Spring 5-2020

A Mixed- Methods Examination Of The Healthcare, Social Support, And Religious Needs Of Sexual And Gender Minority (Sgm) Older Adults In Texas

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A MIXED- METHODS EXAMINATION OF THE HEALTHCARE, SOCIAL SUPPORT, AND RELIGIOUS NEEDS OF SEXUAL AND GENDER MINORITY (SGM) OLDER ADULTS IN TEXAS

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DEDICATION

To Sandy and Chris

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MPH, The University of Texas School of Public Health, 2016

Presented to the Faculty of The University of Texas

School of Public Health

in Partial Fulfillment

of the Requirements

for the Degree of

DOCTOR OF PUBLIC HEALTH

THE UNIVERSITY OF TEXAS
SCHOOL OF PUBLIC HEALTH
Houston, Texas
May, 2020

PREFACE

My dissertation was inspired by the stories of those I met during this work. Their lives and advocacy led to the rights we have today and inspire me to continue to serve SGM communities through service, advocacy, and research.

ACKNOWLEDGEMENTS

The study participants, for their time and stories.

Sandy Johnston and Chris Kerr, I never worked on Paper 3 without thinking of you. I hold your stories in my heart.

The Montrose Center, Especially Judy Woods for her friendship, Fred Reninger for his work, and Dr. Ann Robison for supporting me in this research.

Sharon Ferranti, for her great work on the Montrose Center video.

My dissertation committee, Drs. Vanessa Schick, Gretchen Gemeinhardt, and Mike Wilkerson for their support, guidance and expertise, and humor along the way.

Dr. Melissa Valerio-Shewmaker, for being my supporter, advocate, and mentor.

My SPH team, especially Daniella Chambers and Laura Witte, for their support throughout this process both as friends and colleagues.

Kat Panas, for their data cleaning and coding skills.

Deanne Hernandez, for her flexibility and support.

Albert Schweitzer Fellowship Houston-Galveston, UTHealth School of Public Health, and the Hogg Foundation for Mental Health, for their contributions to this work.

My friends and family, especially my wonderful parents, Bob and Karen, for their unwavering, unconditional love and support and for instilling in me hard work and humility.

Julie Hudsonpillar, for being my person.

Anthony Gaskill, for his love and patience, also for the laptop.

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Shared historical and social contexts influence a generational group's needs, risk factors, and resiliency mechanisms. Sexual and gender minority (SGM) older adults have experienced structural exclusion and systematic discrimination throughout their lifetime. The minority stress model posits that SGM individuals experience stressors, like discrimination, unique to their social status which affect physical and mental health. SGM older adults experience worse physical and mental health outcomes than their heterosexual peers suggesting unique needs for SGM older adults. Research also points to resiliency mechanisms that offset the impact of stressors on SGM older adults. The examination of these needs and resiliency mechanisms help to better understand how to improve quality of life and health outcomes among SGM older adults.

To identify needs and resiliency mechanisms, a concurrent mixed method study was conducted with SGM older adults (50 years and older). First, a secondary data analysis of a statewide cross-sectional online survey examined the community needs of SGM older adults in Texas. A total of 104 SGM older adults completed the survey (7.63% of survey participants). Comparisons across gender and sexual identity were conducted using chi-square and Fisher's exact tests to probe for significant findings. Three categories of needs were identified: culturally sensitive healthcare, mental health and suicide, and social determinants of health.

Second, primary data collection through focus groups and semi-structured interviews further explored community needs. Three one-hour focus groups were conducted with SGM older adults. Emerging needs for SGM women included the role of social support, pets, and religion/spirituality in health. Thirty- seven semi-structured interviews were then conducted to better understand these needs as well as the emerging resiliency mechanisms of SGM women and gender non-binary adults. Two resiliency mechanisms were identified from the interviews, social networks and religiosity or spirituality. Common themes were identified surrounding experiences influencing support networks types and their influence on health. Another important source of resiliency was an individual's religiosity or spirituality. There were differences among those who reported conflict between their SGM and religious identity during their lifetime. These findings suggest implications for interventions tailored to specific SGM older adult populations to increase healthcare and social support resources especially for those experiencing isolation and/or conflict between SGM or religious identity.

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BACKGROUND

Introduction/Statement of the Problem

Two actors at the federal level have identified the sexual and gender minority (SGM) [1] population as a health disparity population and a national priority for research.[2] The SGM population was designated as a health disparity population for research by the National Institute on Minority Health and Health Disparities (NIMHD) and Sexual and Gender Minority Research Office (SGMRO). [2] The national priority for SGM people in Healthy People 2020 goals is to improve the health, safety, and well-being of lesbian, gay, bisexual, and transgender individuals. [3] The goal is oriented toward improving disparities through reducing disease transmission and progression, increasing mental and physical well-being, increasing longevity, and reducing health care costs. [3]

Further research is needed to better understand the extent and causes of health disparities experienced by this population. [2] Considerations around the extent and causes of health disparities and related stressors are important in identifying appropriate research, interventions, and policy for diverse SGM individuals across sexual orientation, gender identity, race and ethnicity, social and economic status, and age. Two considerations to better understand the extent and cause of these health disparities are generational groups and social positions. Generational groups have experienced different historical, social, and cultural contexts. [4] These contexts are important for understanding current health and related quality of life outcomes throughout an individual's life. Social positions are defined as social determinants of health. Social

[1] The term sexual and gender minority (SGM) more broadly describe lesbian, gay, bisexual, transgender, intersex, asexual, queer, two-spirit, and gender non-binary/non-conforming individuals and "…other populations whose sexual orientation and/or gender identity, and reproductive development is considered outside cultural, societal, or physiological norms." [1]

determinants of health are shaped by the distribution of money, power and resources. They include race and ethnicity, sexual orientation, gender identity and expression, sex, socioeconomic status, disability status, geographic location, religion and spiritual identity, immigration or legal status, culture, etc.

Life experiences and events differ among SGM generational groups and social positions.[5-8] Different stressors and their different impacts related to historical events like the HIV/AIDs crisis and policies like Don't Ask, Don't Tell exist for different generational groups. During the 1980s, the number of cases and deaths among persons with AIDS increased rapidly having the biggest impact on gay men and other men who had sex with men. Informal public resources and community-based organizations provided vital educational programs and social support to those individuals and populations particularly affected by the public health crisis before local and state governments substantially intervened. The 1994 Don't Ask, Don't Tell policy marginalized gay, lesbian, and bisexual service members by prohibiting the military from discriminating or harassing SGM service members or applicants, while at the same time it prohibited openly gay, lesbian, or bisexual persons from military service. [9]

Social and cultural forces shaped public attitudes towards SGM individuals and influenced lifetime experiences of SGM individuals. Significant social and cultural forces include assignment and then removal of homosexuality as a mental health disorder, Stonewall Riots, the Civil and Women's Rights movements, Marriage Equality, and discrimination protections in the Affordable Care Act. Popular figures like Ellen DeGeneres also influenced social and cultural forces that shape public attitudes. DeGeneres came out as lesbian on her primetime television show in 1997. SGM representation has increased in television and movies creating more space for public conversations around marriage equality and SGM rights.

Despite public attitude and policy changes, significant gaps still exist in SGM research. The intersection of different social positions creates unique experiences and health outcomes, and health-related quality of life that still need to be explored further in research. [10] Specially, limited research has reported generational differences in levels of health- related quality of life and factors like lifetime victimization and discrimination, identity management, and social support on mental health quality of life. [11] Generational and social considerations in SGM research are critical as the population grows and becomes more diverse. Unique healthcare and social needs may exist among generational groups. Questions surrounding the influence of historical discrimination and marginalization on older generational groups despite the changes in public policy and attitudes remain. What are their current needs? How are and were older generational groups resilient? The resiliency mechanisms and strategies of SGM older adults in the presence of adverse events are not completely understood. [12] This study defines resiliency mechanisms and strategies as, "…behavioral, functional, social, and cultural resources and capacities utilized under adverse circumstances." [4]

In this study the perceived community needs and resiliency mechanisms of SGM older adults are examined. In Aim 1 and 2, the perceived community needs of SGM older adults (50 year and older) are identified. These healthcare and social needs are based on SGM research and feedback from community organizations. Examples of needs include: Poverty, Homelessness/Housing Insecurity, HIV, Gender, and Racial discrimination, Healthcare Provider Knowledge of LGBT issues, Access to Healthcare, Tobacco and Alcohol Use. See Table 1 for a complete survey list. In the second part of the study (Aim 3), factors related to both physical and mental health quality of life outcomes within a specific SGM older adult population, SGM older women gender non-binary adults, are further explored.

Research Questions and Study Aims

1. What are the perceived community needs of SGM older adults?
2. What are resiliency mechanisms and strategies among SGM older women and gender non-binary adults?

Aims

1. To identify perceived community needs among a sample of SGM older adults
2. To identify healthcare and social needs among a sample of SGM older adults
3. To determine resiliency mechanisms and strategies among a sample of SGM older women and gender non-binary adults
    a. To determine mechanisms associated with physical, mental, and activity quality of life
    b. To determine the most common strategies against reduced physical, mental, and activity quality of life
    c. To determine mechanisms associated with social isolation and loneliness
    d. To determine the most common prevention strategies for social isolation and loneliness

Literature Review

This study examined SGM individuals in Texas. Similar health disparities are reported in Texas compared to national data. Approximately 770,000 SGM adults live in Texas (3.8% of adults living in Texas). [13] SGM adults in Texas are significantly more likely to be diagnosed with a depressive disorder (29.8% vs. 16.8%% in heterosexual adults), and report a higher average number of poor mental health days in the past 30 days (3.4 days vs. 2.2 heterosexual adults). [14]

Health Outcomes

SGM individuals experience worse physical and mental health outcomes than their heterosexual peers. [15,16] SGM individuals are more likely to report poorer general health and

higher prevalence of chronic conditions like asthma, diabetes, obesity, and cardiovascular disease.[16-18] Gay and bisexual men have an elevated risk and prevalence for HIV.[17] Some studies have also shown a higher risk of certain cancers for SGM individuals. [19,20] Lesbian and bisexual women are more likely to be diagnosed with heart disease than heterosexual women.[18] Studies have shown SGM adults are more likely to report physical limitations and have higher rates of disability. [21] SGM individuals also report poorer mental health and have an elevated risk for some mood disorders, anxiety, and substance abuse compared with their heterosexual counterparts. [15,22,23] Lesbian, gay, and bisexual individuals report more mental distress than heterosexual individuals. Some studies have shown higher rates mental distress, depression and, and suicidal attempts in SGM individuals. [15]

Factors Related to Health Outcomes

Previous research suggests multiple influences related to health outcomes in SGM individuals: structural and individual contexts, adverse and promoting pathways, and biological processes. The influences in the structural context include social exclusion, stigma and prejudice, homophobia, and religious intolerance and persecution. [4] The influences on health in this context include a culture of marginalization and oppression and related institutional practices, laws, and policies that unfairly treat SGM individuals or value heterosexual individuals and relationships. [4]

Social Determinants of Health

Individual contexts or characteristics include social determinants of health. The social determinants of health across literature are viewed as important factors related to health disparities. The important underlying individual context in this study is identifying as SGM. Between 3 - 5% of adults over 18 years identify as SGM. [24] Some studies showed fewer older adults identified as SGM decreasing with age – 7.2% of adults under age 30 identified as SGM

compared to just 2.1% of those aged 60 and older. [24] In most cases, surveys that collected SOGI (sexual orientation and gender identity) data were roughly 60% lesbian/gay versus 40% bisexual but variations are seen between surveys. Over 0.6% or 1.4 million adults identify as transgender (2016). [25] Other individual contexts include race, education, veteran status, and geographic region. Forty percent of SGM individuals are a racial or ethnic minority compared to 33% of non -SGM individuals. [24] Adults who identify as transgender are more racially and ethnically diverse than the U.S. population overall. [25] In terms of education, 8% of SGM individuals have a college degree compared to 34% of non –SGM individuals. [24] Eight percent of SGM individuals are veterans compared to 13% of non –SGM individuals. [24] Significant to this study, 35% of the SGM individuals in the United States live in the South (Alabama, Georgia, Arkansas, Florida, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, West Virginia, Virginia) compared to 20% in the Midwest, 19% in the Northeast, 17% in the Pacific, and 8% in the Mountain region. [26] SGM individuals report similar rates of health insurance compared to non –SGM individuals. [27] Eighty-six percent of SGM individuals have health insurance compared to 88% non -SGM individuals. [24] Higher rates of unmet medical needs have been reported by SGM. [27] SGM individuals are also less likely to have a primary care provider compared to heterosexual individuals. [27]

Individual and Structural Contexts

Stressors from specific structural and individual contexts have been shown to influence health. SGM individuals experience structural stigma and related events like victimization, discrimination and abuse. SGM individuals experience physical and mental health disparities related to exposure to stigma related to homophobia and minority stressors [28-31] One study reported premature mortality – a shorter life expectancy of approximately 12 years – for SGM

individuals living in a context of a high-prejudice community.[32] Stigmatization and discrimination may lead to increased vulnerability to stress, depression, anxiety, and some psychiatric disorders.[33-35] Stress related to exposure to micro – aggressions and social stress related to stigmatization of homosexuality has been explained through Meyer's minority stress model. [31,36] The model outlines that minority stress related to unique stressors related to social status influence physical and mental health outcomes. [30,36]

Adverse and Promoting Pathways

Other factors related to health outcomes include adverse and promoting pathways. SGM individuals report higher rates of adverse health behaviors like smoking and excessive drinking. [37,38] They also report lower rates of healthcare utilization and preventive screenings. [39,40] Limited research on biological markers in SGM individuals exists. [41,42] One study found that even though SGM individuals reported elevated exposure to multiple stressors across the life course, no significant differences were found in cortisol rhythms by sexual orientation. [41] One explanation is physiologic resilience. [41] Promoting pathways include protective factors and resiliency. [4] Sexual orientation and gender identity openness and disclosure has been shown to be a protective factor for mental health. [43] Disclosure can also increase the risk of social exclusion and rejection, victimization, and discrimination. [43] Disclosure can be an opportunity to socially engage, to create social belongingness, and to access social support. [43] Resilience indicators in SGM older adults might differ by sexual orientation, gender and gender identity, age, race and ethnicity, poverty level, and education. [8] Older adults have also reported religious and spiritual activities as a source of social support and a resilience indicator. [44] Older adults have experienced an accumulation in their lifetime of victimization, discrimination and abuse while also developing

specific resiliency strategies. [4] The specific strategies – in the presence of adverse pathways and stigma related events – remain somewhat unclear in SGM older adults.

Life Course Perspective

Contexts and factors related to health are explained through a life course perspective for SGM generational groups. [45] According to Fredriksen-Goldsen K, et al, a life course perspective takes in consideration "…both historical and social contexts that are shared by age cohorts and the unique needs, adaptation, and resilience of SGM individuals as human agency." [4] The perspective identifies an individual's life trajectory important in understanding current health outcomes and influences. [45] The life course perspective considers how historical, social, and cultural contexts influence health risk factors, protective factors, and health outcomes. [46] Social and cultural contexts have focused on historical events. The events shape adaption and change processes of an individual. Another component of the life course perspective is the age of the individual or generational group during these historical events. The historical events during childhood and young adult years are particularity important in shaping the trajectory of health across life. [46] The trajectory of advantages and disadvantages influencing health are then stable across life in the life course perspective. [46] Specific events occurred during each SGM generational group lifetime. Four generational groups and related chronically events are outlined below.[47] This is not an exhaustive list.

