

Breast and Cervical Cancer Screening in Sexual-Minority Women

Darcy Guidice MSN, APRN, FNP-BC

University of Detroit Mercy

Dr. Mary Serowoky DNP, APRN-BC, FNP

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Abstract

Access to healthcare as well as establishing and understanding barriers to care are important within the sexual minority community. Literature indicates that lack of education, lack of access, fear, and behavioral risk factors contribute to lower breast and cervical cancer screening rates in lesbian, bi-sexual and gender non-conforming individuals. This project used an anonymous survey tool to gauge screening habits and perceived barriers to breast and cervical cancer screening in sexual minority women aged 21-60. The data indicated that there may be a need for continued provider education based on some results of the survey indicating that sexual minority women are uncertain of how they may be perceived by their healthcare provider. The survey also indicated that patient education on the needs specific to this community may be useful for both study participants and healthcare providers as part of the dissemination of findings. There continues to be very little specific data collection done on this population and the goal of this project was to contribute to what is known and add additional insight from the population itself. The goal of this project was to collect information that may improve screening behaviors and increase access to care and education for both providers and community members. Compared to U.S. Census data the findings indicated that the population surveyed deviated from the median American in education, socioeconomic status and rate of insurance coverage (Census Bureau, 2023).. The survey population was more highly educated, generally had higher income and were more likely to be insured than the average American. Therefore, many were more apt to screen. However, the data did indicate a continued need for support and education regarding the specific needs of this group. Findings from this project continue to point to the need for education and continued academic research on topics related to sexual minority women and the specific health risks and concerns within the group.

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Breast and Cervical Cancer Screening in Sexual-Minority Women

Access to appropriate healthcare is a pressing concern across many populations within the United States. While the barriers to care vary between populations, the concern for adequate care remains the same. One of the goals outlined by Healthy People 2030 is the need to improve the health, safety and well-being of the LGBT community. Healthy People 2030 indicates that the collection of population level data is a key part of meeting the needs of the population. In the National Survey of Sexual Health and Behavior, conducted in 2010 it was found that 6.8% of men and 4.5% of women identified as LGBT (Herbenick, et.al. 2010). Newer data indicates that these numbers have increased dramatically. According to Flores and Conron, in 2020-2021, 15.2% of adults aged 18-24 identify as LGBT, 9.1% of 25–34-year-olds, 4.1% of 35-49 year olds and 2.7% of 50-64 year olds. Although these numbers indicate a small percentage of the general population, an area of need and increased access to appropriate care and education still exists. There are many reasons for lack of access for these individuals, some of which include: knowledge, education, associated stigma, and access to insurance (Kerker et.al., 2006). Much of the currently available literature indicates that larger scale population-based studies would bolster current understanding of the demographic and the associated health behaviors and needs (Haviland et. al., 2020). Goals of this project include increasing the body of research on LGBT health issues, and use of preventative testing.

Background and Significance

The body of research regarding women's health as a separate entity from men's health is much smaller in general than research surrounding conditions that are considered non-gendered or are specifically related to men's health. Given this fact, narrowing the pool of research on women's health to an even more specific group further decreases available literature.

Specifically finding women who identify as non-heterosexual further narrows the available data,

much of the currently available literature indicates that larger scale population-based studies would bolster the current understanding of the demographic and their associated health behaviors (Haviland et. al., 2020). One goal of increasing the amount of available data is to decrease disproportionately poor healthcare outcomes within the population. According to the CDC in 2020 the rate of new cervical cancers was 7 per 100,000 women and the rate of new breast cancers was 119.2 per 100,000 women (CDC, 2024). While these numbers are not broken down by sexual orientation or gender identity, they indicate an important health concern that may be mitigated by screening. . The CDC does indicate that rates of both breast and cervical cancer are lower in 2020 than in prior years and attributes that to screening and reporting problems associated with the COVID-19 pandemic.

The Sexual and Gender Minority Research Office (SGMRO) which works directly with the National Institute of Health (2024) has concluded that additional health-related research on sexual minorities is needed. This is echoed by Healthy People 2030 in the guideline regarding the need for collection of population level data. Some data exists for the rates of preventive screening in this population, however many of the studies have noted limitations. One study indicated that women who identify as bisexual have the lowest screening rates for breast and cervical cancer compared to both their singularly heterosexual and singularly homosexual counterparts (Solazzo et, al., 2017). The significance of this problem relates back to the care of underserved populations and the need to assure appropriate treatment regardless of gender, socio-economic status, or sexuality. The 7th Essential of Doctoral Education for Advanced Nursing Practice is Clinical Prevention and Population Health for Improving the Nation's Health, the guiding purpose of Essential VII is the need for understanding population health and the diverse and specific needs of various populations that Doctors of Nursing Practice (DNP)

come into contact with. This guideline informs the significance of the information discussed regarding the health of non-heterosexual identifying women.

Problems with screening have been identified within this population and the implications for the population are related to possible higher rates of breast and cervical cancer along with the possibility of increased mortality when compared to their heterosexual counterparts. Rates of cancer and cancer screening in this population are multifactorial and there is a need for further research to elucidate the most prominent barriers to appropriate care (Solazzo et. al, 2017)

Problem Statement

The purpose of this project is to better understand breast and cervical cancer screening habits in sexual minority identifying women with intact cervixes. The goal of the project is to gain an understanding of barriers and motivators in obtaining appropriate care. As discussed in the literature, noted barriers fall under a group of themes which include educational barriers, fear and the associated variables therein, access to care, and lifestyle modifiers. By gathering information on the role these variables play in obtaining timely care, a process for increasing screening and decreasing risk can be established. The information that is obtained can be used to foster an environment that is safe and welcoming for patients who identify as non-heterosexual. The goal of this project follows DNP Essential VII II in that it gathers information that is necessary to deliver care approaches that meet the needs of specified populations (AACN, 2021). This project will function as needs assessment of the established population. It will be a qualitative and quantitative assessment of the needs for the population from the perspective of women who are non-heterosexual.

