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Sexual Orientation and Gender Identity Differences in Initiation and Utilization of Sexual and
Reproductive Health Services

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Abstract

Statement of the Problem. Adolescents and young adults underutilize sexual and reproductive health (SRH) services, contributing to health disparities related to sexually transmitted infections (STIs) and unintended pregnancies. These SRH health outcomes are especially relevant to youth who do not identify as cisgender or heterosexual. **Summary of the Literature.** A review of the literature showed that receiving appropriate SRH care is crucial for young people, as health-care providers are in a vital position to screen for risk and to support health-promoting behaviors as teens grow into adulthood. **Thesis Statement.** The purpose of this study was to explore barriers and facilitators associated with early initiation of SRH services among Oklahoma emerging adults. The two groups examined were cisgender/heterosexual individuals and lesbian, gay, bisexual, transgender, queer, or other sexual and gender minority individuals (LGBTQ+). The researcher hypothesized that compared to cisgender/heterosexual respondents (H_1), LGBTQ+ respondents will initiate the utilization of SRH services at an older age; (H_2) peers and partners will be stronger influencers on SRH service utilization for LGBTQ+ respondents; and (H_3) LGBTQ+ respondents will report greater numbers of barriers to utilizing SRH services.

Methodology. This retrospective cross-sectional study involved a 46-item online-administered questionnaire to assess young people's experiences with initiating SRH services. Four-hundred adult participants with diverse sexual and gender identities were recruited to provide enough statistical power to find significance. Differences between the two groups were measured using independent t tests and variables were descriptively examined using crosstabulations tables. Analysis was completed using SPSS version 24.0 software. **Results.** The results of an independent t test showed the mean age at initiation of SRH services among LGBTQ+ participants ($M = 16.92$, $SD = 2.39$) was not statistically different from the mean age at initiation

of SRH services among cisgender/heterosexual participants ($M = 17.26$, $SD = 2.41$; $t(356) = 1.317$, $p = .189$). The data violated one of the assumptions of chi-square analysis for the second research question, so influencers on the initiation of SRH services was only examined descriptively. These results showed that peers and partners were hardly influencers on participants initiating SRH services (1.4%), and personal responsibility (44.2%) and recommendations from a provider (27.0%) were the strongest influencers on initiation of SRH services, overall. Finally, the results of an independent t -test found that the mean number of barriers reported by cisgender/heterosexual participants ($M = 2.32$, $SD = 1.84$) was significantly less than the mean number of barriers reported by LGBTQ+ participants ($M = 3.08$, $SD = 2.25$; $t(279) = -3.117$, $p = .002$). Because there was no statistically significant difference in the average age at initiation of SRH services overall between the two groups, the first null hypothesis was accepted. A descriptive examination of the second research question showed that the strongest influencers on initiation of SRH services vary slightly between the two groups. The final null hypothesis was rejected, and the results concluded that LGBTQ+ respondents report a greater number of barriers to utilizing SRH services compared to their cisgender/heterosexual peers.

Significance of Findings. This study adds to the literature on adolescent SRH and factors shaping SRH service utilization among LGBTQ+ and cisgender/heterosexual youth. The findings demonstrate that SRH service utilization remains low for all youth and facilitating access to SRH services is especially important for LGBTQ+ individuals, who report significant barriers to care and poorer sexual health outcomes than their cisgender/heterosexual peers.

Future Research. To address the limitations and gaps in these findings, future research should aim to recruit a more diverse sample and limit the number of measured influencers on SRH utilization to prevent violating assumptions of analysis.

Chapter One: Introduction

Background and Significance

Promoting sexual and reproductive health (SRH) is a fundamental aspect of public health efforts across the globe (Temmerman, Khosla, & Say, 2014). Such efforts are essential to addressing the SRH and wellbeing of adolescents and emerging adults. This is because adolescence is a time of increasing autonomy, sexual exploration, sexual identity development, and sexual risk-taking (Manos et al., 2014; Tornello, Riskind, & Patterson, 2014). Furthermore, adolescence is a pivotal time to address SRH, as behavioral patterns that affect future risk are established at this time (Kerr, Ding, & Thompson, 2013). Receiving appropriate SRH care is crucial for young people. Health care providers are in a vital position to screen for risk and to support health-promoting behaviors as teens grow into adulthood (Breuner & Mattson, 2016; Youatt, Harris, Harper, Janz, & Bauermeister, 2017). Further research is needed to address disparities in SRH outcomes among sexual and gender minority youth and to support adolescents' access to SRH services.

In 2012, HIV/AIDS was the second leading cause of death among young people globally (Otwombe et al., 2015). The U.S. Department of Health and Human Services (HHS; 2018) reports that adolescents ages 15-24 years account for half of the 20 million new cases of sexually transmitted infections (STIs) diagnosed each year. In Oklahoma, adolescents in the same age group account for 55% of Chlamydia cases and 44% of Gonorrhea cases (Oklahoma State Department of Health [OSDH], 2019). STIs, though preventable and often treatable, can cause pain and discomfort in the short term, and they carry long-term health consequences such as infertility, ectopic pregnancy, certain types of cancers, and even death (Agénor, Muzny, Shick, Austin, & Potter, 2017; HHS, 2018). In the U.S., unintended teen pregnancy rates are higher than

those in other developed countries (Guttmacher Institute, 2016). Teen pregnancy is associated with several adverse social and health outcomes, including risk of maternal mortality, premature births, quick secondary births, poverty, and single parenthood (Agénor et al., 2017; Guttmacher Institute, 2016). For Oklahoma, in particular, the teen birth rate was 27.2 per 1,000 females ages 15-19, the third highest in the country in 2018 (Martin, Hamilton, Osterman, & Driscoll, 2019).

Poor SRH outcomes do not affect all adolescents equally. Research has consistently indicated that lesbian, gay, bisexual, transgender, and queer (LGBTQ+) individuals are more likely to engage in sexually risky behaviors and face barriers to care that lead to worse health outcomes when compared to their heterosexual and/or cisgender peers (Klein et al., 2017). For example, sexual minority women, including lesbian and bisexual women, are at greater risk for unintended pregnancy, STIs, and sexual violence compared to heterosexual women (Agénor, Austin, Kort, Austin, & Muzny, 2016). Moreover, sexual minority young women often report lower contraceptive and condom use, more frequent sexual intercourse with males at a younger age, and higher rates of sexual intercourse under the influence of drugs or alcohol than heterosexual young women (Charlton et al., 2013; Tornello, Riskind, & Patterson, 2014). At the same time, gay and bisexual men are the population most affected by HIV, and they account for more than two-thirds of all new HIV cases in the U.S. (Centers for Disease Control and Prevention [CDC], 2018). Compared to heterosexual men, bisexual men have higher rates of HIV, STIs, and cancers related to human papillomavirus (HPV; Reynolds, Fisher, Dyo, & Huckabay, 2016; Rhaman, Li, & Moskowitz, 2019). In Oklahoma, lesbian, gay, and bisexual youth are 1.5 times more likely to engage in sexual activity than their heterosexual peers, putting them at greater risk for the negative SRH outcomes discussed above (OSDH, 2019).

Access to and utilization of SRH services for youth are essential to addressing these poor outcomes. The HPV vaccine is recommended for all youth 11-12 years old and can be administered to youth as young as 9 years old (Petrosky et al., 2015). The American College of Obstetricians and Gynecologists (ACOG; 2014) recommends that the screening and provision of preventative reproductive health care should be initiated between the ages of 13-15 years. This allows for the opportunity to provide educational information, to screen patients for needed services, and to build trust that supports empowered and consistent engagement with the health care system beyond the adolescent years. Women between the ages of 21-29 years should have a Pap test to screen for cervical cancer every three years, and women aged 30-65 years should have the Pap test every five years (ACOG, 2017). Additionally, the CDC (2018) recommends that all adolescents and adults between the ages of 13-64 should be tested for HIV at least once in this age period. Those who have unsafe sex or share injection drug equipment should test for HIV annually. Sexually active women under the age of 25, and those who are older if at an increased risk, are recommended to test for gonorrhea and chlamydia annually. Gay and bisexual men should test annually for syphilis, chlamydia, and gonorrhea. Those at increased risk should test more frequently, including for HIV every three to six months (CDC, 2018).

Despite these recommendations, SRH services remain underutilized among adolescents. Youth often face barriers to accessing SRH services, including lack of SRH knowledge, judgmental attitudes of health care providers, cost of services, distance from a health facility, lack of confidentiality, and lack of confidence in SRH practices (Agénor et al., 2017; Ayehu, Kassaw, & Haliu, 2016; Charest, Kleinplats, & Lund, 2016). For all adolescents, foregoing or delaying utilization of SRH services is often influenced by cultural taboos around sexuality that lead young people to fear or feel shame in accessing these needed services. Among those who

identify as LGBTQ+, these concerns are often further perpetuated not only by their age, but by their sexual and gender minority status (Agénor, Krieger, Austin, Haneuse, & Gottlieb, 2014). Sociocultural norms of heteronormativity, stigma towards LGBTQ+ identities, and real or perceived experiences of discrimination in the health care system negatively affect LGBTQ+ SRH outcomes (Ayehu et al., 2016; Agénor et al., 2016). Jahn, Bishop, Tan, and Agénor (2019) reported that sexual minority young women want their health care providers to know their sexual orientation but are often reluctant to disclose their identity out of fear of judgement and stigmatization. Disclosing one's identity has been positively associated with more satisfactory SRH conversations between sexual minority women and their providers, yet such disclosures often lead to inadequate SRH counseling based on provider assumptions related to sexual identity and behavior (Youatt, Harris, Harper, Janz & Bauermeister, 2017). Providers, for example, may assume that sexual minority women are at lower risk for pregnancy or STIs. Health care providers are often ill equipped and lack training on dealing with adolescent SRH issues and in areas including LGBTQ+ inclusivity. The lack of training among health care providers and bias towards adolescent SRH and LGBTQ+ identities contribute to young peoples' negative experiences in the healthcare system and can deter youth from seeking care altogether (Qureshi et al., 2018; Rahman & Moskowitz, 2019; Rounds, McGrath, & Walsh, 2013).

Determining the underlying factors affecting utilization of SRH services among youth is important to better inform evidence-based public health efforts that facilitate access to SRH services and address SRH disparities among LGBTQ+ youth (Agénor, Muzny, Shick, Austin, & Potter, 2017; Kann et al., 2011). Such efforts are necessary to reduce the burden of physical and psychological morbidity and to improve young people's health, productivity into adulthood, and quality of life (Breuner, & Mattson, 2016; Charlton et al., 2013). These efforts may be especially

beneficial for sexual and gender minority youth, who are most vulnerable to marginalization and discrimination in the health care setting based on their identity.

Existing research in this area largely fails to capture individuals of diverse sexual and gender identities. Studies often focus on cisgender populations, which limits the level of understanding of the SRH needs of transgender and nonbinary individuals. Many studies on SRH focus on the SRH outcomes of women, and many include sexual minority women, but studies on young sexual minority men remain limited (Siconolfi et al., 2013). Consequently, there is little awareness of the disparities in SRH outcomes among sexual and gender minority youth and of how to support adolescents' access to SRH services. This study is significant because the data on the initiation and utilization of SRH services by individuals of diverse sexual and gender identities will inform more effective public health interventions that are designed to provide sexual health information and services to young people and improve SRH outcomes for those most at risk (Donaldson, Lindberg, Ellen, & Marcell, 2013; Kann et al., 2011).

Purpose and Hypothesis

The purpose of this study is to examine the barriers and facilitators associated with early initiation (first-time utilization) of SRH services among LGBTQ+ and cisgender/heterosexual Oklahoma emerging adults. The research questions being asked include: (1) does the average age at initiation of SRH services differ between LGBTQ+ and cisgender/heterosexual individuals? (2) do the strongest influencers on initiation of SRH services differ between LGBTQ+ and cisgender/heterosexual individuals? and (3) do barriers to accessing SRH services differ between LGBTQ+ and cisgender/heterosexual individuals? The null hypotheses state that the average age at initiation of, the strongest influencers to, and the barriers to accessing SRH services will not

differ between LGBTQ+ and cisgender/heterosexual individuals. The research hypotheses include:

- *H₁*: LGBTQ+ respondents will initiate the utilization of SRH services at an older age compared to cisgender/heterosexual respondents.
- *H₂*: Peers and partners will be stronger influencers on SRH service utilization for LGBTQ+ respondents, compared to cisgender/heterosexual respondents.
- *H₃*: LGBTQ+ respondents will report greater numbers of barriers to utilizing SRH services compared to cisgender/heterosexual respondents.

Limitations, Delimitations, and Assumptions

A primary limitation to this study is its cross-sectional design and susceptibility to recall bias. As participants will be asked about past experiences and behaviors, the resulting data will only be as valid as the participants' ability accurately to remember their past and honestly to report their experiences. Similarly, there is potential for bias in this study if participants misrepresent their experience or behaviors by answering in a way that reflects over-reporting of sexual risk-reducing behaviors or under-reporting sexual risk-taking behaviors. This could happen if the participants felt certain expectations about socially acceptable norms around sexual and reproductive health or LGBTQ+ identities. Furthermore, this study is designed to recruit a convenience sample. Due to the sensitive nature of the study outcomes, individuals may forego participating. To maximize study participation, subjects were recruited online, via email and social media announcements, and in print, via flyer distribution and postings. Another limitation of this study is that race/ethnicity is not included as an outcome variable. Although the researcher is not studying race/ethnicity's influence on SRH access, it is important to acknowledge that the intersections of multiple minority identities can perpetuate disparate health outcomes among a

population. Research has indicated that racial/ethnic minorities underutilize SRH services and face a number of barriers to accessing healthcare due to factors including racial bias and discrimination within health care systems (Agénor et al., 2014; Irvine et al., 2014). Having multiple minority identities, such as being LGBTQ+ and Black, Indigenous, or other person of color, can further impact one's SRH and access to SRH services. This study is limited in its discussion of these nuances and focuses solely on sexual and gender identities. Finally, this study will be limited by the fluidity of sexual and gender identities. That is, individuals' sexual and gender identities in adolescence may differ from their identities in adulthood. For some individuals, these identities may change over time and more than once (Goldberg, Reese, & Halpern, 2016).

The delimitations of this study include a convenience sample of Oklahoma emerging adults between the ages of 18 and 25 years. Participants must have access to the internet and be able to read and understand English to complete the online questionnaire.

As this study seeks details on individual behavior and experiences related to SRH, a sensitive topic for some, it is assumed that an online self-administered survey will elicit less biased responses. With the anonymity of recorded and reported responses, participants may be more transparent about their experiences as they will not be face-to-face with another individual whom they may perceive as judgmental, affecting their willingness to share information candidly. It is assumed that the University of Central Oklahoma (UCO) Institutional Review Board (IRB)'s approval of this study's design and methods will increase individuals' comfort in reporting personal information related to their SRH.

Operational Definitions

The following is a list of operational definitions specific to this study:

- Sexual and reproductive health services (SRH services) - These include services that support the prevention and treatment of STIs, including HIV, and that promote family planning. Previous studies have included such services as STI testing, HIV testing, HPV vaccination, cervical cancer screening (Pap testing), information and counseling, contraception, condoms, and medical abortion (Agénor et al., 2016; Ayehu, Kassaw, & Haliu, 2016; Ot wombe et al., 2015). For the purposes of this research study, SRH services will include all these previously mentioned services with the addition of HIV treatment and prevention measures, such as pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP).
- Sexual and gender minority/LGBTQ+ - As a shorthand for sexual and gender diverse individuals, LGBTQ+ designates individuals who identify as lesbian, gay, bisexual, transgender, and/or queer. The “+” importantly denotes other identities often captured by this acronym that would reflect diversity in sexual orientation and/or gender identity. These include agender, two-spirit, nonbinary, intersex, pansexual, demisexual, asexual, and many other identities. As this list is extensive, with no universally accepted set of labels, and as the goal of this research project is to capture a diverse range of experiences, we use the term sexual and gender minority to encompass those who do not identify as exclusively cisgender and/or heterosexual (Ela & Budnick, 2017). “Sexual and gender minority” and “LGBTQ+” are used interchangeably in this study (Charest, Kleinplatz, & Lund, 2016; Comfort & McCausland, 2013). The shortened acronym “LGBT” is used when referring to

participants from studies that solely examined lesbian, gay, bisexual, and transgender identity categories (Comfort & McCausland, 2013; Müller, 2017; Peitzmeier et al., 2014; Qureshi et al., 2018).

- Sex assigned at birth - This relates to one's biological sex, which is usually denoted before or at birth upon examination of an infant's external genitals, and sometimes chromosomes, by a healthcare professional or parents of a newborn. Sex assigned at birth can be male, female, or intersex. The Intersex Society of North America (2008) defines intersex broadly to indicate a range of conditions in which a person's reproductive or sexual anatomy does not exclusively fit typical markers for being female or male.
- Cisgender - This term refers to individuals whose gender identity matches their sex assigned at birth (Charest et al., 2016). For example, someone assigned male at birth who also reports their gender identity as male would be cisgender.
- Transgender- Often referred to as an "umbrella term," it includes any individual whose gender identity does not match their sex assigned at birth. For example, someone assigned male at birth who also reports their gender identity as female would be transgender, or a transgender woman.
- Sexual orientation- Many studies have highlighted that sexual orientation is multidimensional. That is, sexual orientation is a construct comprised of sexual attraction, sexual identity, and sexual behavior (Agénor et al., 2016; Comfort & McCauslan, 2013). These components are related but not necessarily congruous (Ela & Budnick, 2017; Charlton et al., 2013). For the purposes of the study, we will only record individuals' self-reported sexual orientation, also referred to as sexual identity.

- Heterosexual - This term refers to individuals whose sexual identity, attraction, or behaviors are exclusively oriented toward individuals of the opposite sex. These individuals are sometimes referred to as straight.
- Lesbian/gay- Is a term that refers to individuals whose sexual identity, attraction, or behaviors are exclusively oriented toward individuals of the same sex.
- Bisexual- This term refers to individuals whose sexual identity, attraction, or behaviors are among individuals of the same and opposite sex.
- Queer- Also referred to as an “umbrella term,” queer encompasses individuals whose sexual orientation or gender identity is neither heterosexual nor cisgender. Examples include people who are lesbian/gay, bisexual, pansexual, demisexual, asexual, questioning, or another sexual identity that is not straight. Additional examples include those who are transgender, nonbinary/genderqueer/gender non-conforming, genderfluid, questioning, two-spirit, agender, or another gender identity that is not cisgender. This term is also inclusive of intersex individuals.

It is important to note that the dichotomous (same or opposite) way of describing sexual orientation is rooted in a binary framework of understanding of sex and gender. This study recognizes that gender categories are expansive and fluid, and that sex and gender norms are shaped by one’s culture. Gender-expansive categories in this study include transgender, nonbinary/genderqueer/gender non-conforming, two-spirit, agender, or another gender identity that is not cisgender. This study also uses categories such as pansexual, demisexual, asexual, or another sexual identity that is not straight, gay, or bisexual to reflect diverse sexual orientations not commonly included in research. This was done to be inclusive of individuals whose gender and sexual attraction are not solely binary (male/female; gay/straight) or include multiple

categories. For example, pansexual individuals refer to individuals whose sexual identity, attraction, or behavior is not oriented towards any specific sex or gender, including those who are not male or female or who identify with more than one gender category.

Chapter Two: Literature Review

Introduction

Adolescents face a number of barriers when accessing sexual and reproductive health care. Research suggests sexual and gender minority youth experience stigmatization and discrimination for their identities and encounter more barriers to accessing health care compared to their heterosexual and cisgender peers (Charest, Kleinplatz, & Lund, 2016; Charlton et al., 2011; Comfort, & McCausland, 2013; Müller, 2017; Youatt, Harris, Harper, Janz, & Bauermeister, 2017). Sexual and gender minorities or LGBTQ+ individuals are more likely to engage in risky sexual behaviors, indicating that access to and utilization of sexual and reproductive health (SRH) services are especially important for this population (Klein et al., 2017). The purpose of this literature review was to synthesize findings from existing research regarding the utilization of SRH services by individuals of diverse sexual and gender identities. Another aim was to understand better how disparities in SRH health outcomes for LGBTQ+ people are shaped at initiation of these crucial services. This literature review includes 22 articles pertaining to LGBTQ+, heterosexual, and cisgender populations, as well as major findings related to the utilization of SRH services, SRH behaviors, and disparities in SRH health outcomes. The results provide an overview of the articles included in the review and the study characteristics and outcomes. The discussion summarizes the findings and highlights limitations and gaps of the research that might inform future research.

Methodology

To conduct this systematic review, the online database of the University of Central Oklahoma's Max Chambers Library was searched between February 27, 2019 and March 13, 2019. A full list of online databases used can be found in Table 1. Criteria for retrieval and

inclusion were established *a priori* and applied to the search results. Key terms related to the population of interest (LGBTQ+ and heterosexual/cisgender individuals) and outcomes of interest (age at first utilization of SRH services, sexual risk behaviors, and disparities in SRH outcomes) were used to conduct the literature search. Key search terms and phrases are listed in Table 1. Titles were screened to retrieve full-length, primary, and peer-reviewed articles published between 2010 and 2019. Articles met inclusion criteria and were included in a full-text review if the title and abstract were relevant to the population and outcomes of interest. The inclusion criteria were expanded to include studies conducted outside of the United States ($n = 5$) and studies of specific populations based on race/ethnicity ($n = 3$), due to the limited number of relevant studies overall. Furthermore, all types of study designs (*e.g.*, cross-sectional, longitudinal, etc.) were included as long as they were primary and peer-reviewed sources. Table 1 reports the number of articles that were screened, that underwent full review, and that were selected.

The included literature was evaluated for quality by assessing the generalizability (external validity) and risk for bias (internal validity) across study findings. The characteristics of the sample population and health services measured were examined to rate the quality on a scale of low, medium, and high. Studies that included a large sample size ($n > 2,000$), separate sexual orientation and gender identity measures, and clear definitions or guidelines for sexual and reproductive service types were considered high quality (Agénor, Austin, Kort, Austin, & Muzny, 2016; Agénor, Krieger, Austin, Haneuse, & Gottlieb, 2014; Agénor, Muzny, Shick, Austin & Potter, 2017; Charlton et al., 2011; Goldberg, Reese, & Halpern, 2016; Kerr, Ding, & Thompson, 2013; Peitzmeier, Khullar, Reisner, & Potter, 2014; Tornello, Riskind, & Patterson, 2014). Studies that included a large or small sample size, partial or combined categories of

sexual orientation or gender identity, and one or more measure of sexual or reproductive health service types were considered to be of moderate quality (Ayehu, Kassaw, & Haliu, 2016; Charest, Kleinplatz, & Lund, 2016; Charlton, et al., 2013; Ela & Budnick, 2017; Irvin et al., 2014; Otwombe et al., 2015; Rahman, Li, & Moskowitz, 2019; Youatt, Harris, Harper, Janz, & Bauermeister, 2017). Studies with a small sample size ($n < 500$) that did not explicitly define or categorize sexual orientation, gender identity, and SRH service types were considered to be of low quality (Comfort, & McCausland, 2013; Jahn, Bishop, Tan, & Agénor, 2019; Manos, Cui, MacDonald, Parker, & Dummer, 2014; Müller, 2017; Qureshi et al., 2018; Reynolds, Fisher, Dyo, & Huckabay, 2016).