1. Baby Boomers (Born 1946 – 1964) and Silent Generation (Born 1928- 1945)
    - After World War II, homosexuality was seen as a mental illness and individuals were subject to treatments like shock therapy or lobotomies. [7,48,49]
    - Homosexuality was also frequently viewed as a sin, communism or treason in the United States. Individuals were subject to violence and humiliation both by the public

but also by police authorities in police raids. Sodomy laws existed in all 50 states by 1960. [7,48-50]

- President Dwight D. Eisenhower signed an executive order that banned homosexuals from working for the federal government in 1953 saying they are a security risk. [48]
- The Baby Boomers came of age when the 1969 Stonewall Riots and later the civil and women's rights ushered in dramatic social conversation and change.[12]

2. Generation X (Born 1965 - 1980)
    - The Stonewall Riots created both social and legislative changes in the United States. States like Illinois and Califonia repealed their sodomy laws.
    - In 1971, The American Psychiatric Association removed homosexuality from its list of mental disorders.[51]
    - After undergoing gender reassignment surgery in 1975, ophthalmologist and professional tennis player Renee Richards is banned from competing in the women's US Open because of a "women-born-women" rule. Richards challenged the decision and in 1977, the New York Supreme Court rules in her favor. Richards competed in the 1977 US Open but is defeated in the first round by Virginia Wade. [52]
    - Changes were coming with the beginning HIV/AIDs epidemic in 1981. The CDC first described the HIV as a rare lung infection in the *Morbidity and Mortality Weekly Report* (MMWR) and the New York times described this infection in gay men in New York. [53]
    - HIV diagnosis affected a generation of SGM individuals and their friends and family. A 1992 survey with over 200 gay men in New York found that most men had experienced temporary symptoms of grieving related to HIV diagnosis or death, like

preoccupation with the dead person and tearfulness when thinking about him. Community groups like Gay Men's Health Crisis were created in the wake of the epidemic. [54]

- Previous studies demonstrated when one member of the family has HIV/AIDS, the impact is felt by the whole family. [54]

3. Millennials (Born 1981 - 1996)
    - 1990 – The Ryan White Comprehensive AIDS Resources Emergency (CARE) Act created a federal funding program that provides medical care, support services, and medications for those living with HIV/AIDS. [56]
    - 1993- The military law “Don't Ask, Don't Tell" marginalized gay, lesbian, or bisexual service members. The law prohibited the military from discriminating or harassing SGM service members or applicants, while at the same time it prohibited openly gay, lesbian, or bisexual persons from military service. [9,55]
    - Young millenials came of age after the height of the HIV/AIDS epidemic.
    - 1996 - The Defense of Marriage Act (DOMA) defined marriage, at the federal level, as the union of one man to one woman.[9,55]
4. Post Millennials or Generation Z (Born 1997 - 2018)
    - 2000 -Vermont was the first state to legalize same sex civil unions – not marriages.[56]
    - 2003 – The Texas sodomy law ruled unconstitutional by the US Supreme Court in Lawrence v Texas. [56]
    - 2004 – Massachusetts was the first state to legalize same sex marriages. [56]
    - 2008 – California was the second state to legalize same sex marriages. [56]

- 2011- Don't Ask Don't Tell is repealed ending the ban on gay men and lesbians from serving openly in the military. [9,55]
- 2014 - ACA provided protections against discrimination and coverage denials. [57]
- 2015 - Obergefell v. Hodges Supreme Court decision federally legalized same sex marriages. [9,55]

Shifting social and legal contexts around sexuality, gender, and age have created different contexts and influences for each generational group. There has been increased public support and acceptance of SGM individuals. The historical events, timing (age of group) of events, and change in social positions create different trajectories of health risk factors, protective factors, and outcomes for these generational groups. Unique trajectories may differentiate each SGM age cohorts, for example, older gay and bisexual men attitudes on safer-sexual practices and attitudes based on HIV/AIDS crisis. [7,48,49]

SGM Older Adults

While there is increased public acceptance of SGM individuals, ageism continues to be visible in society. [58] Older adults have sometimes been left out of SGM research despite population growth of older adult populations. [58] Nine to eleven million adults identify as SGM in the United States and that number doubles when behavior and attraction are considered [11,58,59] (19 million or 8.2% of Americans report they have engaged in same-sex sexual behavior and 25.6 million or 11% of Americans report some same-sex sexual attraction). [60] Over 2.4 million SGM older adults (50+) live in the United States with this number estimated to double to over 5 million by 2030. [61] Another study estimated that there are 1.4 – 4 million SGM adults over the age of 60 that live in the United States. [61] One third of SGM identified adults are over 50 years.[61] In the general population by 2016, adults over 55 years old made up 28% of the total population

(adults and children). [62] Adults over 50 years and older are predicted to grow over 19 million in the next ten years compared to only 6 million for adults 18-49 years old. [63]

SGM Older Adults: Health Outcomes

SGM older adults report mental and physical health disparities compared to heterosexual older adults. Lesbian, gay, and bisexual adults report more mental distress and depression than heterosexual adults. [7,8,58] In a report with SGM older adults, 30% reported depression and 40% had contemplated suicide in their lifetime. [58] Specific factors related to health outcomes include social, community and identity processes. SGM older adults are at a higher risk for social isolation compared to heterosexual older adults. [40] Social isolation has been associated with depression, impaired cognition, a delay in seeking healthcare services, lower socioeconomic status, and premature mortality. [40] Research suggests that SGM older adults also feel less accepted in the larger SGM population and more disconnected than younger SGM individuals. [40] Research also points to resiliency and protective factors for SGM older adults. The examination of these resiliency and protective factors help to better understand how SGM older adults can successfully age with better physical and mental health quality of life.

SGM Older Adults: Factors Related to Health Outcomes

Social support is a significant factor in influencing physical and mental health quality of life. [11] Some SGM older adults face rejection from friends or biological families, which has led to other sources of psychosocial support systems, coined, families of "choice." Although since these families are from the same generation, they may not be able to provide support. [40] They also may be experiencing physical limitations, mental health impairment, and death. Religious and spiritual services and pets are also source of social support for older adults. Thirty eight percent SGM older adults attend spiritual or religious services or activities at least once a

month. [11] Pets serve as kin and social support for some SGM older adults. One study found that SGM older adults with a pet had a higher perceived support. [64] More research is needed to better understand both of these factors but early research shows that they may play an important role in perceived social support. Other protective factors are identity management and openness. Identity affirmation – defined as a positive appraisal of one's sexual and gender identities – is a stronger predictor of mental and physical health and quality of life than identity stigma. [11,65] The relationship between identity disclosure and mental health quality of life was shown to a positive to negative relationship after controlling for both social support and relationship status. [11]

Another consideration with age is the intersectionality between social positions in SGM individuals and populations. [4] Parent MC et al. [10] describes intersectionality as, "the recognition of multiple interlocking identities, defined by relative sociocultural power and privilege." The intersection of multiple identities creates unique experiences, which are not divisible by the individual identities. [10] Unique experiences could create specific risk factors, protective factors, forms of resiliency, and health outcomes. This study focuses on one SGM social group - SGM older women. Limited research is available on gender-based discrimination (sexism), stress, and subsequent poor mental health outcomes. Research with SGM Baby Boomers has historically focused on gay cisgender men and HIV research. [66] Sexual orientation-based health disparities persist into adulthood for women but these disparities gradually reduce in in men. [67] One study with SGM older adults found worse physical and mental health quality of life for women compared to men. [11] Statistically significant associations were found between women's experiences of sexism, stress, and poor mental health outcomes.[69] Lesbian and bisexual women experience poorer physical and mental health days than heterosexual women. [66]

Study Conceptual Framework

This study's framework includes both generational and social considerations for coping and resiliency. Previous minority and SGM research have focused on models using social, economic, and political mechanisms; stigma, prejudice, discrimination and victimization, and risk factor and adverse pathways for poor health outcomes. The models are focused on stress and coping. The Stress Process Model outlines the concept of disadvantaged status and earlier traumatic events leading to long-term stressors and proliferated stressors. [68] The Meyer Minority Stress Model or Perspective outlines the idea that there are stress processes unique to social status, like discrimination and internalized homophobia. [31,36] The Psychological Mediation Framework, which is similar to Minority Stress Framework, emphasizes the influence of general emotion regulation, social problems, and cognitive processes on mental health outcomes. [69]

The conceptual framework for this study is the Health Equity Promotion Model. [4] The model expands on previous stress coping models to consider resiliency in successful aging despite adverse events and risk factors. The model also focuses on both poor health outcomes related to adverse pathways or risk factors and good health outcomes through health promoting pathways and resiliency when adverse pathways are still present. Social positions may be associated with discrimination and stigma but can also play a role in resilience and reducing poor mental health outcomes. [4,12] The model emphasizes the concept of health equity or the opportunity to attain full health potential. [4] The model was conceptualized with SGM older adults by Fredriksen-Goldsen et al in 2014. [4] There are three major concepts in this model. The model considers both the heterogeneity and intersectionality of SGM populations across age and social positions. The influence of structural, environmental, and individual contexts is seen in stigma, victimization, discrimination and unique minority stressors. Lastly, the model outlines

both the health promoting and adverse pathways (protective and risk factors) through behavioral, social, identity, and biological processes. [4] Figure 1 and Figure 2 outline the framework, the Health Equity Promotion Model and the modified framework with Study Aims.

Public Health Significance

The SGM population is not one population but rather a set of growing and diverse populations. The study will address the gap in research across this diverse population by focusing on SGM older adults. Research comparing SGM generational groups is limited but suggest possible differences in identified needs for older adults. There is also a gap in exploring certain social statues or positions of SGM older adult populations. This study examines SGM women and gender non-binary adults – historically less visible in SGM research although with identified health disparities compared to heterosexual women and gay men. [11,67] An additional gap is the understanding of mechanisms linking factors like social support to health outcomes in SGM older adults. More research is needed on how SGM older adults can achieve health equity - the opportunity to attain full health potential. [4]

There are public health interventions and public policy implications from identifying these perceived community needs, risk factors, resiliency, and health outcomes for generational age and social groups. Three possible implications are interventions for alternative social support, considerations for historical, social, and cultural contexts on health, and anti-discrimination laws and cultural sensitivity trainings. Interventions for alternative social support are focused on identifying support in families of choice rather than partner, family, or children. Another intervention, specifically for SGM older adults, are volunteer organizations based in the SGM community that include younger volunteers, peer to peer support, partnering with local senior organizations, or partnering with local faith religious organizations. Pets can also be a

source of support so access to low cost/affordable pets, pet supply, and food is important considerations for both older adults and low resource individuals. [64]

Additionally, considerations of historical, social, and cultural contexts are needed in public health, medical and social services. SGM may distrust healthcare and mental health interventions and providers based on poor treatment as an individual or a group. Individuals may also distrust religious or spiritual organizations based on historical or current mistreatment (e.g. conversation therapy). Interventions with religious or spiritual organizations appear more relevant to older adults than younger adults or adolescents. These considerations suggest alternative resiliency strategies for SGM older adults. Lastly, policies focused on anti-discrimination laws and cultural sensitivity trainings provide improved structural and individual contexts for SGM individuals. Cultural sensitivity trainings focused on diverse SGM generational age and social groups expose students and professionals to new attitudes, life experiences, and best practices. The trainings extend past medical, allied health, and nursing institutions but expand to social services, legal services, and religious or spiritual organizations. Lastly, data collection and monitoring of SGM populations is needed to inform research, interventions, and public policy. Data collection helps to better describe demographics, health disparities, extent and causes of the disparities, and utilization of healthcare and social services. Public policy can increase sexual orientation and gender identity (SOGI) measurements in local, state, and national surveys.

METHODS

This study is concurrent mixed method design with secondary data analysis and primary data collection through focus groups and semi-structured interviews. Aim 1 provided a descriptive and inferential analyses of community needs of SGM older adults. Aim 2 further compared these community needs through focus groups and interviews across gender and sexual identity. In Aim 3, semi-structured interviews with SGM older women and gender non-binary adults explored resiliency mechanism and strategies related to related to quality of life. The mixed method design is useful to examine the different but related study research questions. Quantitative research provides a quantified pattern of individual behavior and health while a qualitative method is a more effective approach in describing individual's feelings, opinions, and experiences. Since the two methods were conducted concurrently in Aim 1 and 2, they did not directly inform the other's methods but were discussed together in terms of analyses, and in the research, intervention and policy implications. These analyses provide insight and context into resiliency of SGM older adults, and will be valuable for informing future research.

Aim 1 Study Design

Aim 1: To identify perceived community needs among a sample of SGM older adults

Study Setting and Data Collection

Aims 1 was a secondary data analysis of perceived community needs in older adults. The source for Aim 1 is the Tell Us Texas Survey created by The Montrose Research Institute: BRIDGES (Building Relationships to Investigate Diversity in Gender and Sexual Minority Experiences in the Southwest) through collaboration between The University of Texas Health Science Center at Houston School of Public Health and The Montrose Center in Houston (a counseling center in Houston serving SGM populations and individuals living with HIV). The

15- 20-minute survey was available online through Qualtrics from May 2016 – January 2017. The survey included questions around individual demographics (age, race, ethnicity, geographic location, education, health insurance, and military history), sexual orientation and gender identity, perceived community needs, discrimination and other life experiences, health outcomes, HIV and STIs, transition hormones, and tobacco, alcohol, and drug use. The survey was advertised at the Montrose Center, the Montrose Center website and through Facebook advertising targeting Texans with SGM-related interests.

This survey was approved through the UTHealth IRB or the UTHealth Committee for the Protection of Human Subjects (CPHS). Respondents completed an informed consent page before beginning the survey. At the end of the survey, mental health crisis resources were available to respondents. If needed, the secondary analysis of the Tell Us Texas Survey data will be submitted to CPHS for approval. The data contained personal identifiers so it was kept on secured servers located in an area requiring key card access. All written records use a unique ID to link participant information. Personally, identifiable information (e-mail and IP address) was stored in a separate file to process payments and to aid in the participant de-duplication process. Data were stored in password-encrypted computers through UTHealth. Data access was only shared with study personnel or collaborations identified on the CPHS Protocol. The data was managed for this study the same as the original study.

Study Subjects

The final survey dataset consisted of 1,363 respondents. Data were cleaned and checked for missing information and errors. A participant's eligibility was reviewed by checking Texas zip codes were identified using reported zip code, IP addresses and latitude and longitude recorded by Qualtrics. Respondents with a survey completion time of four minutes or less were

removed. The survey utilized non-probability sampling. The target population for the survey was all self-identified SGM individuals and those who identified same sex attraction or behavior in Texas over the age of 12 years old. The four specific eligibility criteria and sampling frame for the study included: 1. Self-identified SGM based on sexual identity, sex at birth, and current gender survey questions and those who identified same sex attraction or behavior based on survey questions; 2. At least 13 years old as reported in the survey; 3. Texas zip code (identified using reported zip code, IP addresses and latitude and longitude recorded by Qualtrics); 4. Completed the survey (survey completion time of four minutes or less were removed); and 5. English/Spanish-understanding.

Sample Size and Power

Noted in other SGM literature, relative to national and population-based surveys; the survey sample size may limit the ability to conduct adequately powered analyses to examine differences. A study could be identified that reflected community needs in Aim 1 Based on the study framework and top needs, HRQOL literature and CDC Behavioral Risk Factor Surveillance System (BRFSS) data were used to determine effect size and power needed to detect potentials differences. [70-74] The mean and standard error of mental unhealthy health days come from a multivariate analysis study with the HIV positive women of color in an urban setting.[74] Women at urban sites with no functional limitations reported a mean of 5.2 physically unhealthy days with a standard error of 0.43 ($p < 0.001$) and a mean of 9.1 mentally unhealthy days with a standard error of 0.77 ($p < 0.001$). [74] Mentally unhealthy means were slightly higher than other age and disease specific populations. The effect size and power calculations are displayed in Figure 3.

Analysis Plan

Study Variables/Measurement

All variables in Aim 1 are from the Tell Us Texas Survey. Four demographics were used in Aim 1: Age, Race/Ethnicity, Public Sexual Identity, and Gender Identity. Exact age in years was collected. Race and ethnicity were captured in a two- step question with ethnicity asked first in the survey. Individuals were able to choose one yes/no for ethnicity, Spanish, Hispanic, or Latino/a, rather than a combined race/ethnicity question. Individuals were able to choose more than one option and to write in an answer when asked about their race. The sexual and gender identity questions are similar to the best practices recommended by the Williams Institute and was developed from LGBT Health and Human Services Evaluation Toolkit.[75-77] Gender identity was asked in a two-step approach at the end of the survey, which is consistent with best practices. The two-step approach has shown to have high sensitivity and specificity with SGM adults.[76] Respondents were first asked, "What was your sex assigned at birth, meaning on your original birth certificate? Please select only one." and then were asked, "What is your current gender identity?"

The question and list of community needs in Table 1 was adapted from the annual Voices of Health Report from Rainbow Health Initiative (RHI) and Minnesota AIDS Project. [78] The Voices of Health survey was also conducted online through a convenience sampling technique similar to Tell Us Texas Survey. For perceived community needs, participants were asked to rank order the top 5 issues they thought needed attention in the LGBTQ community from a list of 33 items: "Please drag and drop the TOP FIVE issues that you think need more attention in the lesbian/gay/bisexual/transgender/queer (LGBTQ) community. Put ONE CHOICE into each box."

