“THEY'RE MESSING UP OUR FUTURE BECAUSE WE NEED TO LEARN THESE THINGS”: A QUALITATIVE EXPLORATION OF SEXUAL HEALTH EDUCATION EXPERIENCES OF ALLEGHENY COUNTY ADOLESCENTS

By

Emma Gossard

BA, University of Pittsburgh, 2016

Submitted to the Graduate Faculty of

the Department of Behavioral and Community Health Sciences

Graduate School of Public Health in partial fulfillment

of the requirements for the degree of

Master of Public Health

University of Pittsburgh

2018

UNIVERSITY OF PITTSBURGH

GRADUATE SCHOOL OF PUBLIC HEALTH

This thesis was presented

by

Emma Gossard

It was defended on

April 2, 2018

and approved by

James Egan MPH PhD, Assistant Professor, Behavioral and Community Health Sciences
Graduate School of Public Health, University of Pittsburgh

Sara Goodkind MSW PhD, Associate Professor
School of Social Work, University of Pittsburgh

Thesis Advisor:
Mary Hawk DrPH, Assistant Professor, Behavioral and Community Health Sciences
Graduate School of Public Health, University of Pittsburgh

“THEY’RE MESSING UP OUR FUTURE BECAUSE WE NEED TO LEARN THESE THINGS”: A QUALITATIVE EXPLORATION OF SEXUAL HEALTH EDUCATION EXPERIENCES OF ALLEGHENY COUNTY ADOLESCENTS

Emma Gossard, MPH

University of Pittsburgh, 2018

ABSTRACT

Introduction: Comprehensive Sex Education is relevant to public health in that it contributes to positive sexual and reproductive health outcomes among adolescents. Pennsylvania schools are not required to provide students with any sex education, though they must provide information about HIV and STDs and are required to stress abstinence. As a formative element of a larger needs assessment, the purpose of this work is to understand the sexual health education experiences and needs of adolescents in Allegheny County, as well as their recommendations for improving sexual health education and services.

Methodology: In this qualitative study, semi-structured focus groups were conducted with eighteen adolescents recruited through community organizations. Focus groups were recorded and transcribed, and data was analyzed for key themes using initial and focused coding methods.

Results: Most adolescents found their sex education to be lacking, and believed that subpar sex education impacts health outcomes. However, participant experiences differed according to the schools they attended. Participants recommended that school-based sex education be improved by covering more topics, using a student-centered framework, and facilitating a school culture of openness. Participants also suggested that schools provide them with condoms and that community organizations increase advertising and outreach to their demographic. Additionally,

participants indicated that stigma associated with sexual health impacts the flow of information in schools.

Conclusion: Findings suggest that both school and community organizations can improve the sexual health education and services that they provide to adolescents. Community organizations in particular will use these results to build upon their existing sexual health education programming and services and better serve adolescents in Allegheny County and to advocate for improved state and local sex education policy and implementation.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

PREFACE

I would like to acknowledge and thank the many people who have supported me throughout the past months. First, I would like to express my deepest gratitude to my thesis chair and academic advisor Mary Hawk. Dr. Hawk provided endless encouragement and advice, and skillfully guided me not just through the thesis process but through the entirety of my public health education.

I would also like to thank other members of the Black Girls Equity Alliance CSE Needs Assessment group, especially Katie Horowitz and Zabi Mulwa. They all have given me the wonderful opportunity to work on this project and have provided me with invaluable advice for this project as well as for my future as a public health professional and sex education advocate.

Next, I would like to thank Ben Lichtman for putting up with my anxiety from the other side of the country and for setting a good example for me when writing his own thesis last year; Danielle and Margalit Kranjec for taking care of me in so many ways and for keeping me busy outside of school; and Caroline Hamilton for "suffering" with me through the MPH program and thesis process. These four folks went above and beyond as they supported me (and my ice cream addiction) throughout my time in the Graduate School of Public Health.

Finally, I am extremely grateful for the financial support of Dr. William T. Green and his family, and for the time and effort of the young people who participated in this work. Dr. Green

and the young participants played core roles in this project, and without them none of it would have been possible.

1.0 INTRODUCTION

Comprehensive sexual health education is critical in producing positive sexual health outcomes among adolescents. However, not all adolescents are provided with comprehensive sexual health education in school and must instead rely on other sources of information that may not be accurate. When school-based sexual health education is inadequate, adolescents are at increased risk of poor sexual health outcomes such as sexually transmitted infections and unintended adolescent pregnancy. Other parties, including nonprofit and local government organizations and healthcare systems, have to fill in the gaps to prevent these poor sexual health outcomes and to provide care when these outcomes do occur. In order for educators, community health professionals, policymakers, and other stakeholders to meet the sexual health needs of adolescents, it is important to understand their experiences with sexual health education and services. The purpose of this research is to explore the experiences of adolescents age 13-18 in Allegheny County with sexual health education and services, as well as their recommendations for how both can be improved in school and community settings. This research will allow stakeholders in Allegheny County to work towards bettering adolescent sexual health by advocating for and implementing improved sexual health education and resources for young people.

For the purposes of this paper, comprehensive sex education is defined as the following:

> *A planned, sequential curriculum that provides medically-accurate, age-appropriate information about the physical, mental, emotional and social dimensions of human sexuality, along with skills-building to help young people communicate about and make informed decisions regarding sex and their sexual health. The curriculum should be culturally appropriate, evidence-based, and designed to motivate and assist students to maintain and improve their sexual health, prevent disease and unintended pregnancy, and reduce sexual health-related risk behaviors.*
>
> *Sex education should:*
>
> - *Treat sexual development as a normal, natural part of human development,*
> - *Occur throughout a student's grade levels, with information and approaches appropriate to students' development,*
> - *Be inclusive of and responsive to all identities including race/ethnicity, sexual orientation, gender identity, ability status, and socioeconomic background,*
> - *Include information about puberty and reproduction, abstinence, contraception and condoms, relationships, healthy decision-making, media literacy, sexual violence prevention, abuse, body image, gender identity, and sexual orientation,*

- *Encourage open parent/guardian and child communication about sex and sexuality,*
- *Be provided by qualified, trained educators, and*
- *Respect young people's right to complete and honest information.*

This definition was adapted by Allegheny County adolescent sexual health stakeholders from definitions written by the Sexuality Information and Education Council of the United States (SIECUS) and Future of Sex Education.

This paper will begin with a background of sexual health education, including literature regarding sexual health outcomes of adolescents in the United States, Pennsylvania, and Allegheny County; the impact of sexual health education on health outcomes; the social ecological model as it relates to sexual health; parent views of sexual health education; SIECUS recommendations for sexual health education programming; national funding and state policy regarding sexual health education; and adolescent sources of sexual health information. Additionally, further description of the context of this research and the working group behind the study will be provided as background. Next, research methods for the study will be described, followed by a summary of results. Then, findings will be discussed and contrasted with the literature and study limitations will be outlined. Finally, the paper will be concluded with recommendations for improving adolescent sexual health in Allegheny County.

2.0 BACKGROUND

2.1 ADOLESCENT HEALTH IN THE UNITED STATES, PENNSYLVANIA, AND ALLEGHENY COUNTY

In the United States, about 80% of adolescents are sexually active (engaging in vaginal, oral, or anal sex) by age 18. Among those adolescents, the average age at first oral sex is 15.8 years and the average age at first vaginal sex is 15.5 years. Among all adolescent women and men, 78% and 85% respectively reported using a hormonal or barrier contraceptive the first time they engaged in sex (National Coalition for Sexual Health).

All adolescents are at risk of contracting sexually transmitted infections (STIs) or having unplanned pregnancies. Every year, young people age 15-24 account for about half of new STI diagnoses and 26% of new HIV diagnosis. Additionally, over 80% of pregnancies in young people are unintended. Overall, youth make up 20% of unintended pregnancies in the United States each year (National Coalition for Sexual Health).

Young people of color are disproportionately at risk of STIs and unplanned pregnancy. Chlamydia and HIV particularly impact young people who are Black. In 2010, almost 70% of all HIV infections among adolescents occurred among Black adolescents. Further, young people of color account for a majority of unplanned teen pregnancies. Non-Hispanic Black women and

Hispanic women age 15-19 reported pregnancy in higher rates (117 and 106.6 per 1000) compared to non-Hispanic White women (43.3 per 1000) (National Coalition for Sexual Health).

Adolescents also experience intimate partner violence. In fact, according to a nationally representative survey, 9.6% of high school students experienced physical dating violence and 10.6% experienced sexual dating violence. Additionally, 6.7% of high school students report ever being physically forced to have sexual intercourse when they did not want to (High School YRBS: United States).

There are some data on the state level for adolescent risk behaviors, adolescent dating violence, and school climate for LGBTQ+ youth in Pennsylvania. The Youth Risk Behavior Survey (YRBS) is a national and state survey that monitors health risk behavior among adolescents in grades nine through twelve. The survey collects data for the same topics identified by the Healthy Allegheny Teens Survey (HATS), including violence and sexual behaviors related to STIs and unintended pregnancy ("Youth Risk Behavior Surveillance System"). Although the Pittsburgh School District does not participate in the YRBS, the Healthy Allegheny Teens Survey aimed to collect the data that the YRBS missed in Allegheny County (Miller et al., 2015). Additionally, the YRBS provides state level data which informs state-wide health policy and interventions. See Table 1 for YRBS and HATS data on national, state, and county levels.

According to the YRBS, among Pennsylvania adolescents in ninth through twelfth grade in 2015, 36.3% had sexual intercourse ever; 3.8% had sexual intercourse for the first time before age 13; 10.3% had four or more sexual partners in their lifetime; and 88.9% were never tested for HIV. In addition, 26.7% reported being sexually active at the time of the survey (had sexual intercourse with at least one person in the past three months). Among those who reported being sexually active: 36.7% did not use a condom at last sexual intercourse; 11.1% did not use any

method to prevent pregnancy at last sexual intercourse; 74.7% did not use any form of hormonal birth control at last sexual intercourse (including the birth control pill, an IUD or implant, the shot, patch, or birth control ring); 91.9% did not use both a condom and any form of hormonal birth control at last sexual intercourse; and 18.8% used drugs or alcohol before last sexual intercourse. Additionally, many adolescents in Pennsylvania reported sexual and physical violence: 6.4% were physically forced to have sexual intercourse when they did not want to; 7.2% experienced physical dating violence; and 9.3% experienced sexual dating violence ("High School YRBS: Pennsylvania").

Table 1: Youth Risk Behavior Survey & Healthy Allegheny Teens Survey

	United States (Youth Risk Behavior Survey, 2015)	Pennsylvania (Youth Risk Behavior Survey, 2015)	Allegheny County (Healthy Allegheny Teens Survey, 2014)
Were ever physically forced to have sexual intercourse when they did not want to	6.7%	6.5%	4.8%
Experienced physical dating violence (Past 12 months)	9.6%	7.2%	10.9%
Experienced sexual dating violence (Past 12 months)	10.6%	9.3%	6.5%
Dated or went out with someone (Past 12 months)	–	–	64.9%
Had sexual intercourse ever	41.2%	36.3%	35%
Had sexual intercourse for the first time before the age of 13	3.9%	3.8%	14.1%
Had sexual intercourse with four or more persons (in their life)	11.5%	10.3%	–
Did not use a condom (at last sex, among participants who were sexually active)	43.1%	36.7%	40.3%
Drank alcohol or used drugs before last sexual intercourse (among participants who were sexually active)	20.6%	18.8%	20%
Did not use birth control pills; an IUD or implant; or a shot, patch, or birth control ring (before last sexual intercourse to prevent pregnancy, among students who were currently sexually active)	73.2%	74.7%	–
Did not use any method to prevent pregnancy (during last sexual intercourse, among students who were currently sexually active)	13.8%	11.1%	–
Have been pregnant in the past five years (among sexually active young women)	–	–	16%
Were never tested for HIV (not counting tests done when donating blood)	89.8%	88.9%	–

The YRBS data also sheds light on some sexual and relationship health disparities that Lesbian, Gay, and Bisexual (LGB) adolescents face. [Note: The YRBS does not collect survey on gender identity other than a "sex" category. This excludes transgender adolescents from

analysis within this dataset.] In many of the areas of the YRBS, LGB-identified adolescents reported health risks at an increased rate compared to their heterosexual-identified counterparts. LGB adolescents in Pennsylvania reported at higher rates that they ever had sexual intercourse; had more than four sexual partners in their lifetime; did not use a condom during last sexual intercourse; experienced sexual dating violence; experienced physical dating violence; and were physically forced to have sexual intercourse when they did not want to. For nearly all other relevant measures from the YRBS (Table 1), no difference was recorded between heterosexual and LGB adolescents. However, heterosexual adolescents were more likely than their LGB peers to report never being tested for HIV ("High School YRBS: Pennsylvania Results 2015"). A large number of adolescents overall report engaging in risky sexual behaviors and having negative experiences in their relationships, and it is clear that in many cases, LGB adolescents fare even worse.