Although no studies compared utilization of SRH services by sexual orientation and gender identity, most of the studies did examine access to critical SRH services or explored influencers and barriers to accessing care among LGBTQ+ individuals. Characteristics and results of the articles that underwent review are summarized in the results section. This includes a brief summary of the included studies, participants, study design, categorization of sexual orientation and gender identity variables, and measured outcomes.

Results

The following section discusses the characteristics and results of the articles that underwent review. A brief summary of the included studies, participants, study design, categorization of sexual orientation and gender identity variables, and measured outcomes are provided.

Study Summaries

Five articles examined SRH behaviors and outcomes among youth and young adults. This included two articles that investigated differences in sexual health behaviors among

participants of diverse sexual orientations (Charest et al., 2016; Tornello et al., 2014) and three articles that examined whether sexual orientation is associated with teen pregnancy and contraceptive use (Charlton, et al., 2013; Ela & Budnick, 2017; Goldberg et al., 2016).

Eight articles investigated utilization of SRH services. Two of these examined sex and youths' access to general and sexual health services (Manos et a., 2014; Ot wombe et al., 2015). Five of these articles examined the associations between sexual orientation and select types of SRH services (Agénor, et al., 2014; Agénor et al., 2016; Agénor, et al., 2017; Charlton et al., 2011; Kerr et a., 2013). Two articles investigated gender identity, sexual orientation, and SRH service utilization (Peitzmeier et al., 2014; Rahman et al., 2019)

Eight articles addressed influencers and barriers to accessing SRH services. Seven of these articles examined the factors associated with SRH service utilization, including experiences of discrimination (Irvin et al., 2014), perceived barriers (Ayehu et al., 2016; Jahn, et al., 2019; Müller, 2017; Qureshi et al., 2018), and gender roles (Reynolds et al., 2016). One article assessed the health priorities of LGBTQ+ individuals (Comfort & McCausland, 2013).

Study Characteristics

Participants. The original goal of the literature search was to identify studies that involved a population with diverse sexual orientations and gender identities. Moreover, the intent was to explore how young people initiated SRH services. Therefore, the descriptions of participants focus mostly on age or age group and sexual orientation and gender identity.

Over half of the articles that underwent review ($n = 12$) were conducted with female participants only. Some of these studies included both youth and adult women, and others included emerging adult and older women. Tornello et al. (2014) focused on adolescent females 15 to 20 years of age ($M = 17.53$), and Charlton et al. (2013) focused on adolescent females 9 to

15 years old and their mothers 24 to 44 years old. Ela & Budnick (2017) focused on young adult women 18 and 19 years old. Goldberg et al. (2016) focused on a slightly older population of young adult women between the ages of 24 and 32 years.

Adult women 21 to 44 years old and 15 to 44 years old were examined in the studies conducted by Agénor et al. (2014) and Agénor et al. (2017), respectively. Agénor et al. (2016) focused specifically on African American young and adult women 16 years of age and older ($M = 28.4$, $SD = 9.2$). Peitzmeier et al. (2014) examined patients 21-64 years old with a cervix, including females and female-to-male (FTM) transgender patients. Jahn, et al. (2019) focused on adult women 18 to 36 years old.

Three articles specifically focused on emerging adult women. Charlton et al. (2011) examined emerging adult women 17 to 25 years of age ($M = 21.6$, $SD = 1.4$), and Kerr et al. (2013) examined undergraduate women 18 to 25 years of age. Youatt et al. (2017) focused on emerging adult women 21-24 years old ($M = 22.0$, $SD = 1.06$).

Several articles did not solely focus on females; some of these articles included males and females, and others explored non-cisgender identities. For example, Manos et al. (2014) examined both male and female adolescents between the ages of 12 and 24 years in Nova Scotia. A similar study looked at both male and female adolescents between the ages of 14 and 19 years, but with a population from South Africa (Otwombe et al., 2015). One article examined adolescents 10 to 24 years old ($M = 17.8$ years, $SD = 2.65$), male and female, in Northwest Ethiopia (Ayehu et al., 2016).

Extending beyond just males and females, one article included cisgender women, transgender women, and transgender men 18 years old and older ($M = 27.1$, $SD = 7.29$; Rahman

et al., 2019). Charest et al. (2016) examined SRH behaviors of emerging adults 18 to 25 years old ($M = 21.1$, $SD = 2.2$), including females, males, and transgender/genderqueer participants.

Three articles specifically examined LGBT participants. Comfort and McCausland (2013) studied adults 18 years of age or older attending the Perth Pride Fairday Festival in Western Australia. Qureshi et al. (2018) studied self-identified LGBT adults 18 years of age and older, in New Jersey. Also focusing on LGBT participants but not specifying an age group, Müller (2017) examined individuals in South Africa.

Two articles included only male respondents. Irvin et al. (2014) focused on HIV-negative Black men who have sex with men (MSM; $M = 38.0$ years) and Reynolds et al. (2016) focused on adult men 18 years of age or older ($M = 39.0$, $SD = 14.0$ years).

Study Design. Ten articles that underwent review utilized an existing data set or survey tool (Agénor et al., 2014; Agénor et al., 2017; Charest et al., 2016; Charlton et al., 2011; Charlton, et al., 2013; Ela & Budnick, 2017; Goldberg et al., 2016; Kerr et al., 2013; Manos et al., 2014; Tornello et al., 2014). Half of these were cross-sectional in design. Charest et al. (2016) utilized an online survey adapted from the Weighted Topics Measure of Family Sexual Communication (WTM) and the Sexual Health Practices Self-Efficacy Scale (SHPSES). Agénor et al. (2014) and Tornello et al. (2014) analyzed the 2006-2010 data set from the National Survey of Family Growth (NSFG). Similarly, Agénor et al. (2017) analyzed the 2011-2013 and 2013-2015 waves of the NSFG. Charlton et al. in 2011 utilized the 2005 wave of the Growing Up Today Study (GUTS).

The other half were longitudinal studies (Charlton, et al., 2013; Ela & Budnick, 2017; Goldberg et al., 2016) and a secondary analysis (Kerr et al., 2013). Utilizing data sets across two generational cohorts, Charlton et al. (2013) utilized data sets from the 1969-1983 Nurses' Health

Study II (NHSII) and the 1995-2006 GUTS. Ela & Budnick (2017) investigated those participating in the Relationship Dynamics and Social Life Study (RDSL) and the Social Life Journal Supplement Survey (SLJS). Goldberg et al. (2016) relied on Wave I and IV data sets of the National Longitudinal Study of Adolescent Health (Add Health). Among those relying on an existing data set, Manos et al. (2014), utilized the Nova Scotia Youth Study (NSYOUTHS) database from 1997-2007.

Another eight articles were either cross-sectional studies implementing interviewer-administered surveys (Agénor et al., 2016; Ayehu et al., 2016; Otwombe et al., 2015; Peitzmeier et al., 2014 Reynolds et al., 2016) or an online survey promoted via LISTSERVEs and social media sites (Qureshi et al., 2018; Rahman et al., 2019; Youatt et al., 2017). On the other hand, Comfort & McCausland (2013) conducted paper surveys at an LGBTQ festival.

The study by Irvin et al. (2014) was a secondary analysis utilizing an interviewer-administered questionnaire and an audio computer-assisted questionnaire. Jahn et al. (2019) and Müller (2017) were the only two qualitative studies to undergo review. These studies utilized semi-structured interviews, with the latter study also conducting focus groups.

Sexual Orientation & Gender Identity. Ten articles only measured sexual orientation among female participants. Charlton et al. (2013) and Ela & Budnick (2017) measured three dimensions of sexual orientation, including self-reported sexual identity (heterosexual, lesbian/gay/homosexual, bisexual), self-reported attraction (attracted to persons of the opposite sex, equally attracted to men and women, attracted to persons of the same sex), and sex of sexual contacts (or sexual behavior).

Tornello et al. (2014) measured sexual orientation using two dimensions, sexual identity and sexual behavior. Agénor et al (2016; 2017) measured sexual orientation in the same two

dimensions. Charlton et al (2011) also used two dimensions of sexual orientation but instead used sexual attraction and sexual behavior.

Agénor et al (2014) measured sexual orientation in one dimension: sexual behaviors. Kerr et al (2013), Goldberg et al (2016), and Youatt et al (2017) relied on sexual identity to measure sexual orientation.

Four articles measured both gender and sexual orientation. Rahman et al. (2019) categorized gender as male, female, transgender male, and transgender female. In measuring sexual orientation, the authors collectively categorized bisexual, pansexual, or queer sexual identities as a “bi+” category. Peitzmeier et al. (2014) only studied cisgender women and female-to-male (FTM) transgender patients. The authors also measured sexual orientation based on sexual behaviors. Comfort and McCausland (2013) and Qureshi et al. (2018) both measured gender, including a transgender category, and sexual orientation, using a measure based on sexual identity. Ayehu et al. (2016), Manos et al. (2014), and Ot wombe et al. (2015) also measured gender, but only in male and female categories.

Two articles measured sex assigned at birth, gender identity, and sexual orientation. LGBTQ+ individuals in the study conducted by Charest et al. (2016) included anyone who did not identify as heterosexual or cisgender. Among individuals assigned a female sex at birth, Jahn et al. (2019), also measured gender identity (cisgender woman, nonbinary) and sexual orientation based on sexual identity, sexual attraction, and sexual behaviors.

Two articles only included male participants. Irvin et al. (2014) included only MSM men, which is a dimension of sexual orientation that measures sexual behaviors. Reynolds et al. (2016), unlike any other reviewed study and among men, solely utilized the Bem Sex Roles Inventory (BSRI) and Klein Sexual Orientation Grid (KSOG) scales to measure an individuals’

identification with traditional gender roles and sexual attraction, based on a scale of 1 through 7 (1- other sex only; 4- both equally, and 7- same sex only).

Another study investigated LGBT individuals but did not define how the variable was being measured (Müller, 2017).

Study Results

SRH Behaviors & Outcomes. Three articles that were reviewed showed that sexual minority young women are at an increased risk for pregnancy (Charlton et al., 2013; Ela & Budnick, 2017; Goldberg et al., 2016). In 2013, Charlton et al. (2013) found that sexual orientation disparities in teen contraception use and pregnancy persist across two generations. The authors reported that lesbians were least likely to use contraceptives ($f = 50$, 34%, $p = .004$) and had an increased risk for pregnancy (RR = 1.61, 95% CI = 0.40-6.55). Completely heterosexual respondents who also reported same-sex partners, however, had the highest risk for pregnancy overall (RR = 5.82, 95% CI = 2.89-11.73). Goldberg et al., in 2016, found that bisexual women had the highest proportion of teen pregnancy compared to their heterosexual and lesbian peers. Bisexual women were two times more likely to experience teen pregnancy than heterosexual participants (AOR = 2.20, 95% CI = 1.40-3.45), whereas lesbians had 63% less likelihood to experience teen pregnancy than heterosexual participants (AOR = .47, 95% CI = .23-.97). Ela & Budnick (2017) investigated determinants of pregnancy among non-heterosexual and heterosexual young women. They found that non-heterosexual women reported sexual behaviors and contraceptive use that put them at greater risk of pregnancy compared to exclusively heterosexual women, including a higher level of sexual activity and a lower level of contraceptive use.

Two articles outlined how SRH behaviors shape poor SRH outcomes for LGBTQ+ adolescents. In 2014, Tornello et al. explored SRH outcomes of lesbian, bisexual, and heterosexual young women. Their study showed that lesbian young women and bisexual young women reporting sex with a male partner were at an elevated risk for poor sexual health outcomes. Bisexual participants were more likely to engage in sexual intercourse than heterosexual participants, including with a male sexual partner ($X^2 (df = 7, n = 2,664) = 774.41, p < .001$). Bisexual young women also reported an earlier age at first sex with a male than heterosexual participants ($F (7, 1380) = 3.73, p = .02$). Contributing to poor SRH outcomes for LGBTQ+ youth, Charest et al. (2016) revealed that heterosexual participants were significantly more confident in their sexual risk-reduction behaviors than their LGBTQ+ peers ($F(1, 382) = 8.66, p = .003$). Moreover, LGBTQ+ individuals used the internet as a source of sexual health information more than their heterosexual peers did.

SRH Service Utilization. Manos et al. (2014) found that older youth and female youth had the highest overall utilization of and contact with general healthcare services. However, Otwombe et al. (2015) concluded that there was a gap between adolescents' health needs and the availability of services. Their surveys found that 64% of females and 56% of males reported a desire for reproductive health services ($p = .0230$). However, only 47% of youth reported ever testing for HIV, and only 2.4% reported ever having sexually transmitted infections (STIs). Further, only 4.9% females sought services for birth control and 8.8% of males sought healthcare for circumcision-related care.

Two articles suggested that bisexual women may be most likely to utilize SRH services (Agénor et al., 2017; Kerr et al., 2013). Agénor et al. (2017) concluded that a previous STI diagnosis may contribute to the higher odds of utilization of sexual health services among

women with male and female sexual partners and among self-identified bisexual women. The authors noted that those who had male and female sexual partners had a significantly higher incidence of STI testing, HIV testing, and HPV testing than those with only male sexual partners (45.5% vs. 29.6%, 84.8% vs. 77.8%, and 68.8% vs. 53.8%, respectively, $p < .0001$). Similarly, Kerr et al. (2013) found that bisexual participants were more likely to participate in screening behaviors, including breast self-exams (BSE) 571 (47.1%), gynecological screening 1,224 (58.2%), and HIV testing 802 (38%) compared to heterosexual participants (BSE, $n = 13,792$, 41.9%; gynecological, $n = 31,724$, 52.6%; HIV testing, $n = 14,379$, 23.7%) and lesbian participants (BSE, $n = 161$, 39.9%; gynecological, $n = 278$, 38.3%; HIV testing, $n = 198$, 27.0%) ($p < .001$).

Conversely, Charlton et al. in 2011 found that those who identified as bisexual had nearly 30% lower odds of having a Pap test and 40% higher odds of being diagnosed with an STI than those who identified as straight/heterosexual (AOR = .13, $p < .0001$). Charlton et al. argued that these results suggest that sexual minority adolescents underutilize reproductive health services but are more likely to be diagnosed with an STI. Agénor et al. (2016) suggested utilization of SRH services may be even lower for lesbian African American women. They found that lesbian women and women with only female sex partners were less likely to have reproductive health screenings compared to bisexual women and women with male and female sex partners. Compared to bisexual women, lesbian women were less likely ever to have been pregnant (41.7% vs. 71.2%, $p < .001$), to have received an HIV test (86.9% vs. 98.6%, $p = .006$), to have received a Pap test (59.8% vs. 80.6%, $p = .005$) or to have received abnormal Pap results (19.9% vs. 43.9%, $p = .002$). In 2014, Agénor, et al. found that sexual orientation disparities in Pap test use exist across race/ethnicity. Their study showed that more than 80% of women in all

racial/ethnic categories who had sex with exclusively men had Pap tests. Pap test rates were lowest among participants who had both male and female sex partners and female-only sex partners across all racial/ethnic categories- black 76 (4.0%) and 33 (1.8%), Latina 41 (2.0%) and 18 (0.9%), and white 170 (3.5%) and 81 (10.4%), respectively.

Two studies examined SRH utilization among transgender individuals. Peitzmeier et al. (2014) reported that transgender patients have lower screening rates than cisgender patients, even within an LGBT-specific clinic. Similarly, Rahman et al. (2019) found that transmen and transwomen were less knowledgeable about HPV than ciswomen ($F(2,146) = 11.24, p < .001, R^2 = .13$). Moreover, only 9% ($n = 3$) of transwomen received the HPV vaccine, compared to 64% ($n = 56$) ciswomen and 63% ($n = 17$) transmen ($\chi^2(4) = 38.41, R^2 = .15, p < .001$).

Influencers & Barriers to Accessing Care. A variety of factors were found to have influenced SRH service utilization for LGBTQ+ and young people. Reynolds et al. (2016) found that personal perceptions of masculinity and femininity affect health service utilization among men. Participant health service utilization was strongly predicted by previous positive gonorrhea status ($R^2 = .32, p = .01$) and by the feminine subscale of the BSRI ($R^2 = .06, p = .012$). The authors concluded that a masculine sex roles score was positively associated with outpatient clinic services and that a feminine sex role score was positively associated with health visits overall.

For adolescents in Northwest Ethiopia, Ayehu et al. (2016) found that although SRH service utilization was low, 41.2% of participants utilized SRH services for reasons including sexual health counseling (51%), contraception and condoms (25.4%), STI treatment (17.3%), and abortion or post-abortion care (2.6%). Of those utilizing SRH services 52.4% were not satisfied with the service they received. Moreover, the authors noted that living with one's

mother was associated with youths' utilization of SRH services (AOR (95% CI): 2.70 (1.26, 5.78) and living with one's father was negatively associated with service utilization (AOR (95% CI): 0.49 (0.30, 0.81).

Four studies discussed the role of discrimination on utilization of SRH services. In a study among Western Australian LGBTQ+ individuals, Comfort and McCausland (2013) found that health issues of greatest priority for respondents included depression, suicide, and HIV/AIDS. Moreover, experiences of discrimination and homophobia were identified as leading social factors affecting LGBTQ+ health. A survey of LGBTQ+ individuals ($n = 30$) and service organization representatives ($n = 14$) concluded that experiences of discrimination based on sexual orientation or gender identity were common among all respondents, in addition to general barriers to health care access. Themes that emerged in a study by Müller (2017) included discrimination as a major concern in accessing care, public sector facilities that were mostly unavailable for LGBT services, disrespectful providers, frequent violations of privacy, providers' lack of knowledge about LGBT health needs, and providers' misconceptions related to sexual orientation and sexual health risk. Similarly, Qureshi et al. (2018) reported that among LGBT adults, 32% had utilized care for information on prevention of risk behaviors. HIV and STIs were reported as common health concerns most notably among gay (49.5% and 33.9%) and transgender respondents (40.6% and 29.1%). Although transgender individuals reported a high need for preventive care, such as STI testing, 50% of transgender respondents reported being refused care. Conversely, Irvin et al. (2014) concluded that perceived racial discrimination was not a major contributor to low healthcare utilization or HIV testing for Black MSM. Healthcare utilization was positively associated with older age (AOR 1.2, 95 % CI 1.1–1.3, $p < .01$) and insurance coverage (AOR 2.5, 95 % CI 1.9–3.3, $p < .01$).

Youatt et al. (2017) found that few women disclosed their sexual identity to providers although disclosure was associated with receipt of sexual health care services. Those who disclosed their sexual identity to their provider were more likely to receive STI testing ($X^2(1, n = 285) = 5.06, p = .03$), a Pap test (AOR = 2.66, 95% CI 1.46, 4.88, $p = .001$) and the HPV vaccine (AOR = 4.30, 95% CI 1.18, 10.19, $p = .001$). Jahn et al. (2019) concluded that inclusive and culturally competent health care providers help to facilitate sexual health communication among sexual minority women seeking care. While investigating young sexual minority women's experiences of patient-provider sexual health communication, the authors found four emergent themes: provider assumptions about sexual behaviors and orientation, emphasis on pregnancy prevention rather than STI prevention, provider misconceptions about STI risk, and intersections of race/ethnicity and gender in receipt of care.

Discussion

This literature review was based on outcomes related to sexual orientation and gender identity and first-time utilization of SRH services. Another aim was to understand better how disparities in SRH health outcomes for LGBTQ+ people are shaped at initiation of these crucial services. No interventions were identified that explored the barriers and facilitators that are associated with early initiation (first-time utilization) of SRH services among LGBTQ+ and cisgender/heterosexual, highlighting the gap in research related to LGBTQ+ SRH outcomes and initiation of such services.

Nevertheless, the limited health research produced major findings to support further research in this area. Although not specific to SRH services, Manos et al. (2014) found that health care utilization was highest among older youth and female youth. This may in part reflect the fact that those who identify strongly with masculine sex roles are less likely to seek clinical

services than those who identify more strongly with feminine sex roles (Reynolds et al., 2016). Nevertheless, young people overall report low utilization of SRH services despite the high need and desire for these services (Ayehu et al., 2016; Otwombe et al., 2015). This is a source of concern considering that sexual minority adolescents and young adults are less likely to receive important SRH screenings such as cervical cancer screenings (Pap tests) and testing for sexually transmitted infections (STIs), and they are also more likely than heterosexual adolescents to receive positive STI diagnoses and to experience teen pregnancy (Charlton et al., 2011; Goldberg et al., 2016).

A majority of the studies identified disparities in SRH outcomes and service utilization in relation to non-heterosexual women. Lesbian women and women with only female sexual partners were less likely to have reproductive health screenings than bisexual and heterosexual women (Agénor et al., 2016; Kerr et al., 2013). Bisexual women and women with female and male sexual partners, however, were significantly more likely to receive STI and HIV testing (Agénor et al., 2017). Moreover, the literature showed that both lesbian women who have reported sex with men and bisexual women were less likely to use contraception and reported earlier age at first sex, factors elevating the risk for poor sexual health outcomes (Charlton et al., 2013; Ela & Budnick, 2017; Tornello et al., 2014). Disparities in sexual health screenings were more pronounced for sexual minority women who are also a racial/ethnic minority (Agénor et al., 2014). Other noteworthy findings related to sexual minority women indicated that disclosing one's sexual orientation to one's provider and having a culturally sensitive provider led to an increase in utilization of SRH services and enhanced patient-provider sexual health communication (Jahn et al., 2019; Youatt et al., 2017). These latter studies highlight the

importance of comfort and acceptance in the patient-provider relationship and its role in mitigating poor SRH outcomes for young sexual minority women.

Perceived discrimination and fear of discrimination were found to be major concerns among LGBTQ+ individuals when accessing SRH services (Irvine et al., 2014; Müller, 2017). This helps to explain why LGBTQ+ individuals, especially transgender individuals, reported low levels of sexual health screenings and low utilization of SRH services overall (Comfort & McCausland, 2013; Peitzmeier et al., 2014; Qureshi et al., 2018; Rahman et al., 2014). Moreover, Comfort and McCausland (2013) reported that homophobia and discrimination were leading social factor affecting LGBTQ+ individuals' health, especially in relation to mental health and depression. Charest et al. (2016) found that LGBTQ+ young adults were less confident in their sexual risk-reduction practices and were more likely to rely on sexual health information from internet sources than their heterosexual peers, further compounding these disparities. Unreliable sources of health information and poor self-efficacy related to sexual risk-reduction practices put LGBTQ+ individuals at a significant disadvantage when it comes to proactively seeking SRH care.