Analysis

Aims 1 examined community needs of SGM older adults using descriptive and bivariate analyses. STATA version 16 was used for statistical analyses of selected demographic characteristics and community needs. Demographic characteristics included race/ethnicity, public sexual identity, current gender identity, and transgender/non-binary gender identity. Transgender/non-binary gender identity was determined by reported sex assigned at birth and current gender identity. Frequency and percentages were reported for categorical demographics data while a mean and standard deviation was reported for age. Frequency and percentages were also reported as for community needs data. Community needs ranked as a top five issue on the survey were coded as "1 - Priority" while those not chosen were coded as "0 - Not a Priority." Top needs were identified as those chosen as a Top Priority by at least 20% of participants.

Comparisons across gender and sexual identity were conducted using chi-square and Fisher's exact tests to probe for significant findings. A Bonferroni correction was applied for community needs with significant findings ($p<0.05$). The top needs were examined by three sample sexual and gender demographic characteristics including transgender/non-binary gender identity, a collapsed current gender identity category, and a collapsed sexual identity category. Those who currently identified as a transgender woman, transgender man, agender person, or a genderqueer person were coded as having a transgender/non-binary gender identity. Those who currently identified as a cisgender men and woman were coded as not having a transgender/non-binary gender identity. For gender identity, those who currently identified as a cisgender or transgender woman, agender person were coded as SGM Women. Those who currently identified as a cisgender or transgender man were collapsed into SGM man. Agender or genderqueer persons were not concluded. For sexual identity, those who currently identified as

straight or gay and lesbian were coded as monosexual and those who identified as bisexual, pansexual, or queer were coded as plurisexual. Those participants who identified as asexual, something else, or did not disclose their sexual identity were not included.

Aim 2 & 3 Study Design

Aim 2: To identify healthcare and social needs among a sample of SGM older adults

Aim 3: To determine resiliency mechanisms and strategies among a sample of SGM older women and gender non-binary adults

Preliminary Work

For a previous study by the researcher - Bridging the Healthcare for LGBT Older Adults – data was collected during June and July 2017 through semi-structured phenomenological interviews. Twelve self-identified SGM women over the age of 50 years were interviewed around perceived healthcare needs such as navigating the healthcare system and healthcare cultural sensitivity. Interviews were 45 minutes to 60 minutes long and women received a $10 CVS gift card for participating. Interviews were conducted in a location and format of the participants' choosing (e.g. community center, home, at work, or over the phone.) Older adult outreach workers at Montrose Center recruited participants through Montrose Center flyers, Facebook, email listservs, and word of mouth. The twelve interviews were included in the total interview study sample (N=37) and analyses of Aim 2 and 3. The preliminary work for Aim 2 and 3 was approved through the UTHealth IRB or the UTHealth Committee for the Protection of Human Subjects (CPHS). An amendment change was submitted under the preliminary work protocol. The informed consent was read by participant or read aloud by the interviewer. Numerical identifiers were given to each participant. Specific names and locations will be

removed from transcripts. All interview notes, demographic forms, and the recorders were kept in an UTHealth *locked cabinet. Data was stored in a password-encrypted UTHealth computer.*

Study Setting, Subjects, and Data Collection: Aim 2 – Focus Groups

Aim 2 utilized qualitative methods through focus groups and in person semi-structured interviews to identify healthcare and social needs. The target population was SGM older adults in Texas who were 50 years or older. Three one-hour focus groups, one for men (n = 25), one for women (n = 6), and one combined group (n=12) were conducted with SGM older adults over the age of 50 years. The men's group took place after a lunch for seniors 60 years and older at the community partner's and women's group took place at a lunch advertised through an organization serving SGM women over the age of 50 years old. The combined group took place during a monthly church social for seniors. The focus groups utilized the World Café approach of engaging discussion in a hospitable environment to make collective knowledge visible and identify patterns. [79] Focus group recruitment and implementation took place at a community partner's site. Questions were open-ended and similar across focus groups, focusing on community needs, although questions prompted participants to reflect on their own experiences so discussion topics evolved in each group. Through shared note-taking, participants individually and then collectively generated responses as a researcher recorded responses on a whiteboard or flipchart. No identifying information was connected to the shared-note taking or researcher field notes. Focus groups were not recorded because of privacy concerns.

Study Setting, Subjects, and Data Collection: Aim 2 and 3 – Interviews

The interview study sample for Aim 2 and 3 include the same 37 participants. A total of 37 SGM women and gender non-binary adults currently living in Texas who were 50 years or older were interviewed. Interviews were mostly conducted in person at the community's partner site

(n=21) or at the participants' homes (n=13) with one interview at a place of work and two interviews conducted over the phone. The interview lasted 29 - 77 minutes with an average interview time of 46 minutes. Participants were compensated with a $10 gift card for participating in the interview. A brief demographic survey was distributed after each interview and no identifying information was connected to the interview transcript. The study procedures were approved through the institutional Committee for the Protection of Human Subjects (CPHS). Non-probability sampling was used through convenience sampling with Montrose Center outreach workers, SGM older adult social groups, social media, churches and faith-based organizations, and email advertising and snowball sampling through existing relationships with the Montrose Center and other SGM older adult social groups. Individuals contacted the researcher after SGM social group meetings or by phone or email and were screened for eligibility. The researcher also reached out to individuals through announcements at social groups and referrals from a Montrose Center outreach worker or another study participant through snowball sampling.

In Aim 2, the interview guide was first focused on perceived community needs such as navigating the healthcare system and healthcare cultural sensitivity. The interview guide for Aim 2 was exploratory and evolved in to its final form in Aim 3 to be responsive to the data and to better reflect the emerging needs specific to SGM women. Aim 2 focused on healthcare and social needs. Aim 3 interview questions focused on the five questions below related to resiliency mechanisms and strategies of SGM older women. The five questions are based on the Health Equity Promotion Model, [4] life course perspective, [46] and SGM older adult literature: [7,8,58]

- What mechanisms are associated with physical, mental, and activity quality of life of SGM older women and gender non-binary adults?

- What are the most common strategies against reduced physical, mental, and activity quality of life of SGM older women and gender non-binary adults?
- What mechanisms are associated with social isolation and loneliness of SGM older women and gender non-binary adults?
- What are the most common prevention strategies of social isolation and loneliness for SGM older women and gender non-binary adults?
- How have mechanisms and strategies changed along the lifespan of SGM older women and gender non-binary adults?

The interview guide for Aim 2 utilized with the preliminary twelve interviews is Appendix #1. The updated and final interview guide was used with the additional 25 interviews for is Appendix #2 The interview protocol for both aims is below:

1. Call, email (UTHealth email of researcher/interviewer), or in person screening of study eligibility (SGM older women currently living in Texas (including transgender women and gender non-binary older adults) who are 50 years or older). The prospective interviewee will be asked if they require any special accommodations.
2. If the individual is eligible at that time, a location and format of the participants' choosing (e.g. Montrose Center, community center, church, home, over the phone.) will be determined. An interview time and date within the next two weeks will be determined
3. A reminder email, text, or call will be sent to the participant the day before the interview.
4. The interviewer will hand the informed consent (Appendix 3) to the participant to read. The interviewer will read the introduction paragraph on the interview guide and will ask if the participant would like them to read the informed consent. The participant may opt to have the interviewer/principal investigator read the consent aloud.

5. The interviewer will ask the participant if they have questions about the informed consent. The interviewer will check that the informed consent has been signed.
6. The interview asks if the interviewee consents to being recorded. If verbal consent is given the interview will start with the recorder turned on. If not, the interview will be conducted without recording, the researcher will take extensive notes and writing an immediate interview summary after the interview.
7. Interviews verbally recorded will be date and time stamped and given the participant's unique number.
8. The interviewer goes through all questions for an attempted 45 minutes – 60 minutes.
9. Questions will be skipped if participant answers in another question.
10. After the interview, the participants will be given their $10 CVS gift card incentive and asked if the interviewer can follow up to confirm anything from the interview. See Interview Guide (Appendix 1 and 2) for script.
11. The participants will be asked last to complete a brief demographic survey privately. See Interview Guide (Appendix 1 and 2) for script.
12. The participants will be asked if they have any questions and be thanked for their time.

Various strategies were used to strengthen rigor, validity, and reliability specific to qualitative research methods based on Creswell's strategies. [80] Through observation and field work, the researcher continued to attend SGM older adult social group meetings. The interview guide was tested with SGM older adult community members. Detailed notes were taken during each interview and summary was compiled directly after each interview. The researcher reviewed (listed to audio and read transcript) and edited transcribed interviews before coding. Peer review or debriefing were external check on the research through discussions and review of

coding structures, categories, and themes with committee members throughout the dissertation research process. Through a mixed method approach, triangulation was used as a validation strategy in exploring the needs and resiliency mechanisms of SGM older adults. [80,81] The mixed method approach can increase confidence in findings and validity when the results from the methods agree and are comprehensiveness. [81,82]

Analysis Plan

Data was collected through focus groups with SGM older adults (Aim 2) and semi-structured interviews with SGM older women and gender non-binary adults (Aim 2 and 3) currently living in Texas. The focus group researcher field notes, focus group shared notes and summaries, and interview data were triangulated to gain an understanding of the community needs of SGM older adults. Focus groups were not recorded verbatim. Each focus group was summarized from shared note-taking during the focus group and researcher field notes. While Aim 2 and 3 each had individual coding and themes, a similar analysis was used. Transcripts were checked for accuracy through multiple readings and listening of transcripts before coding. Interviews were recorded, transcribed verbatim, and analyzed thematically using NVivo 11 (QSR International). A thematic analysis framework and coding was used to develop codes and themes in the interview data. Interview data were open coded and interpreted into larger themes. Definitions for codes were created. Interview data were open coded and interpreted into larger themes. To create a common code book and taxonomy, codes and themes were considered in terms of their relationships to one another.

In Aim 2 Paper 1, focus group and interview data were interpreted based on the top community needs identified in Aim 1. In Aim 3 Paper 2, participant's narratives were categorized based on social network type. With the emergence of themes reflecting social

support pathways and related health outcomes within each social network type, themes were interpreted based on the Health Equity Promotion Model. In Aim 3 Paper 3, participant's narratives were categorized. The resulting categories suggested four distinct groups with common pathways. By diagramming these pathways, the research team was able to visualize the experiences of participants in each category and a conceptual model was developed. Categories were created in each paper and within each category, common themes were identified. Demographic descriptive statistics (mean and standard deviation for age n and % for categorical variables) of the interviewees were also reported.

Journal Article 1

Aim 1 & 2

A community and academic partnership to identify community needs of sexual and gender minority (SGM) older adults in Texas

Formatted for Progress in Community Health Partnerships: Research, Education, and Action based on the International Committee of Medical Journal Editors (ICMJE) Uniform Requirements for Manuscripts Submitted to Biomedical Journals and any additional journal manuscript submission guidelines

Background

Over 2.4 million sexual and gender minority (SGM) older adults (≥50 years) live in the United States with this number estimated to double by 2030. [1,2] Older sexual and gender minority **(**SGM) adults experience mental and physical health disparities compared to heterosexual older adults. [3-5] SGM older adults are at a higher risk for social isolation compared to heterosexual older adults. [2,6,7] Subsequently, social isolation has been associated with depression, impaired cognition, a delay in seeking healthcare services, lower socioeconomic status, and premature mortality. [2,6] Research with SGM Baby Boomers has historically focused on gay men and HIV research. [8] Sexual orientation-based health disparities persist into adulthood for women but these disparities gradually reduce in older men.[9] Limited research is available on gender-based discrimination, stress, and subsequent poor mental health outcomes.[10] Associations were found between sexual minority women's experiences of sexism, stress, and poor mental health outcomes.[10] Transgender older adults, compared to cisgender older adults, also experience elevated risks of depression and perceived stress. [2] While there is increased public acceptance of SGM individuals, ageism continues to be visible in society and within SGM communities. [3,11,12]

Among SGM older adults, historical events and subsequent life experiences during these events differ from other generational groups. [11-14] The life course perspective considers historical and social contexts shared by a generational group and the age of the group during historical events. [15,16] The historical events during childhood and young adult years are particularity important in shaping the trajectory of health across life. [15,16] The historical events create different trajectories of risk and protective factors impacting health outcomes for generational groups. The advantages and disadvantages of these trajectories influencing health are then stable across life in the life course perspective. [15] Trajectories differentiate SGM generational groups community

needs, for example, older gay and bisexual men who lived through the HIV/AIDS epidemic may be more aware and educated about safer-sexual practices and attitudes based on HIV/AIDS crisis. [11] Shifting social and legal contexts around sexuality, gender, and age have also influenced SGM older adults, particularly in the South. SGM individuals living in Southern states represent the largest percentage of overall SGM individuals (35%) in the United States compared other regions. [17] The unique atmosphere for older SGM adults in the South may create even further differences in community needs, stressors, and health outcomes as well as resilience mechanisms.

SGM older adults in Texas have experienced a unique social, policy, and healthcare atmosphere. Ten years before a ban on SGM individuals from federal work, a group of faculty and students were forced to leave the University of Texas because they were suspected of being gay.[18,19] In 1973, the Texas legislature enacted a state statute that statute only "a man and a woman" could obtain a marriage license. [18] This law was updated in 1997 to prohibit the marriage licenses between persons of the same sex. [18] Legislation in 2003 and a 2005 voter referendum further banned the state from recognizing marriage and civil unions of same-sex couples. [18]Also in 1973, the sodomy or "homosexual conduct" law was passed preventing criminalizing same-sex sex and justifying discrimination. [18] The Texas sodomy law was on the books until 2003 when the law was ruled unconstitutional by the US Supreme Court in *Lawrence vs. Texas*. [18] While the law is no longer enforceable, it was never officially appealed by the state legislator. Legislation in 2003 and a 2005 voter referendum further banned the state from recognizing marriage and civil unions of same-sex couples. [18] The Texas marriage ban was struck down in 2014 but remained in effect through appeals until 2015 when the U.S. Supreme Court struck down the ban in *Obergefell v. Hodges*. [18,20]

The effects of discriminatory policies continue to have effects on the social and political context in Texas. In the 2017 state legislative session, a policy was brought to the Texas State legislature that would have kept transgender Texans from using bathrooms that align with their gender identity. [21] In the 2019 session, the Texas state legislature passed a bill that would protect the right of state-licensed workers such as doctors, teachers and counselors to refuse to provide their services to SGM individuals and their families. [22] There are currently no Texas state wide protections for discrimination based on sexual or gender identity in employment, housing, and public accommodations. [18] Almost 80% of Texas residents believe that SGM people experience discrimination in Texas. [18] Transgender individuals in the workplace report harassment (79%), loss of a job (26%), and having been denied a promotion (22%) because of their gender identity.[18] Experiences of or fear of discrimination can discourage SGM individuals from seeking out healthcare and social services, despite the need. SGM individuals report lower rates of healthcare utilization and preventive screenings.[12] As such, SGM individuals in Texas are significantly more likely to be diagnosed with a depressive disorder and report a higher average number of poor mental health days in the past 30 days than heterosexual individuals. [18]

Objectives

In order to assess the community needs of SGM older adults, a mixed-method needs assessment was conducted through a community and academic partnership. The focus of the assessment was to describe the larger community needs of SGM older adults and identify any distinguishable characteristics of needs by gender or sexual identity. The needs assessment was a two-phase study to first identify the specific needs of SGM individuals across Texas whereas, formative qualitative methods were utilized to further explore and compare needs identified by SGM older adults. First, quantitative data on the community needs of SGM older adults (50

years and older) are reported. Then in Phase 2, considering the specific healthcare and social needs generated in the quantitative research, qualitative findings from focus groups and interviews are described more broadly for SGM older adults and then for SGM older women.

Phase 1

Methods

An important stakeholder in identifying and meeting the needs of SGM individuals in Texas is The Montrose Center, a counseling and community center in Houston, TX. The Center utilizes an integrated care model to provide behavioral health and support services, adult primary care and psychiatry, and free wellness programs to SGM populations and individuals living with HIV of all ages across the Greater Houston Area and the Gulf Coast region. The Montrose Center has offered services and developed community trust since its beginnings in 1978. The Center has been driven largely by community engagement and a Board of Directors consisting of SGM leaders across the community, healthcare, law and finance and other sectors.