In addition to facing sexual and relationship health risks, LGBTQ+ adolescents in Pennsylvania face a hostile school climate, which can contribute to poor mental and physical health, as well as poor educational outcomes. A 2015 survey conducted by GLSEN reported that most LGBTQ+ adolescents in Pennsylvania regularly experienced anti-LGBTQ+ remarks, bullying and victimization, and discriminatory policies and practices at school (Table 2). Adolescents in Pennsylvania schools reported hearing "gay" be used in a negative way (91%); hearing homophobic remarks (84%); hearing negative remarks about gender identity (84%); and hearing negative remarks about transgender people (66%). These students also reported being verbally (46-69%) and physically harassed (16-27%) or assaulted (8-12%) on the basis of sexual orientation, gender, or gender expression (Figure 1). LGBTQ students in Pennsylvania also report being prevented from using a bathroom or locker room that aligns with their gender

(23%); wearing clothes that are considered inappropriate for their gender (23%); using their preferred name or gender pronouns (19%); bringing a same-gender date to a school dance (18%); and forming or promoting a GSA (Gay Straight Alliance) (14%). Only 25% of students reported being taught LGBTQ+ inclusive lessons in Pennsylvania schools (GLSEN 2017). The harassment and victimization that LGBTQ+ youth face on a daily basis contributes to high rates of depression, suicidality, self-harm, anxiety, drug and alcohol abuse, school absenteeism and low grade point averages among the population (National Alliance on Mental Health; "Bullying and LGBTQ Youth").

Table 2: LGBTQ+ Experiences in Pennsylvania Schools

Percentage of LGBTQ+ students hearing anti LGBTQ+ remarks from students in PA schools sometimes, often, or frequently:	
Heard "gay" used in a negative way (E.g., "that's so gay")	91%
Heard homophobic remarks (E.g., "D*ke" "f*g")	84%
Heard negative remarks about gender expression	84%
Heard negative remarks about transgender people	66%
Percentage of LGBTQ+ students who were discriminated against in PA schools:	
Prevented from expressing PDA in school	28%
Prevented from using a bathroom or locker room that aligns with their gender	23%
Prevented from wearing clothes that are considered inappropriate for their gender	23%
Prevented from using their preferred name or gender pronouns	19%
Prevented from bringing a same-gender date to a school dance	18%
Prevented from forming or promoting a GSA (Gay Straight Alliance)	14%

(GLSEN School Climate Snapshot, 2015)

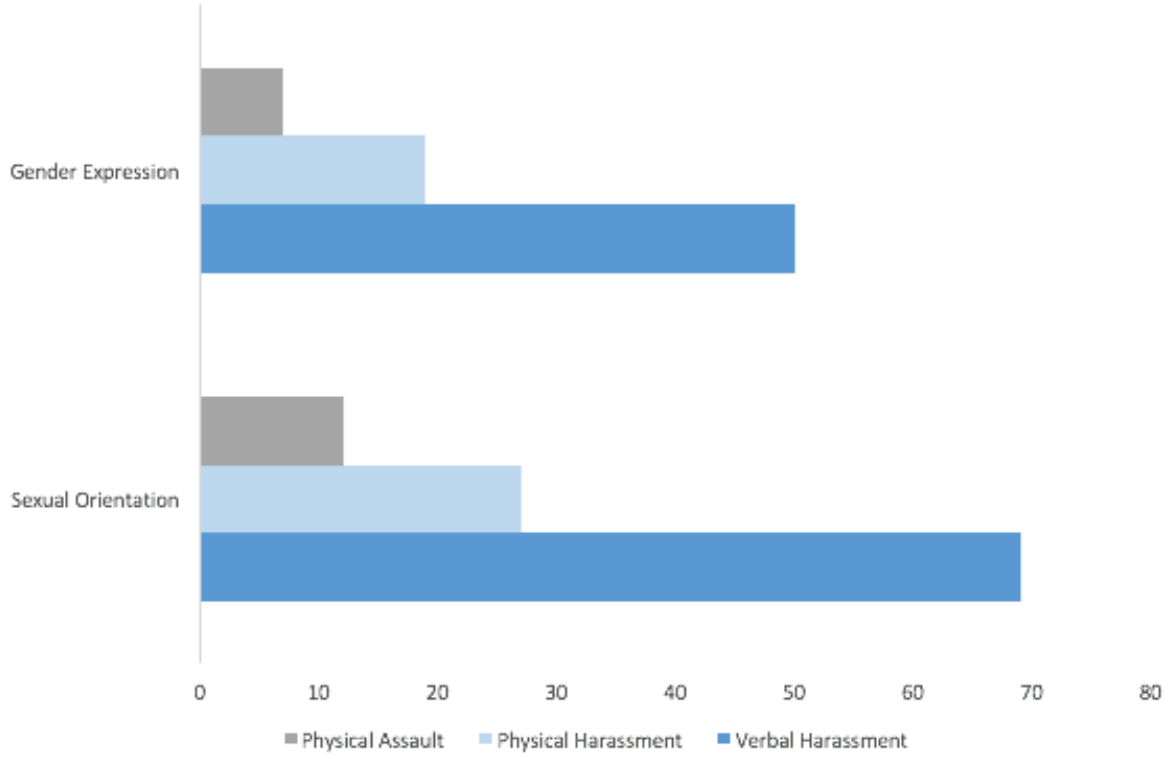

Figure 1: Percentage of LGBTQ+ students harassed in Pennsylvania schools due to sexual orientation or gender identity

Some existing data describe health behaviors and outcomes among adolescents in Allegheny County. In particular, there are data outlining STI and pregnancy rates as well as adolescent health behaviors and experiences. According to a report on Allegheny County births in 2013, the age-specific birth rate among adolescent women aged 15-19 was 15.8 per 1000 births. However, the teen birth rate in Allegheny County has been decreasing since 2009, and is lower than the teen birth rate for the state of Pennsylvania (in 2016 that rate was 17.7 per 1000 births) (Landis 2016, National Center for Health Statistics).

A report on STDs in Allegheny County revealed that chlamydia and gonorrhea are a much larger problem for adolescents in the county compared to teen pregnancy. Chlamydia is the

most commonly reported STD in Allegheny County and is reported at a higher rate than in the state of Pennsylvania overall (463.8 per 100,000 in 2014 and 418.1 per 100,00 in 2015, respectively) (Chen et al. 2014, "Pennsylvania State Health Profile 2015"). Adolescents and young adults aged 15-24 are at highest risk of becoming infected with chlamydia; 50% of reported chlamydia cases were among women aged 15-24. Although about two thirds of chlamydia cases were reported by women, 65% of cases among men were reported by adolescents and young men aged 15-24 (Chen et al. 2014). Further, Black adolescents and young women are disproportionately affected by chlamydia; although this group makes up only 1.2% of the total Allegheny County population, they represent 28% of chlamydia cases in the county in 2014 (Chen et al. 2014). Of all the cases in adolescent and young adult women, 55% were reported by black women (Chen et al. 2014).

In addition to chlamydia, teens and young adults in Allegheny County demonstrate high rates of gonorrhea. Similar to chlamydia, gonorrhea is reported at higher rates than in Pennsylvania overall, with 169.3 cases per 100,000 individuals in the county in 2014 and 100 cases per 100,000 individuals in the nation in 2015 (Chen et al. 2014, "Pennsylvania State Health Profile 2015"). In Allegheny County, incidence of gonorrhea was slightly higher among women than men, with women accounting for almost 53% of cases. Among both women and men, most of the cases reported were in the 15-24 age group, accounting for 69.5% and 49.6% of cases respectively (Chen et al. 2014). Additionally, Black adolescents and young adults aged 15-24 in Allegheny County are at an increased risk of contracting gonorrhea; this group accounts for half of all reported cases among women (Chen et al. 2014).

In 2014, Allegheny County collected data from over 1600 adolescents aged 14-19. The telephone survey based on the state and national Youth Risk Behavior Survey (YRBS), the

Healthy Allegheny Teens Survey (HATS, Table 1) asked adolescents a variety of questions regarding education, health status, diet and nutrition, physical activity, substance use, sexual and reproductive health, violence and injury, childhood adversity, social support and neighborhood cohesion, and depression and suicide. Among all adolescents, 94.3% reported being "completely" or "mostly" heterosexual. In terms of sexual activity, 35% reported ever having sexual intercourse, and 14.1% reported having intercourse before the age of thirteen. Many adolescents reported some risk behavior associated with sex: 20% reported drinking alcohol or using drugs before their last sexual intercourse, and 59.7% reported condom use during their last intercourse. Further, 16% of young women who reported being sexually active also reported being pregnant within the past five years. Regarding relationships, 64.9% of adolescents reported dating or going out with someone within the past year. Some dating violence and sexual abuse was reported: 10% reported that someone they were dating or going out with physically hurt them on purpose at least one time; 6.5% reported that someone they were dating or going out with forced them to do sexual things that they did not want to do at least once; and 4.8% (specifically 7.7% of young women surveyed) reported being physically forced to have sexual intercourse when they did not want to (Miller et al., 2015).

2.2 THE IMPORTANCE OF COMPREHENSIVE SEX EDUCATION

Comprehensive sex education (CSE) is critical in providing adolescents (and adults) with the knowledge and tools to maintain both physical and psychological health. There is an abundance of evidence pointing to the positive health outcomes that adolescents experience as a result of CSE. Evaluations of CSE programs have shown that these programs are associated with

delayed sexual initiation, reduced number of sexual partners, reduced frequency of sex, reduced frequency of unprotected sex, increased condom and contraceptive use, and reduction in teen pregnancy, HIV, and other STIs ("Comprehensive Sex Education..."). Further, CSE provides adolescents with skills to enter and maintain healthy relationships with peers as well as sexual and romantic partners. The inclusion of relationships in CSE curricula helps to prevent dating violence and sexual assault among teens (Bridges and Hauser 2014). Additionally, CSE provides adolescents who are currently experiencing abuse of any kind with the skills to confront the situation and recover emotionally (Bridges and Hauser 2014). Teaching adolescents how to have healthy relationships encourages a culture of a culture of respect and promotes emotional health among adolescents as they move towards adulthood (Bridges and Hauser 2014). Similarly, including discussion of gender and sexuality in CSE curriculum increases awareness of gender and sexual diversity among adolescents and contributes to creating a more welcoming and respectful school environment. Students who identify as Lesbian, Gay, Bisexual, Transgender, Queer or other sexual or gender minority identities (LGBTQ+) will experience positive mental and physical health outcomes as a result of the more inclusive school climate that CSE cultivates (Human Rights Campaign 2015).

Many opponents of CSE programs prefer that adolescents receive abstinence-only (AO) education. AO education, recently rebranded as "Sexual Risk Avoidance" due to the historical stigma associated with the term "Abstinence Only," encourages students to postpone sexual activity until marriage or, if already sexually active, to avoid having further sexual experiences until marriage (Santelli et al. 2017). AO education does not include information about contraception, often presents incorrect or distorted information, ignores the needs of sexually active adolescents, and often frames sexual activity in moral terms. For example, AO programs

refer to abstinence as morally superior, using terms like chastity and purity, and suggest that premarital sex is physically and psychologically harmful (Santelli et al. 2017). However, there is no evidence supporting this claim, and no research has shown that AO programs are effective in promoting sexual and reproductive health and increasing abstinence among adolescents. Multiple studies have found no association between AO education programs and delayed sexual initiation, reduced number of sexual partners, reduced unprotected sex, increased condom use, further abstention from sexual activity (Santelli et al., 2017), and reduction of teen pregnancy and STI rates ("Comprehensive Sex Education..."). In fact, and evaluation of one federally funded abstinence-only program found that rates of sexual activity among junior high school students in the program increased from 5.8 to 12.4% (Kay & Jackson 2008).

As mentioned above, AO programs often present information that is distorted, misleading, or scientifically inaccurate. For example, one federally funded AO curriculum instructed adolescents that the failure rate for condoms is 14%, and that if used as contraception for four years, users will "experience a cumulative failure rate of 50%." However, when condoms are used correctly and consistently, the failure rate for pregnancy prevention is just 3% over the course of a year (Kay & Jackson 2008). While adolescents may not always use condoms correctly and consistently, those who receive AO education and are not taught how to use condoms are far less likely to use them correctly. Additionally, AO programs often discourage contraceptive use; one AO program tells adolescents "there is no such thing as 'safe' or 'safer' premarital sex," leading students to see condoms as ineffective and unnecessary when they do become sexually active (Kay & Jackson 2008). Presenting inaccurate and misleading information puts adolescents at increased risk for unintended pregnancy, STIs, and other poor health outcomes.