Young people who need SRH services report low availability and limited accessibility of these services. Adolescents who forego regular SRH care put themselves at risk for unintended pregnancies, STIs, and HIV. Receiving appropriate SRH care is crucial for young people, as health-care providers are in a vital position to screen for risk and to support health-promoting behaviors as teens grow into adulthood (Breuner, & Mattson, 2016; Youatt, Harris, Harper, Janz, & Bauermeister, 2017).

Limitations

An important limitation of this review involves the large number of studies that relied on self-reported cross-sectional data, which may be influenced by recall bias and which limits understanding of changes in behavior or identity over time ($n = 16$). Furthermore, many of the studies had small sample sizes and low diversity in the race/ethnicity of participants ($n = 6$). Other limitations involving two studies resulted from these studies' use of cross-sectional data from adolescent children of nurses. Although these were studies of high quality and included a large sample, the fact that all the adolescent respondents were children of nurses may indicate that they had access to higher than average levels of health information and services; the sample may therefore not have been truly representative of adolescents in general, and this may have caused these studies to overestimate the utilization of SRH services among the general population (Charlton et al., 2011; Charlton et al., 2013). The literature, by and large, does not engage in a qualitative examination of the reasons for which young adults and sexual minority individuals did not utilize SRH services (Ayehu, et al., 2016; Charlton et al., 2011; Otwombe et al., 2015). The reviewed literature also included only limited information on young adult's pregnancy intentions in relation to SRH outcomes.

Future Implications

These findings demonstrate that SRH service utilization remains low for all youth but especially for LGBTQ+ individuals, who report significant barriers to care and poorer sexual health outcomes. Further research might examine sexual partners' influence on individuals' health knowledge and practices and the impact of consensual versus coerced sexual practices on SRH outcomes for youth and young adults (Agénor et al., 2016; Charest et al., 2016; Goldberg et al., 2016). Future studies might also address the limitations and gaps in the literature by using

mixed methodologies to capture quantitative and qualitative evidence of SRH utilization, outcomes, and perception of experience (Ayehu et al., 2016; Charlton et al., 2011; Ot wombe et al., 2015; Peitzmeier et al., 2014; Qureshi et al., 2018). Further research should utilize more expansive and inclusive survey groups, including a wider diversity of sexual and gender identities among participants, as much of the literature focused on sexual minority women ($n = 9$), and only two studies included transgender participants. By including more categories of sexual orientation and gender identity, future researchers will be better able to identify and describe disparities within groups.

Conclusion

This literature review shows the limitations of existing research on SRH disparities among LGBTQ+ and heterosexual/cisgender individuals. Several studies have found that SRH service utilization among adolescents and LGBTQ individuals remains low. These disparities may be greater for those whose intersecting identities also include a racial/ethnic minority status. Perceived discrimination and lack of culturally competent, youth-friendly health care may contribute to the underutilization of SRH service by youth. Because of these limitations in existing research, it will be important for future research to examine underlying factors that contribute to utilization of SRH services by individuals of diverse sexual and gender identities.

Public health efforts to improve utilization of SRH services among young people and LGBTQ+ youth need to be explored. Healthcare providers are in a critical role to address the SRH disparities that are seen among adolescent and emerging adults. This is because providers can screen young people for risk, provide preventative services, effective treatments, and support harm reduction through health education and referrals to wrap around services. Early access to SRH services establishes health-promoting behaviors in adolescents as well as trust and

confidence in the healthcare system that are important beyond the adolescent years. Although the need for accessible SRH services is obvious, several unanswered questions arose from the literature review:

1. What does initiation or the first-time utilization of SRH services look like for young people with diverse sexual orientations and gender identities?
2. What factors influence early initiation of SRH service among young people with diverse sexual orientations and gender identities?
3. What barriers affect SRH service utilization among young people with diverse sexual orientations and gender identities?

This exploratory study aims to examine the barriers and facilitators that are associated with early initiation of SRH services among LGBTQ+ and cisgender/heterosexual Oklahoma emerging adults. The following research questions address gaps in the available literature:

- RQ₁: Does the average age at initiation of SRH services differ between LGBTQ+ and cisgender/heterosexual individuals?
- RQ₂: Do the strongest influencers on initiation of SRH services differ between LGBTQ+ and cisgender/heterosexual individuals?
- RQ₃: Do barriers to accessing SRH services differ between LGBTQ+ and cisgender/heterosexual individuals?

This research study is important because it will fill an important gap in the existing research, which fails to capture the SRH experiences of adolescents with diverse sexual orientations and gender identities. Furthermore, this study will highlight the influencers and barriers that shape LGBTQ+ and cisgender/heterosexual young people's utilization of SRH services. Overcoming barriers to accessing SRH services is crucial to decreasing the incidence of

STI and HIV morbidity and mortality, teen birth rates, and poor pregnancy and birth outcomes. Foregoing SRH services at an early age leads to missed opportunities for health care providers to support health-promoting behaviors, screen for risk, and provide preventative services and effective treatments. In order to understand better the factors that facilitate early initiation of SRH service among LGBTQ+ and cisgender/heterosexual adolescents and to inform public health interventions that reduce SRH disparities among youth and sexual and gender minority communities, a 46-item online questionnaire was developed and promoted among Oklahoma emerging adults.

Chapter Three: Methodology

The researcher used an exploratory research design to examine the barriers and facilitators associated with early initiation of sexual and reproductive health (SRH) service utilization by comparing sexual orientation and gender identity among Oklahoma emerging adults. A retrospective cross-sectional analysis was used to determine whether the average age at initiation of, the strongest influencers to, and the barriers to accessing sexual and reproductive health (SRH) services differ between sexual and gender minority, or LGBTQ+, and cisgender/heterosexual individuals. This research study involved the administration of an online survey on SRH behaviors and experiences through Qualtrics^{®XM}. This chapter outlines the participants, instruments, procedures, and analytical design of this study.

Participants

This study relied on a convenient sample of Oklahoma emerging adults between the ages of 18 and 25 years. The goal was to recruit 400 respondents, 200 in the LGBTQ+ group (including those self-identifying as a sexual and/or gender minority) and 200 in the heterosexual/cisgender group (including those whose self-identified as “straight” and those whose reported sex assignment at birth was uniform with their gender identity). This estimate was based on Charest et al.’s (2016) study of the differences in sources of sexual health information and sexual health practices among young adults. This was the only study in the literature review that reported means of SRH indicators by sexual orientation and gender identity. Based on this study, the researcher estimated that 200 participants from each comparison group were needed to determine significance in the proposed study. An effect size of 0.33 (Cohen’s *d*) for an independent t-test was calculated based on a confidence interval of 95% ($\alpha = .05$) and high power ($1-\beta = 0.8$). An additional calculation was used to determine how many

survey participants were needed to yield results representative of the target population. Using the sample size calculator offered through Qualtrics^{®XM}, a sample size of 384 was found to be ideal, with a confidence level of 95% and margin of error of 5%. This calculation was based on a population estimate provided by the Kaiser Family Foundation's State Health Facts, estimating that 342,600 Oklahomans were between 19 and 25 years old in 2017.

Participants were recruited via online and print media promotion to participate in an online self-administered questionnaire. A recruitment flyer (Appendix A) and script (Appendix B) were developed and distributed online using the UCO email blast systems, emails to individuals and organizations serving young adults, and on social media platforms, such as Facebook. Recruitment was also conducted through promotional flyers distributed at a state-wide LGBTQ college summit, through flyers posted on public bulletin boards, and through a story published in an LGBTQ newspaper.

Participants could access the survey through a link or by scanning a QR-code. Before accessing the questionnaire, participants were required to read and sign an electronic informed consent form (Appendix C). This affirmation of informed consent to participate ensured the research subject had information on the purpose and procedures of the research study, the risks and benefits to participation, and the voluntary nature of participation. A list of mental health resources was added at the request of the Institutional Review Board.

Participants who consented to participation were then presented with additional information about the survey, including links providing definitions of key terms, and they were required to answer a question about their age as a qualifier for the targeted age group. Anyone indicating they were 26 years of age or older were excluded from participation and directed to the end of the survey. The survey was only offered in English, possibly excluding individuals

who are not proficient in English. Only those completing the full survey were included in data analysis.

Instruments

As no existing survey tool existed for the specific variables being measured in this study, several survey questions were selected based on the scientific literature and adapted into a 46-item questionnaire titled the *Initiation of Sexual and Reproductive Health Services: A Comparison among SOGI* (Appendix D).

The survey tool begins with demographic questions that ask participants about their age, Oklahoma residency, race, ethnicity, educational attainment, employment status, student status, family structure, income level, relationship status, religiosity, and health insurance status (Agénor et al., 2017; Charest et al., 2016; Ela & Budnick, 2017; Goldberg et al., 2016; Jahn et al., 2019; Reynolds et al., 2016). To measure sexual orientation and gender identity, participants were asked about their sex assigned at birth, self-reported gender, and sexual orientation (Charlton et al., 2011; Charlton et al., 2013; Ela & Budnick, 2017; Goldberg et al., 2016; Jahn et al., 2019; Kerr et al., 2013). Participants were then presented with questions about their initiation and utilization of SRH services such as sexually transmitted infections (STIs) testing and treatment, HIV testing and treatment, HPV vaccination, cervical cancer screenings, information and counseling, contraception, medical abortion, PrEP, and PEP (Agénor et al., 2014; Agénor et al., 2016; Agénor et al., 2017; Ayehu et al., 2016; Charlton et al., 2011; Charlton et al., 2013; Irvin et al., 2014; Kerr et al., 2013; Ot wombe et al., 2015; Rahman et al., 2017). When respondents reported utilization of SRH services at any age, a follow-up question was asked regarding the major facilitator influencing access to that service. The facilitators measured internal and external factors (Charest et al., 2016; Ot wombe et al., 2015). To get a better sense

of participants' need for services, participants were asked about their sexual and reproductive health histories. These questions included age at first sex, number of sexual partners, pregnancies, injection drug use, and previous STI and HIV diagnoses (Agénor et al., 2016; Agénor et al., 2017; Ayehu et al., 2016; Charlton et al., 2011; Charlton et al., 2013; Goldberg et al., 2016; Jahn et al., 2019; Kerr et al., 2013; Rahman et al., 2017; Tornello et al., 2013). Finally, participants were asked about their perceived barrier(s) to accessing SRH services, including economic, structural, and social barriers (Ayehu et al., 2016; Irvin et al., 2014; Quershi et al., 2018).

Procedures

The University of Central Oklahoma (UCO) Institutional Review Board (IRB) approved this study on January 27, 2020 (Appendices E and F). Recruitment of subjects began January 29, 2020 and continued through April 30, 2020. A link and QR code to the online survey were disseminated electronically and in print (Figure 1). An email requesting assistance with study recruitment was sent with the study flyer to individuals and organization that serve Oklahoma emerging adults. Additionally, all UCO students were invited to participate through a campus-wide email blast. These contacts reached Cleveland County, Oklahoma County, Tulsa County, and other locations in Oklahoma. Some contacts were LGBTQ+-specific, and others served young adults generally. Three Facebook groups were also contacted and approved posting of recruitment materials on the groups' discussion pages. One contact serving LGBTQ young adults on a statewide basis invited the researcher to recruit at a college summit, where the study flyer was distributed. The April issue of an LGBTQ+ newspaper printed a story promoting the survey, including the recruitment flyer. Finally, the flyer was posted on public bulletin boards at UCO

and a local LGBTQ+ health organization. In print, promotion of the study reached participants in Oklahoma County and statewide.

All IRB policies and procedures were followed, and the UCO campus-wide email was approved and coordinated through the UCO Office of Academic Affairs. Affirmation of an electronic informed consent form was required to enroll in the study and prior to completing the questionnaire. All participants were informed that the survey responses would be kept confidential. To ensure participants' privacy was protected, no names or personal identifiers were collected in this survey. Furthermore, all data collected using Qualtrics[®] XM were stored on a password-protected personal computer and backed up using a password-protected Microsoft OneDrive account. The voluntary survey was estimated to take 10-15 minutes to complete. As no face-to-face interviews were required for this online survey, the risk for bias was minimized. The responses from the survey were entered into IBM[®] SPSS[®] Statistics Version 24.0 for analysis.

Design and Analysis

Before analysis, 63 responses were removed for partial responses, 138 were removed for being outside the target age range (18-25 years old), and two were removed because the respondent responded "no" to informed consent. Additional responses that were removed due to responses being left blank, including two blank responses for informed consent, 29 blank responses to a question about currently living in Oklahoma, and one blank response to the question on sexual orientation. Descriptive statistics and crosstabulation were used to examine the utilization of SRH services among participants. An independent *t* test was used to compare means between LGBTQ+ participants and heterosexual/cisgender participants and a chi-square test of independence was used to compare the observed and expected outcomes of SRH

utilization between the two groups. All statistical tests were performed using IBM® SPSS® Statistics Version 24.0. In testing the hypotheses, the level of significance was set at $\alpha = 0.05$.

Sexual Orientation and Gender Identity

Using the responses from survey questions on sex assigned at birth, gender identity, and sexual orientation, two groups were categorized: LGBTQ+ and cisgender/heterosexual. The LGBTQ+ group included anyone who recorded their gender as “transwoman,” “transman,” “nonbinary/genderqueer/gender non-conforming,” “two-spirit,” “agender,” or “other,” *and/or* a sexual orientation of “lesbian/gay,” “bisexual,” “pansexual,” “demisexual,” “asexual,” or “other.” The cisgender/heterosexual group includes anyone who recorded their gender as “ciswoman” or “cisman” *and* a sexual orientation of “heterosexual.” Because the two groups represent nominal data, frequencies and percentages were used to describe the findings. All sociodemographic data is described in this way, as well.

Age at Initiation of SRH Services

Age at initiation of SRH services was analyzed as both a scale- and nominal-level variable. Because of this, frequency, percentages, mean, and standard deviation were used to describe the findings to determine whether LGBTQ+ and cisgender/heterosexual participants initiated SRH differently. Age was measured beginning with “before the age of 10,” “10 years old,” “11 years old,” “12 years old,” through “25 years old,” and the option “I have never utilized this service.” When analyzed as a scale-level variable, to compare the average age at initiation of SRH services among those who initiated services, “before the age of 10” and “I have never utilized this service” responses were excluded. An independent-samples *t* test was calculated comparing the mean age at initiation of STI testing services of cisgender/heterosexual participants to the mean age at initiation of services of LGBTQ+ participants. In addition, a chi-

square test of independence was performed to determine associations between the two groups and initiation of SRH services by age category. To complete the Pearson's chi-square, the variable for age at initiation of SRH services was categorized into three categories, "minor, 17 years old and younger," "emerging adult, 18-25 years old," and "never before utilized."

Influencers on Initiation of SRH Services

The strongest influencers on initiation of SRH services were analyzed as a nominal-level variable and described using frequencies and percentages. The influencers were categorized as "request or required by parent/guardian," "experiencing symptoms of infection or condition," "pressure from partner(s)," "pressure from peer(s)," "sense of personal responsibility to take care of sexual and reproductive health and prevent infection or condition," "recommendation of healthcare provider," or "other." New categories of "rape," "military," and "school requirement" were added after examining the qualitative data provided when respondents selected "other" and were allowed to write text-responses to the questions. Crosstabulation tables were used to descriptively examine the strongest influencers on initiation of SRH services for both groups.

Barriers to SRH Service Utilization

The barriers to initiation of SRH services were analyzed as a nominal-level variable and described using frequencies and percentages. The barriers were categorized as "lack of well-trained health providers," "lack of LGBTQ-friendly health providers," "lack of separate room for young people," "judgmental attitude of health providers," "lack of privacy and confidentiality," "unwelcoming attitude of health providers toward young people," "insufficient time for counseling," "lack of knowledge and information about services," "inconvenient clinic hours," and "other." Individuals could select multiple barriers at one time. New categories of "parent" and "no barriers experienced" were added after examining the qualitative data provided when

respondents selected “other” and were allowed to write text-responses to the questions. The barriers reported per individual was aggregated to give a scale-level measurement for this variable. An independent *t* test was calculated comparing the mean number of reported barriers between LGBTQ+ and cisgender/heterosexual participants.

Chapter Four: Results

The purpose of this study was to explore the barriers and facilitators that are associated with early initiation (first-time utilization) of sexual and reproductive health (SRH) services among lesbian, gay, bisexual, transgender, queer, or other sexual and gender minority individuals (LGBTQ+) and cisgender/heterosexual Oklahoma emerging adults. The research hypotheses include: (H_1) LGBTQ+ respondents will initiate the utilization of SRH services at an older age compared to cisgender/heterosexual respondents; (H_2) peers and partners will be stronger influencers on SRH service utilization for LGBTQ+ respondents, compared to cisgender/heterosexual respondents; and (H_3) LGBTQ+ respondents will report greater numbers of barriers to utilizing SRH services compared to cisgender/heterosexual respondents. A total of 635 responses were collected over 13 weeks. Before analysis, responses were removed for not meeting inclusion criteria (18-25 years old and living in Oklahoma) and for incomplete responses ($n = 235$). The remaining 400 surveys met inclusion criteria and were analyzed using descriptive and inferential statistics. Participants are described based on their socio-demographic characteristics (see Tables 2 and 3) and SRH characteristics (see Tables 4 and 5).

The study sample's mean age was 21.01 years old ($SD = 1.99$) and as shown in Figure 2, three-quarters (77.8%) of the respondents were white. Eighty-five percent of these emerging adults were full-time students, and 74.3% were working at least part-time. Respondents were most likely to have grown up with two biological parents or a single biological parent (81.5%) and to have lived in Oklahoma as a minor (91.0%). Most of the respondents were from the Oklahoma City Metropolitan Statistical Area, which includes Canadian County, Cleveland County, Grady County, Lincoln County, Logan County, McClain County, and Oklahoma County ($n = 357$; see Figure 3). While 14.8% of respondents did not know their family's income as a

minor, 32.2% had reported a family income of less than \$50,000 annually and 57.9% reported a current income of less than \$50,000 annually. For comparison, a family of three with an annual income of \$50,000 is less than 250% of the federal poverty level. One-fourth (25.6%) of the sample were uninsured, underinsured, or on a public health insurance plan as a minor. A sizeable difference was observed between the two groups regarding religiosity. While 64.2% of the cisgender/heterosexual participants considered themselves religious or spiritual, only 43.1% of the LGBTQ+ participants reported the same.

Over two-thirds (77.2%) of the sample reported being single or never married. The mean age at sexual debut was 13.95 years ($SD = 3.55$). Over half (51.0%) of the sample reported sexual intercourse before the age of 18, and 37.3% had four or more past sexual partners. Twenty-six respondents reported a pregnancy before the age of 20. Only 1.0% of respondents reported injection drug use, a risk-behavior for sexually transmitted infection (STI) and HIV transmission. No respondents reported ever having an HIV diagnosis, 92.8% reported never receiving a STI diagnosis, and 96.5% reported never receiving an HPV diagnosis.

Sexual Orientation and Gender Identity

The respondents were categorized into two groups: LGBTQ+ and cisgender/heterosexual. The LGBTQ+ group included anyone who recorded their gender as “transwoman,” “transman,” “nonbinary/genderqueer/gender non-conforming,” “two-spirit,” “agender,” or “other,” *and/or* a sexual orientation of “lesbian/gay,” “bisexual,” “pansexual,” “demisexual,” “asexual,” or “other.” The cisgender/heterosexual group included anyone who recorded their gender as “ciswoman” or “cisman” *and* a sexual orientation of “heterosexual.” Because the two groups represent nominal data, frequencies and percentages were used to describe their findings. Of the

400 participants included for analysis, 240 (60.0%) were cisgender/heterosexual and 160 (40.0%) were LGBTQ+ (see Table 6).

Age at Initiation of SRH Services

To determine whether LGBTQ+ respondents initiate the utilization of SRH services at an older age compared to cisgender/heterosexual respondents the level of significance was set at $\alpha = 0.05$. Age at initiation of SRH services was analyzed as both a scale- and nominal-level variable. Because of this, frequency, percentages, mean, and standard deviation were used to describe the findings for the first research question. Age at initiation of SRH services was measured beginning with “before the age of 10,” “10 years old,” “11 years old,” “12 years old,” through “25 years old,” and the option “I have never utilized this service.” When analyzed as a scale level variable, to determine the average age at initiation of SRH services among those who initiated services, “before the age of 10” and “I have never utilized this service” responses were excluded. When analyzed as a nominal level variable, all respondents who were under the age of 18 years were categorized as “minor,” those who were between the ages of 18 years and 25 years were categorized as “emerging adults,” and all other responses were categorized as “never before utilized.” Because the age at initiation of SRH services was measured across several SRH service types (STI testing, STI treatment, HIV testing, HIV treatment, HPV vaccine, Pap testing, information and counseling, contraception, medical abortion, PrEP, and PEP), this variable was combined to examine SRH service initiation overall. Cumulative mean age scores were calculated as a scale variable by averaging the age at initiation across all SRH service types together. As a nominal variable, cumulative SRH services refer to the frequencies and percentages of participants indicating utilization of at least one type of SRH service. These responses were then grouped by age category.

Among the 400 study participants, 358 (89.5%) reported utilizing at least one type of SRH service (see Table 7). Of those, 210 (58.7%) were cisgender/heterosexual and 148 (41.3%) were LGBTQ+. This represents 87.5% and 92.5% of the cisgender/heterosexual and LGBTQ+ groups, respectively, utilizing any type of SRH service as a minor or emerging adult. For those reporting utilization of any SRH service type, the average age at initiation was 17.12 years ($SD = 2.40$), including an average age among cisgender/heterosexual respondents of 17.26 years ($SD = 2.41$) and an average age among LGBTQ+ respondents of 16.92 years ($SD = 2.39$; see Table 8). An independent t -test was calculated comparing the mean age at initiation of SRH services of cisgender/heterosexual participants to the mean age at initiation of SRH services of LGBTQ+ participants. No significant difference was found ($t(356) = 1.317, p = .189$). The mean age at initiation of SRH services overall among cisgender/heterosexual respondents ($M = 17.26, SD = 2.41$) was not statistically different from the mean age at initiation of SRH services overall among LGBTQ+ respondents ($M = 16.92, SD = 2.39$).

In examining differences at mean age of initiation among SRH service types between the two study groups, initiation of contraception services was the only service type where significant differences were found ($t(261) = 2.781, p = .006$; see Table 8). Nearly two-thirds (65.8%) of respondents reported utilizing SRH services for contraception, including 160 (66.7%) cisgender/heterosexual and 103 (64.4%) LGBTQ+ respondents. The mean age at initiation of contraception services among cisgender/heterosexual respondents ($M = 17.21, SD = 2.21$) was significantly higher than the mean age at initiation of SRH services among LGBTQ+ respondents ($M = 16.41, SD = 2.41$).