Clinical Question

What are the barriers to timely and appropriate breast and cervical cancer screening in sexual-minority women with intact cervixes aged 19-65?

The U.S. Preventative Services Task Force (USPSTF) recommends that all women get screened for breast cancer every other year starting at age 40 and continuing through the age of 74 (USPSTF, 2024). The USPSTF also “recommends screening for cervical cancer every three years with cervical cytology alone in women 21-29. For women 30-65 years, the USPSTF recommends screening every 3 years with cervical cytology alone, or every 5 years with high-risk human papillomavirus (hrHPV) testing alone, or every 5 years with hrHPV testing in combination with cytology. (USPSTF, 2018).

Literature review

A review of the literature was conducted using University of Detroit Mercy’s library access. Multiple search terms were used including “cervical cancer screening,” “breast cancer screening,” “LGBT,” “lesbian,” and “lesbian women.” The literature review returned results ranging in date from 2006-2022. After an extensive literature search, it was found that this topic area has a paucity of literature which indicated that further investigation is warranted. Some overarching themes were present after reviewing the available literature. These include issues associated with documentation, fear, lack of access, and education. These issues are not necessarily strictly confined to the non-heterosexual population; however, they seem to be more commonly experienced in this group.

Lack of documentation

According to Havilan et al. (2020) “reasons for participation in cancer screening are not largely documented and can only be speculative without collection of cancer-specified Sexual Orientation and Gender Identity (SOGIO data” (p. 2). This theme can further support the need for

and importance of data collection on this population in order to gain an understanding of barriers to screening so that rates are comparable to similar heterosexual populations.

Interestingly, Healthy People 2030 does not outline objectives for increased care access for the LGBT community; rather, the focus is on bullying, and sexually transmitted infections particularly syphilis and HIV. However, it does indicate a need for increasing the number of national surveys that collect data on the LGBT population., The paucity of literature indicates that a need may still exist.

Behavioral Risk Factors

One theme that requires further research is the relationship between health screening and behavioral risk. The research shows that compared to heterosexual women, lesbian and bisexual women report more heavy smoking, obesity, and alcohol use, although more lesbian women have exercised in the past month than heterosexual women (Solazzo et. al., 2017). It is well documented that obesity, alcohol use and smoking contribute to increased cancer risk.

Historically it is known that the LGBT population has been marginalized and often sought refuge in places where alcohol was served in order to find community. Many of these risk behaviors including alcohol use and smoking are addictive and social outlets still may revolve around alcohol use and smoking. Identifying the need for support and treatment in the context of these behaviors may be a way to improve health outcomes in the community.

Fear

Another theme that was prevalent across much of the literature is fear. This theme manifests in multiple ways. There is documented fear associated with heteronormative assumption (Smith et. al, 2017). The idea of heteronormative assumption can be related to the fear associated with improperly educated, or hostile providers (Kerker et. al., 2006). It can also be associated with stigma or perceived stigma surrounding sexual orientation. One study also

indicated that fear of penetration or fear of pain associated with penetration within the context of cervical cancer screening was a barrier to obtaining appropriate screening (Cumi et. al., 2015).

The overarching finding within this theme is the importance of provider awareness of sexual minorities and the perceived acceptance and welcome of sexual minorities within a practice setting to increase screening rates.

Access

The research indicates that access may be another barrier to preventive care in the population. This can be broken up into three different areas of concern. The first is access to lesbian-specific women's health information (Paschen-Wolff et. al., 2020; Shetty et, al., 2016; Smith et. al. 2017). These same resources also indicate that there is a misunderstanding of risk for women who do not identify as heterosexual as outlined in the above resources. Another concern related to access is regarding openness of providers to care for sexual minority patients. This can be perceived in multiple ways and begins with the first interaction upon arrival to clinic. Heteronormative language on intake paperwork is another factor to be considered within this theme.

Education

Education is the final theme that has been identified across literature. While it ties into access, it does remain its own theme and is an obvious area of possible intervention. Educational intervention may be needed within the population itself, but it is also needed for providers and for clinic staff (Paschen-Wolff et, al., 2020). Another factor that is important to consider are the educational needs specific to the population. While issues associated with obesity, smoking, and alcohol use are not specific to sexual minority women, the rates of risk behaviors are much higher in this population (Solazzo et. al, 2017).. As previously discussed, history surrounding the LGBT community is a factor in the participation in risky behaviors which contribute to a

continued need for education as well as identification and treatment of associated chemical addiction. A Canadian article published in 2021 indicates that along with above issues associated with education for both providers and patients, there exists a gray area when it comes to screening the non-heterosexual female population. According to Waugh et. al., 2021 there exists no specific screening criteria for women who have sex with women that takes into account their specific risk factors as compared to their non-homosexual counterparts. This is a recent article that reiterates many of the themes found across the literature and indicates the need for further assessment of this topic. The article indicates that there are misconceptions between both patients and providers regarding recommended screening in this population which points to need for further education on this topic for both patients and providers.

Organizational Assessment

The population surveyed for data collection was a convenience sample of women that are affiliated with an adult hockey league in the Metro Detroit area. This population group ranges in age from 19 to mid-60s however the survey only reached women who were 21 or older based on USPSTF screening guidelines. While the group is comprised of both heterosexual and non-heterosexual women, it does skew more heavily toward non-heterosexual women than the general population. After meeting with and interviewing the chair of the league and speaking with her on subsequent occasions it was clear that this leadership of this group was willing to make the survey available to its participants and were open to data collection especially for the betterment of the community. The survey was presented to the league director who was very interested in the project topic and the possible positive impact that the findings could have on the community. With her assistance, the survey information and link were disseminated to the league. After dissemination there was much discussion and generalized excitement and

willingness to take part in the survey. The bulk of respondents were obtained via email dissemination and subsequent word of mouth discussion.