The Montrose Research Institute: BRIDGES (Building Relationships to Investigate Diversity in Gender and Sexual Minority Experiences in the Southwest) was created through a partnership with The Montrose Center and researchers at The University of Texas Health Science Center at Houston School of Public Health in 2016. The mission of the partnership was to connect with sexual and gender minority individuals to understand the diverse needs of the community in order to develop research and design interventions to address those needs and disseminating research in ways that are accessible to audiences in both the SGM communities and academia. The first project of the partnership was a needs assessment administered through the TELL (Texans' Experiences: LGBTQ+ Lives) Us Texas Survey to better understand the varied needs of the LGBTQ community.

Study Design

The target population for the survey was self-identified sexual and gender minority (SGM) individuals. Study inclusion criteria included self-identifying as a sexual and gender minority (SGM) based on sexual identity, sex at birth, and current gender survey questions and those who identified same sex attraction or behavior based on responses to survey questions. Study participants were 13 years and older, reported a Texas zip code, and were English or Spanish-understanding. Only survey participants who were 50 years of age and older were examined in this study.

The statewide cross-sectional online survey, was administered from May 2016 until January 2017. The survey was advertised through the community partner's website and social media advertisements targeting Texans with SGM-related interests online. The survey took approximately 20 minutes for each participate to complete online. Respondents completed an informed consent page before beginning the survey. The first 1,000 study participants received a $5 Starbucks's gift card and all participants received a promotional code for online retailers who are affirming of SGM individuals. This survey was approved through the academic partner's Institutional Review Board.

Measures

The survey included questions about demographic (e.g. age, race, ethnicity, geographic location, education, health insurance, and military history), current sexual and gender identity, and perceived community needs. The survey measure for community needs was adapted from the annual Voices of Health Report from Rainbow Health Initiative (RHI) and Minnesota AIDS Project. [23] The list of needs was adapted from the Report but was modified through a process of review and feedback with multiple community stakeholders and organizations serving SGM

individuals across Texas. The survey measure included the 33 community needs. For perceived community needs, participants were asked to rank order the top 5 issues they thought needed attention in the LGBTQ community from a list of 33 items: “Please drag and drop the TOP FIVE issues that you think need more attention in the lesbian/gay/bisexual/transgender/queer (LGBTQ) community. Put ONE CHOICE into each box.” In an open-ended question, study participants were able to suggests other health issues they thought needed more attention. The issues would be considered as an option in future surveys.

Data Analysis

STATA version 16 was used for statistical analyses of selected demographic characteristics and community needs. Demographic characteristics included race/ethnicity, public sexual identity, current gender identity, and transgender/non-binary gender identity. Transgender/non-binary gender identity was determined by reported sex assigned at birth and current gender identity. Frequency and percentages were reported for categorical demographics data while a mean and standard deviation was reported for age. Frequency and percentages were also reported as for community needs data. Community needs ranked as a top five issue on the survey were coded as “1 - Priority” while those not chosen were coded as “0 - Not a Priority.” Top needs were identified by where the percentage of participants who identified a need dropped dramatically. Comparisons across gender and sexual identity were conducted using chi-square and Fisher’s exact tests to probe for significant findings. A Bonferroni correction was applied for community needs with significant findings ($p<0.05$).

The top needs were examined by three sample sexual and gender demographic characteristics including transgender/non-binary gender identity, a collapsed current gender identity category, and a collapsed sexual identity category. Those who currently identified as a

transgender woman, transgender man, agender person, or a genderqueer person were coded as having a transgender/non-binary gender identity. Those who currently identified as a cisgender men and woman were coded as not having a transgender/non-binary gender identity. For gender identity, those who currently identified as a cisgender or transgender woman, agender person were coded as SGM Women. Those who currently identified as a cisgender or transgender man were collapsed into SGM man. Agender or genderqueer persons were not concluded. For sexual identity, those who currently identified as straight or gay and lesbian were coded as monosexual and those who identified as bisexual, pansexual, or queer were coded as plural sexual. Those participants who identified as asexual, something else, or did not disclose their sexual identity were not included.

Results

A total of 104 sexual and gender minority older adults (50 years and older) completed the survey (7.63% of total study participants). The mean age of participants was just over 55 years old (M=55.05: SD=4.64) with a range of ages from 50 – 67 years old. Most participants identified as Non-Hispanic White (87.54%: n=90), Gay/Lesbian (69.71%: n=69), and as a cisgender man (532.88%: n= 55). This age group did have the largest percentage of participants who identified as a transgender woman (13.59%: n=14) compared to other age groups in the survey. Table 1 contains demographic characteristics of survey participants.

Twelve needs were identified as a top priority by at least 20% of participants. The top needs emerged into three categories: Culturally sensitive healthcare (Healthcare, provider knowledge, Aging, HIV/STI), mental health and suicide, and social determinants of health (Housing, violence, poverty, healthy relationships, and employment discrimination, bullying). These twelve community needs were compared by selected gender and sexual identity variables

(Table 2). SGM men were more likely to identify bullying as a top community need compared to SGM women (39.29% vs. 19.57%, $p<0.05$). SGM men were also more likely to identify healthcare (39.29% vs 17.39%, $p<0.02$) and HIV/STI prevention (33.93% vs. 8.70%, $p<0.02$) as a top community need compared to SGM women. Results indicated that 50% of SGM women identified employment discrimination as a top community need, whereas only 21.43% of SGM men identified this as a need. This difference was statistically significant ($p<0.02$). In terms of sexual identity, plural sexual individuals (bisexual, queer, and pansexual) were more likely than mono sexual individuals (gay, lesbian and straight) to identify employment discrimination as a top community need (63.64% vs 29.11%, $p<0.02$). Those who identified as transgender/non-binary gender were less likely to identity bullying (5.88% vs. 34.48%, $p<0.02$) and HIV/STI prevention (8.33% vs. 33.93%, $p<0.02$) as a top community need compared to cisgender individuals.

Phase 2

Methods

Study recruitment and design modifications were made in Phase 2 based on reflections guided by community-based participatory research principles including community engagement and building trust. [24-26] Based on these reflections, the partnership was continued to further explore the social and healthcare needs of SGM older adults through a qualitative study design. The methodology better suited the principles of community-based research, aims of the project, accessibility of the community (e.g. Access to the community partner, ability of the researcher to travel and be trusted in participants' home, and limitations in access to email and internet), and availability of funding. Qualitative methods are also well suited to obtain rich data on lifetime experiences to better understand the complexity of needs among SGM older adults.

Study Design

Phase 2 was conducted from May 2017 to November 2019 through a qualitative study of the community needs of SGM older adults. Three one-hour focus groups, one for men (n = 25), one for women (n = 6), and one combined group (n=12) were conducted with SGM older adults over the age of 50 years. The men's group took place after a lunch for seniors 60 years and older at the community partner's and women's group took place at a lunch advertised through an organization serving SGM women over the age of 50 years old. The combined group took place during a monthly church social for seniors. The focus groups utilized the World Café approach. The World Café approach is based in the World Café Community Foundation principles of engaging discussion in a hospitable environment to make collective knowledge visible and identify patterns." [27-29] Focus group recruitment and implementation took place at a community partner's site. Questions were open-ended and similar across focus groups, focusing on community needs, although questions prompted participants to reflect on their own experiences so discussion topics evolved in each group. Through shared note-taking, participants individually and then collectively generated responses as a researcher recorded responses on a whiteboard or flipchart.[30] No identifying information was connected to the shared-note taking or researcher field notes.

Based on differences identified between SGM men and women in the focus group as well as research gaps with SGM women, thirty- seven semi-structured interviews were conducted to further explore the community needs of SGM women over the age of 50 years old. The interview sample also reflected the recent expansion of services provided by the community partner through two new community programs in their women and transgender health outreach and education program. The interview guide was questions focused on perceived community needs

such as navigating the healthcare system, healthcare cultural sensitivity, and interest in health interventions at the community partner. The interview guide was exploratory and evolved to be responsive to the data and to better reflect the emerging needs specific to SGM women identified in the currents study. [31,32] Interviews were mostly conducted in person at the community's partner site (n=21) or at the participants' homes (n=13) with one interview at a place of work and two interviews conducted over the phone. The interview lasted 29 - 77 minutes with an average interview time of 46 minutes. Participants were compensated with a $10 gift card for participating in the interview. A brief demographic survey was distributed after each interview and no identifying information was connected to the interview transcript. The study procedures were approved through the institutional Committee for the Protection of Human Subjects (CPHS).

Data Analysis

The focus group researcher field notes, focus group shared notes and summaries, and interview data were triangulated to gain an understanding of the community needs of SGM older adults. Focus groups were not recorded verbatim because of privacy concerns. Each focus group was summarized from shared note-taking during the focus group and researcher field notes. [30] Interviews were recorded, transcribed verbatim, and analyzed thematically using NVivo 11 (QSR International). A thematic analysis framework and coding was used to develop codes themes in the interview data. Interview data were open coded and interpreted into larger themes. Definitions for codes were created. Interview data were open coded and interpreted into larger themes. To create a common code book and taxonomy, codes and themes were considered in terms of their relationships to one another. To further explore the community needs of SGM men

and women, focus group and interview data were interpreted based on the three categories of needs identified in Phase 1. Within each of the categories, common themes were identified.

Results

Forty-three SGM older adults participated across the three focus groups and thirty-seven SGM women and gender non-binary adults participated in the interviews. Individual demographics were not available for the focus groups. The focus group facilitator identified the focus group participants as mostly gay men in their 70's and younger (50's - 60's years) lesbian women. Demographics were collected after each interview and are reported in Table 3. Three themes were outlined based on community needs identified in Phase 1: (1) Culturally Sensitive Healthcare, (2) Mental Health and Suicide, and (3) Social Determinants of Health. Two new sub-themes emerged in the focus groups and interviews with SGM women: (1) Religion and Spirituality and (2) Role of Pets in Social Support.

Culturally Sensitive Healthcare

Provider Knowledge of LGBTQ Healthcare Needs

Participants expressed the importance of provider LGBTQ cultural sensitivity. A participant in the men's focus group described cultural sensitivity in three parts: a healthcare provider respecting your knowledge of you and your body, accepting you, and knowledge of LGBTQ related needs. The men's group wanted their providers to have better knowledge about HIV insurance coverage, cost of HIV medications, and drug and food interaction with HIV as well as Hepatitis C and age-related medications. Participants expressed interest in pharmacy alerts about drug interactions based on current and any new medication. Opinions varied on whether participants were open about their sexuality with their providers. In the SGM men's focus group, the consensus from the participants was that they wanted their provider to know that

their sexual orientation and to both respect and acknowledge their partner during their healthcare visits. Some women believed it was easier to come out to their provider as one interview participant described the decision for her and her partner to come out to their providers, "…there comes a time when talking in riddles and innuendos, you get caught up and some of the stuff you say you don't remember what you say it, and I just wouldn't do anymore…" (Participant 8). Other women felt it was not always necessary to come out to their provider in their visit unless it related to mental health concerns or the coming out process. One woman described her reasoning for not coming out to her doctors, "Technically, I don't think it's any of their business…There're still a lot of stereotypes and discrimination…I don't know how it could be relevant" (Participant 2). Women, more than men, spoke of fear of discrimination and mistreatment in choosing not to come out to their provider.

Provider Knowledge of Aging Healthcare Needs

In addition to provider LGBTQ cultural sensitivity, the importance of aging cultural sensitivity was identified. Particularity in the men's focus group with older men, participants wanted their providers to be knowledgeable and recommend age-related immunizations like shingles and pneumonia as well as the flu, Hepatitis B and Hepatitis C immunizations. Participants also described the desire for healthcare providers and community organizations to improve patient education surrounding age-related immunizations, disparities, and Medicare insurance coverage so that they could better advocate for themselves or their partner in a healthcare setting. Other topics of importance for future education included mobile applications to monitor prescriptions and electronic health records.

Participants felt they were not being listened to or respected by their providers because they were older adults. The men's group felt that this was reflected in provider behaviors such as

sending them to the emergency room or prescribing medications before behavior or diet modifications. Similarly, one woman in a focus groups asked, “How do I get pain relief without another set of doctors?” Women who did seek new or different medications for pain felt that their pain was not recognized and they were perceived as being drug seeking. Both focus groups expressed interested in integrative behavior modifications for chronic pain such as yoga and deep breathing. In the women’s focus group and interviews, participants felt that provider disrespect was reflected in provider behavior and language. During a healthcare interaction in which she perceived as patronizing; one woman described being called “grandma” in a healthcare visit. The focus group and interview participants also believed ageism in healthcare was based on sexism from the larger society, “I was viewed more as an older woman. Not—not quite as useful in society…. The older women are invisible in this culture and that’s reflected in the healthcare we receive” (Participant 7). These interactions led to women seek out another provider or clinic while others felt stuck with their current provider as their health insurance was limited in medical care coverage.

Mental Health and Suicide

While both groups discussed the importance of mental health, women discussed these needs in greater detail. Participants were interested in integrative medicine options for both improving physical and mental health. These options included yoga, stretching, Tai Chi, deep breathing, and mediation. Both focus groups were interested in how to better advocate for healthcare interventions and policy to improve access and coverage to integrative healthcare as well as for other mental health services and Medicare.

Mental health was discussed as an important component of total well-being of an individual as one participant said, “Naturally, people who don't have good mental health don't

generally manage their total well-being" (Participant 2). Many of the women, specifically in the interviews, described suicide attempts or ideation during stressful events. These stressful life events included the coming out process and times when they were not receiving consistent or appropriate mental healthcare such as a therapist or support groups like Alcoholics Anonymous (AA). As with coming out to healthcare providers, women expressed fear of discrimination in mental healthcare based on their own or others' experiences as one participant described:

> And back when I was younger and coming out in my early years in the community there—you heard stories of lesbians particularly being hospitalized and given shock treatment and everything to cure them…. And I have the stories of some of those women. So, it's not just fairy tale, it happened. So, if you go to those kinds of experiences, you don't want—you don't talk a whole lot about it (Participant 8).

Participants identified the importance of healthcare providers knowing the history, "…I think a health provider needs to know some of that kind of history because that's going to make a difference in how they treat that person" (Participant 8). Fears and experiences of mistreatment and discrimination might prevent SGM older adults from seeking healthcare.

Social Determinants of Health

Six social determinants of health were identified in Phase 1 as top priority needs. Violence, poverty, and healthy relationships did not emerge in either of the focus groups. Some of these topics might have been sensitive topics for these spaces or not associated with healthcare. Participants did express concerns about their future housing needs and the ability to pay for housing, healthcare, and other living costs. Women who lived alone or on a restricted

income (e.g. Social Security), were particularly concerned about where they would live as they aged and became more dependent. Finding senior or long-term housing might prove difficult because of fear of discrimination as one participant describes, "…either [we] will suffer in silence, or… end up leaving and possibly end up being homeless or being in some care in which is not appropriate care for the level that [we] need" (Participant 12). Even those with more financial flexibility, discussed a fear of discrimination in housing and senior services.

Employment Discrimination emerged as an important concern for SGM women. As with experiences in coming out to providers and seeking out mental healthcare, women described the fear of and actual experiences of employment discrimination. Some women described never experiencing employment discrimination but they also noted that they were not out at work or did not talk about their partner at work. Others did describe explicit employment discrimination; one participant described when she was accidently outed to the parents at a school:

> All of the sudden, I had like five or six people resign. I had many of their kids. but because they found out I was gay, they couldn't handle it…. [This one parent,] we were very good friends but…because he was Baptist, he just couldn't keep his kids in the program (Participant 15).

Many women described the negative and inaccurate stereotypes about SGM adults made them even more reluctant to come out at work or be more careful about interaction with their partner in public places.

Emerging Needs of SGM Women

Two emerging needs, Spirituality and Religion and the Role of Pets in Social Support, were not reflected in the community needs measure in Phase 1. God, a higher power, or spirituality was important for social support and for maintaining health as one focus group participant described, "I believe in the power of my mind in partnership with the Infinite/God to be well and to heal any appearance [of] unwellness." Many participants attributed God to helping them through a difficult time or poor mental or physical health as one interview participant described, "… I had strong faith and still do. And am extremely thankful because I know he didn't give me the cancer, but it put everything in line for it to be gone… so I know there's someone better than—bigger than me" (Participant 32). The same participant contributed their recovery to God and their prayer circle: "To me that was all God, so that's once again I'm just thankful—people were praying for me, they still do so" (Participant 22). While internal practices like prayer and beliefs were particularly important, spirituality was also an important healthy behavior shared with others. Resilient spiritual health allowed for independence and strength to take care of others or socialization through church.