Many AO programs include a “virginity pledge” component, in which adolescents are encouraged or forced to pledge to remain abstinent until marriage. These “virginity pledge” programs have been shown to be not only ineffective in delaying sexual activity, but harmful to the adolescents who take such a pledge. Those who broke the pledge were more likely than those who did not pledge abstinence to have multiple partners and have unprotected sex (“Comprehensive Sex Education…”). Additionally, adolescents who took a virginity pledge were found to be less likely to use contraception, more likely to contract HPV or become unintentionally pregnant, and equally likely to contract other STIs than their peers who did not take a pledge of abstinence (Sexuality Information and Education Council, 2005; Santelli et al., 2017). Further, many adolescents who take a virginity pledge do not define oral and anal sex as sex, and they are more likely to engage in this sort of activity than their peers who have not yet had vaginal intercourse but did not take a virginity pledge (Sexuality Information and Education Council, 2005). In fact, one study found that 88% who pledged to abstain broke the pledge and engaged in sexual activity before marriage (“Comprehensive Sex Education…”) In short, even when virginity pledges do delay sexual activity, they typically do not reach their aim of keeping adolescents from engaging in intercourse before marriage. Adolescents typically break these pledges or find loopholes by engaging in oral or anal sex, and find themselves unprepared to engage in safer sex practices.

In addition to being associated with direct negative health outcomes such as teen pregnancy and STIs, AO programs can be harmful and offensive to adolescents. AO programs marginalize LGBTQ youth and invalidate sexual and gender minority identities. Federally funded AO programs are required to cast same-gender relationships in a negative light, and portray heterosexuality as the “expected standard” for sexuality. Similarly, LGBTQ individuals

are often portrayed as HIV-positive or disease prone, and their identities are often written off as "confusion." These depictions of LGBTQ identities imply that homophobia and other sexual and gender minority discrimination is acceptable, creates a hostile school climate, and can contribute to violence and victimization of LGBTQ adolescents (Kay & Jackson 2008).

The idea that sexual activity is only acceptable in the context of heterosexual marriage also marginalizes and invalidates families of adolescents that may be described as nontraditional. Many adolescents may have been born to unwed parents, yet AO programs send the message that their very existence as a child born "out of wedlock" is unacceptable (Kay & Jackson, 2008). Further, many adolescents have parents who are separated or divorced and they may develop relationships with their parents' unmarried partners. Some adolescents may have been raised by a transgender parent or by a same-gender couple. By providing a very narrow and specific idea of acceptable relationships, AO programs may create a sense of shame among adolescents from certain family backgrounds, and may even lead adolescents to lose respect for their parents, thus impacting a significant relationship.

Implementing CSE programs in schools normalizes discussions surrounding topics that are typically seen as taboo, such as sexual activity and sexuality. Including these and other sensitive topics into health education curricula creates an open environment in schools and help adolescents to feel more comfortable engaging with the material and asking their own questions. When teens feel comfortable asking questions about sexual and reproductive health, relationships, or gender and sexuality, they have the opportunity to get correct answers and thus improve their own health. In comparison, AO programs create a culture of shame and stigmatize sexual health topics, silencing adolescents and pushing them towards other resources that may provide them with incorrect or unsafe behaviors.

2.3 SOCIAL ECOLOGICAL MODEL AND SEXUAL HEALTH

The social ecological model, proposed by McLeroy and colleagues in 1988, is a theoretical framework for understanding the wide range of factors that influence health outcomes. While previously used frameworks focused primarily on factors at the individual level that impact health, the social ecological model examines multiple levels of influence on health: intrapersonal factors, interpersonal factors, institutional factors, community factors, and public policy (McLeroy et al. 1988). The social ecological model helps to understand underlying factors of health outcomes and thus to identify potential points of intervention.

McLeroy's social ecological model can be applied to understand the context in which sexual risk behaviors are produced, including unprotected sex, number of partners, and age of sexual debut, as well as sexual health outcomes, such as unplanned adolescent pregnancy and STIs. Intrapersonal or individual factors are characteristics of an individual such as knowledge, attitudes, values, behavior, and skills that influence health outcomes (McLeroy et al. 1988). Intrapersonal factors that influence adolescent sexual health include perceived risk of pregnancy and STIs; perceived susceptibility to STIs; confidence in contraceptive use; confidence in condom negotiation; confidence in ability to say no to sexual activity or unprotected sexual activity; impulsivity; self-esteem; depression; alcohol and drug use; perceived barriers to contraceptive use; attitudes about condoms or other contraceptives; and race, gender, and sexual orientation (Diclemente and Salazar 2005). Other intrapersonal factors are stress; communication skills; confidence in ability to make healthy decisions regarding sexual activity; spirituality and religious beliefs; consumption of pornography and other media; history of sexual abuse; and knowledge of sexual health and safer sex practices (Hajizade-Valokolaee et. al., 2015).

Interpersonal factors are those related to social network and social support systems, including ways in which individuals interact with peers, partners, friends, and family (McLeroy et al. 1988). Interpersonal factors that influence adolescent sexual health include degree of family support; family cohesiveness and connectedness; parent/child communication; actual parental monitoring and adolescent perception of parental monitoring; family structure; conversations about sexual activity and sexual health topics with partners; partner support of condoms and other contraceptives; peer pressure to drink, smoke, or have risky sex; partner's risk-taking; peer support; and STI and teen pregnancy rates in community (Diclemente and Salazar 2005). Additional interpersonal factors include strength of parent/child relationships; age of partner; family attitudes towards sexual activity and contraceptive use; parent knowledge of sexual health topics; behavior of siblings and friends; time spent on online social media; and parental attitudes towards pornography.

Institutional factors include social institutions and organizations and the formal and informal rules and regulations under which they operate (McLeroy et al. 1988). Institutional factors that influence adolescent sexual health include school involvement in sexual health, including quality of school-based sexual health education and services and qualifications and training of those that teach school-based sexual health education (Hajizade-Valokolaee et. al., 2015) and student access to condoms in school (Diclemente and Salazar 2005). Other factors that do not appear in the literature but should be considered as influences of sexual health include stigma surrounding sexual activity and sexual health topics in schools; healthcare systems approach to adolescent sexual health; health insurance coverage of sexual health care and contraceptives; state and local health department support of sexual health services through health

care systems and sexual health programming in schools; and availability of affordable, quality sexual health care.

Community level factors include relationships between organizations, institutions, and informal networks (McLeroy et al. 1988). Community factors that influence adolescent sexual health include peer norms regarding sexual activity and safer sex practices; positive school environments; and the media (Diclemente and Salazar 2005). Other community factors than should be considered are access to contraceptives, sexual health services, and sexual health education; visibility of sexual health services through advertising; quality of existing services provided by community based organizations; and linkage or collaboration between community based organizations, providers, and schools.

Finally, policy factors are local, state, and national policies and laws (McLeroy et al. 1988). Policy factors that influence adolescent sexual health include policy regarding sexual health education in schools; and policy regarding contraception and abortion access. As a framework for this study, the social ecological model can identify factors on all levels that contribute to adolescent sexual health, and can help stakeholders develop strategies to improve adolescent sexual health in Allegheny County.

Intrapersonal	Interpersonal	Institutional	Community	Policy
• Perceived risk of pregnancy and STIs • Perceived susceptibility to STIs • Confidence in contraceptive use • Confidence in condom negotiation • Confidence in ability to say no to sexual activity or unprotected sexual activity • Impulsivity • Depression • Self esteem • Stress • Alcohol and drug use • Perceived barriers to contraceptive use • Attitudes about condoms or other contraceptives • Race, gender, and sexual orientation stress • Communication skills • Confidence in ability to make healthy decisions regarding sexual activity • Spirituality and religious beliefs • Consumption of pornography and other media • History of sexual abuse • Knowledge of sexual health and safer sex practices	• Degree of family support • Family cohesiveness and connectedness • Parent/child communication • Actual parental monitoring • Perceived parental monitoring • Family structure • Conversations about sexual activity and sexual health topics with partners • Partner support of condoms and other contraceptives • Peer pressure to drink, smoke, or have risky sex • Partner's risk-taking • Peer support • STI and teen pregnancy rates in community • Strength of parent/child relationships • Age of partner • Family attitudes towards sexual activity and contraceptive use • Parent knowledge of sexual health topics • Behavior of siblings and friends • Time spent on online social media • Parental attitudes towards pornography	• School involvement in sexual health, including quality of school-based sexual health education and services and qualifications and training of those that teach school-based sexual health education • Student access to condoms in school • Stigma surrounding sexual activity and sexual health topics in schools • Healthcare systems approach to adolescent sexual health • Health insurance coverage of sexual health care and contraceptives • State and local health department support of sexual health services through health care systems and sexual health programming in schools • Availability of affordable, quality sexual health care.	• Peer norms regarding sexual activity and safer sex practices • Positive school environments • Media • Access to contraceptives, sexual health services, and sexual health education • Visibility of sexual health services through advertising • Quality of existing services provided by community based organizations • Linkage or collaboration between community based organizations, providers, and schools	• Policy regarding sexual health education in schools • Policy regarding contraception and abortion access

Figure 2: Social Ecological Model and Sexual Health

2.4 PARENT VIEWS OF SEX EDUCATION

Although there is little research surrounding parents' views of comprehensive sex education, several studies have provided evidence that the general public, and specifically parents, support sex education that covers topics beyond abstinence only. One nationally representative study of people 18 years and older in the United States found that the general public overwhelmingly supports abstinence-plus education programs, which "emphasize abstinence and a delay of sexual debut but also offer information on contraception and protection against STDs" (Bleakley et al. 2006). Among respondents, 50.7% oppose abstinence only education, 82.1% support abstinence-plus education as defined above, and 68% support condom

use instruction. Further, most participants disagreed that abstinence-only education is effective in preventing pregnancy and that condom use instruction encourages sexual activity among adolescents. This support of abstinence-plus programming and condom instruction was demonstrated across the spectrum of political ideologies and religious affiliations (Bleakley et al. 2016). Abstinence-plus education is far less comprehensive in its programming and provides information about contraception alongside strong messages about abstinence. However, parents support of the inclusion of contraception in sexual health education, as well as their opposition to abstinence-only education, suggests that parents are in favor of providing more practical information to adolescents rather than only information about abstinence.

Some research has focused specifically on parental views of sex education. One study reported that parents of adolescents support sexual health education that covers a broad range of topics, including relationships, sexual orientation and gender identity, and pleasure (Peter et al. 2015). Similarly, of a sample of parents of school-age youth in Minnesota, a majority (89.3%) believed that both abstinence and other methods of pregnancy and STI prevention should be taught in schools, compared to less than 10% who supported abstinence only education (Eisenberg et al. 2008). The majority of parents supported teaching about specific topics, including over 90% that favored instruction on reproductive anatomy, puberty, healthy responsible relationships, assertiveness skills, pregnancy and birth, responsibilities of raising children, reasons for not having sex, pregnancy prevention, STIs, and sexual abuse. Further, almost two thirds of parents supported including sexual orientation and abortion. Most parents believed that these topics should be introduced in middle school (grades 6-8), with the exception of puberty, which parents believed should be taught in elementary school, and abortion, which parents believed should be taught in high school (Eisenberg et al. 2008).

A further study on the views of parents with a more diverse sample (in terms of race, ethnicity, immigration status, and socioeconomic status) reported similar findings, with a majority of parents supporting a more comprehensive sex education curriculum. Specifically, eleven out of eighteen topics assessed were supported by 80% or more parents, and only three topics (masturbation, oral sex, and anal sex) dipped below 50% of parental support. Further 86% of parents agreed that sex education should be 'Teaching that young people should wait to have sex, but if they don't they should use birth control and practice safe sex,' and 89% believed that sex education should stress that "Sex is a healthy and normal part of life' (Heller & Johnson, 2013).

These findings are incongruent with government funding of abstinence-only programming, as will be discussed below. Little research has been done to date exploring adolescent opinion of sex education.