This project functioned as a needs assessment of the proposed population. The overarching governing body that this league operates within is USA Hockey. It is a national organization that maintains ice hockey standards of play across the United States. USA hockey was founded in 1937 and was known as the Amateur Hockey Association of the United States until it underwent a name change in 1991. The organization emphasizes development within youth hockey but is also responsible for adult leagues and a growing program for athletes with disabilities. The organization also certifies coaches and officials and is the official representative for the United States Olympic and Paralympic committee when operating with the International Ice Hockey Federation.

A SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis of USA Hockey was conducted. A strength of the organization is that diversity and inclusion are already recognized as an important part of their mission moving forward. The Mission statement of the organization is as follows: “We seek to attract and build a diverse and inclusive organization and membership at every level. We are committed to creating a welcoming environment for all without discrimination based on race, ethnicity, religion, culture, health, veteran status, color, beliefs, physical/cognitive ability, gender, socioeconomic background, sexual identification, social status, and age” (SportsEngine, 2022). There are current guidelines for the inclusion of transgender athletes and well as athletes with disabilities (SportsEngine, 2022). A weakness of the organization within the context of this project is that while it is an organization that promotes healthy behaviors it does not operate within a medical framework. Therefore, concerns related to health screening and interventions are not a listed area of concern known to the organization. Applicable opportunities for the organization are a continued drive toward inclusion. This is an

opportunity because it promotes physical activity which is a benefit to general health. Outside threats to this organization can be related to the ongoing political environment within the United States. It is established that inclusion is an important part of developing programs within the organization. However, there is risk that ongoing discourse regarding LGBT athletes, particularly transgender athletes may have a negative effect on the organization as more policies are developed (Mountjoy et.al. 2016).

Cost factors related to this project were negligible; the survey was done via email and distributed to anyone within the group willing to participate from a listserv that was already in place. Due to the size of the group who received the email and word of mouth spread of the project there was no need to employ other dissemination options. At the completion of this project there are plans to present the data to the stakeholders who are comprised of those surveyed and possibly the league board. This group may be interested because healthy players will continue to be able to pay and play. Once information is obtained and disseminated, discussions with stakeholders can be had and then recommendations can be given to address the findings.

The largest cost factor at play in relation to this project stems from the healthcare cost associated with not maintaining appropriate screening as outlined by CDC guidelines. The perceived cost of obtaining cervical cancer screening is discussed in a 2021 article by Biddell et. al. The authors of the article indicate that “seventy-two percent of participants perceived financial barriers to screening.” The findings indicate that concern about perceived cost is another barrier to cancer screening which is an additional concern for a population that already faces decreased rates of screening compared to their peers. (Biddell et. al., 2021). Cost concerns regarding screening were not noted as a barrier within the study population. This population was generally more educated, had higher rates of insurance and higher income than the average

American. However, the opportunity cost of missed or late cancer diagnosis may be a factor if screening was not done following the USPSTF guidelines (USPSTF, 2024).

Theoretical Framework

Based on the findings within the literature, multiple theories exist which provide an appropriate framework for further research. The Social Determinants of Health Framework and the Minority Stress Model were used as frameworks for this DNP project (Meyer, 2003).

The Social Determinants of Health framework is applicable in that it links social and economic standards and how they influence different population groups. Healthy People 2020 and 2030 use the Social Determinants of Health framework to outline the need to “create social and physical environments that promote good health for all” (Healthy People 2030). This framework cites the importance that education, economic stability, environment, healthcare, and social context have on access to appropriate healthcare. These factors must be considered when working with or studying an underserved population. While LGBT issues have become a more common discussion topic, many patients within the community still perceive disparity in the understanding of the specific needs of the sexual minority population.

Some issues related to follow-up and use of appropriate screening tools fall directly into the areas outlined by the framework. The education of both patients and providers require further research, in order to fully meet the needs of the population. Research shows that provider understanding of healthcare needs requires further intervention (Shetty et.al., 2016). This is also outlined in the Sexual and Gender Minority Health Disparities Research Framework.

Interpersonal factors such as an affirming patient-provider relationship is a key part of relieving

health disparities in minority groups (NIH, 2024). Based on the above resources many providers treat LGBT patients in good faith but acknowledge receiving very little specific education on the population. From the perspective of the patient, there may be a lack of understanding of risk for certain diseases and therefore the need for early screening tools exists (Barefoot et. al., 2017). Both areas require further research on appropriate education for both groups. Concern with financial stability and access to insurance coverage are also issues within the LGBT community. Lack of partner benefits can impact access to full insurance coverage and prevent members of the community from maintaining health related to financial concerns (Biddle et. al., 2021).

The social and community context of the Social Determinants of Health framework also applies to the LGBT population. This group is often very community focused and relies heavily on one another for support. One possible avenue for dissemination of information is to work within the framework of established communities in order to change the understanding of healthcare needs within the LGBT community. This type of education has already proven effective in the LGBT community in relation to the AIDS epidemic.

The Minority Stress Model specifically addresses the needs of the LGB population and was originally developed with the LGB population in mind. The outcome of much of the research within the Minority Stress Model suggests that environmental factors are the main culprit of health disparities rather than inherited predispositions. The Minority Stress Model within the context of the LGB community is well researched and its efficacy has been demonstrated on the study of LGB issues. (Meyer, 2003). The Minority Stress Model distinguishes itself into two process levels. First are distal stress processes which are factors outside of the affected person. These can include overt discrimination and rejection. Proximal stress processes result from internal stressors related to issues with vigilance, anxiety over one's own minority status, and efforts at concealment of identity. Based on the framework, both distal

and proximal process can add up over time causing chronic levels of stress, which can lead to poor health outcomes over time.