Pets were another important source of social and emotional support especially for women who were isolated from family and friends. Pets were seen as a part of participants' family. The grief experienced from a loss of a pet was similar to the loss of a friend or partner for this participant,

> I think it affected me spiritually, [and my] health… I gained at least 25 pounds. When my dogs got cancer, I stopped my life. I mean I stopped going to dinner with my friends, I stopped going to movies… I was so stressed and I could do is stay home and hold her…I

> went through a long time where I wouldn't even go to the gym, I wouldn't exercise, I just was so distraught… (Participant 31).

Pets, particularly dogs, helped women to stay physically active. Pets were a coping method when experiencing physical pain or mental distress. One woman explained this coping method took her focus off herself and her pain for a brief time.

Conclusions

SGM older men and women as well as transgender/non-binary older adults prioritized different community needs. In Phase 1, the top two needs for SGM women were mental health and employment discrimination while the top two needs for SGM men were aging and healthcare (tied with bullying). The top two needs for transgender/non-binary older adults were employment discrimination and aging. When probing for significant findings, SGM women were more like to identify employment discrimination as a top community need while SGM men were more likely to identity healthcare as a top community need. Transgender/non-binary older adults were more like to identify bullying and HIV/STI prevention as a top community need compared with cisgender older adults. While bullying was prioritized in Phase 1 for some groups; it did not emerge in the qualitative results in Phase 2. The need may have been identified as priority based the understanding of SGM youth but not reflected in the personal experiences or current needs of SGM older adults.

In Phase 2, considerations for clinical practice were identified in the focus groups. SGM men prioritized their providers recommending and providing more information around Hepatitis B, Hepatitis C, pneumonia, flu, and shingles immunizations. Participants in this focus group discussed the need for better clinic or pharmacy tracking of medications in order to monitor and

discuss drug interactions with each other and specifically with HIV related medications. Both groups expressed interest in integrative or complementary medicine. Women specifically discussed an interest in integrative medicine treatment for pain and to reduce the frequency and amount of medications. Health education considerations include more knowledge about complementary/alternative medicine options like yoga, meditation, and stretching in addition to traditional medicine protocols. Both focus groups also identified an interest in learning more and being active in advocating for better healthcare policy around complementary/alternative medicine but also relevant policies surrounding US healthcare payment systems they utilize such as Medicare and Medicaid.

Participants described the importance of access to healthcare services by a provider affirming of SGM individuals whether in an SGM focused community-based setting or through providers trained in culturally sensitive care. While the men's focused on affirming care and the importance of coming out to their provider, women were more divided on the importance of coming out to their doctor. They also discussed being treated poorly by a healthcare provider because they were female-identified and older. Culturally sensitive healthcare included the patient deciding if and when to come out to each of their healthcare providers. This may differ from other studies reporting that coming out to a provider is an important step in improving health outcomes. Historical contexts of homophobia and sexism shape the identity development and coming out processes for SGM older women. Women might feel vulnerable when coming out because of past experiences with discrimination and lack of social support and legal protections when coming out. Future research is needed to better understand if and how SGM older adults come out to their healthcare providers particularly in situations in which is not known if the healthcare provider is SGM affirming. In addition to training future and current

health care providers issues in SGM aging healthcare, community education is needed surrounding coming out to a provider, understanding when it is safe to come out to a healthcare provider, and locating an affirming provider or clinic.

Two emerging needs for future research among SGM older women. Spirituality in maintaining mental health and overall wellbeing was only discussed in women's focus group. The theme of spiritual health challenges the narrative of SGM communities' complex relationship with religion specifically beliefs about SGM individuals being seen as sinners, criminals, or mentally ill. Public health implications include the need for affirming faith-based groups and other spiritual groups as community partners in interventions and research. Although community groups and researchers should be considerate of historical considerations and the impact of religion experienced in some SGM communities related to mental health. Future research is needed to better study the spiritual and religious needs of SGM older adults, whether spiritual/religion is a risk or resilience factor or both, and what role they have played in coming out and mental health during one's lifetime. As seen with a previous study with SGM older adults, pets may increase perceptions of social support leading to an improvement in both physical and mental health outcomes. [33] A loss of a pet can feel similar to losing a close family member or friend. Older adult may also lose their pet when moving to affordable housing or a senior living facility that disallows pets. [33] The influence of this loss on social support and mental health is important to consider for older adults. Pet ownership can also be a financial burden for those older adults living alone, in poverty, or on a restricted income. Considerations such as offering pet food, supplies, and veterinary resources are important for community groups serving SGM older adults.

Common limitations in mixed method studies were identified. Phase 1 quantitative findings may not be generalizable to other SGM older populations. Since the survey is a cross sectional online survey, the survey may be self-selecting for those who are more open and engaged with SGM communities. In Phase 1, the survey had a small sample size of adults over the age of 50 years old. Less than eight percent (7.63%; n=104) of the study sample was 50 years or older. The low sample size could be attributed to the survey advertisement being implemented through only the community organization and targeted Facebook ads for those with SGM related interests as reflected in the larger sample size of individuals under the age of 19 years old (50.48 %: n=688). The complete list of community needs was also not age specific and may have excluded needs that may be important to SGM older adults like End of Life/Palliative Care and Religious/Spiritual Care. The needs were mostly healthcare/health categories and did not include social support. The Phase 2 findings may not be transferable to other older SGM populations. The focus groups and interviews were from a convenience sample of SGM older adults. Only cisgender SM adults attended the focus groups while only 3 interviews were conducted with transgender and non-binary older adults. Only one focus group was conducted with each group of interest (SGM women, SGM men, and a combined group) and interviews were only conducted with SGM older women. Lastly, it was not possible to know which participants participated in both the survey and qualitative methods. Some survey participants may have likely taken place in a focus group or interview.

Challenges exist in older adult recruitment outside of spaces affirming of SGM individuals. The recruitment strategy in Phase 1 may have not been an appropriate recruitment and implementation strategy for older adults as some individuals may be isolated from SGM communities. In Phase 1, survey participants were recruited based on SGM related interests on

Facebook. Older adults may not discuss their identity or like SGM interests online. Continued community efforts are being made to reach SGM older adults who are physically or emotionally isolated, not "out," or who are not comfortable being in spaces labeled or indicated as serving SGM individuals. In Phase 2, recruitment of interviews took place at the community partner's site, at social groups for SGM older adults, and through a community outreach worker which may lead to self-selecting by those engaged with the SGM communities. The community partner although was essential for gaining community trust and study implementation. The engagement of trusted stakeholders was necessary to recruit participants connected to the community partner and the larger SGM community as well as though isolated from the partner and community. Future research efforts could include churches and other faith-based institutions who are affirming institutions and careful considerations for less affirming faith-based spaces in which individuals may not be out or want to be outed in these spaces. Other spaces for recruitment visited or mentioned by study participants and community stakeholders include Meals on Wheels, civil and political groups, health fairs by the local Area Agency on Aging (AAA), and local Federally Qualified Health Centers and mental health authorities.

The findings from this mixed method study through an academic – community partnership provide an exploratory narrative from a sample of SGM older adults in Texas. Triangulation of quantitative and qualitative findings provides a more comprehensive understanding of the community needs of SGM older adults. While some similarities in community needs like provider knowledge of SGM health were identified across focus groups, clinical and public health implications may differ by sexual and gender identity as well as race/ethnicity identity and socioeconomic status. Two unique needs and alternative sources of social support for SGM women were also identified. Future research should explore the role of

pet ownership and spirituality/religion in improving mental health outcomes as well as perception of social support in SGM older adults. While these findings are specific to the study, they provide implications for the growing population of SGM older adults especially in the South. This study was a snapchat of community needs but future longitudinal studies should consider the life course perspective examining needs of SGM older adults over time.

Table 1. Survey Demographic Characteristics of Sexual and Gender Minority Older Adults (50 years and older)

Variables	% (N)
Total Sample	7.63% (104)
Race/Ethnicity	
Hispanic	3.85% (4)
Non-Hispanic White	87.54% (90)
Non-Hispanic Black	0.96% (1)
Non-Hispanic Other	7.69% (8)
Did not disclose	0.96% (1)
Public Sexual Identity	
Gay/Lesbian	65.71% (69)
Bisexual	7.62 % (8)
Straight/Heterosexual	9.52 % (10)
Queer	1.90 % (2)
Asexual	6.67 % (7)
Pansexual	0.95 % (1)
Something Else	1.90 % (2)
Did not disclose	4.76 % (5)
Current Gender Identity	
Man	52.88% (55)
Woman	30.77% (32)
Trans Man	0.96 % (1)
Trans Woman	13.46 % (14)
Genderqueer	0.96 % (1)
Agender	0.96 % (1)
Transgender/non-binary gender identity	
Yes	16.35% (17)
No	83.65% (87)

Table 2. Priority Community Needs Identified by Sexual and Gender Minority Older Adults (50 years and older)

	Gender Identity (n=102) •			Transgender/Non-binary Gender Identity (N=104)			Mono sexual vs. Plurisexual (N=90) °		
	SGM Women (N=46)	SGM Men (N=56)		Yes (N=17)	No (N=87)		Mono sexual (N=79)	Plurisexual (N=11)	
Community Need	*% (N)*	*% (N)*	*p*	*% (N)*	*% (N)*	*p*	*% (N)*	*% (N)*	*p*
Aging	47.83% (22)	60.71% (34)		41.18% (7)	42.53% (37)		58.23% (46)	36.36% (4)	
Mental Health	52.17% (24)	33.93% (19)		35.29% (6)	43.68% (38)		39.24% (31)	36.36% (4)	
Employment Discrimination	50.00% (23)	21.43% (12)	*<0.02*	52.94% (9)	31.03% (27)		29.11% (23)	63.64% (7)	*<0.02*˜
Bullying	19.57% (9)	39.29% (22)		5.88% (1)	34.48% (30)	*<0.02*˜	30.38% (24)	27.27% (3)	
Healthcare	17.39% (8)	39.29% (22)	*<0.02*	11.76% (2)	32.18% (28)		27.85% (22)	45.45% (5)	
Housing/Homelessness	30.43% (14)	25.00% (14)		29.41% (5)	27.59% (24)		25.32% (20)	36.36% (4)	
Provider Knowledge of LGBTQ	26.09% (12)	25.00% (14)		35.29% (6)	24.14% (21)		27.85% (22)	27.27% (3)	
Suicide	28.26% (13)	25.00% (14)		17.65% (3)	27.59% (24)		29.11% (23)	18.18% (2)	
Poverty	23.91% (11)	25.00% (14)		29.41% (5)	22.99% (20)		21.52% (17)	18.18% (2)	
Violence	23.91% (11)	21.43% (12)		23.53% (4)	21.84% (19)		22.78% (18)	18.18% (2)	
HIV/STI Prevention	8.70% (4)	33.93% (19)	*<0.02*˜	0.00% (0)	26.44% (23)	*<0.02*˜	22.78% (18)	18.18% (2)	
Healthy Relationships	17.39% (8)	21.43% (12)		17.65% (3)	20.69% (18)		17.72% (14)	27.27% (3)	

• Removed Genderqueer and Agender
° Removed Asexual, Something, and those that did not respond
˜ Fischer's exact test

Table 3. Interview Demographic Characteristics of Sexual and Gender Minority Older Women and Gender Non-Binary Adults (50 years and older)

Variables	Mean, SD
Age (years)	66.37, 8.61
	% (N)
Race	
Native American/American Indian/Alaska Native	2.70 % (1)
White	75.68 % (28)
Black	13.51 % (5)
Asian or Pacific Islander	2.70 % (1)
Multiracial	5.41 % (2)
Sexual Identity	
Gay	5.41 % (2)
Lesbian	81.08 % (30)
Bisexual	8.11 % (3)
Asexual	2.70 % (1)
Don't know	2.70 % (1)
Current Gender Identity	
Woman	91.89 % (34)
Trans Woman	5.41 % (2)
Genderqueer	2.70 % (1)

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Journal Article 2

Aim 3

A qualitative study examining the social networks types of sexual and gender minority (SGM) older women and gender non-binary adults

Formatted for the Journal of Gay & Lesbian Social Services based on the Taylor & Francis Journals Standard Reference Style Guide: American Psychological Association, Seventh Edition (APA-7) and any additional journal manuscript submission guidelines and any additional journal manuscript submission guidelines

Introduction

Social networks are an important resource to improve quality of life and reduce health disparities in sexual and gender minority (SGM) older adults. Compared with heterosexual older (≥ 50 years) adults, SGM older adults are more likely to have overall poorer general health; a higher prevalence of HIV, diabetes, and disability; and a higher prevalence of anxiety, depression, and suicide ideation (Fredriksen-Goldsen, 2011; Fredriksen-Goldsen, et al., 2011, 2015). One of the primary theories for explaining these health disparities is the minority stress model which proposes that SGM individuals experience health disparities because of stress processes, such as discrimination, unique to their social status (Fredriksen-Goldsen, Kim, et al., 2013; Meyer, 1995, 2003, 2015). In this model, social networks can buffer the effect of stress processes to reduce or eliminate poor health outcomes (Meyer, 1995, 2003, 2015). The health equity promotion model (HEPM) builds on the minority stress model to better understand successful aging and how social networks impact health outcomes through health promoting pathways, such as social support, and adverse pathways, such as social isolation (Fredriksen-Goldsen, et al., 2014). These pathways are influenced by shared historical and social contexts and individual lifetime experiences of SGM older adults. (Fredriksen-Goldsen et al., 2014) A gap in research exists in how social networks are developed and sustained and how they impact the health of SGM older adults (Kim et al., 2017).

Social Networks

Population-based studies have found that SGM older adults have different social support networks compared with heterosexual cisgender older adults (Erosheva et al., 2016; Kim et al., 2017). The convoy model outlines that unique lifetime social support networks or "convoy" emerge within specific cultural and social groups such as SGM older adults (Antonucci et al.,

2014; Kim et al., 2017). Lifetime experiences within historical, cultural, and social contexts influence social network composition and sustainment (Antonucci et al., 2014). Using the convoy model and the HEPM, five social network types of SGM older adults were proposed through a quantitative social network typology study by Kim et al. (2017): *diverse, diverse/no children, immediate family-focused network, friend-centered/restricted,* and *fully restricted*. The network types were measured by relationship status; the type and number of network ties; and frequency of contact with ties, which included children and other immediate family members, current and former partner/spouse(s), friends, and neighbors (Kim et al., 2017).

Structure of SGM Social Networks

SGM older adults have systematically experienced social disadvantages (Badgett et al., 2009; Dentato et al., 2014; LGBT Movement Advancement Project [MAP] & Services and Advocacy for Gay, Lesbian, Bisexual and Transgender Elders [SAGE], 2010). SGM older adults came of age during a time when stigmatization and discrimination were especially present in society (Dentato et al., 2014; Johnson, 2009; Kane, 2003). For example, in the 1980s, the HIV/AIDS pandemic affected a generation of SGM individuals, resulting in a loss of complete social networks and close network ties (Erosheva et al., 2016). The experience or fear of discrimination have led to fewer social support and network ties for some SGM older adults throughout their life (Erosheva et al., 2016). Historical and current laws have prevented SGM individuals from marrying, receiving legal benefits from their partner, and adopting children (Erosheva et al., 2016). SGM older adults also have fewer biological family social ties (Wallace et al., 2011).

SGM older adults continue to experience stigmatization and discrimination preventing them from developing social networks and possibly leading to social isolation. SGM older adults

might also be less engaged and accepted in the larger SGM community, compared with than SGM younger individuals MAP & SAGE, 2010). Social engagement and identity disclosure have been associated with a larger social support network but this disclosure can also create conflict and social distance with family, friends, and significant others (Erosheva et al., 2016; Herek & Capitanio, 1996). Despite systematic social disadvantages, some SGM older adult populations have created and sustained supportive social networks throughout life (Grossman et al., 2000). For example, a lack of family ties led individuals to create supportive friendships called "family of choice" ties or to stay close with former partners (Grossman et al., 2000). SGM older adult social networks have arisen from the need for safety and security earlier in life and have evolved over time with ties being added and lost.

Research suggests possible differences in the social networks of SGM women and gender non-binary adults, compared with those of other SGM older adults. For example, SM women are more likely than other SGM groups to have diverse social networks compared to other SGM groups (Kim et al., 2017). Despite these findings, SM-related health disparities persist into adulthood for women while gradually narrowing in men (Bränström et al., 2016; Fredriksen-Goldsen et al., 2015). Recent research on SGM older adult social networks found that individuals who identified their sexual identity as something other than gay or lesbian or identified their gender identity as transgender were more likely to be in a smaller and less diverse network (Kim et al., 2017). Some research suggests that transgender adults perceive less support from the SGM community, whereas, in other research transgender adults have greater social network diversity than gay and lesbian adults (Porter et al., 2013; Weiss, 2004).