2.5 SIECUS RECOMMENDATIONS FOR SEX EDUCATION

The Sexuality Information and Education Council of the United States (SIECUS) is a national organization that advocates for comprehensive sexuality education and promotes sexual and reproductive justice. SIECUS has published an extensive report of guidelines for comprehensive sexuality education, which outlines which topics should be taught in sexuality education programs, as well as when and how they should be introduced over the course of a young person's education from kindergarten through twelfth grade. The SIECUS framework for CSE focuses on six key concepts: human development, relationships, personal skills, sexual behavior, sexual health, and society and culture. Each of these key concepts includes several

topics and sub concepts (Figure 2), which are introduced in ways that are appropriate for the child's age and developmental level. These topics are introduced in a neutral and non-specific manner in order to be inclusive beyond cisgender and heterosexual folks. Gender is never assumed of subjects or their partners, and the word "partner" is used throughout. The guidelines were developed by the National Guidelines Task Force, which consists of educators, health professionals, sex educators, program developers, and national health, adolescent, and education organizations. Task Force members include representatives from the U.S. Centers for Disease Control and Prevention, Planned Parenthood Federation of America, the American Medical Association, and the National Education Association (Sexuality Information and Education Council, 2004)

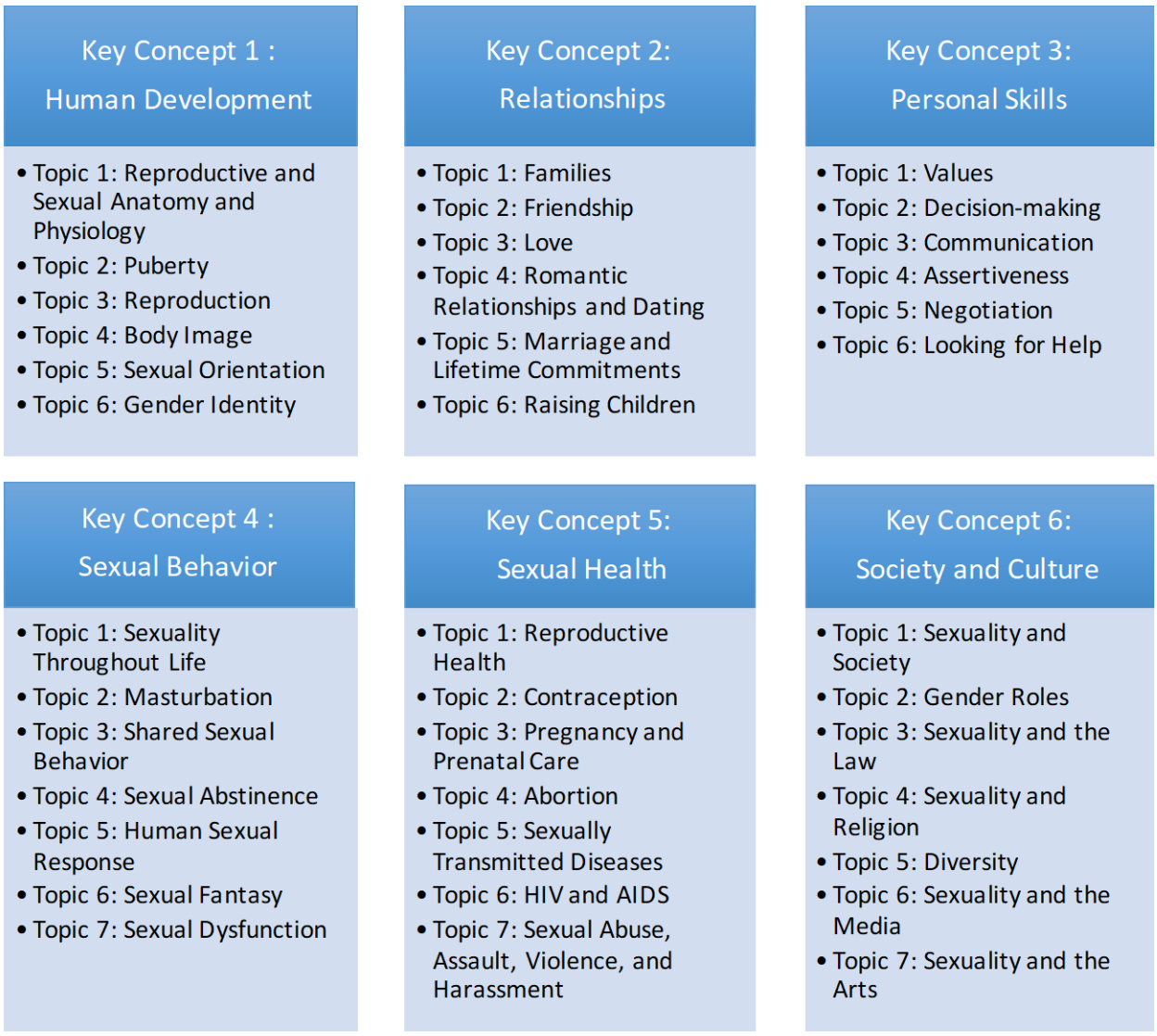

Figure 3: Guidelines for Comprehensive Sexuality Education, Key Concepts and Topics

This set of guidelines is the first nationally-accepted model in the United States for CSE and has helped organizations to develop their own guidelines for CSE. In conjunction with this publication, SIECUS has brought together the National Coalition to Support Sexuality Education in order to more effectively advocate for and develop CSE programming and policies (Planned Parenthood Federation of America).

2.6 SEX EDUCATION POLICIES IN PENNSYLVANIA

The type of sexual health education that adolescents receive (i.e. AO or CSE programs) is shaped both by policies that dictate what is to be taught in school environments as well as government funding provided to school districts and community organizations for programming. Until fairly recently, federal funding for sexual health education has been primarily reserved for AO programming. In 2008, federal funding for AO programming peaked at $177 million, though it decreased during the Obama era when more funding was allocated for comprehensive programming (Donovan 2017). However, there has been a resurgence of federal funding for AO in recent years; In 2016, $85 million was allocated for AO programs, an increase from $55 million. A majority of funding for AO programs, $75 million goes to the Title V abstinence education program, which grants money to states to provide AO education. The remaining $10 is granted to community organizations for "sexual risk avoidance" programming which aims to enforce abstinence (Donovan 2017). In 2017, federal funding for AO education was increased to $90 million ("American Adolescents' Sources…").

In addition to providing funding for AO programs, the federal government allocated $176 million in both 2016 and 2017 for programs that are a bit broader than the AO models (Donovan 2017). While none of this funding was earmarked specifically for CSE programming, it was used to focus on evidence-based programming and to increase adolescent knowledge surrounding contraception. Specifically, $101 million was put towards a grant program, Teen Pregnancy Prevention Program, to fund implementation of evidence-based teen pregnancy prevention interventions. The remaining $75 million was for the Personal Responsibility Education Program, which provides states with grants with funding to support programs that teach adolescents about both abstinence and contraception. Unfortunately, President Trump has

eliminated funding for the Teen Pregnancy Prevention Program in his 2018 budget, and reduced the grant period for projects that are currently funded by Teen Pregnancy Prevention Program ("American Adolescents' Sources…").

According to Pennsylvania state law, schools are not required to teach sexual health education. However, schools must teach adolescents about STDs, including HIV. Elementary schools are allowed to exclude information about how the diseases are sexually transmitted. The materials that schools choose to use for these lessons must be deemed age-appropriate by the local school district. Schools must also discuss prevention of STDs but are required to stress abstinence as "the only completely reliable means of preventing sexual transmission" (Sexuality Information and Education Council, 2017). Additionally, parents and guardians are permitted to review all sexual health education materials, and may allow their children to "opt-out" if the lessons conflict with the family's principles or religious beliefs. Further, the state of Pennsylvania has developed the Academic Standards for Health, Safety, and Physical Education, which act as a framework for all health education curricula in the state. These standards dictate that STD and HIV prevention must be included in health curricula (although school districts may write their own curriculum within the framework of the standards), but decisions regarding instructional materials must be made by individual school districts (Sexuality Information and Education Council, 2017).

The Center for Disease Control and Prevention has published data measuring school policies and practices, with a focus on the health topics that are taught in schools (Table 3). The 2014 survey reported data from 352 principals and 364 health education teachers from secondary schools in Pennsylvania. Data were analyzed separately for sixth through eighth grades and ninth through twelfth grades. While respondents may have been biased towards reporting more

positive information, this data provides a broad idea of what sexual health education is like across the state of Pennsylvania (Sexuality Information and Education Council, 2017).

Table 3: Pennsylvania School Health Profiles, 2014

	Health educators and principals of grades 6, 7, or 8	Health educators and principals of grades 9, 10, 11, or 12
Reported teaching students all 16 critical sexual health education topics, as determined by the CDC, in a required course	11.4%	46.9%
Reported teaching about the benefits of being sexually abstinent	74.2%	94%
Reported teaching how to access valid and reliable information, products, and services related to HIV, other sexually transmitted diseases (STDs), and pregnancy	58.4%	88.6%
Reported teaching how to create and sustain healthy and respectful relationships	69.8%	89.2%
Reported teaching about preventive care that is necessary to maintain reproductive and sexual health	54.4%	86.7%
Reported teaching how to correctly use a condom	14.5%	53.1%
Reported teaching about all seven contraceptives	--	50%
Reported providing curricula or supplementary materials relevant to LGB, transgender, and questioning (LGBTQ) youth	29.3% of secondary schools	

2.7 SOURCES OF SEXUAL HEALTH INFORMATION FOR ADOLESCENTS

Adolescents obtain sexual health information from a variety of sources, including parents, healthcare providers, the Internet, and "formal" instruction from educators. In a 2011 study, 89% of adolescents aged 13-24 reported that the Internet is their main source of sexual health information (National Coalition for Sexual Health). LGBTQ+ adolescents may be especially likely to use the Internet, as they may not be getting the information they need from formal sex education in school, and may feel uncomfortable or unable to ask family.

Additionally, 70% of young men and 78% of young women aged 15-19 reported talking to a parent about at least one sexual health topic ("American Adolescents Sources…"). However, while many parents provide sexual health information to their adolescent children, their knowledge may be inaccurate or incomplete.

Despite recommendations from the American Medical Association, the American Academy of Pediatrics, and the American College of Obstetricians and Gynecologists, less than 40% of adolescents age 15-25 report being given time alone with a health care provider during a visit in the past year. Further, when adolescents do get to speak with providers about sexual health, they have very little time to do so. One study found that conversations between providers and patients age 12-17 lasted only 36 seconds. Additionally, adolescents may feel uncomfortable talking to providers and may worry that their parents will find out ("American Adolescents Sources…").

2.8 BLACK GIRLS EQUITY ALLIANCE & COMPREHENSIVE SEXUAL HEALTH NEEDS ASSESSMENT

In Allegheny County, Black Girls Equity Alliance (BGEA) is a working group that aims to address disparities that young women of color face. The group grew out of Gwen's Girls Equity Summit in October 2016. Planned Parenthood education staff serve on the BGEA Health and Wellness sub-group, and are now leading an effort within that sub-group to conduct a needs assessment of comprehensive sex education in Allegheny County. Other stakeholders serving on the needs assessment working group include representatives from Gwen's Girls, UPMC/University of Pittsburgh researchers working with young people of color, Allegheny County Department of Human Services, Adagio Health, the Midwife Center, and Women and Girls Foundation. Components of the comprehensive needs assessment include searching existing data to understand the demographics and sexual health outcomes of Allegheny County adolescents; searching legislative documents and collecting qualitative and quantitative data to understand existing state, local, and school district sex education policies and their implementation; collecting data from schools, universities, and community-based organizations to determine what sexual health programming is taking place; analyzing curriculum materials of various partners to determine how they align with sex education standards; and collecting qualitative and quantitative data from parents and adolescents to understand their opinions about available sex education and the sexual health needs that they perceive for adolescents in Allegheny County.

The role of this study in the context of the needs assessment is to gather qualitative data from adolescents in Allegheny County to understand how they experience sex education and sexual health services and how they think these things could be improved to better meet their

needs. This work is formative research; it is not meant to be representative of the experiences of all adolescents in Allegheny County, but rather as the beginning of exploring and understanding sexual health education in Allegheny County. This study is just one component of a much larger, ongoing work.

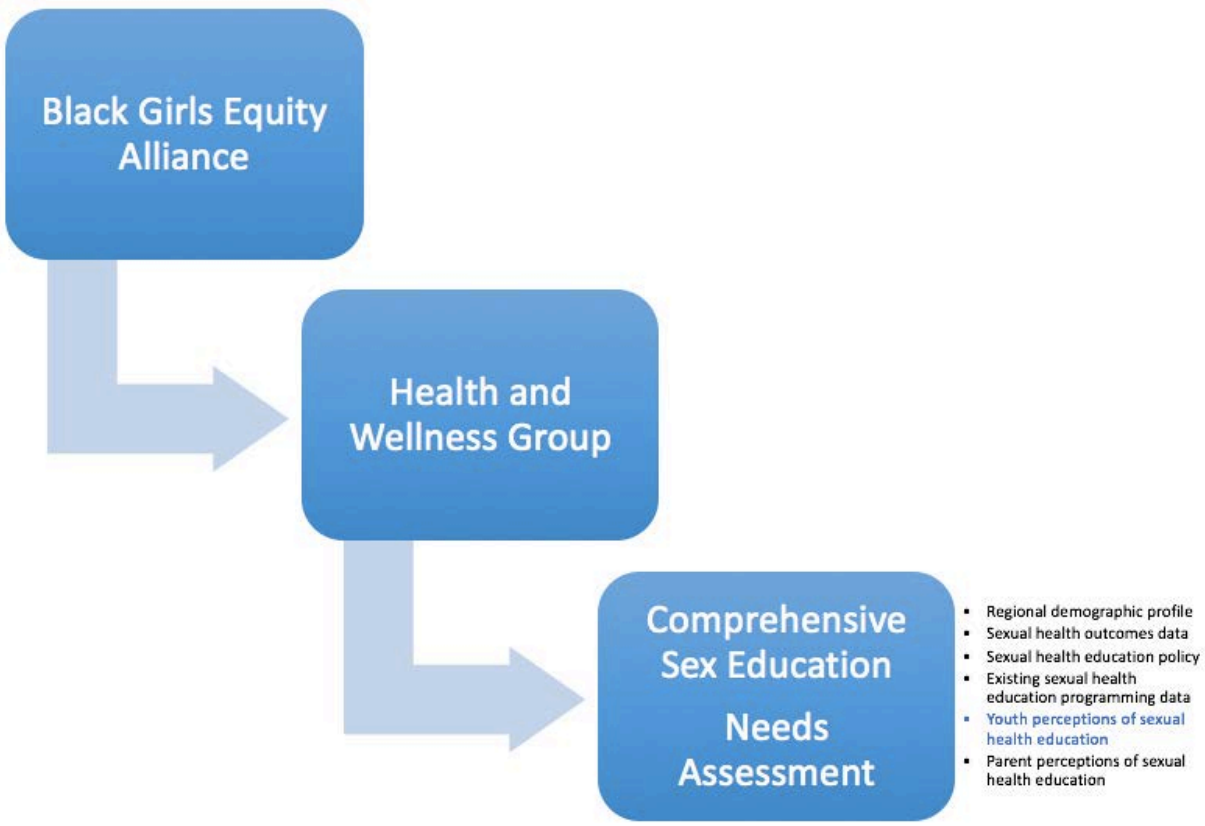

Figure 4: Black Girls Equity Alliance and Study Context

3.0 METHODS

A qualitative approach was used in this study to understand Allegheny County adolescents' experiences of sexual health education and services. Approval for this study was obtained under expedited review by the Human Research Protection Office (HRPO) at the University of Pittsburgh. Funding for the study was provided by the William T. Green, Jr. Award in Public Health Studies.