The Minority Stress Model is applicable to the study population and has been used in prior study of the LGB population (Meyer, 2003). The model itself does not discuss transgender issues as they are often more differentiated than those of the LGB community. This model was applied to the population of non-heterosexual identified women, as described above. The definitions of proximal and distal stressors were used to guide this DNP project and assist in narrowing the study topic to the most likely causes of health disparities. The Minority Stress Model was the framework for organizing this needs assessment in a logical way.

Both frameworks described above apply to the study of health disparities among the LGBT population and have historically been used in such a manner. These models provide an appropriate framework for further study of the population and differentiate areas of study into logical subheadings. Much of the information contained in this literature review focuses on the non-heterosexual identifying female population demonstrating a need for continued study in this field. The sub-populations within the LGBT population have separate health needs require further research.

Methods

The project design was a needs assessment of sexual minority women with intact cervixes and breasts ages 21-65. Exclusion criteria included males, people without cervixes, those who have had bilateral mastectomies, anyone who identifies as transgender and has had gender affirming surgery. This project assessed the barriers to appropriate and timely breast and cervical cancer screening as described by this community. IRB approval was required due to the project surveying and assessing the needs of a minority population. The IRB approval was through the University of Detroit Mercy. The needs assessment was obtained using an

anonymous SurveyMonkey tool. The tool sought to understand what barriers this community may face regarding breast and cervical cancer screening. The goal of this survey was to gain better insight into the cause of delayed screening, if there was a delay at all. Possible causes prior to disseminating the survey tool were anticipated to include fear of the tests themselves, fear of provider or office staff reaction when disclosing sexual orientation, financial concerns, or lack of education among other possibilities. Ethical considerations for this project were minimal and included possible psychological stress due to the questions within the survey. This was accommodated by including local and national mental health resources at the end of the survey. The survey was fully voluntary, and all results obtained from the survey remained completely anonymous. The survey questions were an amalgamation of questions on similar previously published surveys. These sources include Barefoot et. al., 2017; Johnson et. al., 2016, Johnson et. al., 2016; Kerker et. al., 2006; Matthews et. al., 2004; Paschen-Wolff et. al., 2020; Shetty et. al., 2016. The questions used in the survey for this project were exploratory and based on themes identified in the literature. The Survey Monkey program made it possible for respondents to read the introduction and then they had the ability to decline to begin or complete the survey once the details of the survey were known. By moving forward and completing the survey, respondents gave consent to the anonymous data collection. Anonymity was made clear in the introduction to the needs assessment which each respondent was able to read prior to answering any survey questions. There were no obvious negative impacts of the survey; especially considering the data will be kept entirely anonymous. However, it is understood that some of the questions may have prompted a negative emotional response or triggered difficult feelings. For this reason, local and national mental health resources were listed at the end of the survey in case those resources were needed.

Outcomes

The results obtained from the survey were used as a needs assessment of the population surveyed. The goal was to obtain clear and honest answers to the questions posed in the survey to better understand the needs and barriers perceived by the population. The goal at the outset of this project was to reach 100 respondents; at the close of data collection, 106 volunteers completed the survey. Outcomes were measured based on these responses and themes that can be understood therein. Of those who completed the survey the participants fell into the age range of 21-60. There were survey options for 60-71 and older, however, none of the survey respondents fell into this category. The mean age of survey respondents was 35.5 years. The median age was 25.5 and the standard deviation was 9.41. This group was largely Caucasian with 89 of the 106 or 83.96% of respondents falling into that category. The next largest category was Black/African/American with 11 of 106 or 10.38% of respondents falling into that demographic. The United States Census Bureau indicates that in 2022 the median income for a single female householder (person in who's name the home owned, being bought, or rented) is \$40,200 (Census income, 2023). Of the 106 survey respondents 62 reported an income higher than the U.S. median based on Census data.

Themes outlined in the literature include behavioral risk factors, fear, access to care and education. The literature indicates that these themes comprise a constellation of factors that impact screening habits and risk for breast and cervical cancer in sexual minority women. According to Solazzo et. al., (2017) rates of smoking, alcohol use and obesity are higher in sexual minority women and constitute behavioral risk factors that affect rates of breast and cervical cancer in this population. The most recent CDC data indicates that 10.1% of US women reported smoking every day or some days (CDC, 2021). The data collected in this project indicates that 14% of those surveyed smoke every day or some days. The 4% difference does indicate that the sexual minority women in this data set smoke slightly more frequently than the

National rates. The National Institute on Alcohol Abuse and Alcoholism (NIAAA) define heavy alcohol use in women as consuming 8 or more alcoholic drinks per week. According to the NIAAA 4.5% of women 18 and older drink more than 8 alcoholic drinks per week nationally (NIAAA, 2024). Of those surveyed as part of this project, 5.66% of participants reported drinking more than 6 drinks per week: thus, being slightly higher than the national prevalence. Of the 106 survey participants, 47, or 44% reported drinking between 1-5 drinks on average per week. The most recent CDC data indicates that in the United States 81% of women over the age of 20 fall into the categories of overweight, obese, or severely obese (CDC, 2024). Of those surveyed for the project 48.57% of respondents report being told by their healthcare provider they were either overweight or obese. This represents a much smaller percentage as compared to the national data, however, Solazzo et. al., (2017) indicate rates of obesity are higher in sexual minority women than the general population. The fact that the population surveyed was mainly comprised of those affiliated with an athletic league may explain why this figure differs from what the literature review suggested the data would indicate.

Fear is another theme outlined in the literature as a barrier to breast and cervical cancer screening among sexual minority identified women. Smith (2017) and Kerker (2006) both state in their works that fear associated with heteronormative assumption is likely a barrier to screening. Their works go on to state that the fear of heteronormative assumption relate to fears associated with stigma or perceived stigma from providers who are either not properly educated on the female sexual minority population or outright hostile toward that group. These findings in the literature review are contrary to what was reported by survey participants in this project. Of those surveyed 82.08% report having an established primary care provider and 56.6% report having an established women's healthcare provider such as an OB/GYN or Midwife. Of those surveyed as part of this project 33.02% either disagree or strongly disagree with the question "I

am concerned that healthcare providers assume I am heterosexual.” 40.56% either agree or strongly agree with this statement and 26.42% neither agree nor disagree. This outcome of this question does indicate that concern for heteronormative assumption is a factor of consideration for the population studied. Chi square and Fisher’s Exact Test indicate that there is no significant relationship between age and concern for assumption of heterosexuality.