Social Networks and Health

Although not completely understood, two possible pathways linking social networks to health outcomes in SGM older adults are (a) social support and (b) social isolation (Fredriksen-Goldsen et al., 2014). Social networks can provide these varying levels of social support through tangible support, emotional and information support, positive social interaction, and affectionate support (Golden et al., 2009; Sherbourne & Stewart, 1991). Perceived satisfaction of social support and social network size and ties can have a significant influence on the quality of life for older adults (Bruine de Bruin et al., 2020; Kemperman et al., 2019). For those who have a smaller or less diverse network and who have less social support, social isolation and feelings of loneliness and isolation can account for health outcomes. Compared with heterosexual older adults, are at a higher risk for social isolation and loneliness which have been associated with depression, impaired cognition, a delay in seeking healthcare services, lower socioeconomic status, and premature mortality (Golden et al., 2009; Kuyper & Fokkema, 2010). Research to better understand population characteristics associated with network size and diversity are needed to help develop interventions that target more isolated populations in order to improve social support (Erosheva et al., 2016).

Limited quantitative or qualitative studies have examined the social networks of SGM older adults. A recent study by Kim et al. (2017) quantitatively identified five possible social network types of SGM older adults. Quantitative research can be used to identify social network structure, but social networks change over time and, therefore, might evade categories (Edwards, 2010). To understand social networks, it is important to know how individuals perceive their social network and the meaning they give these ties. Qualitative research is thus important to examine an individual's view of their social network as well as the context of the network,

changes over time, and emerging ties (Edwards, 2010). To our knowledge, no qualitative studies have examined the social networks of SGM women and gender non-binary adults. To better understand the social network types of SGM older women and gender non-binary adults, the five social network types previously quantitatively identified by Kim et al. (2017) were examined in a qualitative study design. This study also examined lifetime experiences influencing social networks as well as explanatory pathways of how social networks influence health outcomes in SGM older women and gender non-binary adults.

Materials and Methods

A total of 37 semi-structured interviews were conducted with SGM older women and gender non-binary adults who were 50 years of age and older. The study sample was drawn from populations served at local community organizations. The interview guide focused on explanatory pathways of social networks and related health outcomes. Participants were recruited through convenience sampling from community organizations and snowballing sampling with study participants. Interviews were conducted at a location chosen by participants based on geographic location and physical accessibility. Of the 37 interviews, 22 were conducted at a community partner's site, thirteen were conducted at participant's home, and two were conducted over the phone. Participants received a $10 gift card for participating in the interview. A demographic questionnaire was distributed after each interview. The study procedures were approved by The University of Texas Health Science Center at Houston (UTHealth) institutional review board (IRB).

Analysis

Interviews were recorded, transcribed verbatim, and analyzed thematically using NVivo 11 (QSR International). Transcripts were checked for accuracy through multiple readings and

listening of transcripts before coding. Using the five social network types previously identified by Kim et al. (2017), individuals were grouped based on their current social network size and ties including current partner/spouse, former partners/spouses, family, and friends. Rich descriptions were created for each network type in Table 1. Within each network type, common themes were identified. Interview data were open coded and interpreted into larger themes. Definitions for codes were created. To create a common code book and taxonomy, codes and themes were considered in terms of their relationships to one another. Themes were interpreted based on the HEPM with the emergence of themes reflecting social support pathways, lifetime experiences, and related health outcomes within each social network type. Interview quotes illustrative of social network types and themes were selected and discussed with researchers experienced in SGM health.

Results

Participant Characteristics

Participants ranged in age from 50 to 84 years old, with a mean age of 66.4 years. In terms of race, 30 participants identified as White, with two of these participants also identifying as Native American/American Indian; five participants identified as Black; one participant identified as Native American/American Indian; and one participant identified as Asian or Pacific Islander. In terms of ethnicity, one participant also identified as Hispanic. In terms of sexual identity, 30 participants identified as lesbian, three participants identified as bisexual; two participants identified as gay; one participant identified as asexual; and one participant reported not knowing their sexual identity. In terms of current gender identity, 34 participants identified as a woman, two participants identified as a transgender woman, and one participant identified as a genderqueer person.

Social Network Types

Participant characteristics in each network are summarized in Table 1. A difference in social network types emerged compared with findings from Kim et al (2017). The *immediate family-focused* network, not the *friend-focused* network, was a *restricted* network. In terms of network type, 15 participants were in the *diverse/no children* network; four participants were in the *diverse* network; seven participants were in the *immediate family-focused/restricted* network; six participants were in the *fully restricted network*; and five participants were in the *friend-centered* network.

The *diverse* network*/no children* network, was composed of a large social network comprising family, friends, and many times a partner. The participants in this network type were more involved in the SGM community than those in other network types. These participants had social and financial resources, as well as access to transportation, which helped them to be involved in the SGM community and with aging peers. The community involvement included seeking services at the local community organization, being involved in SGM social groups, and attending SGM-affirming church or religious services. These participants received significant social support from, and had numerous social network ties with, an SGM-affirming church or religious community:

> Growing up church was family…that's the struggle that some black LGBT folks have because when you leave the church, you leave your family... then when I came [to an affirming church], I started creating new family. I haven't been without familial support, be it blood or choice (Participant 13).

This community belongingness and engagement was consistent throughout life, as many participants came out and found an affirming community or religious space early in adulthood.

Participants in the *diverse* network also had a large network, but they were older and mostly identified as bisexual. Participants received support from community groups like Alcoholics/Narcotics Anonymous (AA/NA), as one participant described, "…aging isn't for punks, so it's good when you have somebody that's aging with you so you don't have to cry about all these things…Socialization is [why] I started a book club…in the 12 step program" (Participant 21). Others were involved in SGM older social groups, even though one participant felt social distance because of a previous marriage or bisexual identity: "…they never had kids... [And] I had a husband, I don't want to be with him or live with him or be married to him. I still care for him and a lot of people don't get that…" (Participant 4). Participants were not socially involved with a church but they described the role that previous and current female partners played in their involvement with a church: "Well, the previous partner…she was very devoted Catholic, she's always been out. I started going to mass with her..." (Participant 4). These participants described the importance of diverse social network ties in one's quality of life while identifying unique experiences related to bisexual identity, having previously been married, and being a parent.

Participants in the *friend-centered* network had a large number of community ties and had but few family ties. One participant described the losing social network ties after the death of her parents and siblings: "You don't get used to that loss, even though their lives were so different from mine, but they're my [siblings]. They were my family. Then you wake up one day and you're it. You're the last one standing" (Participant 9). Participants' social activity came from involvement in an SGM or religious group as one participant described, "Even though I'm an

introvert and I like to be by myself, that's the most dangerous for anybody to be is alone. A faith community… is the place I go to make sure that I don't fall into isolation" (Participant 6). A faith community and friends functioned almost as family ties in this network. These ties provided emotional support, social support, and physical support such as transportation to the doctor.

Participants in the *immediate family-focused/restricted* network relied on a partner or close family member such as a child or parent. Those who were partnered/married were in long-term partnerships and relied on their partner for social support during times of social isolation and poor mental health:

> I would like for us to have at least a small social group, or even another couple. But you know, it's hard when you get older and people are settled down. It's harder to find people to do things with, people that want to do the same things as you (Participant 19).

Those who were not partnered relied on family and had few friends or SGM community ties. Participants felt disconnected from the larger SGM older adult community, which created a smaller social network. One participant described feeling out of place at SGM-affirming religious spaces: "I want to have my heart fed. You're coming there to… speak your issues about the gay community…and not taking care of me. I just don't enjoy the atmosphere. I don't enjoy the discussions" (Participant 22). Like this participant, participants were no longer or were never involved with SGM older adult organizations or churches.

Participants in the *fully restricted* network had the least number of social network ties. Those participants who had lost their partner were interested in seeking out a new partner. They felt disconnected from a community and did not know how to meet a partner, as one participant

described, “I am determined not to spend the rest of my life alone. I don't know how I'm gonna do it, but I will find somebody. But I don't want to get on matched dot com or…go to a bar….” (Participant 14). For one participant, their partner was their only social support: “Uh, neither [my partner] nor I can handle that [being in a group]. I've been isolating [a] great deal. And she has too, which is, we're both super sensitive to loud noises and crowds” (Participant 3). Another participant described being physically and mentally abused by partners. The participant had lost most of their friends and only relied on a few people but was seeking new friendships at an SGM community center: “All my friends are deceased…So it kind of gets lonely sometimes being here on this earth. I have nobody to visit. That's the reason why I like coming to [community center], make new friends and…interact during the day” (Participant 1). Those in the *fully restricted* network expressed feelings of loneliness and isolation. They were not only socially isolated from the SGM community, but they were also geographically isolated from SGM social groups and services.

Life Experiences Influencing Social Network

Some participants described how life experiences helped to sustain social networks into older age, while others described how stressful life events and loss of close ties contributed to a smaller social network. Participants in the two *diverse* networks had been engaged longer with the SGM community. These participants were the oldest, with a mean age of 68 years for those without children and 75 years for those with children. They came out earlier in life, compared with participants in other networks and were connected with an SGM community during the coming out process. One participant joined a lesbian community as a young adult: “… [my lesbian friends] which I've known since I was 14… [I] got involved with some of them knowing that they played softball…” (Participant 5). Another participant reflected on finding an affirming

church when she moved to Houston: "…then coming to Houston and looking for a church home. I was surprised to find that there was one that was predominantly LGBT-friendly. And so, I started attending when I was 18…" (Participant 13).

Other participants had built social networks within the SGM community during the HIV/AIDS epidemic, as one participant described, "…there was a period of time in which the gay community…socialized in the same places simply because there were only very limited places to socialize…the AIDS epidemic is actually one of the things that brought them together" (Participant 20). Participants were engaged in community and felt support from gay and bisexual men during this time of social marginalization. The mobilization of the community created new formal and informal social networks that were sustained throughout life. One participant described a gay Catholic group that was active during the HIV/AIDS epidemic. More recently, the group played a significant role in social support for a participant:

> …they were helpful…. I [was] isolated with what was going on with my partner, but I was young…I didn't know who to talk to. I had a couple of friends, but they were also her friends, so what do you do? (Participant 17)

Participants described sustaining relationships and social networks from these SGM community and religious groups into older adulthood.

In the three less *diverse* network types, participant experiences influencing social network size and sustainability varied. Those in the *friend-centered* network had moved away or were living away from their childhood family or community. Some participants were distant from family because of religious beliefs as well as geographic distances. Participants described

isolation when they moved away from the SGM community and other important social groups: "…I really had kind of isolation…after my mother died, I stayed living with my sister and it was just where I didn't have community... I didn't have feminist support. So, there's been isolation just mainly because of geographic restraint" (Participant 2). Those in the *immediate family-focused/restricted* network had also moved away from social support, but they had a smaller social network type. These participants had generally come out later in life. For one participant, the process of coming out and leaving her husband left her isolated from family with no community: "I didn't have any friends…. I was lonely. I felt like I was doing it by myself. I could call Mom if I wanted to. It was more, I didn't want to share it with anybody…" (Participant 22). Those in the *immediate family-focused/restricted* network had a network dependent on their partner or a family member and they were not able to or did not seek out a larger social network.

Participants in the *fully restricted* network described stressful or traumatic past experiences that resulted in fewer social network ties with friends and family. While these participants were the youngest in age (mean age of 62 years), almost all had lost a partner or close friend. The loss (death) of a partner had left participants isolated from the community. The loss (death) of a partner also created feelings of depression and loneliness, which further isolated participants from a social network. One participant described moving away from a community after her partner passed away: "I moved away… because that community was very judgmental…that community was my family, my friends, my everything. Moving away, which was my choice, but still it…isolated me..." (Participant 15). Others felt they had lost their social network and connection to the SGM community after the loss (death) of a partner. Participants who had lost a partner described loneliness and a loss of interest in socialization. Many other participants were already isolated from the SGM community when they lost their partner. One

participant described women living in isolation after a losing a partner: “Women in long term relationships and one had died…they have no community….we've watched them die [in isolation]…. because going alone to some [social] group, if you've been closeted is really hard… (Participant 8). For some participants, a partner was the only or one of the few social network ties.

Explanatory Pathways of Social Network and Health

Participants in the two *diverse* networks and the *friend-centered* network type described utilizing their social network ties in accessing healthcare. Social networks played a role in participants’ seeking out a provider, transportation to a provider, and experience at a provider’s visit. Bringing along a family member, friend, or partner to healthcare visits was important in facilitating patient-provider communication and providing emotional support. Some participants went with their partner to every healthcare visit, as one participant described, “I think you always need two pair[s] of ears. And I know from the experience [with cancer] …. you can filter some of the information you're getting. You hear what you want to hear and you don’t hear anything else” (Participant 8). Some participants were caregivers to their partners or friends in the SGM community, and others relied on their partners for transportation and support at the doctor’s office because of physical or mental limitations. A community organization serving queer women and gender non-binary persons living with a disability or chronic illness was identified by many participants as a source of support for themselves, their partner, or those in their social network. The organization was particularly important for one participant and her partner who were highly isolated; They had little or no support for socialization, in healthcare visits, or transportation from their social network.

Participants with a larger and more *diverse* network had knowledge about and access to culturally sensitive healthcare providers. In particular, those more involved with the SGM community sought out referrals from community organizations and friends about providers that who served SGM individuals or who self-identified as SGM. Referrals from other SGM older adults about cultural sensitivity providers were important in choosing a healthcare provider. As one participant described, "I got a referral for the current doctor I have from [a friend]. Now, she's an out lesbian [the doctor] ...she was so nice" (Participant 17). Others utilized knowledge about aging-related healthcare needs and insurance coverage from SGM older adult friends and social groups. Sometimes attending a healthcare visit with a friend or partner was beneficial to a participant: "…I went to her Medicare [appointments], I learned a lot…then we turn around and tell friends as they come up, 'Okay, this is a good person...'And it's kind of like a network…." (Participant 23). The network provided participants with confidence in a provider's knowledge about SGM-affirming and aging-related healthcare.

The *immediate family-focused/restricted* network and *fully restricted* networks described delaying or not seeking out healthcare visits. Participants in the *fully restricted* network lacked financial resources to access healthcare as well as social resources. For many participants, losing or retiring from a job and transitioning to a restricted income posed a barrier to accessing healthcare services. One participant described missing healthcare visits because she could not afford the cost of the visit: "… I stopped [working] and found out how low my income is…I had gotten to the point where I simply did not make doctor appointments no matter how bad I felt. I never went to a doctor…I couldn't afford it" (Participant 3). The same participant also described missing appointments or not being able to run errands because of lack of access to transportation: "It got to where it was very, very painful to drive anywhere and my car...is unreliable… [My

partner], can't drive…. Being without a car…is a completely different way to live" (Participant 3). Participants in the *fully restricted* network mostly relied on their partner or a close friend when seeking out healthcare. These individuals were vulnerable because their small network of peers was also experiencing poor health, limited physical mobility, and lack of resources, further limiting their social network.

Participants in the *fully restricted* and the *immediate family-focused/restricted* networks, also lacked access to SGM-affirming healthcare and social services. In this study, in particular, participants described an SGM community-based health fair ending. The health fair provided affirming and little-to-no-cost healthcare services, including mammograms, Pap smears, HIV/STI testing, and other preventative screenings, to SGM women and gender non-binary adults. Participants with limited-to-no healthcare insurance coverage described relying on the health fair for annual screenings: "I did mammograms and Pap smears because once again I had no insurance, but that was awesome because that clinic was all day long… I still look for that occasionally" (Participant 23). Those in these networks had very limited community ties, so the health fair provided social resources. Many women who attended these health fairs had no other source for preventative services. When the health fair ended, those who relied on the services had difficulty identifying other services and locations that were both affirming to SGM adults and free or low cost. For one participant, the health fair no longer being held led to a delay in accessing these preventative services: "They stopped serving underinsured women. So that's one reason I have not had a Pap smear or, well, in particular, a mammogram for a number of years" (Participant 3). Those in the *fully restricted* network lost already-limited social network ties and socially related pathways gained through the health fair.