3.1 PARTICIPANTS AND RECRUITMENT

Eighteen adolescents from Allegheny County participated in focus group discussions about their experiences with sex education and sexual health services. Convenience sampling was used to recruit participants through Planned Parenthood of Western Pennsylvania (PPWP). PPWP staff facilitates educational programs in several public schools and through community organizations. Adolescents who were recruited were involved in PPWP's *Peer Helpers*, a peer education program conducted in public schools to prevent pregnancy and STIs, or *Mentors in Violence Prevention*, a program to prevent gender-based violence, sexual harassment, and bullying. Adolescents who participate in the Mentors in Violence Prevention program do so through another community organization, Operation Better Block, in the Homewood neighborhood of Pittsburgh.

Participants in Focus Groups A and C were involved in Peer Helpers, and those in Group B were involved in Mentors in Violence Prevention. These groups were different not only in their sexual health education background (as Peer Helpers receive sexual health education in the program), but in their demographic characteristics. Group A participants attend a highly ranked public school with various student resources and are diverse in terms of race, gender identity, and sexual orientation. Group B participants primarily attend a school with a low graduation rate and state test scores that demonstrate low academic achievement. Most participants in this group live in economically disadvantaged areas, and almost all are African American and heterosexual.

The study and its purpose were explained to adolescents who were asked for their voluntary participation in the study. Those who agreed were provided with parental consent forms to be returned at the time and location of the focus group, as described to them by PPWP staff. Participants were compensated $10 and provided with dinner.

3.2 DATA COLLECTION

A total of two focus groups (Groups A and B) and one in-depth interview (Group C) were conducted, which ranged from 20 to 70 minutes. Focus groups were held in private rooms in locations that participants were familiar with. One of the focus groups was facilitated by the PI and co-investigator, and one focus group and the in-depth interview were facilitated by the PI alone. During the discussions, notes were taken by PI to record nonverbal behavior. Additionally, personal memos were written by PI after data collection to record personal reactions, observations from the scene, and emerging themes.

Focus groups and interview discussions were semi-structured, accompanied by a focus group guide which outlined main questions and probes. The focus group guide was developed with input from other members of the comprehensive sex education working group. With the semi-structured model, the participants were able to introduce new ideas and content but were brought back on topic with probes from facilitators if the content became less relevant to the study. There was some flexibility with methods, as qualitative research often requires researchers to adapt to participants' needs. For example, questions were adapted slightly to meet participants' level of knowledge and frame of reference in one focus group. Additionally, due to recruitment challenges, one planned focus group was adapted to be an in-depth interview.

Before focus groups and interview were conducted, participants completed a brief demographic survey in order to understand the age, race, gender, and sexual orientation of participants. Focus groups were audio recorded and sent to an external transcription service. Transcription was then double-checked for accuracy against audio recordings by the PI.

3.3 ANALYSIS

Initial codes were developed using open coding based on the focus group guide and a first reading of transcripts. These codes were then applied to each transcript, and notes were recorded to describe portions of data that were not captured in initial codebook. Codes were then reorganized and collapsed to more accurately reflect the data. The revised set of codes were then reapplied to transcripts, and areas that required child codes were recorded. Areas that required child codes were subsequently reviewed and re-coded. Data were then transferred and arranged into a results table.

4.0 FINDINGS

4.1 PARTICIPANT INFORMATION

To understand participant demographics, a short survey was distributed before focus groups. Most participants (55.6%) identified as female. One participant identified as transgender female and one as transgender male. A majority of participants (66.6%) identified as straight, followed by bisexual (11.1%), pansexual (11.1%), gay or lesbian (5.6%), and asexual (5.6%). Over half (55.5%) of participants identified their race/ethnicity as Black or African American. Participants also identified themselves as White or Caucasian (27.8%) and Asian American or Pacific Islander (5.55%). Two participants were multiracial. The mean age of participants was 15.27 years. See Table 4 for more information about participant demographics.

Table 4: Participant Characteristics

	Group A (n=8) n (%)	Group B (n=9) n (%)	Group C (n=1) n (%)	Total (n=18) n (%)
Age (mean, *std*)	15.62, *.18*	14.88, *.35*	16	15.27, *.21*
Gender				
Female	6 (75.0)	3 (33.3)	1 (100)	10 (55.6)
Male	0 (0.00)	6 (66.6)	0 (0.00)	6 (33.3)
Transgender Female	1 (12.5)	0 (0.00)	0 (0.00)	1 (5.55)
Transgender Male	1 (12.5)	0 (0.00)	0 (0.00)	1 (5.55)
Sexual Orientation				
Straight	4 (50.0)	8 (88.9)	0 (0.00)	12 (66.6)
Gay or Lesbian	1 (12.5)	0 (0.00)	0 (0.00)	1 (5.55)
Bisexual	0 (0.00)	1 (11.1)	1 (100)	2 (11.1)
Pansexual	2 (25.0)	0 (0.00)	0 (0.00)	2 (11.1)
Asexual	1 (12.5)	0 (0.00)	0 (0.00)	1 (5.55)
Race or Ethnicity				
White or Caucasian	5 (62.5)	0 (0.00)	0 (0.00)	5 (27.8)
Black or African American	1 (12.5)	8 (88.9)	1 (100)	10 (55.6)
Asian American or Pacific Islander	1 (12.5)	0 (0.00)	0 (0.00)	1 (5.55)
Multiracial	1 (12.5)	1 (11.1)	0 (0.00)	2 (11.1)

4.2 SEXUAL ACTIVITY

Focus group participants described a range of information related to sexual activity among their peers. For example, participants noted that most teens in Allegheny County become sexually active between ages twelve and sixteen. One participant acknowledged that sexual debut is "different for everyone," but overall participants reported that young people become sexually active in their "teenage years." However, eighteen appeared to be a strong upper boundary; one participant suggested that adolescents become sexually active at age eighteen, and other participants in that conversation responded to the suggestion with outrage and surprise.

Correspondingly, participants reported that most young people in Allegheny County are sexually active. Participant estimations ranged from 50% to 99%. The participants in Group A estimated around 80%, while Group B believed that almost everyone in their age group is sexually active. Some participants in the latter group said that “everyone” is sexually active at their age, with one person even saying that “a thousand out of a hundred” young people (i.e. significantly more than 100%) are sexually active. These contrasting perceptions may be driven by demographic differences between the two groups.

4.3 EXPERIENCES WITH SEXUAL HEALTH EDUCATION AND SERVICES

Participants described their experiences with sexual health education and services, both in school and community settings. Almost all participants had some form of health or sexual health education in their schools. Notably, participants from Group A described their school sexual health education experiences as insufficient:

> *“I feel at this point I'm not having anything comprehensive or like that much at all in the way of sex education.”*

Most school sex education was taught by health or gym teachers. Some participants were provided with textbooks to be used in school-based sex education classes. Topics that are covered in school-based sex education include anatomy, the reproductive system, STIs, methods of birth control, and abstinence. Drug use and relationships are also frequently included in school-based sex education. However, participants expressed annoyance with these topics,

explaining that these are taught in class repeatedly. Although participants view drug use and relationships as important topics to learn about, they feel as though they should be spending class time learning about other topics as well.

At times, participants expressed frustration with their school based sex education, as they sensed that abstinence was being forced on them and that information was being withheld by educators. Some participants felt as though they do not get the information that they want or need from school-based sex education. For example, participants said that when they would ask sexual health questions in class, the teacher would not answer the question and instead encourage abstinence. Another participant explained that her cousin, who is a lesbian, asked a teacher a question about having safer sex with another woman. The question was "brushed off" by the teacher, who did not provide a specific answer but rather told the student to remain abstinent. The participant telling this story noted that after that experience, students no longer asked about LGBTQ+ topics.

In addition to not getting their questions answered by health educators, participants spoke about a fear-based approach to sex education. This approach caused distress among participants and left them feeling "freaked out." They described how, even before some adolescents became sexually active, health educators showed students explicit pictures of genital warts and other STIs, and told them that "if you get AIDS you'll die." Participants felt that this method of teaching was scary and that it functioned to push them to abstinence. Notably, the participants that expressed frustration and criticism of school-based sexual health education were those in Group A, who suggested that health classes in schools need to be changed completely. Participants in Group B were much less critical of the sexual health education that the received in

school, expressing neither satisfaction or dissatisfaction, and appeared to generally accept it as-is.

While the data from this study show that some adolescents who ask questions get denied answers from educators, they also show that adolescents sometimes do not want to ask questions or discuss sexual health topics with friends or educators. Participants attributed this to the stigma surrounding sexual health topics and the judgmental culture in school environments, saying that students are worried about being judged when asking sexual health questions. Many of their peers, participants say, are not open to talking about or listening to others talk about sexual health, and that adolescents are "so ingrained that sex is something that we should not talk about."

Additionally, participants discussed their experiences with community organizations or programs that provide sex education through schools. Organizations or programs that were mentioned include PAAR (Pittsburgh Action Against Rape) and Boost for the Future. Some participants described how someone came to their health class to share their personal experience with HIV. Outside organizations taught students about topics such as condoms, healthy relationships, and consent.

The data show that some participants know that adolescents can access sexual health services and supplies through community organizations such as Planned Parenthood of Western PA and The Urban League of Greater Pittsburgh. In fact, some participants reported going to Planned Parenthood on a regular basis to obtain free condoms. Participants also knew that they could buy condoms at pharmacies. However, they also noted that some of their peers may not go to community organizations or pharmacies to buy condoms because they are too shy, or that some adolescents avoid going to Planned Parenthood because they are afraid of the protestors

that camp outside of the facility. Additionally, some participants demonstrated confusion about whether there is an age requirement for buying condoms. For example, participants said that some of their peers do not go to pharmacies to buy condoms because they are “not old enough” and that identification is required to buy condoms in order to show that they are over age eighteen.

4.4 SOURCES OF SEXUAL HEALTH INFORMATION

In addition to school-based sexual health education participants identified many sources from which they obtain information about sexual health. As mentioned above, adolescents learn about sexual health from community-based organizations that facilitate guest lessons or extracurricular programs in schools, including Planned Parenthood’s Peer Helpers program, PAAR, and Boost for the Future. These programs supplemented the information provided by school health educators, and sometimes filled in some gaps left by their school’s health curricula. For example, when discussing safer sex practices, participants in Group A noted that they were unaware of some contraceptives and STI prevention methods before participating in Peer Helpers, because they had not learned about them in their health classes in school.

Outside of lessons facilitated by school health educators or community-based organizations, adolescents obtained information about sexual health topics from a variety of sources. These sources include friends, family, the Internet, social media, popular culture, pornography, health providers, and everyday life. See Table 5 for a detailed list of sources of information that participants identified.