Table 108*Observed and Expected Frequencies*

ConcernHCPAssume	Age				<i>p</i>
	21-30	31-40	41-50	51-60	
Strongly disagree	6[4.42]	2[4.19]	2[2.49]	2[0.91]	.362
Disagree	9[8.46]	8[8.03]	5[4.77]	1[1.74]	
Neither agree nor disagree	5[10.30]	15[9.77]	5[5.81]	3[2.11]	
Agree	12[11.04]	8[10.47]	8[6.23]	2[2.26]	
Strongly agree	7[4.78]	4[4.54]	2[2.70]	0[0.98]	

Note. Values formatted as Observed[Expected].

f the total number of survey respondents 64 of the 106 or 60.37% either disagree or strongly disagree with “Concern that the healthcare provider would lack knowledge of LGBT issues would make me less likely to have a mammogram.” This date indicates that a majority of this population is not concerned that their healthcare provider is lacking knowledge specific to sexual minority women. Interestingly, 26 respondents or 24.53% answered neither agree or disagree. This is an example of a question that may have provided better data if the neutral option was removed. If this survey were to be used again, removal of the neutral option may clarify some of the relationships and show significance that was not found based on the weakness of the question format and development. Similarly, 57.54% of respondents either disagree or strongly disagree with the assertion that “concern that the healthcare provider would lack knowledge of LGBT issues would make me less likely to have a cervical smear test.” These pieces of data are reassuring because it indicates there is some trust in this community that healthcare providers are knowledgeable about their specific health needs. Of women surveyed for this project 79.24%

indicate that they feel comfortable discussing breast health with their health care provider and 78.3% of women survey indicate that they feel comfortable discussing cervical health with their provider.

Another theme found in the literature review is related to access to care. Of those surveyed 82.08% report having an established primary care provider and 56.6% report having an established women's healthcare provider such as an OB/GYN or Midwife. Of the population surveyed 99.05% of respondents were covered by insurance whether it was through their own employer, their spouse's employer, their parents or public insurance. According to the United States Census Bureau in 2022, 89.2% of American adults aged 19-64 were insured which is 10% less than those who responded to the survey for this project. Given this data it appears that lack of access to care is less of a barrier for this population than was indicated by the literature search. Formal educational attainment is the final theme outlined in the literature search that is considered a barrier to screening in sexual minority women. According to the United States Census Bureau in 2022, 39% of women aged 25 and older had completed a bachelor's degree or higher (Census, 2023). Of the study participants 45.28% held a bachelor's degree, 16.04% held a master's degree and 8.49% held either a professional or doctoral degree. Together these numbers indicate that a total of 69.81% of study participants held a bachelor's degree at minimum.

The education data along with income data suggest that the study population is much more well educated than the average American. It also indicates that those who participated in the study average out to be in a higher income bracket than median in the United States. Based on the outcomes in the fear and access to care thematic categories it is reasonable to assume that education and socio-economic status have a positive impact on this study group. Interestingly some survey respondents screened for cervical cancer but mentioned they had not had a specific conversation with their healthcare provider about the need to be screened. This may indicate one

of two things. Either there is some level of trust between the patient and the healthcare provider, and the patient allows for testing without express conversation. Or the respondents that fall into this category do align with literature themes and have some level of fear or unwillingness to question their provider. This is an area that may be worth further investigation after the conclusion of this project. A weakness of this project is the group is not representative of the median or general population. Demographic data also indicated that this group of survey respondents likely do not adequately represent the experiences of racial minorities.

The data obtained from the survey provides some insight into the breast and cervical cancer screening habits of sexual minority women. However, there were some weaknesses noted along the way. If this survey or project were to be reproduced the removal of the neutral option of many of the questions would have assisted in obtaining a clearer data set. The removal of the neutral option may have allowed for more statistically significant relationships and provided more clarity into the screening habits and possible barriers of this population. One strength of the survey was the willingness of the organization to participate in the dissemination of the survey tool. There were also multiple in-person and face-to-face discussions about the project and its objectives. These conversations garnered support and trust from the community which allowed for a strong response rate.

Implications for Practice

The overall goal of this project was to establish a clear population that fit into very specific parameters and survey that group to gain a better understanding of barriers to care. As evidenced by the literature review, there is minimal data on screening rates and barriers to appropriate screening within the non-heterosexual cis female population. Obtaining data from this group can be difficult for multiple reasons and the ability to establish trust is an important piece. Again, the willingness of the women's hockey organization to be involved in the

dissemination of this survey allowed for a solid response group. There is already trust built into the community and the leadership which had a positive impact on data collection.