Table 9 describes initiation of SRH services overall by age category (nominal variable) among participants. SRH services were most often initiated by respondents when they were

minors, under the age of 18 years ($n = 209$, 52.3%), followed by initiation as emerging adults ($n = 149$, 37.3%), and those who have never utilized any type of SRH service ($n = 42$, 10.5%). A Pearson's Chi-Square test of independence was calculated comparing the initiation of SRH services overall by age group, including those who never utilized, and among cisgender/heterosexual and LGBTQ+ respondents. No significant relationship was found ($X^2(2) = 3.566$, $p = .168$).

Influencers on Initiation of SRH Service

The influencers on initiation of SRH services were analyzed as a nominal level variable and described using frequencies and percentages (see Table 10). When a respondent indicated they utilized a specific SRH services type, they then chose the main reason they initiated that service, citing one of up to 11 influencers (i.e., one per SRH service type). The influencers were categorized as “request or required by parent/guardian,” “experiencing symptoms of infection or condition,” “pressure from partner(s),” “pressure from peer(s),” “sense of personal responsibility to take care of sexual and reproductive health and prevent infection or condition,” “recommendation of healthcare provider,” or “other.” New categories “rape,” “military,” and “school requirement” were added after reviewing the “other” fill-in text responses and determining themes among responses. A chi-square test of independence could not be utilized for this research question because of lower-than-expected frequency counts in the data. Because of the violation of assumptions of chi-square analysis, the relationship between sexual orientation and gender identity and influencers on initiation of SRH services were examined descriptively. Although these results may not be generalizable to the population, conclusions may be drawn about the study sample. Figure 4 shows the distribution of influencers on initiation of SRH services overall reported among cisgender/heterosexual participants and LGBTQ+ participants.

Participants who utilized at least one type of SRH service ($n = 358$) reported 1,243 influencers of initiation of SRH services ($M = 3.5$). Of those reporting influencers, 707 (56.9%) were reported by cisgender/heterosexual participants and 535 (43.0%) were reported by LGBTQ+ participants. Cisgender/heterosexual participants were most likely to report a sense of personal responsibility to take care of SRH (41.4%) and healthcare provider recommendation (28.1%) as the main reasons for initiating SRH services. LGBTQ+ participants were slightly more influenced by personal responsibility (48.0%) and slightly less by provider recommendations (25.4%) compared to their cisgender/heterosexual peers. Parent/Guardian and symptoms were other commonly reported influencers on initiation of SRH services (11.3% and 11.9% for cisgender/heterosexual participants and 12.5% and 8.4% for LGBTQ+ participants, respectively).

Two cisgender/heterosexual participants reported the military as the reason for initiating HIV testing services. Rape was reported as an influencer for initiating STI testing ($n = 3$, 1.6%), STI treatment ($n = 1$, 1.7%), HIV testing ($n = 1$, 0.8%), HIV treatment ($n = 1$, 6.3%), and medical abortion ($n = 2$, 13.3%) among cisgender/heterosexual and LGBTQ+ participants. A school requirement was only named as an influencer to initiating the HPV vaccine among five cisgender/heterosexual participants (2.2%). Pressure from peers was the least reported influencer on SRH initiation, with only one cisgender/heterosexual respondent reporting peer pressure for initiating the HPV vaccine (0.4%). Pressure from partners was also reported infrequently. Only 1.3% of the reasons for initiation of SRH services overall can be attributed to partner influence. For cisgender/heterosexual participants, partners were influential in their initiation of STI testing ($n = 3$, 2.8%), STI treatment ($n = 1$, 2.8%), information and counseling ($n = 2$, 1.8%), and contraception ($n = 2$, 1.3%). For LGBTQ+ participants, partners were influential in the initiation

of STI testing ($n = 2$, 2.4%), HIV testing ($n = 1$, 1.8%), information and counseling ($n = 1$, 1.1%), and contraception ($n = 4$, 3.8%).

The SRH services utilized most frequently include contraception, HPV vaccine, information and counseling, and STI testing. Nearly two-thirds (65.8%) of the participants utilized birth control services. Cisgender/heterosexual participants were slightly more likely to report personal responsibility as the main reason for initiating birth control services, compared to LGBTQ+ participants (60.0% and 50.0%, respectively). This response was followed by experiencing symptoms of infection or a condition as the main reason for initiating birth control services (21.9% and 22.1%, respectively). For HPV vaccination, utilized by 53.3% of participants, the main influencers on initiation included provider recommendation (48.4% vs. 42.7%) and request or requirement of parent/guardian (33.1% and 42.7%) among cisgender/heterosexual and LGBTQ+ participants, respectively. Half (48.3%) of the participants utilized information and counseling services. LGBTQ+ participants were more likely to report personal responsibility and slightly less likely to report provider recommendation as the main reason for initiation SRH services for information and counseling, compared to their cisgender/heterosexual peers (58.6% vs. 39.6% and 21.8% vs. 23.4%, respectively). STI testing was utilized by 47.3% of participants. LGBTQ+ respondents were more likely to report personal responsibility as the reason for initiating STI testing (62.7%) compared to their cisgender/heterosexual peers (45.3%). However, cisgender/heterosexual respondents were more likely to report provider recommendation (25.5%) as the reason for initiating STI testing services, compared with their LGBTQ+ peers (18.1%).

Pap screening and HIV testing services were utilized a little less frequently by the study sample (37.5% and 29.0%, respectively). Provider recommendation and personal responsibility

were the main reason for initiating Pap screening among cisgender/heterosexual participants (48.3% and 36.8%, respectively) and among LGBTQ+ participants (44.4% and 38.1%, respectively). LGBTQ+ respondents were more likely to report personal responsibility as the reason for initiating HIV testing (78.6%), compared to their cisgender/heterosexual peers (48.4%). However, cisgender/heterosexual respondents were more likely to report provider recommendation (35.3%) as the reason for initiating HIV testing services, compared with their LGBTQ+ peers (10.7%).

The remaining SRH services were utilized infrequently. For STI treatment, utilized by 14.8% of the participants, the main influencers were personal responsibility (48.3%) and experiences of symptoms or a condition (31.0%). Among the 15 participants utilizing medical abortion, 86.7% of participants reported personal responsibility as their reason for initiating medical abortion services and 13.3% of participants reported rape as the reason for initiation medical abortion. For HIV treatment and PrEP services, personal responsibility and provider recommendation were among the strongest influencers for initiation, including 31.3% and 37.5% for HIV treatment and 25.0% and 62.5% for PrEP, respectively.

Barriers to SRH Service Utilization

To identify whether LGBTQ+ participants report a greater number of barriers to accessing SRH services as a minor, under the age of 18years, compared to their cisgender/heterosexual peers, the alpha level was established at $\alpha = .05$. The barriers to accessing SRH services were analyzed as a nominal-level variable and described using frequencies and percentages. All participants were asked about barriers to accessing SRH services overall and were invited to select all the barriers that applied. The barriers were categorized as “lack of personal and financial resources,” “lack of transportation to get to services needed,” “lack of

well-trained health providers,” “lack of LGBTQ-friendly health providers,” “lack of separate room for young people,” “judgmental attitude of health providers,” “lack of privacy and confidentiality,” “unwelcoming attitude of health providers toward young people,” “insufficient time for counseling,” “lack of knowledge and information about services,” “inconvenient clinic hours,” and “other.” A new category “parent” and “no barriers experienced” were added after reviewing the “other” fill-in text responses and determining themes among responses.

Participants who did not record any barriers (no categories selected) were combined with the “no barriers experienced” category.

A total of 119 respondents ($n = 89$ cisgender/heterosexual, $n = 30$ LGBTQ+) were marked as “no barriers experienced” and were excluded from the frequency tables and analysis (see Tables 11 and 12). The remaining 281 participants reporting barriers to accessing SRH services reported a cumulative total of 752 barriers ($M = 2.68$ per individual). Of those reporting barriers, 351 (46.7%) were among cisgender/heterosexual participants and 401 (53.3%) were from LGBTQ+ participants. To calculate this, the number of barriers were summed across all participants. Cisgender/heterosexual participants were most likely to report lack of knowledge about services (32.9%), lack of personal and financial resources (19.6%), and lack of privacy and confidentiality (21.6%) as barriers to accessing SRH services. LGBTQ+ participants were more likely to report lack of knowledge (45.0%), lack of personal and financial resources (28.8%), and lack of privacy and confidentiality (35.6%) as a barrier to accessing SRH services compared to their cisgender/heterosexual peers. Lack of LGBTQ-friendly provider was another commonly reported barrier to accessing SRH services among LGBTQ+ respondents (29.3%); this was not a barrier for cisgender/heterosexual respondents (1.7%). Figure 5 shows the distribution of the barriers reported among cisgender/heterosexual participants and LGBTQ+ participants.

The remaining barriers were reported less than 20% of the participants overall. This included judgmental attitudes of providers ($n = 63$, 15.8%), lack of transportation ($n = 53$, 13.3%), unwelcoming attitude of providers towards young people ($n = 50$, 12.5%), insufficient time for counseling ($n = 49$, 12.3%), lack of separate rooms for young people ($n = 48$, 12.0%), parents ($n = 31$, 10.0%), inconvenient clinic hours ($n = 27$, 6.8%), lack of well-trained providers ($n = 23$, 5.8%), and other ($n = 12$, 3.0%).

An independent samples t -test comparing the mean number of reported barriers between the two groups found a significant difference between the mean number of barriers reported by LGBTQ+ and cisgender/heterosexual participants ($t(279) = -3.117$, $p = .002$). The mean number of barriers reported by cisgender/heterosexual participants ($M = 2.32$, $SD = 1.84$) was significantly less than the mean number of barriers reported by LGBTQ+ participants ($M = 3.08$, $SD = 2.25$).

Chapter Five: Discussion

Summary of Findings

The purpose of this study was to explore the barriers and facilitators that are associated with early initiation (first-time utilization) of sexual and reproductive health (SRH) services among lesbian, gay, bisexual, transgender, queer, or other sexual and gender minority individuals (LGBTQ+) and cisgender/heterosexual Oklahoma emerging adults. Three research questions were examined to understand better the relationship between sexual orientation and gender identity and SRH service utilization, that is: (1) does the average age at initiation of SRH services differ between LGBTQ+ and cisgender/heterosexual individuals? (2) do the strongest influencers on initiation of SRH services differ between LGBTQ+ and cisgender/heterosexual individuals? and (3) do barriers to accessing SRH services differ between LGBTQ+ and cisgender/heterosexual individuals?

The average age at initiation of SRH services among the sample ($n = 358$) was 17.12 years ($SD = 2.40$). There was no statistically significant difference in the average age at initiation of SRH services overall between the cisgender/heterosexual group (17.26 years, $SD = 2.41$) and the LGBTQ+ group (16.92 years, $SD = 2.39$; $p = .189$). Because of this, the null hypothesis was accepted. A statistically significant difference was found when examining age at initiation by SRH service type. Cisgender/heterosexual participants were, on average, older at initiation of birth control compared to their LGBTQ+ peers ($M = 17.21$, $SD = 2.21$ vs. $M = 16.41$, $SD = 2.41$, $p = .006$).

LGBTQ+ individuals do not appear to initiate SRH services differently from their cisgender/heterosexual peers. Average age at initiation of common SRH services were similar for both groups of youth in the sample. However, LGBTQ+ youth may be slightly younger than

their cisgender/heterosexual peers when initiating services for birth control. Most of the SRH service types (STI testing, STI treatment, HIV testing, HIV treatment, Pap screening, information or counseling, and medical abortion) were initiated by the sample at an average age of 17.12 to 19.43 years old. The youngest average age at initiation of SRH services was for the HPV vaccine ($M = 14.75$, $SD = 3.00$). Contraception services and PrEP services were initiated on average at an age of just under 17 years old.

Peer pressure and partner pressure to initiate SRH services were only reported 17 times (1.3%) between cisgender/heterosexual and LGBTQ+ participants. One cisgender/heterosexual respondent reported peer pressure for initiating the HPV vaccine (0.4%). Sixteen participants, evenly divided between cisgender/heterosexual and LGBTQ+ respondents, identified partner pressure as the main reason for initiation of SRH services. For cisgender/heterosexual participants, partners were influential in their initiation of sexually transmitted infection (STI) testing ($n = 3$, 2.8%), STI treatment ($n = 1$, 2.8%), information and counseling ($n = 2$, 1.8%), and contraception ($n = 2$, 1.3%). For LGBTQ+ participants, partners were influential in the initiation of STI testing ($n = 2$, 2.4%), HIV testing ($n = 1$, 1.8%), information and counseling ($n = 1$, 1.1%), and contraception ($n = 4$, 3.8%). Peer and partner influence on SRH initiation was not reported more frequently by LGBTQ+ participants compared to their peers; therefore, the null hypothesis was accepted. The data violated one of the assumptions of chi-square analysis, so results may not be generalizable to the population (lower-than-expected frequency counts). Nevertheless, many conclusions may be drawn about the study sample.

Personal responsibility (44.2%) and recommendation from a provider (27.0%) were the strongest influencers on initiation of SRH services, overall. LGBTQ+ youth were more likely to report personal responsibility as a main reason for initiating STI testing (62.7%) and HIV testing

(78.6%) compared to their cisgender/heterosexual peers (45.3% and 48.4%, respectively). On the other hand, provider recommendations were a stronger influencer on initiation of STI testing and HIV testing for cisgender/heterosexual youth than for LGBTQ+ youth (25.5% and 35.5% vs. 18.1% and 10.7%, respectively). Utilization of medical abortion was not reported frequently ($n = 15$). However, for cisgender/heterosexual youth, personal responsibility was the only reported influencer on initiation of medical abortion. For LGBTQ+ youth, in addition to personal responsibility, rape was also reported as an influencer on initiation of medical abortion (60.0% and 40%, respectively).

The average number of barriers to accessing SRH services as a minor among the sample was 2.68 ($SD = 2.07$). There was a statistically significant difference in the average number of reported barriers to accessing SRH services between the cisgender/heterosexual group and the LGBTQ+ group ($M = 2.32$, $SD = 1.84$ vs. $M = 3.08$, $SD = 2.25$, $p = .002$). The null hypothesis was rejected, and the results determined that LGBTQ+ respondents report, on average, a greater number of barriers to utilizing SRH services compared to cisgender/heterosexual respondents. Both groups most frequently reported lack of knowledge about services, lack of personal and financial resources, and lack of privacy and confidentiality as major barriers to accessing SRH services. LGBTQ+ participants were more likely to report barriers overall, for each barrier category measured.

Implications of the Results

The two study groups, cisgender/heterosexual Oklahoma emerging adults and LGBTQ+ Oklahoma emerging adults, were largely similar in their socio-demographic characteristics. Cisgender/heterosexual participants made up 60% ($n = 240$) of the sample while LGBTQ+ participants made up 40% ($n = 160$) of the sample. Among the LGBTQ+ group, 11.2% identified

with a gender-expansive or non-cisgender category, 19.8% as men (transgender and cisgender), and 72.8% as women (transgender and cisgender). Most of the LGBTQ+ group identified as bisexual (47.5%), followed by pansexual (18.1%), lesbian/gay (16.3%), asexual/aromantic (8.8%), heterosexual/straight (2.5%), and other (3.8%).

According to the 2017 Youth Risk Behavior Survey, LGBTQ+ youth in Oklahoma are 1.5 times more likely to engage in sexual activity than their heterosexual peers, presenting an increased risk for poor SRH outcomes (OSDH, 2019). A number of studies support the claims that LGBTQ+ youth are at a greater risk of poor SRH outcomes due in part to risky SRH behaviors outcomes (Charlton et al., 2013; Ela & Budnick, 2017; Goldberg et al., 2016; Tornello et al., 2014). In line with previous research, the LGBTQ+ participants in this study were more likely to report first-time sex as a minor (53.8%) and four or more sexual partners (43.1%) compared to their cisgender/heterosexual peers (49.2% and 33.3%, respectively). Although a low representation of the sample overall, cisgender/heterosexual participants were more likely to have experienced a pregnancy and STI diagnosis than LGBTQ+ participants, 7.5% vs. 5.1% and 7.5% vs. 5.6%, respectively. A previous HPV diagnosis was reported even less (3.3%) and no diagnoses for HIV/AIDS were recorded. Given that Oklahoma is a state with a high burden of STIs, particularly chlamydia and gonorrhea, among adolescents, STI prevalence among the study sample may be low or participant SRH history may be under-reported (OSDH, 2019).

Some previous studies found that adolescent and sexual and gender minority individuals underutilize SRH services, including HIV testing, HPV vaccination, and Pap testing (Agénor et al., 2014; Agénor et al., 2016; Charlton et al., 2011). Other previous studies showed that sexual minority individuals utilize SRH services more than their heterosexual peers, including STI testing, HIV testing, and HPV testing (Agénor et al., 2017; Kerr et al., 2013). The results from

this survey reflect a delay in SRH service initiation and low utilization of SRH services overall among adolescents. The sample reported an average age at first sex of 13.95 years ($n = 320$, $SD = 3.55$) yet the average age at first time utilization of SRH services was 17.12 years ($SD = 2.40$). LGBTQ+ youth were slightly more likely to report sexual debut and SRH service initiation as a minor, under the age of 18 years old, compared to their cisgender/heterosexual peers (53.8% and 56.9% vs. 49.2% and 49.2%). Initiation of SRH services was most likely to occur for contraception services ($n = 263$, 65.8%) and HPV vaccination ($n = 213$, 53.3%). These services were more likely to be utilized by LGBTQ+ respondents than by cisgender/heterosexual respondents. Previous literature that has found that contraceptive use was lower among sexual minority women than heterosexual women (Charlton et al., 2013; Ela & Budnick, 2017). According to the CDC, about 58.5% of adolescents in Oklahoma (13-17 years old) have received at least one dose of the HPV vaccine (Walker et al., 2018). The LGBTQ+ participants in this study were more likely to report contraceptive use than previous studies have found and the proportion of participants in this study who have initiated the HPV vaccine is in line with state-level data.

SRH services for information and counseling and STI testing were utilized by less than half of all respondents (48.3%, $n = 193$ and 47.3%, $n = 189$, respectively). STI testing services were more likely to be utilized by LGBTQ+ respondents than by cisgender/heterosexual respondents. Information and counseling services were more likely to be utilized by cisgender/heterosexual respondents than by LGBTQ+ respondents. Less than half of the participants utilized the remaining SRH service including, 37.5% ($n = 150$) for cervical cancer screening, 29% ($n = 166$) for HIV testing, 14.8% ($n = 59$) for STI treatment services, 4.0% ($n =$

16) for HIV treatment, 3.8% ($n = 15$) for medical abortion, and 1.8% ($n = 7$) for PrEP services; no respondents utilized services for PEP.

Although peers and partners are common sources of sexual health information for young people, peers and partners were hardly influencers on youth initiating SRH services (1.3% overall), contrary to the second prediction. The results of this study show that a sense of personal responsibility to take care of one's SRH health and prevent infection or a condition was the leading influencer on initiating SRH services, overall (44.2% of the time). This may be explained by previous research findings that show confidence in one's sexual health practices, including accessing SRH services, is a key factor in reducing poor SRH outcomes (Charest et al., 2016). Individuals who are confident in their sexual health practices may have a stronger sense of personal responsibility to prevent infection or condition. This relationship could be examined in future studies. Recommendations from a healthcare provider was also a major influencer on initiating SRH services (27.0% of the time). This may explain why previous research has found that positive patient-provider relationships can facilitate SRH service utilization (Jahn et al. 2019; Müller, 2017; Youatt et al., 2017). Interestingly, personal responsibility was a slightly stronger influencer among LGBTQ+ respondents compared to their cisgender/heterosexual peers, and provider recommendations were a slightly stronger influencer on cisgender/heterosexual respondents compared to their LGBTQ+ peers. Jahn et al. (2019) found that inclusive and culturally competent health care providers help to facilitate sexual health communication among sexual minority women seeking care. The lower influence of providers on SRH initiation among LGBTQ+ respondents may be due to LGBTQ+ individuals' discomfort with disclosing their sexual identity with their health care provider (Youatt et al., 2017).

HPV vaccination and birth control services were initiated at the earliest ages among the sample and across all SRH services ($M = 14.75$ years and $M = 16.90$ years, respectively). These were also the most frequently initiated services among the sample and across all SRH service types ($n = 213$, 53.3%, and $n = 263$, 65.8%, respectively). Provider recommendation was still the strongest influencer on initiating HPV vaccination (45.8%), but this was closely followed by a request or requirement by a parent/guardian (37.4%). While personal responsibility was the strongest influencer on initiation of services for birth control (56.1%), experiencing symptoms of infection or a condition was an influencer for over one-fifth of those initiating birth control services (22.0%). Since 41 out of the 58 responses indicating symptoms as the reason for initiating contraception were originally from those providing an “other” fill-in text response (recoded into the “symptom” category), symptoms can be largely attributed to conditions such as acne; endometriosis; irregular, heavy, and/or painful periods; hormonal imbalance; and polycystic ovarian syndrome (PCOS). This speaks to young people’s utilization of birth control services for purposes other than pregnancy prevention.

Youth face several barriers to accessing SRH services. Parents, personal health priorities and provider attitudes have been found to affect young people’s utilization of SRH services by previous researchers (Ayehu et al. 2016; Comfort & McCausland, 2013) Discrimination may be particularly burdensome for LGBTQ+ youth (Irvine et al., 2014; Müller, 2017; Qureshi et al., 2018; Rahman et al., 2014). In this study, LGBTQ+ participants reported each measured barrier more often than their cisgender/heterosexual peers. Overall, on average, LGBTQ+ young people report more barriers to accessing SRH services than cisgender/heterosexual young people ($M = 2.32$ vs. $M = 3.08$). Seventy percent (70.3%) of the study sample reported barriers to accessing SRH services. Young people were most likely to report lack of knowledge and information about

services (37.8%), lack of privacy and confidentiality (25.3%), and lack of personal and financial resources (23.3%) as barriers to accessing SRH services. The lack of LGBTQ-friendly providers was also a commonly reported barrier among LGBTQ+ youth (29.4%).

Application of the Results

The study findings show that there are similarities and differences in the utilization of SRH services among LGBTQ+ and cisgender/heterosexual Oklahoma emerging adults. Overall, youth delay SRH service initiation following their sexual debut by about 3 years. The average age at initiation of SRH services among Oklahoma emerging adults is 17 years old and 89.5% of the Oklahoma emerging adults surveyed utilized at least one type of SRH service. Differences in the age at initiation of SRH services were found in cases involving those who initiated contraceptive service or birth control (65.7%). LGBTQ+ youth were younger at initiation of contraceptive services than their cisgender/heterosexual peers. While no differences in average age of initiation of services were found between the two groups, other services commonly utilized by the study sample included HPV vaccination (49.6% and 58.8% among cisgender/heterosexual and LGBTQ+ respondents, respectively), information and counseling (45.0% and 53.2% among cisgender/heterosexual and LGBTQ+ respondents, respectively), and STI testing (44.2% and 51.9% among cisgender/heterosexual and LGBTQ+ respondents, respectively). HPV vaccination and information and counseling on SRH are particularly important SRH preventative services. HPV vaccines protect individuals from cancers and genital warts. Information and counseling on SRH is important because it provides health education and resources to support harm reduction and safer sex behaviors. Even though all youth could benefit from these services, only about half of Oklahoma emerging adults report utilizing such services. STI testing is also essential for any sexually active persons because early diagnosis and treatment

prevent long-term health consequences of STIs and reduce the transmission of infections. While 79.6% of cisgender/heterosexual and 80.6% LGBTQ+ Oklahoma emerging adults reported being sexually active (33.3% and 43.1% reporting four or more sexual partners in their lifetime, respectively), only about half of the surveyed Oklahoma emerging adults utilized STI testing services.