Table 5: Adolescents' Sources of Sexual Health Information

- School-based health education classes
- Community-Based
  - Peer Helpers (Planned Parenthood of Western PA)
  - Guest lessons from Pittsburgh Action Against Rape (PAAR)
  - Boost for the Future program
  - HIV+ guest speakers
  - *It's OK To Ask Someone (IOTAS)* (Text line operated by Planned Parenthood of Western PA)
- Parents, other family members, or other trusted adults
- Friends
- "Everyday life" and hearing people around them talk about sex and sexual health topics
- Doctors/Providers
- Media
  - Internet searches
  - Social media (Instagram, Snapchat)
  - Songs
  - YouTube videos
  - *Cosmopolitan* Magazine
  - *Big Mouth (*Netflix series)
  - *Norbit* (2007 comedy film)
  - *Family Guy* (FOX comedy television series)
  - Porn
  - Celebrities who speak publicly about sexual health
  - *Oh Joy Sex Toy* (online comic blog)

Participants in Group A mentioned *It's OK to Ask Someone* (IOTAS), a textline operated by PPWP that allows teens to anonymously text questions about sexual health and relationships, as a source of information. PPWP educators and trained adolescents text back free, confidential, and accurate answers to texters within twenty-four hours. Adolescents see IOTAS as a reliable and accessible way to get answers to their sexual health questions despite the stigma surrounding sex among teens.

While participants identified many sources of sexual health information, they admitted that not all of these are reliable. Particularly, Internet and media sources were recognized as less reliable as sources of accurate information compared to other sources that came up in discussion. Participants noted that these sources focus mostly on sex acts themselves, and that information on the Internet varies greatly. Participants believe that searching for information on the Internet requires a certain level of "common sense," which they find to be rare among their age group. They also said that the Internet is "lacking" as a source of information and that "half of [answers on the Internet] are probably not true." Participants agreed that it is especially difficult to find accurate information on the Internet when they seek out answers to specific questions, compared to when they are simply browsing on the Internet. They noticed that they often find conflicting information on different sources, which made them feel "completely overwhelmed," or that they have to be skeptical about some sources like *Cosmopolitan Magazine's* online articles.

Additionally, the Internet often provides adolescents with narratives of other peoples' experiences, which can vary and may not be helpful, relevant, or accurate. Some participants acknowledged that "everyone's experience with sex is different" and that it's important to be skeptical when reading about others' personal experiences.

Not only do participants get unreliable Internet from Internet or media sources, but they also get misinformation from other teens. Participants identified many myths that they have heard from other teens about sexual health. In particular, adolescents in Group A were better at identifying sexual health myths. They knew that there is a risk of pregnancy if two condoms are used; that the HPV vaccine is for all adolescents, not just young women; that withdrawal is not an effective method of contraception; that condoms are not 100% effective; and that douching after intercourse does not prevent pregnancy. Group A adolescents clearly knew that these were

myths, due to the way that they made the statement and then clarified by saying something like "but that's not true." In comparison, adolescents in Group B were less skilled at identifying sexual health myths. When asked about what sexual health myths and misinformation they hear from other teens, participants from Group B reported facts, such as that STDs can spread through oral, anal, and vaginal sex; that STDs sometimes can not be cured; and that pregnancy is possible even with the use of a condom. It is unclear whether these participants misunderstood the question or indeed believed these were myths. Despite this, these participants were still unable to correctly identify myths to the same degree as participants in Group A.

Finally, participants expressed awareness that information from friends is not always accurate or reliable. They believed that it is necessary to fact-check information that they get from friends by doing their own research. Participants hypothesized other students may not want to go through the effort of fact-checking information, which leaves them with potentially flawed information that they got from peers.

4.5 IMPROVING SEXUAL HEALTH IN ALLEGHENY COUNTY

Participants responses pointed to ways in which adolescent sexual health can be improved. A group of adolescents who all attend the same school mentioned that the students keep a locker stocked with condoms and menstrual products for all to use. They found this to be a helpful way to access supplies, but explained that school officials do not outwardly support this resource.

"…there's this locker on the sixth floor [at school]. It's like a secret that the students know about- what is there, pads, tampons, condoms, is that what it was freshman year? They've ended up there. People are like, "Hey, if you need something, go here," but you have to keep it on the down low because you don't want a problem here...really-- you know. I think it was helpful. If it didn't have to be secret, that would be so much better. Why does a school want that to not happen?"

Similarly, participants viewed school policy as a barrier to accessing safer sex supplies; When participants suggested that their schools should distribute condoms to students, others countered that is against school rules. Still, participants stressed that having condoms and dental dams available in schools, specifically in the main school office or the nurse's office, would not only improve adolescent sexual health, but would help to normalize adolescent sexual activity and safer sex practices. Participants specifically noted that school would be an ideal setting to distribute condoms because most adolescents are there almost every day, and providing condoms in school prevents adolescents from having to take an extra trip to find condoms elsewhere.

In addition to making condoms available in school, participants suggested other ways that sexual health services and distribution of supplies can be improved. They recommended expanding PPWP's IOTAS text line with increased advertising, as well as improving advertising and outreach for community services, such as those that are available at Planned Parenthood and the Urban League.

Several adolescents in Group A were trained as peer educators to suggest answers to questions that other adolescents anonymously text to IOTAS. Through their experience with the text line, participants viewed the program as useful and suggested that it be better advertised to reach more adolescents in Allegheny County and the surrounding areas.

Additionally, participants recommended that community service providers improve their advertising to reach more adolescents. They suggested that many adolescents are not aware of the array of sexual health services that are available to adolescents in Allegheny County. Potential ways of advertising services to adolescents include sending organization representatives to schools to tell students about the services that they offer and distribute safer sex supplies; putting up posters or handing out flyers to adolescents; and hanging advertisements for services in school guidance counselor offices. While adolescents in both groups suggested making condoms available to students in schools, participants in Group A emphasized increased advertising and outreach from community service providers. In contrast, Group B did not mention the role of community organizations in improving adolescent sexual health.

Being aware of sexual health resources, having more conversations about sexual health, and having easy access to condoms and clinical services are other ways that adolescents identified to improve their sexual health. On a broader level, adolescents recognized the influence that the media has on their sexual health. For example, participants suggested that sex should be less visible in the media, because “They advertise sex on TV shows like it's nothing.”

4.6 RECOMMENDATIONS FOR EDUCATORS

Participants provided explicit and implicit recommendations for how health educators and school faculty can improve sexual health education programming and services. Adolescents discussed what they believe are effective components of sexual health education programs. A primary suggestion is that that educators provide students with the information that they need to maintain their sexual and reproductive health. They believe that since health class is mandatory

by law, educators should make use of that time by teaching students useful topics, rather than giving them the same information about drugs and relationships over and over again, or teaching abstinence only. Similarly, adolescents do not want information to be withheld from them. For example, they said that it is “bullshit” that teens are required to have health education classes but aren’t given the information that they need to protect themselves. Participants also suggested that educators place a focus on what adolescents want to know and create a sexual health education class that is “centered around what students are really curious about.”

Another main suggestion for educators is to reduce the stigma associated with sexual health in school-environments. Participants expressed that their school should cultivate a more open environment in which students feel more comfortable discussing sexual health and asking their own questions. Some felt as though the idea that “It's OK to Ask Someone” should be emphasized in schools. Others specifically cited the stigmatized nature of sexual health topics as something that has prevented adolescents from asking their questions; they believe that a lack of openness among adolescents may be a result of the education system, and that cultivating a new culture of openness in schools will “fix the cycle [...] like a chain reaction,” thus improving the overall quality of sex education in schools. Participants also suggested that educators offer a space for adolescents to anonymously ask their questions, so that even those that feel uncomfortable asking in front of people will still have the opportunity to get answers.

Additionally, participants suggested that educators change their attitudes about teen sexuality. Adolescents feel as though they are not taught about sexual health because of educator and parent ideas about when it is appropriate to expose young people to these topics. However, they say that adults need to “move past thinking about [adolescent sexuality]” so that teens can get the information they need and “be safe.”

Participants also expressed that educators could be more specific, direct, and include real world examples that are relevant to the adolescents' lives in their lessons. They also suggested that educators introduce sexual health topics earlier in adolescents' education, before most become sexually active. For example, they note that they do not currently get STD instruction until about tenth grade, but find that to be unhelpful as some students are already sexually active at that time and "they probably already have an STD by [then]."

Additionally, participants recognized that there is an emotional aspect of sex education that educators should be aware of. Adolescents want to feel supported during sex education, and recalled feeling alone during health class because they were not validated in their personal choices regarding sexual activity or told that it is ok to feel however they are feeling. Participants mentioned that sometimes adolescents do not pay attention in sexual health education classes because they were bored. However, some noted that when educators asked students to apply the lesson to real world scenarios, adolescents found the subject fun and engaging rather than boring, and thus wanted to pay more attention to the educators. Finally, participants praised Boost for the Future programming because it is taught by peers, who are more similar to them than adult educators. While this is not necessarily a suggestion, educators, can use this information to plan better sexual health education programs.

4.7 POTENTIAL CHANGES TO CURRICULA

Participants recognized the narrow breadth of topics covered in sex education, and understood that there is more that could be taught in health classes. They explained that they are tired of the focus on drugs and relationships and felt that their time is being wasted by not being

taught about other sexual health topics. They also expressed that abstinence-only education is not effective in promoting health. Participants suggested topics beyond drug use, relationships, and abstinence that should be emphasized or added to sexual health curricula. Some participants brought up themes that are related to relationships, such as loyalty. Others noted that it is important for adolescents to understand how not to be abusive in relationships, in addition to only being taught to identify when they are victims of abuse. Participants also suggested adding or emphasizing topics such as methods of contraception; STDs, including transmission, prevention, and symptoms; gender and sexuality, or "LGBTQ+ stuff"; sexual hygiene; masturbation; and anatomy.

By asking their own sexual health questions during the focus group, adolescents in Group B demonstrated that there are several topics that they want or need to know more about. Questions that these participants asked were about topics such as anatomy, pregnancy risk, contraceptives, and STDs. See Table 6 for a list of questions that Group B participants asked during the focus group. In addition to directly asking focus group facilitators questions, Group B participants demonstrated a lack of knowledge about sexual health through their discussion, primarily by making inaccurate claims to facilitators and other participants. For example, participants claimed that they are unaware of how often birth control must be taken; that birth control can "make your butt grow"; that you have to be eighteen to buy condoms at pharmacies; and that the female genitalia has only one opening. They also expressed uncertainty about how prostate exams work and if internal condoms are painful.

Table 6: Group B Sexual Health Questions for Facilitators

"Why does females have ... I don't know the exact word, but [...] A click."
"What is a blue waffle?"
"What does the patch do?"
"Is [the internal condom] painful?"
"Is there a such thing as a two-night stand?"
"Why does the vagina stink?"
"Can you get pregnant by precum?"
"What is precum?"
"What are the chances of getting pregnant from precum?"
"What is the right way to put a condom on?"
"What are blue balls?"
"What's a discharge from a girl?"
"Can you talk about STDs?"
"Can you die from AIDS?"
"Why do we get boners out of nowhere?"
"Where do STDs even come from?"
"Why does the vagina grow hair?"
"Why does the vagina get wet?"

4.8 ADOLESCENT LANGUAGE AND ATTITUDES REGARDING SEXUAL HEALTH

Through their language, participants in Group B demonstrated negative attitudes regarding sexual health topics. First, adolescents in this group illustrated their stigmatized

attitudes towards sexual health topics. Participants implicitly and explicitly referred to sexual health topics as inappropriate or negative. They described songs, explicit content on social media, and references to anal and oral sex as “inappropriate” or “nasty.” Upon mention of oral and anal sex, participants declared that they were “not old enough to hear this.” Further, participants declared that their estimate of 80%-100% of youth as sexually active is “*not* good.” They also illustrated the stigma of sexual health topics, particularly sexual activity and menstrual products, by clearly and defensively stating that they do not use birth control, have sex, or use tampons.

Additionally, adolescents in Group B used disrespectful language to talk to and about each other in the context of sexual activity. Participants referred to peers as “hoes” or judged sexually active peers as “nasty” or “disgusting.” They brought up a peer who had explicit photos of themself circulated, but declared with disgust “I don't hang with her.” They also discussed the context in which sex is brought up in their everyday lives, and noted that it “doesn't really come up unless a hoe walks past.” Similarly, participants said that discussions about sex are usually started if a girl with “big body parts” walks past and peers will “start talking about what they’re going to do to them [or] what they did to them.” This disrespectful language that adolescents use towards each other illustrates their stigmatized attitudes towards sexual activity. In contrast, participants in Group A did not use this language, but did note that it is prevalent in their school. They explained that many of their peers do not want to ask sexual health questions in school because they fear being called sluts or whores.

Finally, throughout the discussion, several Group B participants demonstrated homophobic attitudes. Participants believe that it is “gay” for young men to get sexual health services from a male provider. They expressed feelings of discomfort, and described it as “nasty”

for male providers to treat young men. Additionally, adolescents in Group B used disrespectful and inappropriate language to describe a transgender cousin, saying “she is a man” and asking “she don’t got no boobs no more?” Participants in Group A, however, spoke respectfully about LGBTQ+ issues, and in fact praised Caitlyn Jenner (an openly transgender woman) and other celebrities for being open about their gender and sexual identities.

5.0 DISCUSSION

Findings of this study suggest that adolescent sexual health in Allegheny County has the potential to be improved through significant changes in current sexual health education policy and practices, as well as through expansion of sexual health services in the community. Although this work does not report on adolescent sexual health outcomes, results suggest that adolescents are dissatisfied with the sexual health education that they receive and not getting the information they need to maintain their health.