Discussion

This is one of the few qualitative studies to examine the social network types of SGM older women and gender non-binary adults. Similar and divergent study findings compared with previous research with SGM older adults were identified. In SGM older adult social network types defined by Kim's et al. (2017), women were more likely to have a *diverse* or *immediate-family* network. In this study, the most common social network type among participants was *diverse/no children* network but the least common was the *diverse* network. The differences between the two *diverse* networks were seen in the experiences of bisexual women who compared with those of lesbian women. Another similar finding was that former partners were frequently identified as social network ties across all networks. Unlike Kim's et al.'s (2017) findings, our finding showed that the *immediate family-focused* network type was smaller and less diverse than the *friend-centered* network type. In the *immediate family-focused* network type, most participants relied on their partner or children as their social network tie and support. In the *fully restricted* network, participants had few social network ties including a partner or a close friend.

Participants in the *fully restricted* network type and *immediate family-focused/restricted* network types came out later in life (e.g., after a divorce, during middle age), compared with participants in other network types. They described feeling disconnected from the SGM community and may have lost substantial social network ties with friends, family members, or religious communities when they came out. These individuals had not been connected to the SGM community throughout life to develop and sustain social networks like those who came out earlier in life (e.g., adolescents, young adults). Future interventions are needed for SGM older adults who come out later in life, especially those who might be more at higher risk for poorer

health outcomes. Many times, these participants were also geographically or financially isolated from SGM social groups and healthcare services. Participants lacked social resources for referrals to affirming services but, even with referrals, they had less access to affirming healthcare services because of geographic or financial barriers.

Across gender identities, in this study, those who identified their sexual identity as something other than lesbian or bisexual were more mostly in the *fully restricted* network type, unlike in Kim et al.'s (2017) study, in which these individuals were in an *immediate family* network type. *Fully restricted* network characteristics included those who identified as a transgender woman and those who identified their sexual identity as something other than lesbian or bisexual. Experiences developing social support networks might be different for SGM women compared with gay cisgender men because of social disadvantages and systematically experienced discrimination. In this study, transgender women had a *fully restricted* network type and were not partnered/married. Previous research has shown that transgender adults are more likely to have children, be divorced, and have less social support (Fredriksen-Goldsen, Cook-Daniels, et al., 2013). Limited research has explored engagement and belongingness of transgender older adults. This is an important topic to further explore not only social network characteristics but also how levels of engagement and belongingness in the larger SGM community can influence mental health outcomes.

Study limitations are to be considered to understand and interpret findings of this study. First, the network types identified reflect experiences of SGM older adults from a large Southern metropolitan area. The experiences might not be transferable to other SGM older adult populations who live in a different geographic area or who are more racially and ethnically diverse. Second, it was not possible to identify and compare social network types by

race/ethnicity or other sociodemographic characteristics. More research is needed to explore the transferability of these network types, lifetime experiences, and explanatory pathways in other SGM older adult populations. Third, the interview data were collected using a mostly convenience sample so self-selection bias is to be considered as most participants were recruited from SGM-affirming spaces. However, snowball sampling with participants was effective in identifying more isolated participants.

A Call to Action

SGM older adults in *restricted* and *diverse* network types are vulnerable to the unique challenges surrounding social support. In this study, even participants in the *diverse* networks described the fear of losing close network ties and becoming isolated from community as they age. Compared with cisgender heterosexual older adults, SGM older adults are less likely to have children and more likely to be estranged from family since coming out, limiting sources of support in older age. SGM social networks are not based on a previous understanding of traditional social support such as children or parents but rather "families of choice." The creation of "families of choice" provided resilience for SGM older adults as they continue to provide support to their own aging peers. Individuals in *diverse* networks not only have more support but they also will be providing support to their peers, limiting available social support from the community and increasing stress among older caregivers (Boggs et al., 2017; Shiu et al., 2016). As one participant said, "…most straight people aren't thinking about gay elders…. they're thinking about their mama once she gets dementia, but they're not thinking about Aunt Sue and her friend" (Participant 7). In particular, SGM women are more likely then SGM men to be caregivers (Boggs et al., 2017).

SGM older adults across networks are at greater risk for economic and housing insecurity, unmet medical needs, and premature institutionalization compared with heterosexual cisgender older adults (Emlet, 2016; Fredriksen-Goldsen et al., 2011; Kates et al., 2018). Economic and housing insecurity can isolate older adults who can no longer afford to live in neighborhoods concentrated in the urban city center that provide social and healthcare services to the SGM community (Doan & Higgins, 2011). Participants who were socially or geographically isolated chose not to seek out important healthcare services such as a mammogram. Some of these participants described traveling over an hour for SGM- affirming services while others described the ending of some important SGM-affirming community services in recent years. Even participants in *diverse* networks or *friend-centered* networks described the difficulty in accessing and paying for healthcare services.

Gentrification has changed previously SGM spaces and neighborhoods that have been occupied for decades by the now aging SGM population (Doan & Higgins, 2011). Living in these neighborhoods can cause stress for those SGM older adults because of limited income and rising prices. This stress is intensified for SGM women and transgender adults who make less money and have less opportunities to build savings during their lifetime compared with men (Badgett et al., 2013; Emlet, 2016). In this study, those in the *restricted* networks who were isolated from SGM neighborhoods and communities, had also lost a partner earlier in life, further creating an economic disadvantage. Older adults pushed out of these neighborhoods have to travel longer distances to find affirming services and social groups. In previous older adult research, close neighborhood ties and the satisfaction with these ties are more important than network size (Bruine de Bruin et al., 2020; Kemperman et al., 2019).

With SGM older adults increasing in age and socioeconomic insecurity, housing becomes a barrier to social support and networks. Housing becomes even more of a concern as older adults attempt to transition into senior and long-term care. For those who are financially able to transition to a senior or long-term care living facility, discrimination because of identity or having a same-sex partner becomes a concern in religious institutions who often provide these services (Boggs et al., 2017). Community -based senior centers and housing can provide a space to increase socialization for SGM older adults in a safe space. These spaces provide a central location for SGM-affirming healthcare and social services (Boggs et al., 2017). In recent years, a naturally occurring retirement communities (NORCs) model has been recommended (Boggs et al., 2017). NORCs can be local agencies located within senior housing or neighborhood that provide services such as home health or health education (Boggs et al., 2017). In recent years, SGM senior housing projects have also begun in cities such as New York City, Chicago, Los Angeles, and Houston. These senior-housing projects, which are located close to historically SGM neighborhoods, offer affordable housing, healthcare services, and social resources to SGM older adults.

SGM older adults have created families of choice and social networks despite social exclusion and structural discrimination. During the HIV/AIDS epidemic, a diverse community of SGM individuals came together to create social and healthcare services for their community. In the unique social climate of the 20th and 21st centuries, SGM individuals have come together to advocate for marriage and family equality and for access to spaces without fear of discrimination. As SGM adults grow older, this social support and network cohesion could decrease because of housing or economic insecurity and decreasing physical and mental health. Attention is greatly needed in research to develop interventions that consider the needs of those

living in isolation, while also considering the possible burden placed on caregivers and the aging SGM community (National Academies of Sciences, Engineering, and Medicine, 2020; Shiu et al., 2016). Interventions that create affirming spaces to facilitate social resources and to sustain social networks help are critical to increasing the quality of life of SGM older adults.

Table 1. Social Network Types of Sexual and Gender Minority Older Women and Gender Non-Binary Adults (50 years and older)	
Social Network Types	**Network Descriptions from Interview Participants**
Diverse/No Children Network	Large network with diverse network ties: family, friends, ex partners and community. Currently partnered or married. Almost all identified as a lesbian woman.
Diverse Network (with children)	Large network with diverse network ties: family, friends, ex partners (men and women), community, and children from a previous relationship or marriage. Many identified as a bisexual.
Friend-Centered Network	Similar community/friend network size as Diverse networks. Very few or no family of origin ties; estranged from their family or socially or physically isolated from family; More than half were not partnered/married. All identified as lesbian.
Immediate Family-Focused/ Restricted Network	Smaller in network size and diversity to Friend-Centered Network. Household-focused network ties such as partner or close family members (child or parent). Few friend/community ties. All identified as lesbian.
Fully Restricted Network	Least amount of network ties. Socially or geographically isolated from family and community/friends. Most not currently partnered/married. Almost all had lost a partner or close friend. Most identified sexual identity as something other than lesbian and/or identified as a transgender woman.

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Journal Article 3

Aim 3

Reconciling sexual and gender (SGM) identity and religious beliefs among older adults

Formatted for the Journal of Religion, Spirituality & Aging based on the Taylor & Francis Journals Standard Reference Style Guide: American Psychological Association, Seventh Edition (APA-7)

Introduction

Religion and spirituality are intertwined constructs that can co-occur in an individual's daily life (Halkitis et al., 2009; Pargament & Saunders, 2007; Park et al., 2017; Pew Research Center, 2015). While these constructs are the foundation for social support and mental health for some individuals, they can be more complicated for sexual and gender minority (SGM) individuals (Ganzevoort et al., 2011; Human Rights Campaign, 2018). Numerous Christian denominations have historically held or currently hold non-affirming beliefs about SGM individuals (Human Rights Campaign, 2018; Pew Research Center, 2012). Sexual minority refers to people who do not identify as heterosexual or who have same-sex sexual behavior or attraction (Romero et al., 2019). Gender minority refers to individuals whose gender identity or expression does not reflect binary masculine/feminine norms (Romero et al., 2019). SGM individuals may identify with either or both groups (Romero et al., 2019).

Although it is not a universal experience in SGM individuals, some SGM individuals can experience conflict between their own religious beliefs and SGM identity (Levy & Reeves, 2011; Rodriguez, 2009; Rodriguez et al., 2019). Sources of conflict can be from an adherence to established Christian beliefs (i.e., extrinsic) or internalized moral ideals that include fear of divine retribution (i.e., intrinsic; Rodriguez, 2009). This conflict could be reconciled quickly or persist throughout life. Conflict reconciliation might be a spiritual milestone in which individuals modify individual religious beliefs, reinterpret biblical text, or engage with an affirming church (Brennan-Ing et al., 2013; Levy & Reeves, 2011; Rodriguez, 2009). To reconcile conflict, some SGM individuals might reject one of their identities whereas others live with conflict, either unable or unwilling to reconcile it (Foster et al., 2015; Rodriguez et al., 2019).

Limited research has explored conflict reconciliation in SGM individuals also referred to as conflict resolution or integration (i.e., combining SGM identity and religious beliefs; Foster et al., 2015; Rodriguez et al., 2019). In Levy and Reeves's (2011) model of conflict resolution for LGB (lesbian, gay, bisexual) Christians, individuals move through a five-stage process influenced at each stage by personal and contextual factors such as individual resiliency and community resources, respectively. Conflict resolution is not a single event but rather a continual process (Levy & Reeves, 2011). The model for LG (lesbian and gay) Christian spiritual resilience by Foster et al. (2015) outlines the processes of integrating sexual identity and Christian faith as a form of resilience through cognitive and relational processes. Individuals maintain or redefine their own religion or spirituality through transforming theological meanings and building spiritual resilience, while experiencing these disruptions (Foster et al., 2015). A gap in understanding remains in SGM individuals who integrate their identities and, importantly, in those who do not or cannot reconcile their SGM identity and religious beliefs who might be particularly vulnerable to poor quality of life and social isolation (Everett, 2015).

Recent studies exploring the relationship between individual religious beliefs or affiliation and quality of life have yielded mixed results (Barnes & Meyer, 2012; Gibbs & Goldbach, 2015; Hampton et al., 2013). For SGM individuals, the level of religiosity (e.g., beliefs, prayer, and engagement) has been found to be a protective factor against negative mental health outcomes (Rowatt et al., 2009). However, SGM individuals in religious communities have reported increased discrimination and internalized homophobia, as well as negative attitudes towards SGM individuals (Barnes & Meyer, 2012; Harris et al., 2008; Rowatt et al., 2009). In Meyer's minority stress model, internalized homophobia has been associated with negative health outcomes (Harris et al., 2008). Some studies have found that greater levels of outness in

religious communities were related to lower levels of depression, whereas other studies with adults found no relationship between religious affiliation and suicide or other negative mental health outcomes (Barnes & Meyer, 2012; Gibbs & Goldbach, 2015).

In a study with older SGM older adults, a higher level of outness in religious communities were related was lower levels of depression and loneliness, but higher levels of religious engagement were related to higher levels of depression and loneliness (Escher et al., 2019). Cognitive dissonance, the discomfort in diametrically beliefs opposed to one another, might help prevent poor quality of life in the short term but could increase depression, compared with SGM individuals who had stable conflict reconciliation over time (Everett, 2015). However recent studies have begun to move away from the cognitive dissonance theory, suggesting it is not reflective of the experiences of SGM individuals, as they have multiple identities that can change when needed (Rodriguez et al., 2019). Questions remain surrounding if, if so, and how older SGM adults turn to religion as a resilience or coping method during stressful times such as navigating conflict between one's SGM identity and religious beliefs (Escher et al., 2019).

Churches and other religious and spiritual communities might provide a social network for SGM individuals. Research among LG Christians has indicated that intentionally developing social networks and then constructing meaning within social networks help to reconcile religious beliefs with SGM identity (Oswald, 2002). Individuals may choose either to seek out affirming churches or to continue to participate in non-affirming churches and communities, while minimizing anti-SGM doctrine or beliefs (Barnes & Meyer, 2012; Foster et al., 2015). For SGM older adults, being in a perceived religious affirming environment may lead to positive mental health outcomes (Escher et al., 2019). In a recent survey, almost 40% of SGM older adults reported participating in spiritual or religious activities at least once a month (Fredriksen-

Goldsen et al., 2011). Research suggests that SGM adults abandon their childhood religion more often than non-SGM older adults, particularly those from the Roman Catholic and Protestant faiths (Escher et al., 2019). SGM individuals who stay in non-affirming churches or communities make a distinction between the institutional church's beliefs and their own religious beliefs (Foster et al., 2015). Leaving these communities may cause additional stress and social isolation and negatively impact conflict recompilation (Bowland et al., 2013; Foster et al., 2015). For some SGM individuals, engagement with affirming communities is essential for conflict reconciliation, whereas others are resilient in non-affirming communities as they seek out conflict reconciliation (Foster et al., 2015).

Much of the research investigating the reconciliation of an individual's SGM identity and religious beliefs has predominantly focused on the experiences of gay cisgender men (Foster et al., 2015; Murr, 2013). Compared with gay cisgender men, SGM women and gender-nonbinary adults are exposed to sexist church experiences and non-affirming beliefs around marriage and binary gender definitions and roles and subsequently, might have different experiences navigating conflict reconciliation (Malcomnson et al., 2006; Morrow, 2003; Porter et al., 2013). The Levy and Reeves (2011) and Foster et al. (2015) models focused on the importance affirming communities, churches, and spiritual leaders. These may not be as accessible or affirming for SGM women and gender-nonbinary adult, who might be less likely to be involved (Dahl & Galliher, 2009). Additional research is needed to explore how these individuals navigate possible conflict, develop SGM identity and religious beliefs, and experience quality of life outcomes (Everett, 2015; Rodriguez et al., 2019). In this study, to understand if and, if so, and how they integrated or reconciled their SGM identity and religious beliefs, SGM women and gender non-binary older adults were recruited into a qualitative research design.

Materials and Methods

Semi-structured interviews were conducted with SGM women and gender non-binary older adults who were 50 years and older. There were no study inclusion criteria for religiosity or religious affiliation. The study sample was drawn from individuals served by community partners. Participants were recruited through convenience sampling and snowball sampling with participants. Interviews were conducted at a location chosen by the participant based on their geographic location and physical accessibility. Most participants were interviewed in person at a community partner (N=17) or at a participant's home (N=10); one interview was conducted by phone. The average time of interviews time was 47 minutes. The interview guide focused on resiliency mechanisms and strategies. Themes surrounding religion and spirituality emerged early in the interviews and the guide was updated to reflect these themes. Participants were compensated with a $10 gift card for participating in the interview. A demographic survey was distributed after each interview. The study procedures were approved through The University of Texas Health Science Center at Houston (UTHealth) institutional review board.

Analysis

Interviews were recorded, transcribed verbatim, and analyzed thematically using NVivo 11 (QSR International). Transcripts were checked for accuracy through listening to interview recordings and reading multiple the interview transcripts multiple times. Definitions for codes were created. Interview data were open coded and interpreted into larger themes. To create a common code book and diagram, codes and themes were considered in terms of their relationship to one another. To understand how study participants reconciled conflict between their SGM identity and religious beliefs, participant's narratives were grouped based on whether or not they experienced conflict, and their process for reconciling conflict, if it existed. Four

distinct groups with common themes and pathways were identified. By diagramming these pathways, the experiences of participants in each group were visualized. The final diagram is presented as a conceptual model to outline the similarities and differences identified across groups and pathways.