The gap between sexual debut and SRH service utilization is of concern for public health practitioners and health care providers. Key opportunities to provide health education and preventative services are missed, which puts young people at a greater risk for poor SRH outcomes. This highlights the need to design policies and programs that support and facilitate youth's access to SRH services. This may be especially beneficial to LGBTQ+ youth in Oklahoma, who are more likely than their cisgender peers to report sexual activity as a minor and to report sexual activity with four or more sexual partners in their lifetime. Based on the barriers reported by the participants, programs and policies should focus on eliminating financial barriers to accessing care, protecting young people's privacy and right to confidential services, and educating young people on the SRH services available to them. Based on the influencers reported by the participants, programs and services should also focus on empowering young people to take charge of their sexual health and ensuring healthcare providers initiate screening of all their adolescent patients. For example, Medicaid expansion in the state could result in more youth having access to affordable and confidential services. Comprehensive sexuality education for all students could help to ensure more youth are knowledgeable about SRH services available to them and empower youth to take charge of their sexual health.

The study results regarding influencers on initiation of SRH services may not be generalizable to the larger population due to lower than expected frequency counts violating

assumptions of chi-square analysis. This study, however, highlights how inconsequential peer pressure and partner pressure are on the initiation of SRH services among the study participants. Personal responsibility (41.4% and 48.0% among cisgender/heterosexual and LGBTQ+ respondents, respectively) and provider recommendations (28.1% and 25.4% among cisgender/heterosexual and LGBTQ+ respondents, respectively) were much more influential on SRH service initiation than other measured influencers. While experiencing symptoms were a common reason for seeking healthcare services among adolescents in some studies, other studies found the confidence in one's sexual health practices was associated with SRH service utilization (Charest et al., 2016; Otworld et al., 2015). This speaks to the importance of youth having the knowledge and skills to take charge of their own SRH and to health care providers' role in providing adolescent SRH services. Interestingly, LGBTQ+ participants were slightly more influenced by personal responsibility and slightly less by provider recommendations compared to their cisgender/heterosexual peers. Personal responsibility to prevent infection or condition may be a greater influencer on LGBTQ+ youth who also report having more lifetime sexual partners, compensating for their own personal SRH risks behaviors. LGBTQ+ youth could benefit, however, from provider-recommended screenings, and the results of this study may highlight providers' missed opportunities in appropriately counseling LGBTQ+ youth. Previous research tells us that healthcare provider communication about sexual identity with their adolescent patients may improve patient-provider relationships and increase utilization of SRH services (Jahn et al., 2019; Youatt et al., 2017). Culturally competent, well-trained, and LGBTQ+ friendly healthcare providers facilitate the utilization of SRH services. This may be especially important for LGBTQ+ youth, who may be at greater risk and less likely to disclose their sexual orientation or gender identity to a healthcare provider.

This study is in line with previous research in revealing that LGBTQ+ young people report more barriers to accessing SRH services than cisgender/heterosexual young people (Ayehu et al., 2016; Agénor et al., 2016; Charest et al., 2016; Charlton et al., 2011; Comfort, & McCausland, 2013; Müller, 2017; Youatt et al., 2017). Overcoming barriers such as lack of knowledge and information about services (reported by 32.9% and 45.0% of cisgender/heterosexual and LGBTQ+ respondents, respectively), lack of personal and financial resources (reported by 19.6% and 28.75% of cisgender/heterosexual and LGBTQ+ respondents, respectively), and lack of privacy and confidentiality (reported by 21.6% and 35.6% of cisgender/heterosexual and LGBTQ+ respondents, respectively) are critical to improving young people's utilization of SRH services, overall. As expected, LGBTQ+ participants are more likely to report confidentiality and privacy concerns and a need for LGBTQ-friendly providers. A lack of supportive networks of LGBTQ+ youth may contribute to greater concerns about confidentiality and privacy. Youth often report confidentiality and privacy concerns when accessing SRH services due to fear that their parents, and sometimes their peers, may find out about their sexual activity (Agénor et al., 2017; Ayehu, Kassaw, & Haliu, 2016; Charest, Kleinplats, & Lund, 2016). For LGBTQ+ youth, concerns about being "outed" could compound the barrier that lack of privacy and confidentiality present for young people. Discrimination is also often reported as a major concern for accessing health services among sexual and gender minority individuals (Jahn et al., 2019; Irvine et al., 2014; Müller, 2017). Previous studies have reported that 50% of transgender respondents have been refused care (Qureshi et al., 2018). Negative attitudes towards adolescent SRH and LGBTQ+ identities contribute to youths' negative experiences of healthcare and can deter young people from seeking care altogether (Qureshi et al., 2018; Rahman & Moskowitz, 2019; Rounds, McGrath, & Walsh, 2013). This

suggests that inclusive and confidential SRH services may be especially beneficial for LGBTQ+ youth. Healthcare providers must receive adequate training on adolescent SRH issues, how to protect minor's confidentiality, and how to ensure LGBTQ+ inclusivity to reduce disparities in adolescent SRH outcomes.

Facilitating access to SRH services at an early age is critical to addressing and supporting the SRH needs of young people. More research is needed to understand the relationship of influencers and barriers to utilization of SRH services among adolescents with diverse sexual orientations and gender identities.

Recommendations for Future Study

The exploratory nature of this study provides an interesting and unique perspective on the factors shaping SRH service initiation among Oklahoma emerging adults. Since existing research in this area often is limited to sexual minority women, this study was intentional in using diverse and inclusive categories of sexual orientation and gender identity to describe the study participants. Nonetheless, this study had several limitations to consider. First the study participants were over-representative of white cisgender women attending college full-time. These study results may not capture the impact of intersecting social identities on SRH service utilization. For example, research has indicated that racial/ethnic minorities underutilize SRH services and face a number of barriers to accessing healthcare due to factors including racial bias and discrimination within health care systems (Agénor *et al.*, 2014; Irvine *et al.*, 2014). Future research may aim to be more inclusive of multiple minority identities in relation to SRH service utilization.

Second, because of the cross-sectional and retrospective design of this study, recall bias presents a challenge. Recall bias limits the accuracy of the data in representing true historical

events related to one's experience in accessing SRH services as an adolescent. Self-response bias may play out here, too. If the participants felt certain expectations about socially acceptable norms around SRH or LGBTQ+ identities, there is potential for bias in the way participants report their SRH experience or behaviors. For example, participants may answer survey questions in a way that reflects over-reporting of sexual risk-reducing behaviors or under-reporting sexual risk-taking behaviors. Future research could seek to interview adolescents who access SRH services directly or could conduct a randomized medical chart review of healthcare providers serving adolescent clients as means to reduce bias. Another limitation includes the study's reliance on a convenience sample. While the goal was to recruit a diverse pool of Oklahoma emerging adults, the survey was limited in its reach across the state of Oklahoma. Moreover, the personal and sensitive nature of the topic of SRH may have limited the number of individuals willing to participate in the study. Again, a study that relied on medical chart reviews could employ a randomized sampling technique and target its audience more effectively.

Lastly, a limitation of the study was its violation of the expected frequency counts assumption for the chi-square analysis regarding the influencers on SRH service initiation. Future research should explore major influencers on adolescent SRH initiation and utilization. Based on this study, it would be ideal to examine the roles that a sense of personal responsibility and recommendations of a healthcare provider play in influencing utilization of SRH services among LGBTQ+ and cisgender/heterosexual youth. To do this and examine the variable inferentially, influencers could be measured on a Likert scale and the scores compared between groups.

Future research should also explore the factors influencing early initiation of SRH services between sexual orientation and gender identity categories. Investigating these categories

more deeply may reveal relationships not readily apparent in the current data because sexual minority status and gender minority status were categorized together in this study. The influencers and barriers to accessing SRH services among sexual minority individuals are likely to differ among gender minority individuals. Utilizing mixed methodologies to capture quantitative and qualitative experience related to SRH utilization and SRH outcomes might also address the limitations and gaps in the available data on this topic. Understanding these complex relationships will benefit public health practitioners seeking to promote adolescent SRH and reduce SRH disparities in LGBTQ+ communities.

Conclusion

This research study was conducted to understand better the factors that facilitate early initiation of SRH service among adolescents and to inform public health interventions that reduce SRH disparities among youth and sexual and gender minority communities. Consistent with much of the previous research, these findings demonstrate that SRH service utilization remains low for all youth and that facilitating access to SRH services is especially important for LGBTQ+ individuals, who report significant barriers to care and poorer sexual health outcomes. Facilitating early initiation of SRH services, before a young person engages in sexually risky behaviors, is important because health care providers can screen young patients for risk, provide preventative services, effective treatments, and support harm reduction through health education and referrals to wrap around services. This establishes health-promoting behaviors in early adolescents as well as trust and confidence in the healthcare system, supporting health beyond just the adolescent years. To effectively support LGBTQ+ adolescents' access to SRH services it is important that healthcare providers are culturally competent, well-trained, and LGBTQ-inclusive.

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Tables

Table 1

Literature Search Methods and Results

Search Terms	Number of Titles	Titles Screened	Full Text Review	Articles Selected	Online Databases
"Sexual orientation and sexual health service utilization"	N=49,980	n=3,693	11	11	Elsevier ScienceDirect Journals; PubMed Central; SpringerLink Journals Complete; EBSCOhost Academic Search Premier; ProQuest Central
"Sexual orientation and reproductive health service utilization"	N=9,651	n=829	4	4	JSTOR Arts and Sciences X; ProQuest Central; Elsevier ScienceDirect Journals
"Gender and sexual orientation and initial sexual and reproductive health care service utilization"	N=6,165	n=306	1	1	ProQuest Central
"LGBTQ and initial sexual and reproductive health care service utilization"	N=295	n=22	1	0	--
"Lesbian gay bisexual transgender queer and sexual and reproductive health care service utilization"	N=423	n=62	6	6	ProQuest Central; Elsevier ScienceDirect Journals; Taylor Francis Journals Complete
"Male female heterosexual and initial sexual and reproductive health care service utilization"	N=7	n=1	0	--	--
"Gender and sexual orientation and initial contraception STI screening service utilization"	N=280	n=26	0	--	--

Literature Search Methods and Results (continued)

Search Terms	Search Terms	Search Terms	Search Terms	Search Terms	Search Terms
"LGBTQ and initial contraception STI screening service utilization"	<i>N</i> =18	<i>n</i> =2	0	--	--
"Lesbian gay bisexual transgender queer and initial contraception STI screening service utilization"	<i>N</i> =23	<i>n</i> =2	0	--	--
"Male female heterosexual and initial contraception STI screening service utilization"	<i>N</i> =0	--	--	--	--

Table 2*Mean Age of Participants by SO/GI Category*

Sexual Orientation/ Gender Identity	<i>M</i>	<i>SD</i>	Minimum	Maximum
Cisgender/heterosexual	21.02	1.93	18	25
LGBTQ+	21.01	2.07	18	25
Total	21.01	1.99	18	25

Note. Age = years; SO/GI = sexual orientation/gender identity categories used to define the two study groups, cisgender/heterosexual (CIS/HET) and LGBTQ+

Table 3*Sociodemographic Characteristics of Participants by SO/GI Category*

Participant Characteristic	Sexual Orientation/Gender Identity				Total	
	CIS/HET		LGBTQ+			
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Lived in OK as a minor						
Yes	217	90.4%	147	91.9%	364	91.0%
No	23	9.6%	13	8.1%	36	9.0%
Education						
Some High School	3	1.3%	2	1.3%	5	1.3%
Finished High School	17	7.1%	14	8.8%	31	7.8%
Some College	193	80.4%	122	76.3%	315	78.8%
Finished College	12	5.0%	10	6.3%	22	5.5%
Some Graduate School	12	5.0%	11	6.9%	23	5.8%
Finished Graduate School	3	1.3%	1	0.6%	4	1.0%
Employment						
Not Working	57	23.9%	45	28.1%	102	25.6%
Working Part-Time	135	56.7%	92	57.5%	227	57.0%
Working Full-Time	46	19.3%	23	14.4%	69	17.3%
Student						
Not s Student	4	1.7%	8	5.0%	12	3.0%
Part-Time Student	30	12.5%	19	11.9%	49	12.3%
Full-Time Student	206	85.8%	133	83.1%	339	84.8%
Family Structure						
Two Bio Parents	114	60.0%	88	55.0%	232	58.0%
Two Non-Bio Parents	12	5.0%	8	5.0%	20	5.0%
Single Bio Parent	54	22.5%	40	25.0%	94	23.5%
Single Non-Bio Parent			1	0.6%	1	0.3%
Mixed Bio and Non-Bio	15	6.3%	9	5.6%	24	6.0%
Grandparents	1	0.4%	2	1.3%	3	0.8%
Other	14.2	5.8%	12	7.5%	26	6.5%

Note. SO/GI = sexual orientation/gender identity categories used to define the two study groups, cisgender/heterosexual (CIS/HET) and LGBTQ+; bio = biological

Sociodemographic Characteristics of Participants by SO/GI Category (continued)

Participant Characteristic	Sexual Orientation/Gender Identity				Total	
	CIS/HET		LGBTQ+		n	%
	n	%	n	%		
Family Income as a Minor						
Less than \$10,000	8	3.3%	7	4.4%	15	3.8%
\$10,000-\$29,999	28	11.7%	21	13.1%	49	12.3%
\$30,000-\$49,000	42	17.6%	22	13.8%	64	16.0%
\$50,000-\$69,999	37	15.5%	29	18.1%	66	16.5%
\$70,000 or more	96	40.2%	50	31.3%	146	36.6%
I Do Not Know	239	11.7%	160	19.4%	399	14.8%
Family Income as Emerging Adult						
Less than \$10,000	28	11.7%	29	18.1%	57	14.3%
\$10,000-\$29,999	65	27.2%	35	21.9%	100	25.1%
\$30,000-\$49,000	40	16.7%	34	21.3%	74	18.5%
\$50,000-\$69,999	35	14.6%	19	11.9%	54	13.5%
\$70,000 or more	71	29.7%	43	26.9%	114	28.6%
Relationship Status						
Single/Never Married	181	75.7%	127	79.4%	308	77.2%
Currently Married	17	7.1%	6	3.8%	23	5.8%
In a Relationship	15	6.3%	14	8.8%	29	7.3%
Cohabiting	25	10.5%	12	7.5%	37	9.3%
Separated/Divorced	1	0.4%	1	0.6%	2	0.5%
Religious or Spiritual						
Yes	154	64.2%	69	43.1%	223	55.8%
No	64	26.7%	67	41.9%	131	32.8%
I Do Not Know	22	9.2%	24	15.0%	46	11.5%
Health Insurance as a Minor						
Private	165	69.0%	110	68.8%	275	68.9%
Public	46	19.2%	34	21.3%	80	20.1%
Uninsured	14	5.9%	8	5.0%	22	5.5%
I Do Not Know	14	5.9%	8	5.0%	22	5.5%

Note. SO/GI = sexual orientation/gender identity categories used to define the two study groups, cisgender/heterosexual (CIS/HET) and LGBTQ+; minor = 17 years old and younger

Table 4*Mean Age at Sexual Debut of Participants by SO/GI Category*

Sexual Orientation/ Gender Identity	<i>M</i>	<i>SD</i>	Minimum	Maximum
Cisgender/heterosexual	13.96	3.54	10	18
LGBTQ	13.95	3.59	10	18
Total	13.95	3.55	10	18

Note. Age = years; SO/GI = sexual orientation/gender identity categories used to define the two study groups, cisgender/heterosexual (CIS/HET) and LGBTQ+

Table 5*SRH Characteristics of Participants by SO/GI Category*

Participant Characteristic	Sexual Orientation/Gender Identity				Total	
	CIS/HET		LGBTQ+			
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Age at Sexual Debut						
Minor, <18	118	49.2%	86	53.8%	204	51.0%
Emerging Adult, 18-25	73	30.4%	43	26.9%	116	29.0%
Never Before Had Sex	49	20.4%	31	19.4%	80	20.0%
Number of Past Sexual Partners						
0	49	20.4%	31	19.4%	80	20.0%
1	57	23.8%	29	18.1%	86	21.5%
2	35	14.6%	17	10.6%	52	13.0%
3	19	7.9%	14	8.8%	33	8.3%
4 or More	80	33.3%	69	43.1%	149	37.3%
Number of Pregnancies						
0	222	92.5%	152	95.0%	374	93.5%
1	17	7.1%	6	3.8%	23	5.8%
2			2	1.3%	2	0.5%
3	1	0.4%			1	0.3%
4 or More						
Injection Drug Use						
Yes	2	0.8%	2	1.3%	4	1.0%
No	238	99.2%	158	98.8%	396	99.0%
STI Diagnosis						
Yes	18	7.5%	9	5.6%	27	6.8%
No	221	92.1%	150	93.8%	371	92.8%
Not Sure	1	0.4%	1	0.6%	2	0.5%
HIV/AIDS Diagnosis						
Yes						
No	239	99.6%	160	100.0%	399	99.8%
Not Sure	1	0.4%			1	0.3%
HPV Diagnosis						
Yes	8	3.3%	5	3.1%	13	3.3%
No	231	96.3%	155	96.9%	386	96.5%
Not Sure	1	0.4%			1	0.3%

Note. SRH = sexual and reproductive health; SO/GI = sexual orientation/gender identity categories used to define the two study groups, cisgender/heterosexual (CIS/HET) and LGBTQ+; Age = years; STI = sexually transmitted infection; HIV/AIDS = human immunodeficiency virus/acquired immune deficiency syndrome; HPV = human papillomavirus

Table 6*Sexual Orientation and Gender Identity of Participants by SO/GI Category*

Participant Characteristic	Sexual Orientation/Gender Identity					
	CIS/HET		LGBTQ+		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Cisgender/heterosexual	240	100.0%			240	60.0%
LGBTQ+			160	100.0%	160	40.0%
Sex Assigned at Birth						
Female	187	77.9%	132	82.5%	319	79.8%
Male	53	22.1%	27	16.9%	80	20.0%
Intersex			1	0.6%	1	0.3%
Gender Identity						
Cisgender woman	187	77.9%	98	61.3%	285	71.3%
Transgender woman			6	3.8%	6	1.5%
Cisgender man	53	22.1%	17	10.6%	70	17.5%
Transgender man			9	5.6%	9	2.3%
NB, genderqueer, or GNC			16	10.0%	16	4.0%
Two-spirit			1	0.6%	1	0.3%
Agender			10	6.3%	10	2.5%
Other			3	1.9%	3	0.8%
Sexual Orientation						
Heterosexual/straight	240	100.0%	4	2.5%	244	61.0%
Lesbian/gay			26	16.3%	26	6.5%
Bisexual			76	47.5%	76	19.0%
Pansexual			29	18.1%	29	7.3%
Demisexual			5	3.1%	5	1.3%
Asexual/aromantic			14	8.8%	14	3.5%
Other			6	3.8%	6	1.5%

Note. SO/GI = sexual orientation/gender identity categories used to define the two study groups, cisgender/heterosexual (CIS/HET) and LGBTQ+

Table 7*Frequency of Initiation of SRH Services by SO/GI Category*

SRH Services Type	Sexual Orientation/Gender Identity					
	CIS/HET		LGBTQ+		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
SRH Service (Cumulative)	210	87.5%	148	92.5%	358	89.5%
STI Testing	106	44.2%	83	51.9%	189	47.3%
STI Treatment	37	15.4%	22	13.8%	59	14.8%
HIV Testing	60	25.0%	56	35.0%	116	29.0%
HIV Treatment	8	3.3%	8	5.0%	16	4.0%
HPV Vaccine	119	49.6%	94	58.8%	213	53.3%
Pap Screening	87	36.3%	63	39.4%	150	37.5%
Info & Counseling	108	45.0%	85	53.2%	193	48.3%
Contraception	160	66.7%	103	64.4%	263	65.8%
Medical Abortion	10	41.7%	5	31.3%	15	3.8%
PrEP	3	1.3%	4	2.5%	7	1.8%
PEP						

Note. Cumulative SRH services refer to the frequencies and percentages of participants indicating utilization of at least one type of SRH service. SRH = sexual and reproductive health; SO/GI = sexual orientation/gender identity categories used to define the two study groups, cisgender/heterosexual (CIS/HET) and LGBTQ+

Table 8*Mean Age at Initiation of SRH Services of Participants by SO/GI Category*

SRH Service Type	Sexual Orientation/Gender Identity						<i>p</i>
	CIS/HET		LGBTQ+		Total		
	<i>M</i>	(<i>SD</i>)	<i>M</i>	(<i>SD</i>)	<i>M</i>	(<i>SD</i>)	
SRH Service (Cumulative)	17.26	(2.41)	16.92	(2.39)	17.12	(2.40)	.189
STI Testing	18.42	(2.10)	18.45	(1.86)	18.43	(1.99)	.942
STI Treatment	19.14	(2.12)	19.50	2.13	19.27	2.12	.527
HIV Testing	18.25	(2.08)	18.59	(2.08)	18.41	(2.20)	.408
HIV Treatment	18.88	(2.10)	17.50	(2.07)	18.19	(2.14)	.208
HPV Vaccine	15.00	(3.18)	14.43	(2.75)	14.75	(3.00)	.160
Pap Screening	19.48	(2.12)	19.34	(2.00)	19.43	(2.06)	.698
Info & Counseling	17.04	(2.60)	17.05	(2.16)	17.04	(2.41)	.997
Contraception ^a	17.21	(2.21)	16.41	2(.41)	16.90	(2.32)	.006
Medical Abortion	18.40	(2.12)	20.80	(2.49)	19.20	(2.46)	.072
PrEP	17.00	(2.65)	16.75	(2.88)	16.86	(2.54)	.911
PEP							

Note. An independent *t* test found no violation of homogeneity of variance across all service types. Cumulative mean age scores were calculated by averaging the age at initiation across all SRH service types together. Age = years; SRH = sexual and reproductive health; SO/GI = sexual orientation/gender identity categories used to define the two study groups, cisgender/heterosexual (CIS/HET) and LGBTQ+; STI = sexually transmitted infection; HIV/AIDS = human immunodeficiency virus/acquired immune deficiency syndrome; HPV = human papillomavirus; Pap = cervical cancer screening; PrEP = pre-exposure prophylaxis, a HIV prevention medication; PEP = post-exposure prophylaxis, a HIV prevention medication
^aIndependent *t* test found that the mean age at initiation of contraception services among cisgender/heterosexual respondents was significantly higher than that among LGBTQ+ respondents ($t(261) = 2.781, p = .006$).