Results also suggest that a majority of adolescents in Allegheny County are sexually active, a finding that is consistent with the literature. Adolescents, especially those that are sexually active, are in need of accurate sexual health information in order to have safer sex and maintain healthy relationships. Further, adolescents in this study recognized that the sexual health education that they receive in school is lacking. School-based sex education should be student-centered, relevant to adolescent lives, and focused on meeting adolescent needs and answering their questions. It should also begin earlier and more often in students' education, with topics introduced throughout childhood. This is consistent with the SIECUS guidelines, which recommend that most topics are introduced to children as early as kindergarten (Sexuality Information and Education Council, 2004). Additionally, sexual health education should be more direct and specific, and adolescents should feel emotionally supported through their developing sexuality and adolescent years of change.

Many participants had a hard time remembering much of the information that they may have learned in school, or simply stated that they were not paying attention in class. For example, one participant said that they were learning about the patch in school as a form of contraception, but later students from the same school asked what the patch does. This suggested a disconnect between the information provided to adolescents and the information that they actually learn. Thus, sex education programming both in schools and with community-based organizations must be designed to be more engaging, so that adolescents are more likely to pay attention and remember the information.

Topics covered in curricula for school-based sexual health education must be expanded beyond abstinence, drugs, and relationships. While some participants did report learning about a variety of other topics, including anatomy, contraceptives and STIs, it appeared as though sex education was centered around abstinence, drugs, and relationships. Curricula should cover sexuality and gender, masturbation, and sexual hygiene, and should be more thorough with topics such as contraception, anatomy, and STIs. Most participants understood that there are many types of myths and misinformation circulating among young people, and some showed susceptibility to these myths. Others were able to recognize that some sources of information, such as the Internet and peers, are not accurate and reliable. As reflected in the literature, the Internet appears to be a top source of sexual health information for teens. Sexual health education programming must provide adolescents with media literacy skills, such as the ability to debunk myths, tell the difference between accurate and inaccurate sources, be critical of their sources of information, and find accurate sources of information on their own. Additionally, sexual health education programs should provide adolescents with online resources that are known to be trustworthy. Participants in Group A who participated in the Peer Helpers program

were able to identify sources that are accurate or inaccurate, particularly because that skill was included in the Peer Helpers curriculum.

Group A participants who were Peer Helpers also found the program to be valuable simply because it supplemented their school-based sex education. They recognized that the program was filling gaps in their school curriculum, and that they were getting information from Peer Helpers that they would not have otherwise been provided. Overall, participants of this study who were Peer Helpers demonstrated a greater understanding of sexual health topics compared to participants who were not Peer Helpers. Participants of the latter group asked focus group facilitators many questions about sexual health, suggesting that they are not being taught the information that they need, are not paying attention in class, do not feel comfortable asking questions in school, or most likely some combination of these factors. Addressing these factors can mitigate the poor health outcomes that may result from a lack of sexual health knowledge.

As reflected in participants' lack of knowledge, their homophobic comments, and suggestions for curriculum improvement, LGBTQ+ adolescents are left of of sexual health education. While some participants were able to identify that LGBTQ+ topics are excluded from discussions in school about sexual health, others expressed ignorant comments which suggests exclusion of their LGBTQ+ peers. With curricula that is not inclusive of all gender identities and sexual orientations, some students may not be getting the information that they need to maintain their sexual health and healthy relationships. Further, neglecting to discuss LGBTQ+ topics means that some students may not get any exposure to these ideas, thus reinforcing homophobic or transphobic attitudes. Often, adolescents' problematic attitudes and ways of speaking can be attributed to a lack of knowledge or exposure. For example, one group of participants discussed someone's cousin, who recently began taking testosterone. In this exchange, it was clear that

participants lacked the knowledge and vocabulary with which to discuss this in a respectful way. It should not be assumed that the participants had negative beliefs towards someone being transgender (though some adolescents may feel this way); rather, we should arm students with the skills and vocabulary to discuss these issues in a respectful and open manner.

Similarly, participants demonstrated slut shaming and judgment of peers targeted at their bodies or sexual activity. Again, adolescents should be taught to approach these topics with respect and understand how consent plays into the way in which they interact with others. Another way to address slut shaming, body judgment, and sexual harassment that is evidently present in schools is to work towards shifting the culture of schools by cultivating a more open environment with less stigma associated with sexual health. While a culture change is difficult to tackle, improving sexual health education curricula and beginning sexual health education earlier in a student's academic career may make an impact, as suggested by the SIECUS guidelines. These changes would help adolescents grow up with a sex positive attitude and be open to asking questions in order to get the sexual health information they need.

Even if adolescents are brought up with positive exposure to sexual health education topics, parents, educators, and other school staff must adjust their attitudes about sexual health education. Adults must stop viewing adolescent sex as "bad" or "inappropriate" and accept that adolescents are sexually active. When adults cannot acknowledge this truth and do not provide adolescents with the sexual health information that they do in fact need, they are doing a disservice to young people and their health. Further, the view that sexual health topics are inappropriate can feel condescending to adolescents. These adolescents know what they want and need to know, yet adults think they know better. To be denied information by a system that is supposed to support them is disrespectful and harmful to adolescents. If adults cannot change

their attitudes about sexual activity, adolescents will grow up with sex-negative attitudes themselves as well as and stigma surrounding sexual health information, and may possibly pass these attitudes on to their own children, thus furthering a cycle of stigma.

Participants spoke about several organizations, such as PPWP, PAAR, and Boost for the Future that provided sexual health education in schools. These lessons were most likely meant to supplement school-based sexual health education, and participants noted that some aspects of these programs were helpful, including being peer-led, teaching more information, and providing real world scenarios for adolescents to apply information to. However, like school-based sexual health education, these programs run by community-based organizations have flaws. Participants disliked that the peer-led lessons felt scripted, the lessons sometimes felt vague or indirect, or the material was already covered in school-based classes. Community-based organizations should coordinate with schools to ensure that they are in fact filling gaps in adolescents' sexual health education, rather than repeating it. Additionally, these organizations should be contributing to sexual health education advocacy in Allegheny County. While school policies may not allow community-based organizations to discuss certain topics with their students, these organizations can work towards challenging and changing these policies to secure access to sexual health education for all adolescents.

In terms of sexual health services, participants reported that they get services from local clinics and pharmacies, PPWP, the Urban League, and the Allegheny County Health Department STI clinic. To meet adolescent needs, services should be better advertised to teens, especially those services that are provided by community-based organizations. Participants suggested that many adolescents do not know about the services that community-based organizations provide for teens, and are thus missing out on important resources. While PPWP, the Urban League, the

Allegheny Health Department, and many other community organizations provide sexual health services for adolescents, these services are not effective if adolescents do not know that they exist. Participants involved with PPWP echoed these sentiments regarding IOTAS, the text line that provides answers to adolescent questions regarding sexual health and relationships. While IOTAS is a valuable resource that many adolescents have utilized, it could act as a source of information for many more if it was more well known. With better advertising that reaches more adolescents, community-based organizations and programs can maximize their impact.

Additionally, many participants recommended that schools provide menstrual products, condoms, and other sexual health supplies to their students. Not only would this reduce stigma of sexual health topics, but it would also significantly increase adolescents' access to these products. With increased access to condoms and other safer sex supplies, adolescents will feel more empowered to have safer sex, thus leading to a lower incidence of unplanned teen pregnancies and STIs.

Notably, a large difference was observed between Groups A in B in their knowledge, attitudes, and satisfaction with their sexual health education. Specifically, participants in Group A, who were involved in Peer Helpers, were able to recognize and debunk myths, identify gaps in their sexual health curriculum, and demonstrated a nuanced perspective about sexual health education. In contrast, participants in Group B demonstrated a serious lack of sexual health knowledge, spoke about sex and sexual health topics in problematic and disrespectful ways, and did not express particular dissatisfaction with their sexual health curriculum besides explicitly identifying some topics that they would like to learn more about. The one participant who was interviewed in Group C was more similar to Group B than A in terms of both demographic

characteristics and the way she discussed sexual health education, despite being involved in Peer Helpers.

These differences may be related to the demographic differences between the two groups, which had contrasting racial and potentially socioeconomic characteristics. This is consistent with the literature that shows racial disparities in adolescent pregnancy and STI rates. Additionally, participants from group A attend a school with a 96.7% graduation rate and 23% economically disadvantaged student population, while participants from group B attend a school with 63% graduation rate and 81% economically disadvantaged student population. Differences in the sexual health education experiences of groups A and B may be tied to racism and classism, as well as the way that these structures impact access to sexual health resources. These observations suggest that in addition to advocating for improved sexual health education for all students, additional resources should be allocated to less privileged schools in order to work towards sexual health equity.

Changes in both policy and practice can improve sexual health education and adolescent sexual health outcomes. On the policy level, comprehensive sexual health education should be required in all schools and federal funding should no longer be used towards abstinence only or sexual risk avoidance education. In particular, the Real Education for Healthy Youth Act (RHEYA, H.R.3602) was introduced to the House of Representatives in July of 2017 and is currently under review by the Subcommittee on Health. The bill would require the Department of Health and Human Services and Department of Education to provide grants for comprehensive sex education for adolescents and young adults and for training school faculty to teach comprehensive sex education. These grants may not be used for health education programming that does not meet certain standards, thus incentivizing medically accurate,

comprehensive, and inclusive programming. The bill also amends existing bills to allow federal funding to be used to distribute contraception in schools and will repeal the abstinence education program (United States Congress). A Pennsylvania bill (Pennsylvania Healthy Youth Act, S.B.1338) was introduced to the state senate in 2016, which would require public schools to provide age appropriate and medically accurate sexual health education, with specific content requirements including topics such as consent and sexting (Pennsylvania State Senate). Unfortunately, the bill failed due to Pennsylvania senate adjournment. With greater advocacy from stakeholders and improved political circumstances, bills like RHEYA and PA SB1338 will have a greater chance of being made into law.

In terms of practice, there are several changes that can be made by school districts, individual schools, and community-based organizations. Sexual health education, including the limited curricula that may already be in place in schools, should be adapted to be more inclusive of people of all gender identities, sexual orientations, and racial or ethnic backgrounds. Lessons should be centered around students and their questions, and should be engaging and relevant to adolescent experiences. Both school and home environments should be more open, accepting, and free of stigma to enable the flow of information between educators and/or parents and adolescents. Adult attitudes surrounding adolescent sexual health should be altered to recognize the challenges that adolescents face and meet their needs accordingly. Sexual health supplies such as condoms and menstrual products should be distributed at school. Community-based organizations should improve their advertising to broaden their reach and meet the needs of more adolescents. Finally, community-based organizations, educators, parents, and other stakeholders must continue to advocate for comprehensive sex education for all adolescents, primarily by supporting policies like RHEYA and PA SB 1338.

Additionally, the social ecological model can be applied to improve the sexual health of adolescents in Allegheny County (Figure 5). The most effective interventions address factors on multiple levels. Adolescent sexual health can be improved through sexual health education by addressing factors on multiple levels. On the intrapersonal, or individual level, by expanding sexual health curricula to improve adolescent knowledge of communication skills including condom negotiation, contraceptives, pregnancy, STIs, contraceptives, and safer sex practices. Sexual health can also be improved through sexual health education by providing adolescents with the tools to combat stress, low self esteem, depression, and substance use, and by discussing how these factors impact sexual health. While adolescents will not stop consuming media or pornography, sexual health education can help them to become more media literate and think more critically about media portrayal of sex and its impacts on health. Additionally, providing adolescents with real world scenarios and more engaging sexual health lessons can increase self-efficacy and confidence in communicating with a partner, saying no to unprotected sexual activity, and making healthier decisions. In addition to increasing knowledge of contraception, interactive class discussions can improve adolescent attitudes towards contraception.

On an interpersonal level, improved education can provide adolescents with the skills to communicate with partners about sexual activity and sexual health; respond to peer pressure in effective ways and avoid pressuring their peers; avoid negative peer influence; and support each other in making healthy decisions. On an institutional level, the overall quality of sexual health education can be improved, including better training for health educators. Additionally, improving sexual health education to cultivate more positive attitudes about sexual health topics may contribute to reduced stigma in schools.

Sexual health education can contribute to more positive outcomes by addressing factors on a community level, such as improving media literacy and providing adolescents with increased access to accurate sexual health information. Not only can education programs provide adolescents with information in school, but they can also help students to understand how to find accurate information on their own. Additionally, schools and community organizations can collaborate to link adolescents with sexual health services and resources. Finally, on a policy level, adolescent sexual health can be improved through policy that mandates comprehensive sexual health education in all schools.