The research indicates that access may be another barrier to preventive care in the population. This can be broken up into three different areas of concern. The first is access to lesbian-specific women's health information (Paschen-Wolff et. al., 2020; Shetty et, al., 2016; Smith et. al. 2017). These same resources also indicate that there is a misunderstanding of risk for women who do not identify as heterosexual as outlined in the above resources. Another concern related to access is in regard to openness of providers to care for sexual minority patients. This can be perceived in multiple ways and begins with the first interaction upon arrival to clinic. Heteronormative language on intake paperwork is another factor to be considered within this theme. The goal of this project was to establish a baseline or information on barriers to screening for the sexual-minority female population aged 21-65. It was expected that there would be barriers to care that mirrored what was found in the literature. In actuality, the population of the survey group had a reasonably high rate of compliance with and access to healthcare. As previously mentioned, this group skewed above the average income and education of the rest of the population. It became clear that these factors were in play when looking at the results of the survey. The goal for this survey was to gain a baseline and then use that information to establish safe, welcoming practices where patients feel able to express their needs to their providers without fear. While the data from this study skewed toward willingness to screen there were some open-ended questions at the end of the survey that provided some qualitative insight. These responses hold a lot of value, and they indicate that themes from the literature including provider education and patient fear are legitimate and they continue to be barriers in this community. Some of the responses indicated that cervical cancer screening "wasn't a priority." Another respondent reported that she was told by her provider the screening

for cervical cancer “wasn’t needed if I wasn’t sexual with men yet.” Other respondents also mentioned that the topic of cervical cancer screening had never come with their provider, and they never felt inclined to ask. These responses indicated knowledge gaps in both patients and providers on the topic of cervical cancer screening in sexual minority women. This knowledge gap points to a continued need for providing education on health minority groups. The open-ended questions on the survey also allowed for respondents to add information that felt they wanted to share. While only 12 of the 106 respondents answered this question some of the information was very interesting and mirrors what was reported in the literature review. One person wrote “I feel as though my answers derive from the fact that I am a cis-white-seemingly hetero woman, so I don’t face as much discrimination or bias.” The interesting part here is this person recognizes that there is likely bias at minimum, if not actual discrimination and understands that how she presents in the world allows her to avoid some of the poor outcomes that may come with a different presentation. One respondent indicated that they would be “less likely to get screening from a male provider, a conservative, or a religious provider.” This indicates there is an expectation of bias and associated fear with how that bias may impact care or provider interaction. This response points to the importance of providers indicating they are LGBTQ friendly if that is the case. Provider willingness to indicate safety for sexual minorities is especially important in areas where there are few options for care or where access is difficult. The ability to seek care without concern for the barriers established by this project will hopefully serve to increase rates of screening in the population defined here. Another respondent stated that she waited until she was “31 years old to get screened because it seemed daunting and embarrassing.” She goes on to state that “previous childhood trauma” was also a factor. This took courage to write as a survey response and it indicates that there are multiple reasons why a person may choose to delay screening. Given some of these responses, education modules on

trauma informed care may be useful implication from this project for healthcare providers. In regard to practice implications, again this response indicates the importance of education and health promotion education and counseling to maintain appropriate screening. Finally, the most pivotal open-ended survey response really summed up the purpose and the goal of this project. This woman wrote that she “was diagnosed with ovarian and cervical cancer when [she] was 20. I have had the same OB/GYN since that diagnosis. She is amazing and never cared that I was gay. It was hard to find a doctor like her, and had it not been for her I’m not sure I would have survived because it was so hard finding a doctor that didn’t judge me for being gay/lesbian.” This response summarizes the purpose of this study and falls in line with expected barriers to care and screening would be based on findings in the literature review. Implications for practice are well outlined by Waugh et. al., this article points to the needs for increased education on the need for screening for both patients and providers. The continued need for education found in the literature was echoed by the findings of this survey. Interestingly, despite the higher education, income and rate of insurance coverage compared to median there is still evidence that education and safe unbiased access to care is what drives screening behavior. Waugh et. al., (2021) speaks to the importance of creating an environment devoid of discrimination which is again echoed by survey respondents. The Waugh article also acknowledges that “the community is much more diverse than originally perceived and their risks are not as well evaluated” (Waugh et. al., 2021). The article goes on to state that some physicians may be unaware of current screening recommendations for sexual minority women. This article along with the findings from this project point to a continued need for further study of this population to best promote preventative healthcare is a way that is most approachable. The goal of this project was to better understand the barriers to screening faced by the population with the hope that the results will serve as education for providers who care for patients that fall into the described demographic group.

Appendix A

Breast and Cervical Cancer screening in Sexual Minority Women

THANK YOU!

Thank you to all who participated in this survey. Your willingness to provide honest answers has increased the body of academic knowledge on sexual minority women and will increase education and awareness of health concerns specific to our community. Your responses are incredibly appreciated.

PARTICIPANTS

A total of 106 people responded to the survey
 Of those 95.28% identified as female,
 3.77% identified as Non-binary,
 78.3% Identified as Lesbian
 15.09% Identified as Bisexual
 6.6% Identified as something else

FINDINGS FOR THE WIN

Your data indicated that this population is more likely to have a college degree, have a higher income, have more access to healthcare and are less likely to be obese than the general female population of the United States!

FINDINGS FOR GROWTH

Your data indicates that our population has a higher rate of smoking and alcohol use compared to the national average for American women. This is something to consider when thinking about disease risk.

SUSTAINABILITY

Your survey responses indicate that there is need for healthcare provider education to increase comfort and willingness to obtain breast and cervical cancer screening.

FINAL THOUGHTS:

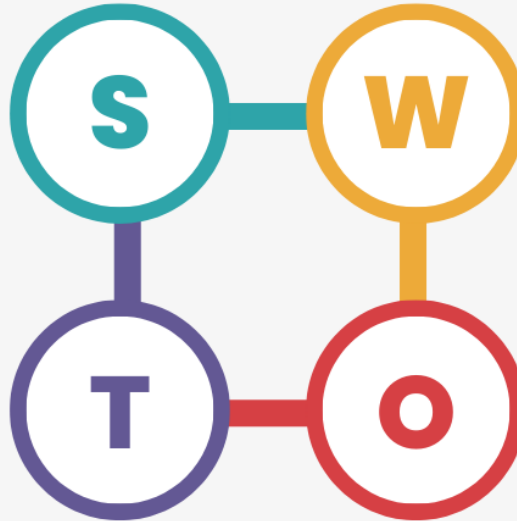
Results from the survey indicate that we do a better job of screening for breast and cervical cancer than the existing literature would indicate. Outcomes also indicate that education within our community and for healthcare providers is necessary for the continued health of our population.

Thank you again for willingness to contribute to the data collection.