Table 9*Frequency of Initiation of SRH Services by Age Category and SO/GI Category*

Age Category	Sexual Orientation/Gender Identity				Total	
	CIS/HET		LGBTQ+		<i>n</i>	%
	<i>n</i>	%	<i>n</i>	%		
SRH Service (Cumulative) ^a						
Minor, <18	118	49.2%	91	56.9%	209	52.3
Emerging Adult, 18-25	92	38.3%	57	35.6%	149	37.3
Never Before Had Sex	30	12.5%	12	7.5%	42	10.5

Note. Cumulative SRH services refer to the frequencies and percentages of participants indicating utilization of at least one type of SRH service and then grouped by age category. Age = years; SRH = sexual and reproductive health; SO/GI = sexual orientation/gender identity categories used to define the two study groups, cisgender/heterosexual (CIS/HET) and LGBTQ+^a Pearson's Chi-Square test of independence found no significant relationship ($X^2(2) = 3.566, p = .168$).

Table 10*Frequency of Influencers on Initiation of SRH Services by SO/GI Category*

Influencer Types	Sexual Orientation/Gender Identity					
	CIS/HET		LGBTQ+		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Influencers on Initiation (Cumulative)						
Parent/Guardian	80	11.3%	67	12.5%	146	11.9%
Symptoms	84	11.9%	45	8.4%	129	10.4%
Partner Pressure	8	1.1%	8	1.5%	16	1.3%
Peer Pressure	1	0.1%			1	0.0%
Personal Responsibility	293	41.4%	257	48.0%	550	44.2%
Provider						
Recommendation	199	28.1%	136	25.4%	335	27.0%
Rape	5	0.7%	3	0.6%	8	0.6%
Military	2	0.3%			2	0.2%
School Requirement	5	0.7%			5	0.4%
Other	30	4.2%	19	3.6%	43	3.5%
STI Testing						
Parent/Guardian	6	5.7%	4	4.8%	10	5.3%
Symptoms	18	17.0%	4	4.8%	22	11.6%
Partner Pressure	3	2.8%	2	2.4%	5	2.6%
Personal Responsibility	48	45.3%	52	62.7%	100	52.9%
Provider						
Recommendation	27	25.5%	15	18.1%	42	22.2%
Rape	2	1.9%	1	1.2%	3	1.6%
Other	2	1.9%	5	6.0%	7	3.7%

Note. Cumulative frequencies and percentages of influencers on initiation of SRH services were calculated by adding together all frequencies and percentages of influencers across all SRH service types. SRH = sexual and reproductive health; SO/GI = sexual orientation/gender identity categories used to define the two study groups, cisgender/heterosexual (CIS/HET) and LGBTQ+; STI = sexually transmitted infection; HIV/AIDS = human immunodeficiency virus/acquired immune deficiency syndrome; HPV = human papillomavirus; Pap = cervical cancer screening; PrEP = pre-exposure prophylaxis, a HIV prevention medication; PEP = post-exposure prophylaxis, a HIV prevention medication

Frequency of Influencers on Initiation of SRH Services by SO/GI Category (continued)

Influencer Types	Sexual Orientation/Gender Identity					
	CIS/HET		LGBTQ+		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
STI Treatment						
Parent/Guardian	1	2.8%			1	1.7%
Symptoms	11	30.6%	7	31.8%	18	31.0%
Partner Pressure	1	2.8%			1	1.7%
Personal Responsibility	17	47.2%	11	50.0%	28	48.3%
Provider						
Recommendation	4	11.4%	4	18.2%	8	13.8%
Rape	1	2.8%			1	1.7%
Other	1	2.8%			1	1.7%
HIV Testing						
Parent/Guardian	1	1.6%	2	3.6%	3	2.5%
Partner Pressure	-	-	1	1.8%	1	0.8%
Personal Responsibility	30	48.4%	44	78.6%	74	62.7%
Provider						
Recommendation	22	35.5%	6	10.7%	28	23.7%
Rape	1	1.6%			1	0.8%
Military	2	3.2%			2	1.7%
Other	6	9.7%	3	5.4%	9	7.6%
HIV Treatment						
Personal Responsibility	1	12.5%	4	50.0%	5	31.3%
Provider						
Recommendation	3	37.5%	3	37.5%	6	37.5%
Rape	1	15.5%			1	6.3%
Other	3	37.5%	1	12.5%	4	25.0%

Note. SRH = sexual and reproductive health; SO/GI = sexual orientation/gender identity categories used to define the two study groups, cisgender/heterosexual (CIS/HET) and LGBTQ+; STI = sexually transmitted infection; HIV/AIDS = human immunodeficiency virus/acquired immune deficiency syndrome; HPV = human papillomavirus; Pap = cervical cancer screening; PrEP = pre-exposure prophylaxis, a HIV prevention medication; PEP = post-exposure prophylaxis, a HIV prevention medication

Frequency of Influencers on Initiation of SRH Services by SO/GI Category (continued)

Influencer Types	Sexual Orientation/Gender Identity					
	CIS/HET		LGBTQ+		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
HPV Vaccine						
Parent/Guardian	41	33.1%	44	42.7%	85	37.4%
Peer Pressure	1	0.8%			1	0.4%
Personal Responsibility	15	12.1%	14	13.6%	29	12.8%
Provider						
Recommendation	60	48.4%	44	42.7%	104	45.8%
School Requirement	5	4.0%			5	2.2%
Other	2	1.6%	1	1.0%	3	1.3%
Pap Screening						
Parent/Guardian	5	5.7%	4	6.3%	9	6.0%
Symptoms	7	8.0%	4	6.3%	11	7.3%
Personal Responsibility	32	36.8%	24	38.1%	56	37.3%
Provider						
Recommendation	42	48.3%	28	44.4%	70	46.7%
Other	1	1.1%	3	4.8%	4	2.7%
Info & Counseling						
Parent/Guardian	14	12.6%	5	5.7%	19	9.6%
Symptoms	13	11.7%	7	8.0%	20	10.1%
Partner Pressure	2	1.8%	1	1.1%	3	1.5%
Personal Responsibility	44	39.6%	51	58.6%	95	48.0%
Provider						
Recommendation	26	23.4%	19	21.8%	45	22.7%
Other	12	10.8%	4	4.6%	16	8.1%

Note. SRH = sexual and reproductive health; SO/GI = sexual orientation/gender identity categories used to define the two study groups, cisgender/heterosexual (CIS/HET) and LGBTQ+; STI = sexually transmitted infection; HIV/AIDS = human immunodeficiency virus/acquired immune deficiency syndrome; HPV = human papillomavirus; Pap = cervical cancer screening; PrEP = pre-exposure prophylaxis, a HIV prevention medication; PEP = post-exposure prophylaxis, a HIV prevention medication

Frequency of Influencers on Initiation of SRH Services by SO/GI Category (continued)

Influencer Types	Sexual Orientation/Gender Identity				Total	
	CIS/HET		LGBTQ+		n	%
	n	%	n	%		
Contraception						
Parent/Guardian	12	7.5%	8	7.7%	20	7.6%
Symptoms	35	21.9%	23	22.1%	58	22.0%
Partner Pressure	2	1.3%	4	3.8%	6	2.3%
Personal						
Responsibility	96	60.0%	52	50.0%	148	56.1%
Provider						
Recommendation	12	7.5%	15	14.4%	27	10.2
Other	3	1.3%	2	1.3%	5	1.3%
Medical Abortion						
Personal						
Responsibility	10	100.0%	3	60.0%	13	86.7%
Rape			2	40.0%	2	13.3%
PrEP						
Parent/Guardian			1	20.0%	1	12.5%
Personal						
Responsibility			2	40.0%	2	25.0%
Provider						
Recommendation	3	100.0%	2	40.0%	5	62.5%
PEP						

Note. SRH = sexual and reproductive health; SO/GI = sexual orientation/gender identity categories used to define the two study groups, cisgender/heterosexual (CIS/HET) and LGBTQ+; STI = sexually transmitted infection; HIV/AIDS = human immunodeficiency virus/acquired immune deficiency syndrome; HPV = human papillomavirus; Pap = cervical cancer screening; PrEP = pre-exposure prophylaxis, a HIV prevention medication; PEP = post-exposure prophylaxis, a HIV prevention medication

Table 11*Mean Number of Barriers to Accessing SRH Services of Participants by SO/GI Category*

Sexual Orientation/ Gender Identity	<i>M</i>	<i>SD</i>	Minimum	Maximum
Cisgender/heterosexual	2.32	1.84	1	9
LGBTQ	3.08	2.25	1	10
Total	2.68	2.07	1	10

Note. Barriers were select all that apply. An independent samples *t*-test found no violation of homogeneity of variance. The mean number of barriers reported by cisgender/heterosexual participants was significantly less than those reported by LGBTQ+ participants ($t(279) = -3.117$, $p = .002$). SRH = sexual and reproductive health; SO/GI = sexual orientation/gender identity categories used to define the two study groups, cisgender/heterosexual (CIS/HET) and LGBTQ+

Table 12*Frequency of Barriers to Accessing SRH Services of Participants by SO/GI Category*

Barrier Types	Sexual Orientation/Gender Identity					
	CIS/HET		LGBTQ+		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Lack of Personal and Financial Resources	47	19.6%	46	28.8%	93	23.3%
Lack of Transportation	23	9.6%	30	18.8%	53	13.3%
Lack of Well-Trained Providers	12	5.0%	11	6.9%	23	5.8%
Lack of LGBTQ-Friendly Providers	4	1.7%	47	29.4%	51	12.8%
Lack of Separate Rooms for Young People	23	9.6%	25	15.6%	48	12.0%
Judgmental Attitude of Providers	28	11.7%	35	21.9%	63	15.8%
Lack of Privacy and Confidentiality	44	21.6%	57	35.6%	101	25.3%
Unwelcoming Attitudes Toward Young People	27	11.3%	23	14.4%	50	12.5%
Insufficient Time for Counseling	24	10.0%	25	15.6%	49	12.3%
Lack of Knowledge and Info about Services	79	32.9%	72	45.0%	151	37.8%
Inconvenient Clinic Hours	15	6.3%	12	7.5%	27	6.8%
Parents	15	6.3%	16	10.0%	31	7.8%
Other	10	4.2%	2	1.3%	12	3.0%

Note. Barriers were select all that apply. SRH = sexual and reproductive health; SO/GI = sexual orientation/gender identity categories used to define the two study groups, cisgender/heterosexual (CIS/HET) and LGBTQ+

Figures

Figure 1

Survey distribution and recruitment chart

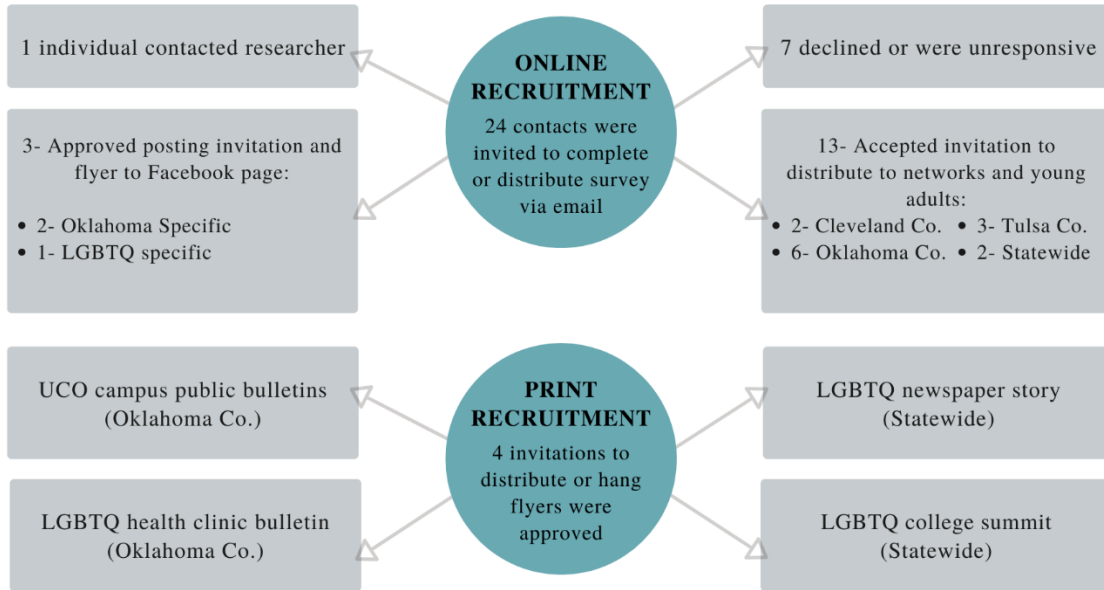
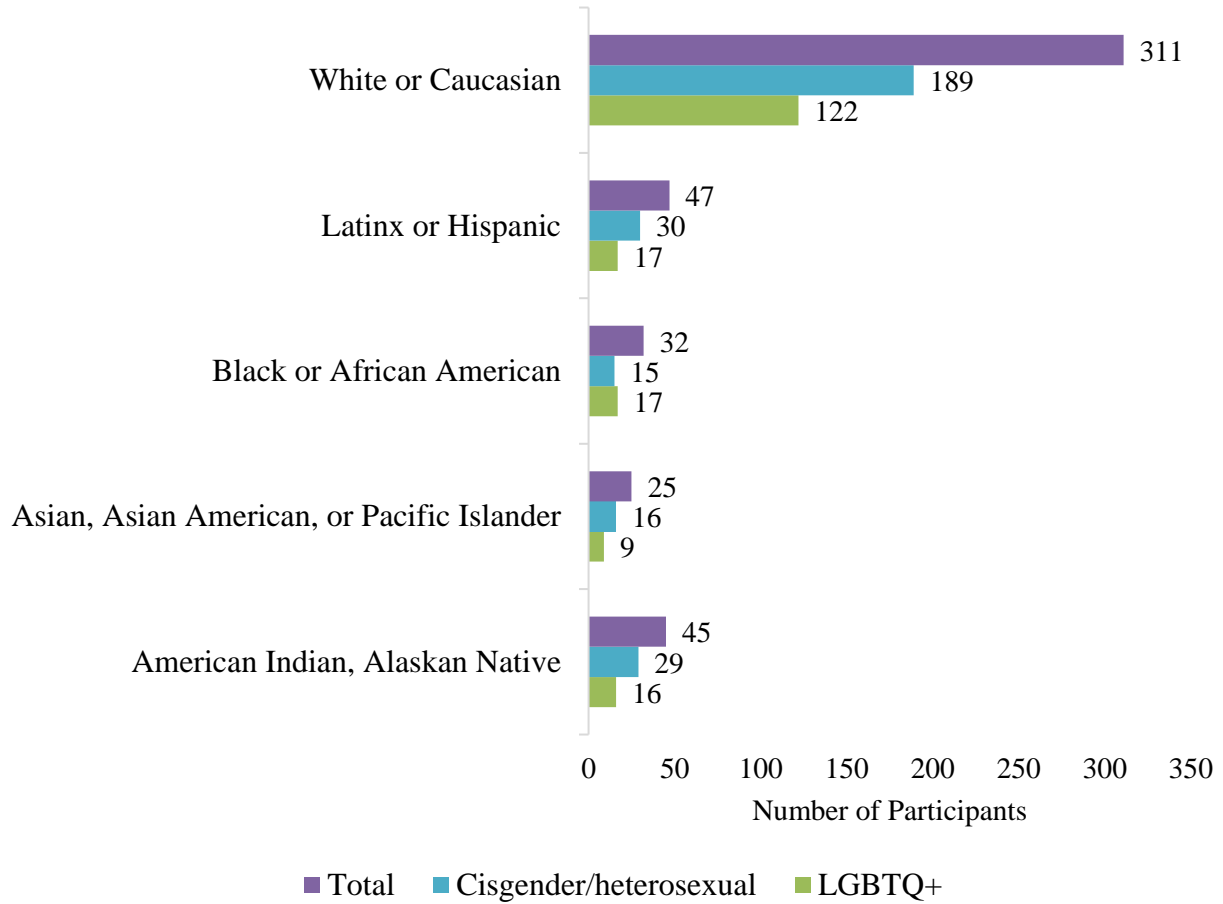


Figure 2

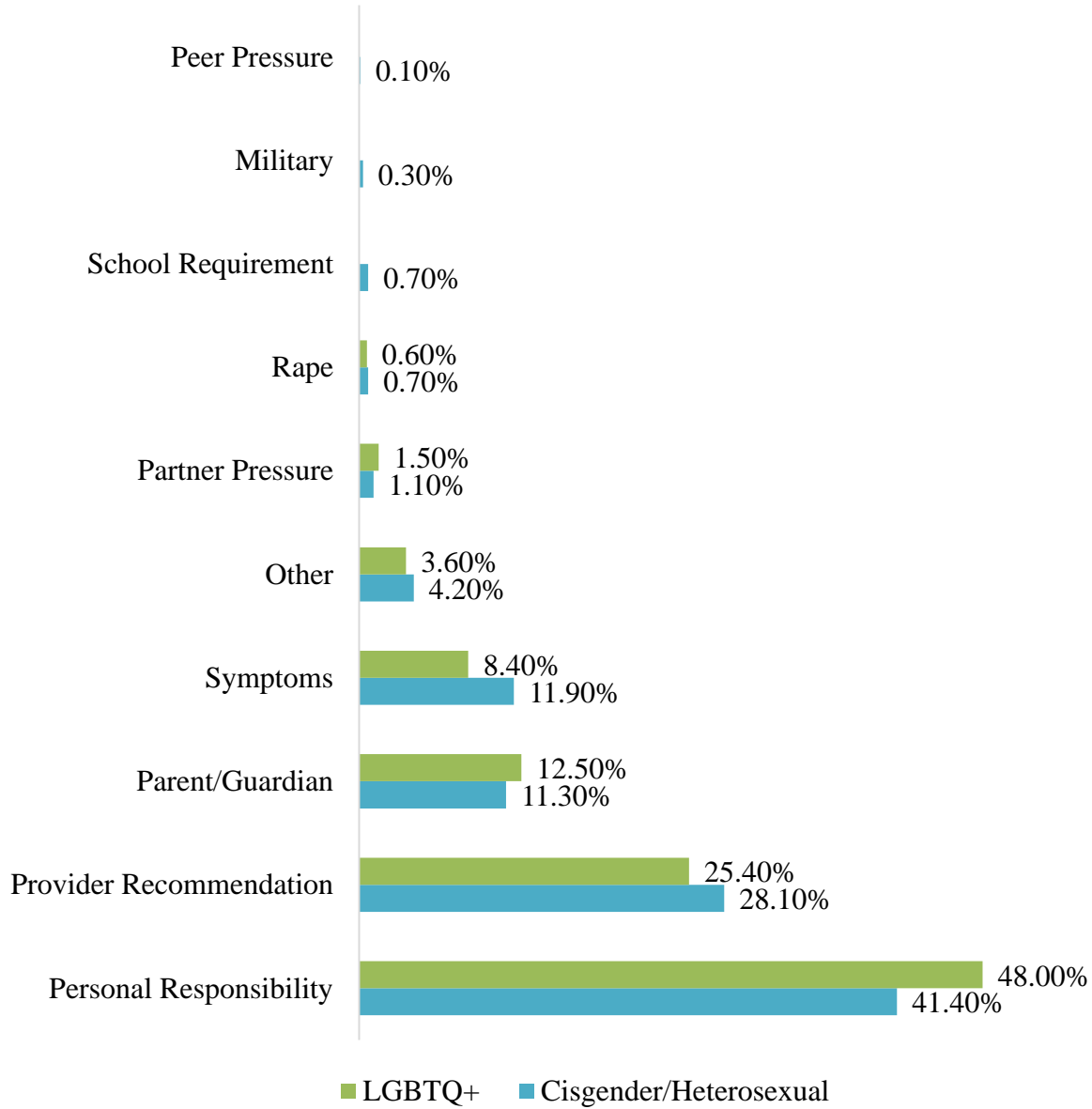
Race/Ethnicity of Participants by Sexual Orientation and Gender Identity



Note. This figure demonstrates the number of participants identifying with each race/ethnicity category for all participants (total) and by sexual orientation and gender identity (both groups; cisgender/heterosexual and LGBTQ+).

Figure 4

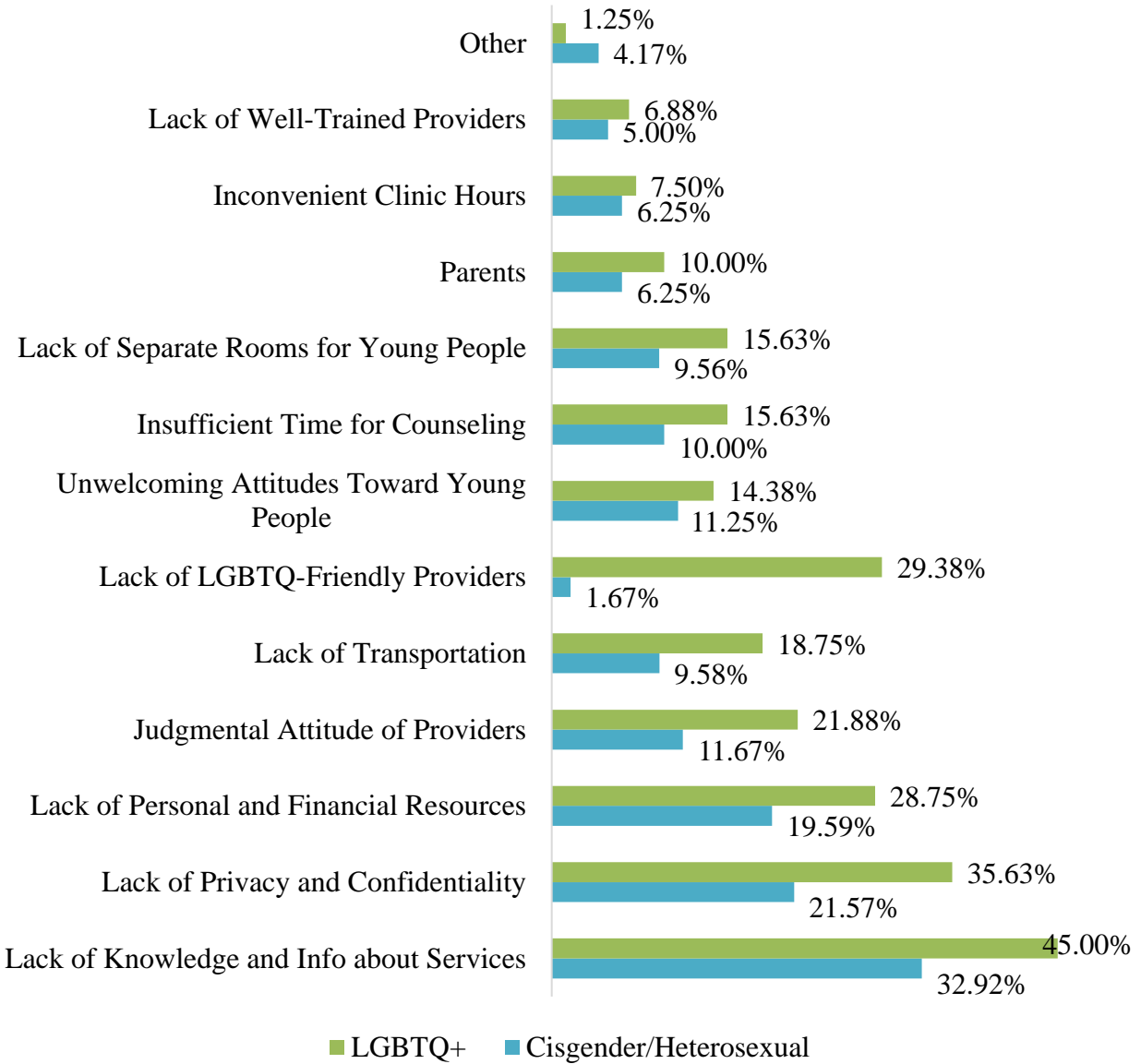
Influencers on Initiation of SRH Services by Sexual Orientation and Gender Identity



Note. This figure demonstrates the proportion of reported influencers on initiation of SRH services per influence type and by sexual orientation and gender identity (both groups; cisgender/heterosexual and LGBTQ+)

Figure 5

Barriers to Accessing SRH Services by Sexual Orientation and Gender Identity



Note. This figure demonstrates the proportion of reported barriers to accessing SRH services per barrier category and by sexual orientation and gender identity (both groups; cisgender/heterosexual and LGBTQ+)

Appendices

Appendix A: Recruitment Flyer

SEEKING YOUNG ADULTS!