Community-based organizations can also contribute to improving adolescent sexual health by addressing factors on multiple levels. On an intrapersonal level, community-based organizations can address adolescents' perceived barriers to contraceptive use, for example by distributing condoms or providing adolescents with resources regarding access to contraceptives. On an interpersonal level, community-based organizations can create programming to improve the strength of parent/child relationships, parent/child communication, family attitudes towards sexual activity and contraceptive use, and parent knowledge of sexual health topics. Further, these organizations can work to reduce overall adolescent STI and pregnancy rates in specific communities.

On an institutional level, both schools and community-based organizations can work to increase adolescent access to contraceptives and menstrual products. Organizations can also help adolescents and parents to navigate the healthcare system, for example by accompanying families through complicated insurance processes and by connecting adolescents with quality and affordable healthcare. On a community level, community-based organizations can increase adolescent access to contraceptives and sexual health services; improve advertising and outreach

for community health programs or services; and increase collaboration between themselves, schools, and providers. Finally, on a policy level, community-based organizations can advocate for policy that will increase adolescent access to contraceptives and other sexual health services. Overall, both the education system and community-based organizations can work towards improving adolescent sexual health by addressing factors on all levels of the social ecological model.

Intrapersonal	Interpersonal	Institutional	Community	Policy
• Perceived risk of pregnancy and STIs • Perceived susceptibility to STIs • Confidence in contraceptive use • Confidence in condom negotiation • Confidence in ability to say no to sexual activity or unprotected sexual activity • Impulsivity • Depression • Self esteem • Stress • Alcohol and drug use • Perceived barriers to contraceptive use • Attitudes about condoms or other contraceptives • Race, gender, and sexual orientation stress • Communication skills • Confidence in ability to make healthy decisions regarding sexual activity • Spirituality and religious beliefs • Consumption of pornography and other media • History of sexual abuse • Knowledge of sexual health and safer sex practices	• Degree of family support • Family cohesiveness and connectedness • Parent/child communication • Actual parental monitoring • Perceived parental monitoring • Family structure • Conversations about sexual activity and sexual health topics with partners • Partner support of condoms and other contraceptives • Peer pressure to drink, smoke, or have risky sex • Partner's risk-taking • Peer support • STI and teen pregnancy rates in community • Strength of parent/child relationships • Age of partner • Family attitudes towards sexual activity and contraceptive use • Parent knowledge of sexual health topics • Behavior of siblings and friends • Time spent on online social media • Parental attitudes towards pornography	• School involvement in sexual health, including quality of school-based sexual health education and services and qualifications and training of those that teach school-based sexual health education • Student access to condoms in school • Stigma surrounding sexual activity and sexual health topics in schools • Healthcare systems approach to adolescent sexual health • Health insurance coverage of sexual health care and contraceptives • State and local health department support of sexual health services through health care systems and sexual health programming in schools • Availability of affordable, quality sexual health care	• Peer norms regarding sexual activity and safer sex practices • Positive school environments • Media • Access to contraceptives, sexual health services, and sexual health education • Visibility of sexual health services through advertising • Quality of existing services provided by community based organizations • Linkage or collaboration between community based organizations, providers, and schools	• Policy regarding sexual health education in schools • Policy regarding contraception and abortion access Key: Blue text: Areas for intervention from school-based sex education Green text: areas for intervention from community based organizations Black text: may not be intervened on by school sex education or community-based organizations

Figure 5: Social Ecological Model Areas for Potential Intervention

6.0 CONCLUSION

6.1 LIMITATIONS

There are several limitations to this study. First, due to limited funding and time constraints, the sample size of this study is small. All of the participants of this study were already involved with PPWP in some capacity, including some that directly received sexual health education in the Peer Helpers program. The teens involved in Peer Helpers already support and understand the importance of comprehensive sexual health education. This leaves them more likely to feel dissatisfied with the sexual health education that they receive in school yet also makes them more aware of the topics that are left out in their school-based sexual health education. Additionally, due to convenience sampling methods, the sample is not representative of all students in Allegheny County. Finally, due to recruitment challenges, a planned third focus group was adapted to an in-depth interview when only one participant arrived with a signed consent form. This speaks to the difficulty of focus group recruitment, especially when done through community-based organizations.

A second limitation is that the second focus group had a large number of participants, which led to a loud discussion in which participants spoke over each other. Additionally, participants frequently joked with each other and engaged in multiple side conversations, which acted as a distraction from the focus group itself. This behavior may indicate participants'

discomfort with the content of the discussion, may have been their way of shielding themselves from embarrassment. However, due to participants' crosstalk and side conversations, some data may have been lost over the course of the discussion. With better funding, more time, and increased connections with youth, future studies may attempt to limit the number of participants in each focus group in order to avoid these disorderly discussions.

A third and final limitation is the sensitive nature of the research questions. Sexual health is a stigmatized topic that many adolescents may not have felt comfortable discussing, even when research questions were framed generally rather than referring to participants personally. Some participants, primarily those who did not participate in the Peer Helpers program, censored themselves when discussing some sexual health topics. Additionally, one focus group was facilitated in a space associated with a community-based organization. Adults who oversee the youth who were participating in the focus group stayed in the room during the discussion. This may have impacted participants' responses.

6.2 NEXT STEPS

This work is a formative step in a larger sexual health needs assessment process, and results of this study will be used both to guide additional research endeavors within that process and to advocate for improved sexual health education and services locally. To build on this work, it is suggested that members of the BGEA comprehensive sexuality education working group continue to explore adolescents' experiences with sexual health education in Allegheny County. In particular, the working group should consider using survey methods to capture the experiences of a more representative sample of adolescents. Additionally, in-depth interviews should be

conducted with adolescents from a variety of backgrounds beyond those that are already involved in community-based organizations' work.

Although more research is necessary to fully understand adolescent sexual health education and services in Allegheny County, these results may still be used by community-based organizations to improve their services and by all stakeholders to more effectively advocate for improved sexual health education and services in local schools. Improving sexual health education and services will contribute to more positive sexual health outcomes among adolescents, and if resources are allocated effectively, will reduce sexual health disparities.

BIBLIOGRAPHY

American Adolescents' Sources of Sexual Health Information (Fact Sheet). (2017). New York, NY: Guttmacher Institute.

Bleakley, A., Hennessey, M., & Fishbein, M. (2006) "Public Opinion on Sex Education in US Schools." Archives of Pediatrics & Adolescent Medicine, vol. 160, Nov. 2006, pp. 1151–1156., doi: 10.1001/archpedi.160.11.1151.

Bridges, E., & Hauser, D. (2014, May). Youth Health and Rights in Sex Education. Retrieved March 21, 2018, from http://www.futureofsexed.org/youthhealthrights.html

Bullying and LGBT Youth. (2015, August 17). Retrieved January 13, 2018, from http://www.mentalhealthamerica.net/bullying-and-gay-youth

Chen, X., Taylor, M., Mertz, K., Torso, L., & Wiesenfeld, H. C. (2014). 2014 Annual STD Report (Rep.). Pittsburgh, PA: Allegheny County Health Department.

Comprehensive Sex Education: Research and Results (Rep.). (2009, September). Retrieved January 10, 2018, from Advocates for Youth website: http://www.advocatesforyouth.org/publications/1487

Diclemente, R. J., Salazar, L. F., Crosby, R. A., & Rosenthal, S. I. (2005). Prevention and control of sexually transmitted infections among adolescents: the importance of a socio-ecological perspective—a commentary. *Journal of the Royal Institute of Public Health, 119*(9), 825-836. doi:10.1016/j.puhe.2004.10.015

Donovan, Megan K. "The Looming Threat to Sex Education: A Resurgence of Funding for Abstinence-Only Programs?" Guttmacher Policy Review, vol. 20, 2017.

Eisenberg, M. E., Bernat, D. H., Bearinger, L. H., & Resnick, M. D. (2008) "Support for comprehensive sexuality education: Perspectives from parents of school-Age youth." Journal of Adolescent Health, vol. 42, 2008, pp. 352–359., doi:10.1037/e456032008-005.

GLSEN. (2017). School Climate in Pennsylvania (State Snapshot). Retrieved January 13, 2018, from https://www.glsen.org/sites/default/files/Pennsylvania State Snapshot - NSCS.pdf

Hajizade-Valokolaee, M., Yazdani-Khermandichali, F., Shahhosseini, Z., & Hamzehgardeshi, Z. (2016). Adolescents' sexual and reproductive health: an ecological perspective. *International Journal of Adolescent Medicine and Health*, 29(4). doi:10.1515/ijamh-2015-0097

Heller, J. R., & Johnson, H. L. (2013). Parental opinion concerning school sexuality education in a culturally diverse population in the USA. *Sex Education*, 13(5), 548-559. doi:10.1080/14681811.2013.775063

High School Youth Risk Behavior Survey: Pennsylvania 2015 Results. (2015). Retrieved January 13, 2018, from https://nccd.cdc.gov/youthonline/App/Results.aspx

High School Youth Risk Behavior Survey: United States 2015 Results. (2015). Retrieved March 6, 2018, from https://nccd.cdc.gov/youthonline/App/Results.aspx

Human Rights Campaign. (2015). *A Call to Action: LGBTQ Youth Need Inclusive Sex Education* (Rep.). Retrieved March 21, 2018, from Human Rights Campaign website: https://assets2.hrc.org/files/assets/resources/HRC-SexHealthBrief-2015.pdf?_ga=2.171063840.1077995885.1521675775-1319786654.1521675775

Kay, J. F., & Jackson, A. (2008). Sex, Lies & Stereotypes: How Abstinence-Only Programs Harm Women and Girls (Publication). New York, NY: Legal Momentum. Retrieved February 18, 2018.

Mcleroy, K. R., Bibeau, D., Steckler, A., & Glanz, K. (1988). An Ecological Perspective on Health Promotion Programs. *Health Education Quarterly*, 15(4), 351-377. doi:10.1177/109019818801500401

Miller, E., Bear, T., Hacker, K., & Ricci, E. M. (2015). Healthy Allegheny Teens Survey (HATS) (Rep.). Pittsburgh, PA: Allegheny County Health Department.

National Alliance on Mental Health. (n.d.). LGBTQ. Retrieved April 06, 2018, from https://www.nami.org/Find-Support/LGBTQ

National Center for Health Statistics: Stats of the State of Pennsylvania. (2017, March 31). Retrieved January 13, 2018, from https://www.cdc.gov/nchs/pressroom/states/pennsylvania/pennsylvania.htm

National Coalition for Sexual Health. (n.d.). Sexual Health of Youth in the United States: An Audience Profile. Retrieved February 19, 2018, from https://nationalcoalitionforsexualhealth.org/data-research/audience-profiles/document/AdolescentBackgrounder-final.pdf

Pennsylvania State Health Profile 2015 (Rep.). (2015). Retrieved January 13, 2018, from National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention: Center for Disease Control and Prevention website: https://www.cdc.gov/nchhstp/stateprofiles/pdf/Pennsylvania_profile.pdf

Pennsylvania State Senate. (2016). Senate Bill 1338. Retrieved March 01, 2018, from http://www.legis.state.pa.us/cfdocs/billInfo/billInfo.cfm?syear=2015&sind=0&body=S&type=B&bn=1338

Peter, C. R., Tasker, T. B., & Horn, S. S. (2015). Parents' attitudes toward comprehensive and inclusive sexuality education: beliefs about sexual health topics and forms of curricula. *Health Education, 115*(1), 71-92. doi:https://doi.org/10.1108/HE-01-2014-0001

Planned Parenthood Federation of America. (2012). *Sex Education in the United States* (Issue brief). New York, NY: Planned Parenthood Federation of America.

Santelli, J. S., Kantor, L. M., Grilo, S. A., Speizer, I. S., Lindberg, L. D., Heitel, J., . . . Ott, M. A. (2017). Abstinence-Only-Until-Marriage: An Updated Review of U.S. Policies and Programs and Their Impact. Journal of Adolescent Health, 61(3), 273-280. http://dx.doi.org/10.1016/j.jadohealth.2017.05.031

Sexuality Information and Education Council of the United States (SIECUS). (2004). Guidelines for Comprehensive Sexuality Education: Kindergarten-12th Grade, Third Edition. Retrieved January 14, 2018, from http://www.siecus.org/_data/global/images/guidelines.pdf

Sexuality Information and Education Council of the United States (SIECUS) State Profiles: A Portrait of Sexuality Education, Fiscal Year 2017, Pennsylvania (Publication). (2017). Washington DC: Sexuality Information and Education Council of the United States

Sexuality Information and Education Council of the United States (SIECUS). (2005, August). "I Swear I Won't!" A Brief Explanation of Virginity Pledges . Retrieved January 17, 2018, from http://www.siecus.org/index.cfm?fuseaction=Page.ViewPage&PageID=1202

United States Congress. (2017, August 04). H.R.3602 - 115th Congress (2017-2018): Real Education for Healthy Youth Act of 2017. Retrieved March 01, 2018, from https://www.congress.gov/bill/115th-congress/house-bill/3602

Youth Risk Behavior Surveillance System (YRBSS). (2016, August 11). Retrieved January 13, 2018, from https://www.cdc.gov/healthyyouth/data/yrbs/index.htm