SWOT Analysis

STRENGTHS

The organization already recognizes the importance of diversity and inclusion and it is written into their mission statement.



WEAKNESSES

In this context of this project, while the organization supports healthy behaviors, it does not operate within a medical context.

THREATS

A threat to this organization is the ongoing discourse regarding transgender athletes and how developing policy may have a negative Effect on their mission to increase inclusion and diversity.

OPPORTUNITIES

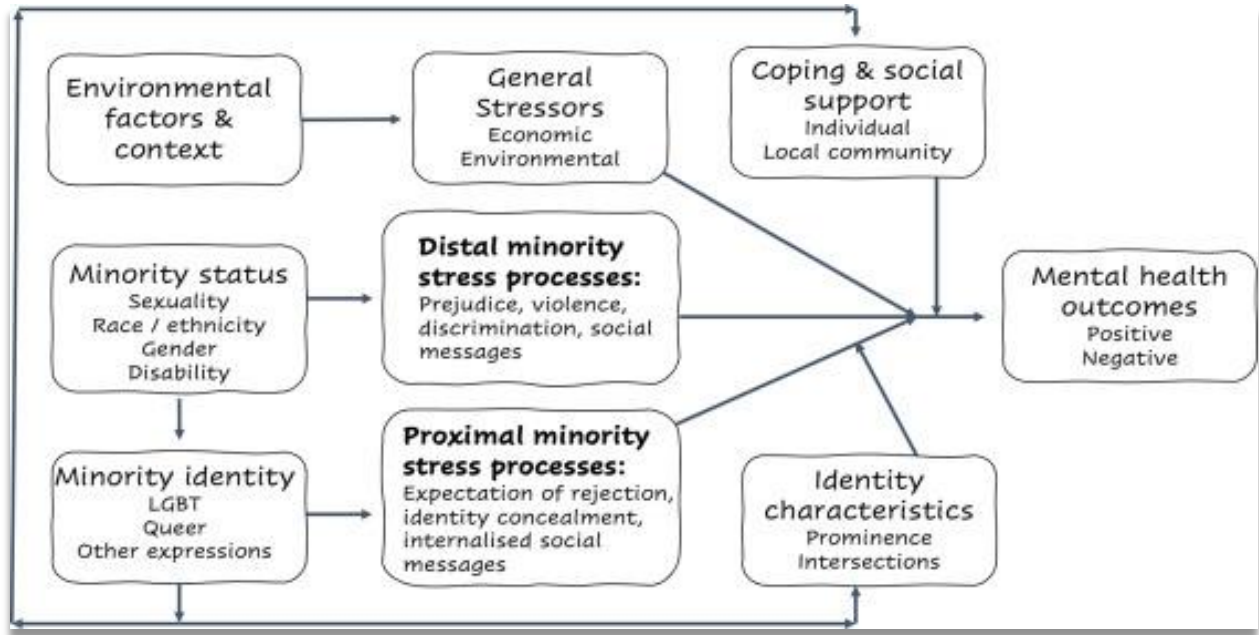
Opportunities for USA hockey involve a continued drive toward inclusion and promotion of physical activity for all.

Appendix C

Social Determinants of Health



Appendix D



- The American Association of Colleges of Nursing (AACN) homepage*. (n.d.). Retrieved October 19, 2022, from <https://aacnnursing.org/Portals/42/Publications/DNPEssentials.pdf>
- Barefoot, K. N., Warren, J. C., & Smalley, K. B. (2017). Women's Health Care: The experiences and behaviors of rural and urban lesbians in the USA. *Rural and Remote Health, 17*(1). <https://doi.org/10.22605/rrh3875>
- Biddell, C. B., Spees, L. P., Smith, J. S., Brewer, N. T., Des Marais, A. C., Sanusi, B. O., Hudgens, M. G., Barclay, L., Jackson, S., Kent, E. E., & Wheeler, S. B. (2021). Perceived financial barriers to cervical cancer screening and associated cost burden among low-income, under-screened women. *Journal of Women's Health, 30*(9), 1243–1252. <https://doi.org/10.1089/jwh.2020.8807>
- Centers for Disease Control and Prevention (2024, March 28). *Current Cigarette Smoking Among Adults in the United States*. Retrieved March 28, 2024 from https://www.cdc.gov/tobacco/data_statistics/fact_sheets/adult_data/cig_smoking/index.htm
- Centers for Disease Control and Prevention. (2024, March 28). *Prevalence of Overweight, Obesity, and Severe Obesity Among Adults Aged 20 and Over: United States, 1960–1962 Through 2017–2018*. Retrieved March 28, 2024, from <https://www.cdc.gov/nchs/data/hestat/obesity-adult-17-18/obesity-adult.htm#table1>
- Centers for Disease Control and Prevention. (2024, February 24). *United States Cancer Statistics*. Centers for Disease Control and Prevention. Retrieved February 24, 2024, from <https://www.cdc.gov/cancer/uscs/index.htm>
- Cochran, S. D., & Mays, V. M. (2012). Risk of breast cancer mortality among women cohabiting with same sex partners: Findings from the National Health Interview Survey, 1997–2003. *Journal of Women's Health, 21*(5), 528–533. <https://doi.org/10.1089/jwh.2011.3134>