SEXUAL & REPRODUCTIVE HEALTH SURVEY

Share your experiences
accessing health services!



- Must live in Oklahoma
- Must be 18 to 25 years old

SCAN OR VISIT: www.tinyurl.com/SRHsurvey2020



This survey is all online and completely confidential. For
additional questions contact mmancebo@uco.edu

This project has been reviewed by the University of Central Oklahoma Institutional Review Board and determined to be
classified as "exempt" human subjects research.

Appendix B: Recruitment Scripts

Study Recruitment Email – UCO Email Blast



UNIVERSITY OF CENTRAL OKLAHOMA
**Education and Professional
Studies**



Sexual and Reproductive Health Research Study

You are being invited to participate in a research study titled "Initiation and Utilization of Sexual and Reproductive Health Services: A Comparison by Sexual Orientation and Gender Identity."

This project will be utilized for a graduate thesis project for the Department of Kinesiology and Health Studies. This project has been reviewed by the University of Central Oklahoma Institutional Review Board and determined to be classified as "exempt" human subjects research. The purpose of this study is to examine the barriers and facilitators associated with early initiation of sexual and reproductive health service utilization by comparing sexual orientation and gender identity among Oklahoma emerging adults.

This questionnaire will take approximately 10-15 minutes to complete. Participants are asked to provide demographic information such as age, race, ethnicity, educational attainment, family structure, income level, relationship status, religiosity and health insurance status. Additional survey questions will ask participants about their gender identity, sexual orientation, initiation and utilization of sexual and reproductive health services, sexual risk history, and perceived barriers to care.

Completion of this survey is voluntary, and anyone 18 to 25 years of age can participate. Responses are confidential and present no risk beyond those present in daily life. To complete the survey, please follow the link below. Please email direct questions related to this study to [Maria Mancebo](mailto:maria.mancebo@uco.edu).

Take Survey



CONTACT US: 405.974.2000
Legal & Policies | Contact UCO
100 North University Drive
Edmond, OK | 73034 US



Study Recruitment Email – Organization/General

Attachments: Flyer_SRH Survey.pdf

Subject: Assistance with Study on Sexual & Reproductive Health

Hello [Contact Person]

My name is Maria Mancebo. I am a graduate student at the University of Central Oklahoma in the Wellness Management- Health Promotion Program. I am currently conducting a research study titled “Initiation of Sexual and Reproductive Health Services: A Comparison by Sexual Orientation and Gender Identity.” **I am writing you to ask if you could assist me with recruiting participants for this study.**

Below, I have provided more details about the study and how to access the survey. Additionally, I have attached a study flyer that includes a website link and QR code where potential participants can access the survey. **Please share this information with any organizations and contacts you think may be interested in participating.**

Purpose: This project will be utilized for a graduate thesis project for the Department of Kinesiology and Health Studies. This project has been reviewed by the University of Central Oklahoma Institutional Review Board and determined to be classified as “exempt” human subjects research. The purpose of this study is to examine the barriers and facilitators associated with early initiation of sexual and reproductive health service utilization by comparing sexual orientation and gender identity among Oklahoma emerging adults.

Eligibility: Completion of this survey is voluntary and anyone 18 to 25 years of age and residing in Oklahoma can participate. Response are confidential and present no risk beyond those present in daily life.

Survey Length: This questionnaire will take approximately 10-15 minutes to complete. Participants are asked to provide demographic information such as age, race, ethnicity, educational attainment, family structure, income level, relationship status, religiosity, and health insurance status. Additional survey questions will ask participants about their gender identity, sexual orientation, initiation and utilization of sexual and reproductive health services, sexual risk history, and perceived barriers to care.

Link to Survey: https://uco.co1.qualtrics.com/jfe/form/SV_4JfL6UYDib4WX3v

Thank you in advance for your assistance. Please direct questions related to this study to Maria Mancebo at mmancebo@uco.edu.

Respectfully,
Maria Mancebo
Wellness Management, Health Promotion

Appendix C: Informed Consent Form

UNIVERSITY OF CENTRAL OKLAHOMA**INFORMED CONSENT FORM**

Research Project Title: Initiation of Sexual and Reproductive Health Services: A Comparison among Sexual Orientation and Gender Identity

Researcher(s): Maria Mancebo and LaNita Wright, PhD, MPH, CHES

- A. Purpose of this research:** The purpose of this study is to examine the barriers and facilitators associated with early initiation of sexual and reproductive health service utilization by comparing sexual orientation and gender identity among Oklahoma emerging adults.
- B. Procedures/treatments involved:** Participants will answer questions about their demographic background, such as age, race/ethnicity, education attainment, family structure, income, relationship status, religiosity, and health insurance status; sexual orientation and gender identity; initiation and utilization of sexual and reproductive health services; sexual and reproductive health history; and perceived barriers to care.
- C. Expected length of participation:** The questionnaire is expected to take 10-15 minutes to complete.
- D. Potential benefits:** There are no benefits to participation in this study. However, the information gathered will help create the first study comparing facilitators and barriers to initiation of sexual and reproductive health services by sexual orientation and gender identity.
- E. Potential risks or discomforts:** Your participation in this study does not pose more than minimal risk to you; however, this survey does include questions about sexual health, sexual orientation and gender identity which may cause a certain amount of emotional or psychological discomfort in some people. In order to reduce these potential risks, the following steps are being taken: (1) Your responses are anonymous. Your name or other identifying information will not be associated with your responses; (2) You have the option to end participation in this study at any time, for any reason, without penalty; and, (3) You will be provided with a link to a list of local resources at the end of the survey if you feel the need to seek out such services. You may also access this list here: <https://tinyurl.com/SRHsurveyResources>
- F. Medical/mental health contact information (if required):** Below is a list of mental health resources. An additional list of resources will be provided at the end of the survey and can be accessed at this link: <https://tinyurl.com/SRHsurveyResources>

Center for Counseling and Well-Being: (405) 974-2000
Nigh University Center, Room 402
University of Central Oklahoma

APPROVED
January 27, 2020
UCO IRB

100 N. University Dr., Edmond, OK 73034

<https://www.uco.edu/student-resources/center-for-counseling-and-wellbeing/>

National Suicide Prevention Lifeline: (800) 273-8255

The National Suicide Prevention Lifeline is a national network of local crisis centers that provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Crisis Text Line: Text START to 741-741

Crisis Text Line is free, 24/7 support for those in crisis. Text from anywhere in the USA to text with a trained Crisis Counselor.

G. Contact information for researchers:

Maria Mancebo: mmancebo@uco.edu

LaNita Wright: lwright33@uco.edu
(405) 974-5216

H. Contact information for UCO IRB:

Office of Research Integrity and Compliance
NUC 341, BOX 132
405-974-5497 or 405-974-5479
email: irb@uco.edu

I. Explanation of confidentiality and privacy: All responses to the questionnaire will be administered and collected online via the Qualtrics survey tool. Questionnaire responses will be stored on a password protected laptop computer available only to the researchers. Research will be reported in aggregate (group only) and individual surveys will not be made public. Personally identifiable information such as age, race/ethnicity, sexual orientation and gender identity will not be made public and will be stored on a password protected computer. Participants may withdraw from the study at any time by exiting the questionnaire.

J. Assurance of voluntary participation: Participation in this study is voluntary and you may withdraw and stop answering the questionnaire at any time. Incomplete questionnaires will not be included in the study.

A PDF copy of this consent form that you can download is provided [here](#).

AFFIRMATION BY RESEARCH SUBJECT

I hereby voluntarily agree to participate in the above listed research project and further understand the above listed explanations and descriptions of the research project. I also

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UCO IRB

understand that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this project at any time without penalty. I acknowledge that I am at least 18 years old. I have read and fully understand this Informed Consent Form. I electronically sign it freely and voluntarily. I acknowledge that access to a copy of this Informed Consent Form has been made available to me in pdf format through a downloadable link. Clicking below indicates that I have read the description of the study and I agree to participate in the study.

- Yes
- No

APPROVED
January 27, 2020
UCO IRB

Appendix D: Data Collection Instrument



Default Question Block

INFORMED CONSENT FORM

Research Project Title: Initiation of Sexual and Reproductive Health Services: A Comparison among Sexual Orientation and Gender Identity

Researcher(s): Maria Mancebo and LaNita Wright, PhD, MPH, CHES

A. Purpose of this research: The purpose of this study to examine the barriers and facilitators associated with early initiation of sexual and reproductive health service utilization by comparing sexual orientation and gender identity among Oklahoma emerging adults

B. Procedures/treatments involved: Participants will answer questions about their demographic background, such as age, race/ethnicity, education attainment, family structure, income, relationship status, religiosity, and health insurance status; sexual orientation and gender identity; initiation and utilization of sexual and reproductive health services; sexual and reproductive health history; and perceived barriers to care.

C. Expected length of participation: The questionnaire is expected to take 10-15 minutes to complete.

D. Potential benefits: There are no benefits to participation in this study. However, the information gathered will help create the first study comparing facilitators and barriers to initiation of sexual and reproductive health services by sexual orientation and gender identity.

E. Potential risks or discomforts: Your participation in this study does not pose more than minimal risk to you; however, this survey does include questions about sexual health, sexual orientation and gender identity which may cause a certain amount of emotional or psychological discomfort in some people. In order to reduce these potential risks, the following steps are being taken: (1) Your responses are anonymous. Your name or other identifying information will not be associated with your responses; (2) You have the option to end participation in this study at any time, for any reason, without penalty; and, (3) You will be provided with a link to a list of local resources at the end of the survey if you feel the need to seek out such services. You may also access this list here:
<https://tinyurl.com/SRHsurveyResources>

F. Medical/mental health contact information (if required): Below is a list of mental health resources. An additional list of resources will be provided at the end of the survey and can be accessed at this link: <https://tinyurl.com/SRHsurveyResources>

Center for Counseling and Well-Being: (405) 974-2000
Nigh University Center, Room 402
University of Central Oklahoma
100 N. University Dr., Edmond, OK 73034

<https://www.uco.edu/student-resources/center-for-counseling-and-wellbeing/>

National Suicide Prevention Lifeline: (800) 273-8255

The National Suicide Prevention Lifeline is a national network of local crisis centers that provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Crisis Text Line: Text START to 741-741

Crisis Text Line is free, 24/7 support for those in crisis. Text from anywhere in the USA to text with a trained Crisis Counselor.

G. Contact information for researchers:

Maria Mancebo: mmancebo@uco.edu

LaNita Wright: lwright33@uco.edu
(405) 974-5216

H. Contact information for UCO IRB:

Office of Research Integrity and Compliance Manager: Mr. Steven Dunn
Compliance Coordinator: Ms. Pam Lumen
NUC 341, BOX 132
405-974-5497 or 405-974-5479
email: irb@uco.edu

I. Explanation of confidentiality and privacy: All responses to the questionnaire will be administered and collected online via the Qualtrics survey tool. Questionnaire responses will be stored on a password protected laptop computer available only to the researchers. Research will be reported in aggregate (group only) and individual surveys will not be made public. Personally identifiable information such as age, race/ethnicity, sexual orientation and gender identity will not be made public and will be stored on a password protected computer. Participants may withdraw from the study at any time by exiting the questionnaire.

J. Assurance of voluntary participation: Participation in this study is voluntary and you may withdraw and stop answering the questionnaire at any time. Incomplete questionnaires will not be included in the study.

A PDF copy of this consent form that you can download is provided [here](#).

AFFIRMATION BY RESEARCH SUBJECT

I hereby voluntarily agree to participate in the above listed research project and further understand the above listed explanations and descriptions of the research project. I also understand that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this project at any time without penalty. I acknowledge that I am at least 18 years old. I have read and fully understand this Informed Consent Form. I electronically sign it freely and voluntarily. I acknowledge that access to a copy of this Informed Consent Form has been made available to me in PDF format through a downloadable link. Clicking below indicates that I have read the description of the study and I agree to participate in the study.

- Yes
 No

This first set of questions are designed to help understand the research population including demographic background, such as age, race/ethnicity, education attainment, family structure, income, relationship status, religiosity, and health insurance status; sexual orientation and gender identity.

Please answer honestly and to the best of your knowledge. Participation is voluntary and you may withdraw from the study at any time by exiting out of the survey.

Definitions for key terms are provided throughout the survey and can be accessed by clicking on underlined hyperlinked words. Links will open in a new window. For a full list of LGBTQ+ terms and definitions visit <https://www.transstudent.org/definitions>.

What is your age in years?

- 18
 19

20

- 21
- 22
- 23
- 24
- 25
- 26 or older

In what Oklahoma County do you currently live?

Did you live in the state of Oklahoma at any point between 10-17 years of age, even if for as little as one year?

- Yes
- No

How would you describe your race/ethnicity? **Please select all that apply.**

- American Indian, Alaskan Native
- Asian, Asian American, or Pacific Islander
- Black or African American
- Latinx or Hispanic
- White or Caucasian
- Other (Please specify)

What is your highest level of education?

- Some high school
- Finished high school/ Received high school diploma or GED
-

- Some college/ Undergraduate studies or Associates degree
- Finished college/ Received Bachelor's degree
- Some graduate school
- Finished graduate school/ Received graduate degree

What is your current employment status?

- Not working or unemployed
- Working part-time
- Working full-time

What is your current student status?

- Not a student
- Part-time student
- Full-time student

When you were an adolescent (10-17 years of age) how would you describe your family structure?

- Lived with two biological parents
- Lived with two parents, not biological
- Lived with a single biological parent
- Lived with a single non-biological parent
- Other (Please specify)

When you were an adolescent (10-17 years of age), what was your family's annual household income?

- Less than \$10,000
- \$10,000-\$29,999
-

- \$30,000-\$49,999
- \$50,000-\$69,999
- \$70,000 or more
- I don't know

What is your current annual household income?

- Less than \$10,000
- \$10,000-\$29,999
- \$30,000-\$49,999
- \$50,000-\$69,999
- \$70,000 or more

How would you describe your current relationship status?

- Single/ Never married
- Currently married
- Not married living with a partner(s)
- Separated, divorced, or widowed
- Other (Please specify)

Would you describe yourself as religious or spiritual?

- Yes
- No
- I don't know

When you were an adolescent (10-17 years of age) what was your health insurance status?

- Private insurance (Blue Cross Blue Shield, Aetna, etc.)
-

- Public insurance (e.g. SoonerCare, Medicaid)
- Uninsured or underinsured
- I don't know

How would you describe your sex assigned at birth?

- Female
- Intersex
- Male

What is your gender?

- [Agender](#)
- [Cisgender](#) woman
- [Cisgender](#) man
- [Nonbinary](#), [genderqueer](#), or [gender non-conforming](#)
- [Transgender](#) woman
- [Transgender](#) man
- [Two-spirit](#)
- Other (Please specify)

What is your sexual orientation?

- [Asexual/aromantic](#)
- [Bisexual](#)
- [Demisexual](#)
- [Heterosexual/straight](#)
- [Lesbian/gay](#)
- [Pansexual](#)
- Other (Please specify)

Initiation and Utilization of Sexual and Reproductive Health Services These firs

This next set of questions will ask about the first time you accessed and received sexual and/or reproductive health services. Below is a list of sexual and reproductive health services. Please provide the age at which you first received each of these services, and then select the factor that most influenced your decisions to access that service.

At what age did you first utilize **STI testing** services (*i.e.*, gonorrhea, chlamydia, syphilis, or genital herpes)?

STI stands for sexually transmitted Infection.

- | | |
|--|--|
| <input type="radio"/> Before the age of 10 years | <input type="radio"/> 18 years |
| <input type="radio"/> 10 years | <input type="radio"/> 19 years |
| <input type="radio"/> 11 years | <input type="radio"/> 20 years |
| <input type="radio"/> 12 years | <input type="radio"/> 21 years |
| <input type="radio"/> 13 years | <input type="radio"/> 22 years |
| <input type="radio"/> 14 years | <input type="radio"/> 23 years |
| <input type="radio"/> 15 years | <input type="radio"/> 24 years |
| <input type="radio"/> 16 years | <input type="radio"/> 25 years |
| <input type="radio"/> 17 years | <input type="radio"/> I have never utilized this service |

Which of the following was the main reason you utilized **STI testing** services at the age you indicated?

- Request or required by parent/guardian
- Experiencing symptoms of infection or condition
- Pressure from partner(s)
- Pressure from peer(s)
- Sense of personal responsibility to take care of sexual and reproductive health and prevent infection or condition
-

Recommendation of healthcare provider

- Other:

At what age did you first utilize **STI treatment** services (*i.e.*, treatment for gonorrhea, chlamydia, syphilis, or genital herpes)?

STI stands for sexually transmitted infection.

- | | |
|--|--|
| <input type="radio"/> Before the age of 10 years | <input type="radio"/> 18 years |
| <input type="radio"/> 10 years | <input type="radio"/> 19 years |
| <input type="radio"/> 11 years | <input type="radio"/> 20 years |
| <input type="radio"/> 12 years | <input type="radio"/> 21 years |
| <input type="radio"/> 13 years | <input type="radio"/> 22 years |
| <input type="radio"/> 14 years | <input type="radio"/> 23 years |
| <input type="radio"/> 15 years | <input type="radio"/> 24 years |
| <input type="radio"/> 16 years | <input type="radio"/> 25 years |
| <input type="radio"/> 17 years | <input type="radio"/> I have never utilized this service |

Which of the following was the main reason you utilized **STI treatment** services at the age you indicated?

- Request or required by parent/guardian
- Experiencing symptoms of infection or condition
- Pressure from partner(s)
- Pressure from peer(s)
- Sense of personal responsibility to take care of sexual and reproductive health and prevent infection or condition
- Recommendation of healthcare provider
- Other:

At what age did you first utilize **HIV testing** services?

HIV stands for human immunodeficiency virus.

- | | |
|--|--|
| <input type="radio"/> Before the age of 10 years | <input type="radio"/> 18 years |
| <input type="radio"/> 10 years | <input type="radio"/> 19 years |
| <input type="radio"/> 11 years | <input type="radio"/> 20 years |
| <input type="radio"/> 12 years | <input type="radio"/> 21 years |
| <input type="radio"/> 13 years | <input type="radio"/> 22 years |
| <input type="radio"/> 14 years | <input type="radio"/> 23 years |
| <input type="radio"/> 15 years | <input type="radio"/> 24 years |
| <input type="radio"/> 16 years | <input type="radio"/> 25 years |
| <input type="radio"/> 17 years | <input type="radio"/> I have never utilized this service |

Which of the following was the main reason you utilized **HIV testing** services at the age you indicated?

- Request or required by parent/guardian
- Experiencing symptoms of infection or condition
- Pressure from partner(s)
- Pressure from peer(s)
- Sense of personal responsibility to take care of sexual and reproductive health and prevent infection or condition
- Recommendation of healthcare provider
- Other:

At what age did you first utilize **HIV treatment** services?

HIV stands for human Immunodeficiency virus.

- | | |
|--|--------------------------------|
| <input type="radio"/> Before the age of 10 years | <input type="radio"/> 18 years |
| <input type="radio"/> 10 years | <input type="radio"/> 19 years |
| <input type="radio"/> 11 years | <input type="radio"/> 20 years |
| <input type="radio"/> 12 years | <input type="radio"/> 21 years |
| <input type="radio"/> 13 years | <input type="radio"/> 22 years |
| <input type="radio"/> 14 years | <input type="radio"/> 23 years |
| <input type="radio"/> 15 years | <input type="radio"/> 24 years |
| <input type="radio"/> 16 years | <input type="radio"/> 25 years |

- 17 years I have never utilized this service

Which of the following was the main reason you utilized **HIV treatment** services at the age you indicated?

- Request or required by parent/guardian
 Experiencing symptoms of infection or condition
 Pressure from partner(s)
 Pressure from peer(s)
 Sense of personal responsibility to take care of sexual and reproductive health and prevent infection or condition
 Recommendation of healthcare provider
 Other:

At what age did you first utilize the **HPV vaccine**?

HPV stands for human papillomavirus.

- Before the age of 10 years 18 years
 10 years 19 years
 11 years 20 years
 12 years 21 years
 13 years 22 years
 14 years 23 years
 15 years 24 years
 16 years 25 years
 17 years I have never utilized this service

Which of the following was the main reason you utilized the **HPV vaccine** at the age you indicated?

- Request or required by parent/guardian

- Experiencing symptoms of infection or condition
- Pressure from partner(s)
- Pressure from peer(s)
- Sense of personal responsibility to take care of sexual and reproductive health and prevent infection or condition
- Recommendation of healthcare provider
- Other:

At what age did you first utilize **cervical cancer screening** (Pap test/smear)?

- | | |
|--|--|
| <input type="radio"/> Before the age of 10 years | <input type="radio"/> 18 years |
| <input type="radio"/> 10 years | <input type="radio"/> 19 years |
| <input type="radio"/> 11 years | <input type="radio"/> 20 years |
| <input type="radio"/> 12 years | <input type="radio"/> 21 years |
| <input type="radio"/> 13 years | <input type="radio"/> 22 years |
| <input type="radio"/> 14 years | <input type="radio"/> 23 years |
| <input type="radio"/> 15 years | <input type="radio"/> 24 years |
| <input type="radio"/> 16 years | <input type="radio"/> 25 years |
| <input type="radio"/> 17 years | <input type="radio"/> I have never utilized this service |

Which of the following was the main reason you utilized **cervical cancer screening** (Pap test/smear) at the age you indicated?

- Request or required by parent/guardian
- Experiencing symptoms of infection or condition
- Pressure from partner(s)
- Pressure from peer(s)
- Sense of personal responsibility to take care of sexual and reproductive health and prevent infection or condition
- Recommendation of healthcare provider
- Other:

At what age did you first utilize services for **information and counseling** on sexual and reproductive health from a medical provider?

- | | |
|--|--|
| <input type="radio"/> Before the age of 10 years | <input type="radio"/> 18 years |
| <input type="radio"/> 10 years | <input type="radio"/> 19 years |
| <input type="radio"/> 11 years | <input type="radio"/> 20 years |
| <input type="radio"/> 12 years | <input type="radio"/> 21 years |
| <input type="radio"/> 13 years | <input type="radio"/> 22 years |
| <input type="radio"/> 14 years | <input type="radio"/> 23 years |
| <input type="radio"/> 15 years | <input type="radio"/> 24 years |
| <input type="radio"/> 16 years | <input type="radio"/> 25 years |
| <input type="radio"/> 17 years | <input type="radio"/> I have never utilized this service |

Which of the following was the main reason you utilized services for **information and counseling** on sexual and reproductive health from a medical provider at the age you indicated?

- Request or required by parent/guardian
- Experiencing symptoms of infection or condition
- Pressure from partner(s)
- Pressure from peer(s)
- Sense of personal responsibility to take care of sexual and reproductive health and prevent infection or condition
- Recommendation of healthcare provider
- Other:

At what age did you first utilize **contraception** (birth control methods such as the pill, patch, ring, implant, shot, intra-uterine device)?

- | | |
|--|--------------------------------|
| <input type="radio"/> Before the age of 10 years | <input type="radio"/> 18 years |
| <input type="radio"/> 10 years | <input type="radio"/> 19 years |
| <input type="radio"/> 11 years | <input type="radio"/> 20 years |

- | | |
|--------------------------------|--|
| <input type="radio"/> 12 years | <input type="radio"/> 21 years |
| <input type="radio"/> 13 years | <input type="radio"/> 22 years |
| <input type="radio"/> 14 years | <input type="radio"/> 23 years |
| <input type="radio"/> 15 years | <input type="radio"/> 24 years |
| <input type="radio"/> 16 years | <input type="radio"/> 25 years |
| <input type="radio"/> 17 years | <input type="radio"/> I have never utilized this service |

Which of the following was the main reason you utilized **contraception** services at the age you indicated?

- Request or required by parent/guardian
- Experiencing symptoms of infection or condition
- Pressure from partner(s)
- Pressure from peer(s)
- Sense of personal responsibility to take care of sexual and reproductive health and prevent infection or condition
- Recommendation of healthcare provider
- Other:

At what age did you first utilize services for **medical abortion**?

- | | |
|--|--|
| <input type="radio"/> Before the age of 10 years | <input type="radio"/> 18 years |
| <input type="radio"/> 10 years | <input type="radio"/> 19 years |
| <input type="radio"/> 11 years | <input type="radio"/> 20 years |
| <input type="radio"/> 12 years | <input type="radio"/> 21 years |
| <input type="radio"/> 13 years | <input type="radio"/> 22 years |
| <input type="radio"/> 14 years | <input type="radio"/> 23 years |
| <input type="radio"/> 15 years | <input type="radio"/> 24 years |
| <input type="radio"/> 16 years | <input type="radio"/> 25 years |
| <input type="radio"/> 17 years | <input type="radio"/> I have never utilized this service |

Which of the following was the main reason you utilized services for **medical abortion** at the age you indicated?

- Request or required by parent/guardian
- Experiencing symptoms of infection or condition
- Pressure from partner(s)
- Pressure from peer(s)
- Sense of personal responsibility to take care of sexual and reproductive health and prevent infection or condition
- Recommendation of healthcare provider
- Other:

At what age did you first utilize services for **PrEP** (pre-exposure prophylaxis, an HIV prevention medication)?

- Before the age of 10 years
- 10 years
- 11 years
- 12 years
- 13 years
- 14 years
- 15 years
- 16 years
- 17 years
- 18 years
- 19 years
- 20 years
- 21 years
- 22 years
- 23 years
- 24 years
- 25 years
- I have never utilized this service

Which of the following was the main reason you utilized services for **PrEP** (pre-exposure prophylaxis, an HIV prevention medication) at the age you indicated?

- Request or required by parent/guardian
- Experiencing symptoms of infection or condition
- Pressure from partner(s)
- Pressure from peer(s)
-

Sense of personal responsibility to take care of sexual and reproductive health and prevent infection or condition

Recommendation of healthcare provider

Other:

At what age did you first utilize services for **PEP** (post-exposure prophylaxis, an HIV prevention medication)?

Before the age of 10 years

10 years

11 years

12 years

13 years

14 years

15 years

16 years

17 years

18 years

19 years

20 years

21 years

22 years

23 years

24 years

25 years

I have never utilized this service

Which of the following was the main reason you utilized services for **PEP** (post-exposure prophylaxis, an HIV prevention medication)?

Request or required by parent/guardian

Experiencing symptoms of infection or condition

Pressure from partner(s)

Pressure from peer(s)

Sense of personal responsibility to take care of sexual and reproductive health and prevent infection or condition

Recommendation of healthcare provider

Other:

Block 2

This next section includes questions about your sexual and reproductive health history and barriers to accessing services.

At what age did you first have sexual intercourse (by sexual intercourse we mean anal sex, oral sex, or vaginal sex)?

- | | |
|--|---|
| <input type="radio"/> Before the age of 10 years | <input type="radio"/> 18 years |
| <input type="radio"/> 10 years | <input type="radio"/> 19 years |
| <input type="radio"/> 11 years | <input type="radio"/> 20 years |
| <input type="radio"/> 12 years | <input type="radio"/> 21 years |
| <input type="radio"/> 13 years | <input type="radio"/> 22 years |
| <input type="radio"/> 14 years | <input type="radio"/> 23 years |
| <input type="radio"/> 15 years | <input type="radio"/> 24 years |
| <input type="radio"/> 16 years | <input type="radio"/> 25 years |
| <input type="radio"/> 17 years | <input type="radio"/> I have never had sexual intercourse |

During your lifetime, with how many people have you had sexual intercourse (by sexual intercourse we mean anal sex, oral sex, or vaginal sex)?

- 0, I have never had sex
- 1
- 2
- 3
- 4 or more

How many times have you gotten pregnant or gotten someone else pregnant before you were the age of 20?

- 0, I have never been pregnant or gotten someone else pregnant
- 1
- 2
-

3

 4 or more

Have you ever, even once, used a needle to inject a drug not prescribed by a doctor?

- Yes
 No
 Not sure

Have you ever been told by a medical provider that you have an STI (such as gonorrhea, chlamydia, syphilis, or genital herpes)?

STI stands for sexually transmitted infection.

- Yes
 No
 Not sure

Have you ever been told by a medical provider that you have HIV or AIDS?

HIV stand for human Immunodeficiency virus.

AIDS stand for acquired Immunodeficiency syndrome.

- Yes
 No
 Not sure

Have you ever been told by a medical provider that you have an HPV infection or genital warts?

HPV stands for human papillomavirus.

- Yes

No

Not sure

When you were an adolescent (10-17 years of age), were any of the following a barrier to accessing sexual and reproductive health care? **Please select all that apply.**

- Lack of personal and financial resources
- Lack of transportation to get to the services needed
- Lack of well-trained health providers
- Lack of LGBTQ-friendly health providers
- Lack of separate room for young people
- Judgmental attitude of health providers
- Lack of privacy and confidentiality
- Unwelcoming attitude of health providers toward young people
- Insufficient time for counseling
- Lack of knowledge and information about services
- Inconvenient clinic hours
- Other:

Appendix E: IRB Application



View xForm - Initial Review Application (IRB)

New application for proposed research effort.

New Protocol Data Entry

Type of Application

Has this study previously undergone exempt determination, was determined ineligible for exempt status, and now requires submission of this application?

Yes-Exempt Category Research form previously submitted for the study

Please provide the IRB Number that was indicated in the email sent to you from the IRB office regarding ineligibility for study exemption.

2020-001-UCO E

Project Information

Submitter

Mancebo, Maria

Email: mmancebo@uco.edu

Mobile: 7275049215

What is the title of the project.

Initiation of Sexual and Reproductive Health Services: A Comparison Among Sexual Orientation and Gender Identity

If one of your study contacts is not currently available within the UCO IRBManager system, please use the following link to add the new contact.

Please click here to begin the New Contact Form

Please enter the UCO email address of the Principal Investigator (PI), if you are the PI please enter your own email.

Mancebo, Maria

Expirations:

Please identify the role of the PI to UCO.

Student

Please enter the UCO email address of the Faculty/Staff Mentor.

Wright, LaNita S. Ph.D.

Expirations: Human Subjects Training Certification - 06/19/2022

Please click "add contact", and enter the UCO email address of each Co-PI involved in the study.

No answer provided.

Please click "add contact", and enter the UCO email address of each Key Personnel involved in the study.

Fink, Kevin Ph.D.

Expirations: Human Subjects Training Certification - 01/17/2022

Wright, LaNita S. Ph.D.

Expirations: Human Subjects Training Certification - 06/19/2022

Please choose a funding source from the list provided.

Thesis

Has any person serving as a key personnel received personal compensation from the sponsor of this study in the last 12 months? If this has occurred a disclosure of such needs to be made in the consent form.

Entered: 11/25/19 By: Mancebo, Maria

There is no sponsor for this study.

No

Describe the purpose/hypothesis of the project or the research problem in enough detail that we can ascertain what the project is about. Describe why it is being done and the importance of the knowledge expected to result. Explain how the project/study fits with and extends current knowledge.

Adolescents face a number of barriers to accessing sexual and reproductive health care and research suggest these barriers may be exasperated for non-heterosexual and transgender (LGBTQ+) youth who experience stigmatization and discrimination for their identities differently than their heterosexual and cisgender peers (Charest, Kleinplatz, & Lund, 2016; Charlton et al., 2011; Comfort, & McCausland, 2013; Müller, 2017; Youatt, Harris, Harper, Janz, & Bauermeister, 2017). Existing research in this area largely fails to capture individuals of diverse sexual and gender identities. Studies often focus on cisgender populations which limit the level of understanding of the sexual health practices of transgender and nonbinary individuals. Moreover, many studies on sexual and reproductive health focus on the sexual health practices of women, many of which include sexual minority women. But studies on young sexual minority men remains limited (Siconolfi et al., 2013). Consequently, there is little understanding of the barriers and facilitators that influence young people's initiation of sexual and reproductive health services, especially for sexual and gender minority individuals. Data on the initiation and utilization of sexual and reproductive health services by individuals of diverse sexual and gender identities will ensure more effective public health interventions that are designed to provide sexual health information to young people and improve sexual and reproductive health outcomes for those most at risk (Donaldson, Lindberg, Ellen, & Marcell, 2013; Kann et al., 2011). The purpose of this study is to examine the barriers and facilitators associated with early initiation of sexual and reproductive health service utilization by comparing sexual orientation and gender identity among Oklahoma emerging adults. The hypotheses include (1) LGBTQ+ individuals will initiate the utilization of sexual and reproductive health services at an older age compared to heterosexual/cisgender individuals and (2) LGBTQ+ individuals will report greater numbers of barriers to utilizing sexual and reproductive health services compared to their heterosexual and cisgender peers.

Recruitment

Please choose all types of subjects.

Any UCO Student
Other

Please describe the other subjects to be included in your research.

Any adult 18 to 25 years of age and living in Oklahoma may participate in the study.

Please check the procedures you plan to recruit participants. You must attach a copy of your recruitment flyer, script for email or online posting, or in-person announcement at the end of this application form.

Advertisement (Flyer)
Email Blast
Direct/Targeted Email
Online Posting

Please describe all recruitment locations, including on campus or off campus, as well as specific identification of location. You must attached an email/letter of permission to conduct your research at each location at the end of this application form. Indicate steps to be taken to minimize undue influence or coercion when using a classroom.

Recruitment of subjects will take place online via flyer advertisement, email blast, direct/targeted emails and online posting, particularly in connection to communities and organizations where young adults may frequent, like universities, health centers, and community-based organizations. Voluntary participation of survey participation will be emphasized in emails and the informed consent form. Organizations to be solicited include: University of Central Oklahoma via email blast, Oklahoma State University Sexual Health Lab, University of Oklahoma Human Sexuality Professor, Oklahoma City Community College Human Sexuality Professor, Latino Community Development Agency, Q-Space, Freedom Oklahoma, Free Mom Hugs, Youth services of Tulsa, Yes Love OKC, Guiding Right Inc., Oklahoma State Department of Health Sexual Health and Harm Reduction, YWCA, Community Health Centers of Oklahoma, Sunbeam Services, Take Control Initiative, Pivot, Variety Care, Trust Women, Planned Parenthood of the Great Plains, and Student Alliance for Equality (SAFE) organizations across the state of Oklahoma. These organizations will be encouraged to share the flyer and email notice with their networks, including qualifying young adults they serve.

Examples such as instructor's classroom/campus facility or off campus business/organization location.

What is the maximum number of subjects you expect to recruit?

400

Provide justification for the number of subjects you expect to recruit.

In Oklahoma, according to the 2017 Kaiser Family Foundation's State Health Facts, there were approximately 342,000 Oklahoman's between the ages of 19 and 25 in 2017. Using the sample size calculator offered through Qualtrics, a sample size of 384 will be ideal with a confidence level of 95 % and margin of error of 5%.

Will you be specifically including or targeting any of the following groups for research subjects? Check all that apply.

None of the Above

Methodology / Procedures

Describe the methods to be used in this study, including study design, measurements or observations of subjects, and what subjects will experience. Provide the estimated total time to complete research participation.

Participants will be recruited through online-based promotion and posting flyers around the community. This will include promoting the online survey via email blast and social media. Flyers will be distributed online and organizations serving young adults will be solicited to promote the flyer. Demographic questions will ask participants about their age, race, ethnicity, educational attainment, family structure, income level, relationship status, religiosity, and health insurance status. Additional survey questions will ask participants about their sexual orientation, gender identity, initiation and utilization of sexual and reproductive health services, sexual risk history, and perceived barriers to care. All participants will be informed that the survey is anonymous and is expected to take 10-15 minutes to complete. As no face-to-face interviews are required for this online survey, the risk for bias is minimized. The responses from the survey will be entered into IBM® SPSS® Statistics Version 21.0 for analysis.

Do you plan to conduct any of your research via the internet?

Yes

Check which of the following you plan to use.

Qualtrics

Will you be using questionnaires, surveys, tests, or other written instruments? If yes, you will be required to attach copies of the scripts/documents at the end of this form.

Yes

Where will data be collected and stored? Identify where exactly data will be collected and stored (which would include blood draw location if blood being drawn), as well as what steps that will be taken to ensure that data is securely stored.

Data will be collected using the online survey tool, Qualtrics. No names or identifiers will be collected. Data will be entered into IBM® SPSS® Statistics Version 21.0 for analysis. All data, from Qualtrics and entered into SPSS®, will be stored on a password protected personal computer and backed up using a password protected personal One Drive account.

Who will have access to the data collected?

PI
Other

Please describe and identify other individuals that will have access to data.

Principal Investigator and key personnel, including Dr. LaNita Wright and Dr. Kevin Fink.

Who will be responsible for the security of the data?

PI

What length of time will each type of data be maintained. Please identify whether electronic or paper. **Signed consent forms are required to be maintained for 3 years following the close of the study by Federal Regulations.**

Paper data documents do not apply to this project. Electronic data documents will be maintained for 3 years on the password protected personal One Drive account.

Please identify who will be responsible for destruction of data and how data will be destroyed, given the type of data to be destroyed.

Principal Investigator

Will you be using existing data?

No

Will tissue or blood samples be collected for data?

No

Will medical clearance be necessary for subjects to participate because of tissue or blood sampling, administration of food or drugs, or physical exercise conditioning?

No

Please check all of the potential risks for the participants of this study.

Personal or sensitive information about subject or family

Please identify the level of risk for this study.

Research not involving more than minimal risk.

Please justify the rationale for subjecting the participants to the risks of this study, explain what will be done to minimize the risks for the study, and describe the benefits of participation for the subjects (if there are any, if not state that there are none).

No risk or harm is anticipated; however, participants will be asked to share personal information about their sexual and reproductive health that may be sensitive to some. Participants may feel uncomfortable reporting such information. Information on individual sexual and reproductive health behaviors is needed to inform evidence-based practices that seek to address poor sexual and reproductive health outcomes. Through the informed consent process, participants will be notified of the information being requested as part of this study. Furthermore, survey responses are anonymous and all data and personal information will be protected. Participants are able to withdraw from the study at any time. There are no benefits to participation in this study. However, the information gathered will help create the first study comparing facilitators and barriers to initiation of sexual and reproductive health services by sexual orientation and gender identity.

Methodology / Procedures Continued

Will subjects be deceived or misled in any way?

No

Please check the inducements used for this study.

None

Will the participant be required to sign a consent form to participate in this study? If yes upload a copy of the consent form. To access UCO consent template click here.

Yes

Please attach all consent and assent forms, as well as information sheets.

Informed Consent Form_FINAL.pdf Consent Form
Waiver of Documentation of Informed Consent.pdf Consent Form

Who will be consented, check all that apply?

Participant

Please identify where the consent process will occur.

Informed consent will be collected prior to participation in the questionnaire with electronic acknowledgement of the Informed Consent Form. A PDF copy of the Informed Consent Form will be available for download at https://drive.google.com/file/d/19I3auq4s4isV_T82ZkZCFD1iIFbbZvSG/view. Subjects will indicate consent to participating in the study by selecting "Yes" on the electronic Informed Consent Form before entering the questionnaire. Completion of the online questionnaire will indicate consent to participate in this research study.

Will you use a Certificate of Confidentiality for this study? If yes please upload a copy of obtained certificate at the end of this form.

No

Will any aspect of the data be made a part of a record that can be identified with the subject?

No

Will a master code sheet be kept for purposes of identity security?

No

Does this study involve?

None of the above

Will this study use group or aggregate interventions? Group or aggregate here refers to how the data will be collected (from one individual or in a group setting such as a classroom).

No

Will the fact that a particular subject did or did not participate or complete a specific experiment or study be made a part of any record available to supervisor, teacher, or employer?

No

Please describe the benefits of your study to society.

The information gathered as part of this thesis project will help create the first study comparing facilitators and barriers to initiation of sexual and reproductive health services by sexual orientation and gender identity. Information on individual sexual and reproductive health seeking behaviors is needed to inform evidence-based practices that seek to address poor sexual and reproductive health outcomes.

Necessary Attachments

Please attach training certificates.

CITI_IRB Certification_MMancebo_2019 11.23.pdf	Human Subjects Research Training Certification
Initial Review Application (IRB)-2019-11-21-12-53.pdf	Human Subjects Research Training Certification
SBR_CITITraining_1.18.2019-Fink.pdf	Human Subjects Research Training Certification

Please attach all recruitment material such as scripts, flyers, or emails.

Flyer-SRH Survey_FINAL.pdf	Flyer
Study Recruitment - Organizational Email.docx	Flyer
Study Recruitment - Organizational In Person.docx	Flyer
Study Recruitment - UCO Email.docx	Flyer

Please attach protocol.

No answer provided.

Please attach your letter of support from off UCO campus study sites, as well as instructor's approval for classroom interruption on campus.

No answer provided.

Please attach the survey or questionnaire to be used.

Qualtrics_exported_SRH Survey_2019 12.11.docx Questionnaire / Survey

Please attach the privacy form.

No answer provided.

Please attach the test battery you planned to use in this study.

No answer provided.

Please attach the research team agreement.

No answer provided.

Please attach grant face page.

Entered: 11/24/19 By: Mancebo, Maria
This study is not supported by a grant.

Grant Face Page - not applicable.docx Grant Face Page

Please attach any documentation you believe needs to be considered for your research effort that is not called out.

Flyer-SRH Survey_FINAL.pdf	Other
Informed Consent_ Resources Page.pdf	Other
Waiver of Documentation of Informed Consent.pdf	Other

Investigator's Statement**Please confirm agreement to each statement by checking the statement.**

This application represents an accurate and complete description of my proposed research project.
I agree to provide the proper surveillance of this project to ensure that rights and welfare of the human subjects are properly protected.
I agree to comply fully with any requirements made by the UCO IRB.
The Human contact portion of my research will not be begin until the UCO IRB has given its written approval.
Any additions or changes after the project has been approved will be submitted to the IRB and approved prior to Implementation.
Unless otherwise directed by the IRB, I will renew this application with the IRB no more than every 11 months as long as I intend to continue the research effort.
Everyone listed as Key Personnel, including myself, will comply with the SOP regarding staying current with human subjects research training completed every 2 years or be in good standing with his or her home institution.
I do not have an economic interest that could affect or appear to affect the design, conduct, or reporting of the research.
I am responsible for reporting any emergent problems, serious adverse effects, or reactions participant's may experience.

Appendix F: IRB Approval Letter



January 27, 2020

IRB Application #: 2020-001

Proposal Title: Initiation of Sexual and Reproductive Health Services: A Comparison Among Sexual Orientation and Gender Identity

Type of Review: Initial Review-Expedited Exempt

Investigator(s):

Maria Mancebo
LaNita S Wright, Ph.D.

Dear Ms. Mancebo and Dr. Wright:

Re: Application for IRB Review of Research Involving Human Subjects

We have received your materials for your application. The UCO IRB has determined that the above named application is APPROVED BY EXEMPT REVIEW. The Board has provided expedited review under 45 CFR 46.110, for research involving no more than minimal risk and research category (2) Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met: (i) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects; (ii) Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; or (iii) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by §46.111(a)(7).

Date of Approval: January 27, 2020

If applicable, informed consent (and HIPAA authorization) must be obtained from subjects or their legally authorized representatives and documented prior to research involvement. A stamped, approved copy of the informed consent form will be made available to you. The IRB-approved consent form and process must be used, where applicable. Any modification to the procedures and/or consent form must be approved prior to incorporation into the study.

Please let us know if the IRB or Office of Research Integrity and Compliance can be of any further assistance to your research efforts. Never hesitate to contact us.

Sincerely,

A handwritten signature in blue ink that reads 'MPowers'.

Melissa Powers, Ph.D.
Chair, Institutional Review Board
University of Central Oklahoma
100 N. University Dr.
Edmond, OK 73034
405-974-5497
irb@uco.edu

Office of Research Integrity and Compliance
100 North University Drive / Edmond, OK 73034
Phone (405) 974-5497 Fax (405) 974-3818