- Curmi, C., Peters, K., & Salamonson, Y. (2015). Barriers to cervical cancer screening experienced by Lesbian women: A qualitative study. *Journal of Clinical Nursing, 25*(23-24), 3643–3651. <https://doi.org/10.1111/jocn.12947>
- Haviland, K., Swette, S., Kelechi, T., & Mueller, M. (2020). Barriers and facilitators to cancer screening among LGBTQ individuals with cancer. *Oncology Nursing Forum, 47*(1), 44–55. <https://doi.org/10.1188/20.onf.44-55>
- Herbenick, D., Reece, M., Schick, V., Sanders, S. A., Dodge, B., & Fortenberry, J. D. (2010). Sexual behavior in the United States: results from a national probability sample of men and women ages 14-94. *The journal of sexual medicine, 7* Suppl 5, 255–265. <https://doi.org/10.1111/j.1743-6109.2010.02012.x>
- Flores, A.R. & Conron, K.J. (2023). Adult LGBT Population in the United States. The Williams Institute, UCLA, Los Angeles, CA
- Johnson, M. J., Mueller, M., Eliason, M. J., Stuart, G., & Nemeth, L. S. (2016). Quantitative and mixed analyses to identify factors that affect cervical cancer screening uptake among lesbian and bisexual women and transgender men. *Journal of Clinical Nursing, 25*(23-24), 3628–3642. <https://doi.org/10.1111/jocn.13414>
- Johnson, M. J., Nemeth, L. S., Mueller, M., Eliason, M. J., & Stuart, G. W. (2016). Qualitative study of cervical cancer screening among lesbian and bisexual women and transgender men. *Cancer Nursing, 39*(6), 455–463. <https://doi.org/10.1097/ncc.0000000000000338>
- Kiesler-Starkey, K., Bunch, L., & Lindstrom, R. (n.d.). Health insurance coverage in the United States: 2022. Health Insurance Coverage in the United States: 2022. <https://www.census.gov/content/dam/Census/library/publications/2023/demo/p60-281.pdf>

- Kerker, B. D., Mostashari, F., & Thorpe, L. (2006). Health Care Access and utilization among women who have sex with women: Sexual behavior and identity. *Journal of Urban Health*, 83(5), 970–979. <https://doi.org/10.1007/s11524-006-9096-8>
- Matthews, A. (2004). Correlates of underutilization of gynecological cancer screening among lesbian and heterosexual women. *Preventive Medicine*, 38(1), 105–113. <https://doi.org/10.1016/j.ypmed.2003.09.034>
- Mountjoy, M., Brackenridge, C., Arrington, M., Blauwet, C., Carska-Sheppard, A., Fasting, K., Kirby, S., Leahy, T., Marks, S., Martin, K., Starr, K., Tiivas, A., & Budgett, R. (2016). International Olympic Committee Consensus statement: Harassment and abuse (non-accidental violence) in sport. *British Journal of Sports Medicine*, 50(17), 1019–1029. <https://doi.org/10.1136/bjsports-2016-096121>
- National Institute on Alcohol Abuse and Alcoholism (2024, March 28). *Alcohol Use in the United States: Age Groups and Demographic Characteristics*. Retrieved March 28, 2024 from <https://www.niaaa.nih.gov/alcohols-effects-health/alcohol-topics/alcohol-facts-and-statistics/alcohol-use-united-states-age-groups-and-demographic-characteristics>
- National Institute of Health (2024) *Sexual and Gender Minority health Disparities Research Framework*. Retrieved May 1, 2024 from https://dpcpsi.nih.gov/sites/default/files/2024-04/NIH-SGM-Health-Disparities-Research-Framework-FINAL_508c_UPDATED-2024.pdf.
- Paschen-Wolff, M. M., Greene, M. Z., & Hughes, T. L. (2020). Sexual minority women’s sexual and Reproductive Health Literacy: A qualitative descriptive study. *Health Education & Behavior*, 47(5), 728–739. <https://doi.org/10.1177/1090198120925747>
- Shetty, G., Sanchez, J. A., Lancaster, J. M., Wilson, L. E., Quinn, G. P., & Schabath, M. B. (2016). Oncology Healthcare Providers’ knowledge, attitudes, and practice behaviors

regarding LGBT health. *Patient Education and Counseling*, 99(10), 1676–1684.

<https://doi.org/10.1016/j.pec.2016.05.004>

Smith, S. K., & Turell, S. C. (2017). Perceptions of healthcare experiences: Relational and communicative competencies to improve care for LGBT people. *Journal of Social Issues*, 73(3), 637–657. <https://doi.org/10.1111/josi.12235>

Solazzo, A. L., Gorman, B. K., & Denney, J. T. (2017). Cancer screening utilization among U.S. women: How mammogram and pap test use varies among heterosexual, lesbian, and bisexual women. *Population Research and Policy Review*, 36(3), 357–377. <https://doi.org/10.1007/s11113-017-9425-5>

SportsEngine. This is USA hockey. (2022). <https://www.usahockey.com/about>

United States Census Bureau (2024, March 28). *Census Bureau Releases New Educational Attainment Data*. Retrieved March 28, 2024 from <https://www.census.gov/newsroom/press-releases/2023/educational-attainment-data.html#:~:text=not%20statistically%20significant,-.Sex,women%20age%2025%20and%20older.>

United States Census Bureau (2024, March 28). *Income in the United States: 2022*. Retrieved March 28, 2024 from [https://www.census.gov/library/publications/2023/demo/p60-279.html#:~:text=Real%20median%20household%20income%20was,and%20Table%20A%2D1\).](https://www.census.gov/library/publications/2023/demo/p60-279.html#:~:text=Real%20median%20household%20income%20was,and%20Table%20A%2D1).)

US Preventative Services Taskforce. (2024) *Breast cancer: Screening*. Recommendation: Breast Cancer Screening. United States Preventative Services Taskforce. <https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/breast-cancer-screening#:~:text=What%20is%20the%20Task%20Force,This%20is%20a%20B%20grade>

. US Preventative Services Taskforce. (2018) *Cervical cancer: Screening*. Recommendation:

Breast Cancer Screening. United States Preventative Services Taskforce.

<https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/cervical-cancer-screening>

Waugh, E., Myhre, D., Beauvais, C., Thériault, G., Bell, N. R., Dickinson, J. A., Grad, R., Singh,

H., & Szafran, O. (2021). Preventive screening in women who have sex with women.

Canadian Family Physician, 67(11), 830–836. <https://doi.org/10.46747/cfp.6711830>