Results

Participants

Of the total sample of 37 interview participants, a sample of 28 participants discussed experiences with religion or spirituality in relation to their conflict reconciliation, coming out, and/or quality of life. Participant age ranged in age from 50 to 84 years old, with a mean age of 65 years. In terms of race, 21 participants identified as White, with two of these participants also identifying as Native American/American Indian; five participants identified as Black; one participant identified as Native American/American Indian; and one participant identified as Asian or Pacific Islander. In terms of ethnicity, one participant also identified as Hispanic. In terms of sexual identity, 21 participants identified as lesbian; three participants identified as bisexual; two participants identified as gay; one participant identified as asexual; and one participant reported not knowing their sexual identity. In terms of current gender identity, 25 participants identified as a woman; two participants identified as a transgender woman; and one participant identified as a genderqueer person.

Formative experiences

All participants were exposed to Christian beliefs in their childhood and/or currently held Christian beliefs. Participants described common formative experiences in childhood, as well as into adulthood. These experiences included two overarching themes: (a) the coming out process and (b) religious and spiritual influences in childhood. When discussing the coming out process,

participants mentioned lacking language for same-sex attraction, experiencing romantic and sexual behavior, and the timing of their coming out as attracted to persons of the same gender. For example, one participant said, “By the time I got to high school, I was clear. I really liked the company of women. I didn't know that made me a lesbian” (Participant 7). Similarly, another participant described growing up in a Christian environment that did not provide sexuality education and communicated negative messages about SGM individuals:

> …the conflict began in high school…I was all in on the religious teachings… I didn't identify as gay. But I was very much aware of it, and it was just something I pushed aside. So really, when I went to college…that was an opportunity for me… to break away from that structure that I was in, family [and] church (Participant 28).

For many participants, growing up in an environment in which they did not learn about same-sex attraction or received negative messages about same-sex relationships resulted in confusion or distress. Even for those who did not receive these negatives messages, language and attraction were not completely understood. For those who came out later in life, the confusion or distress presented difficulty in conflict reconciliation. As one participant said, “Is this what...[I am or want]?’ I got married, and I had two children…and that didn't work….He was a great human being… But, the problem was the sexual part” (Participant 10). These participants described coming out after leaving a marriage and while they still held non-affirming beliefs about themselves as an SGM person. Adverse childhood and adult experiences with their emerging sexual attraction was also a common antecedent. For example, some participants struggled with their identities because of adverse, sexist childhood or adult experiences with family or within

the church. One participant described an interaction with her mother about sexual harassment from a family member: “So I went to my mom and I said, ‘You know, he's been making advances to me and everything. She told me that, ‘that's okay. That's just the way he is and I just have to take it” (Participant 6).

Religious and spiritual influences included institutional church doctrine and beliefs; family beliefs and church attendance; and expectations of gender, sexuality, and marriage. Participants received messages from church doctrine describing SGM individuals as an “abomination to God because of [their] lifestyle” (Participant 1) and outlining the church beliefs, “The concept that the Bible didn't teach, but the church taught, that gays were all going to hell, no matter what” (Participant 7). For many participants, the institutional church beliefs corresponded with family beliefs. These families perceived these beliefs, as the correct and only option. Other participants described the freedom to seek out their own church and beliefs, as one participant described: “When we turned 12, my mother said, ‘You can visit any church in town and make up your own mind’” (Participant 17). Other participants received sexist and heterosexist messages from their family and church and perceived the structure of the church as patriarchal: “…I regularly questioned the rules of the church, particularly around how women function in the church. And would always get feedback…from the men of the church, they're supposed to be the head, it's scripturally supported” (Participant 13). These participants’ families, who also attended church, did not hold negative beliefs about SGM individuals.

The convergence of the coming out processes and religious and spiritual influences created an awareness of conflict between an individual’s SGM identity and religious beliefs. Based on formative experiences and common themes integration or reconciliation SGM identity and religious beliefs, four groups emerged. Among participants, 68% had integrated their SGM

identity and religious beliefs through a supportive family and community or individual affirming beliefs (that is, they had no conflict during their lifetime); 21% had either reconciled the conflict between their SGM identity and religious beliefs through connecting with an affirming church or community, or previously reconciled this conflict but returned to the awareness and possible conflict because of the exposure to non-affirming beliefs; and 11% had not reconciled the conflict between their SGM identity and religious beliefs.

Group 1 - No Conflict: Integration of SGM Identity and Religious Beliefs

Supportive Family and Community

Participants in this group had a supportive family and community during the coming out process and described no conflict between their SGM identity and religious beliefs. Integration occurred soon after the awareness of a potential conflict for most participants. Participants in both religious and non-religious families described support in the coming out process or soon after. Many participants came from families with religious beliefs that supported SGM individuals and thus, supported them when they came out. Participants heard messaging about acceptance from their church as one participant described, "[We went to the] Presbyterian church because they accept everybody at the communion table…. that's the attitude I grew up with. There are not strict rules…. Will I go to heaven? That's neither here nor there for me" (Participant 17). One participant attended a Roman Catholic church, whose doctrine was not affirming of SGM individuals, but her family was accepting:

> I was the only Catholic in my family... It wasn't a thing, the rigidness of the rules of the Vatican or the church…I can't say that was my experience [conflict] because it wasn't a

> family thing, it didn't affect me that way that it might have affected some of my friends who [were in the] traditional Catholic religion. (Participant 21).

The participant attributed her family's beliefs not aligning with the church's as an explanation for why she had never experienced conflict. Another participant described having an SGM community within her Baptist church which made the experience different than others who had attended the same Baptist denomination: "My experience of growing up in my church…was very different. …we had a lot of LGBT [individuals] within the congregation, so I didn't get the hellfire, brimstone messages from the pulpit that I know a lot of folks receive" (Participant 13). This participant attributed her absence of conflict to the absence of non-affirming messages about SGM individuals from her church or family.

Others participants described events in which they came out to their family and the support was delayed or included fear for their wellbeing. While this support was delayed, it did not create conflict between their SGM identity and religious beliefs. Participants described their family eventually supporting their identity and partners during the coming out process. As one participant describes, "… [my mother] thought it must be her fault that I was a lesbian… she just had a lot of fear, and so our communication broke down a bit around that because I wasn't not going to be gay" (Participant 8). Similarly, another participant described her relationship with her mother in which the initial conversation was negative even as her mother had never attended church and did not hold non-affirming beliefs: "…we had been together eight years and she [mother] knew. She didn't speak to me for two weeks… She knew gay people, but it's hard for a parent to come to the reality that their child is gay" (Participant 14). Despite these initial reactions, participants did not experience conflict as the reactions were not based in Christian

doctrine around going to hell or a sinful lifestyle. Participants continued to receive support from family members throughout their lifetime.

Individual Affirming Beliefs

Some participants did not experience conflict even without a supportive family or community. These participants were estranged from their family who were unsupportive and had modified their religious beliefs before they came out. Those with affirming or non-stigmatizing beliefs during the coming out process reported no conflict even as their family or community held stigmatizing beliefs. One participant recognized the potential of conflicting messaging from the church and her SGM identity but never experienced this conflict as she dismissed beliefs that did not align with her view of God and her lesbian identity: “That has never affected me [conflict]. I haven't had that effect because where I grew up, I attended church…. if the preacher preached that, I didn't hear it, you know?…” (Participant 6). Other participants discussed fear of being disowned by their family or not having their approval:

> I just really don't believe what they believe… It was very difficult because I went down the route…about feeling guilty. My parents would disown me. When I came out to my mother, I said, "I don't expect you to necessarily understand it, feel what it's like to be gay…but to try to just accept the fact that I am." We don't talk about it… (Participant 20)

This participant was scare to come out to her family because of their personal beliefs and those of the Roman Catholic church.

Other participants experienced overt discrimination from non-affirming churches or communities. One participant was told to leave multiple churches and that she was an “un-

repenting sinner [and] full of Satan" because of her identity. On another occasion she was given a pamphlet with the line, "People in your situation don't go to this church" (Participant 24). Participants separated their individual beliefs and scripture interpretation from those of non-affirming churches, doctrine, or religious leaders: "I think a lot of the programs of the churches is very harmful for the transgender…, and gay and lesbian groups, period. They take things out of context [in the] bible. They come up with their own ideas" (Participant 24). Despite non-affirming messaging and lack of support from a church, participants had positive feelings about their own faith: "… my prayer definitely helps me and he [God] does comfort me in times of stress. It gives me the courage to go out and do things that I wouldn't normally want to do" (Participant 14). Individual religious beliefs and practices played an important role in mental health quality of life and socialization.

Group 2 - Reconciled SGM Identity and Religious Beliefs

Those who reconciled the conflict between their SGM identity and religious beliefs lacked social support from family or a community and individual affirming beliefs during the coming out process. Participants described living in a Christian environment during childhood and held beliefs such as "God made me who I am, and now I'm destined to go to hell because of who God made me…" (Participant 7) or "…I am just confused…" (Participant 4). A conflict arose when an individual's religious beliefs were discordant with the recognition of their sexual or gender identity. Participants struggled with reconciling religious beliefs with their emerging recognition of their identity, as one Roman Catholic lesbian woman described, "… the conflict was brought to a head because I hadn't divested myself off my beliefs. I was very inflexible….It wasn't even a choice for me in my mind that I could jettison something integral to myself as my

beliefs…" (Participant 28). Religious beliefs and practices were an important component of identity since childhood informing participants' daily lives and worldview.

A shift began when participants, mostly in adulthood, sought out new beliefs through studying scripture, praying, and attending affirming church services, as one participant described, "I realized at some point I was going to have to be lying to join a church and that just didn't seem quite right with me and the God or higher power that I have…" (Participant 4). For some participants it took many years to explore their SGM identity: "I don't jump into things, I guess. I try not to act on impulse, especially something that significant…" (Participant 25). While for other participants, there was a distinct point when they decided to reconcile their SGM identity and religious beliefs as one participant describes, "Jesus [Christ] said, I'm not mad at you about that [being gay]….I was at a crossroads… What do I do with this new information that I'm really okay? …" (Participant 9). With this new information, the participant sought out an affirming church that validated being both a queer person and a follower of Jesus Christ, describing this process as, "blended[ing] my authentic self and genuine self to my Jesus self" (Participant 9). Affirming churches and individual beliefs, were beneficial in maintaining and improving mental health: "I'm very much of a believer, very faith oriented…I know I would not be sitting here today if I wasn't and I say that because I really do think I would have committed suicide… if I hadn't had that…" (Participant 4). Churches and communities were also a source of social support.

Not all participants found reconciliation through a church, as some participants described discomfort in religious or spiritual services because as they associated these spaces to past discrimination or religious trauma or connected them to their childhood church. Consciousness-raising organizations and support groups like Co-Dependents Anonymous (CoDA) meetings

helped participants to reconcile conflict and manage their mental health. Others sought out mental health providers to help with their coming out and conflict reconciliation. Other participants described feelings of isolation as they experienced conflict earlier in life: “It's a great sense of isolation.... It was a very hard time to be a little country girl in the mountains and be a lesbian” (Participant 7), as well substance abuse and poor mental health: “I was a very emotionally wounded young person, and I didn't care if I lived or died” (Participant 7). Individual beliefs and practices in addition to having an SGM community became more of a focus than church engagement for these participants as they reconciled their conflict.

Group 3 - Reinjuring: Exposure to Non- Affirming Beliefs or Church

Some participants who had previously reconciled their conflict indicated a return to conflict after being exposed to non-affirming messaging or discrimination. One participant described a salvation experience in a new church after she had reconciled her SGM identity and religious beliefs and been out as a lesbian for many years: “I thought God was going to deliver me from this homosexuality thing. I was face first all into the scriptures…Changed denominations…” (Participant 9). The participant described “praying the gay away” during this salvation experience even though this was not her initial intention in seeking out a new church. She described being closeted in this church and community after this experience: “I knew that the gay thing just was not permitted. That was just not what you did.” (Participant 9). Thus, SGM individuals might be “reinjured” or return to conflict after they are unintentionally exposed to a non-affirming church or beliefs:

> …folks who have come [to the affirming church] want to go back once their churches or their denominations become open and affirming…And what they're finding is that once

> people find out about their sexual orientation or their partner want to hold hands at church…things aren't as open and affirming as they had hoped that they would be….And some things are good in thought but not necessarily in action. (Participant 13)

While these churches had proposed affirming doctrine, they were non-affirming spaces that did not respect partner and families, conduct same-sex marriages, or ordain SGM ministers. Another life stage in which individuals might be reinjured was at the end of life or even during older age. Individuals might "replay old tapes" of their life in which they return to the beliefs that they are going to hell or are an abomination. Religious communities and leaders can help individuals reconciling their identities: "And as they age, we remind them that not all things that they've learned in their earlier life are how things are interpreted now... we try to debunk some of the rhetoric that they have heard earlier in life…" (Participant 13). For those attempting to reconcile their conflict again later in life, affirming beliefs and reconnecting with an affirming church or community was an important step in this process.

Group 4 - Conflict between SGM Identity and Religious Beliefs

The last group included those who were currently experiencing conflict or who were attempting to reconcile this conflict. The narratives included those who described conflict between their SGM identity and religious beliefs, conflict with one of these, or conflict that could not or would not be reconciled. One participant described, "burying [her] head in the sand as she was navigating how her gender and sexual identity fit into within her individual beliefs and the church:

> …even with my lifestyle in the book, you can't contradict what the word says…. I stand firm with what God says in the word… I don't know why I feel the way I feel about myself because I feel like a lady... So, then I hear a lot of people say that's a choice, a choice that we made…someone like me living the life as a female…It's kinda hard. (Participant 1)

Similar to others, this participant grew up receiving non-affirming messaging from her church and family. She no longer attended a church or religious/spiritual group regularly. The participant, however, did rely on prayer and reading Biblical scripture during stressful life events even as she believed the Bible condemned her sexual and gender identity. Individuals might maintain SGM behavior and identity in addition to beliefs about going to hell because of this behavior and identity, as reflected in one perspective: "…well, if I'm going to hell anyway, I might as well act how I want…" (Participant 12). Others with conflict in either identity or beliefs utilized the other to reconcile the conflict. Participants sought out religious counselors, mental health providers, and support groups. One participant had been married to a man and deeply embedded in a non-affirming Christian church and community during her coming out. She described her current process of reconciliation: "…I'm trying to work out is where God fits, not where I fit. It's not where the lesbian part fits in my relationship with him…Because this is happening, whether anybody likes it or not…" (Participant 15). She no longer attended church as she experienced discomfort even at affirming churches, so she was redefining her spiritual identity with the assistance of a mental health provider.

Participants in this group were socially isolated from their family and the SGM community. They had few sources of social support outside of a few close friends or family and

described feelings of loneliness. Participants also described being geographically isolated from affirming services. One participant had no car and had limited access to an affirming church on the bus line. Another participant described having to seek out a provider online and over the phone because she was geographically isolated from affirming providers in the area. These participants generally described worse lifetime and current quality of life than those who had no conflict and who had reconciled their conflict.

Discussion

Model for Reconciliation

Common pathways across the four groups were diagrammed in a conceptual model (Figure 1). The two formative experiences are described as model antecedents co-occurring before the awareness of conflict. The convergence of model antecedents led to the awareness and potential conflict between an individual's SGM identity and religious beliefs and, thus, the different groups and pathways. Individuals in Group 1 identified no conflict between their SGM identity and religious beliefs and integrated their identity through one of two pathways, a supportive family and community or individual affirming beliefs. This result supports previous research that suggests conflict is not universally experienced by SGM individuals: individuals integrate their religious beliefs or distance themselves from religion (Rodriguez et al., 2019).

Individuals in Group 2 and 3 identified conflict between their SGM identity and religious beliefs and sought out conflict reconciliation through one of two pathways, a connection to an affirming church or a connection to an SGM community. This model advances Foster et al.'s (2015) for Christian spiritual resilience of individuals who have receive negative messaging about homosexuality and seek out a new religious community. In Levy and Reeves's (2011) model of internal conflict resolution, affirming churches and communities also were important

but were not explicitly outlined (Levy & Reeves, 2011). Foster et al. (2015) and Levy and Reeves's (2011) also discussed the impact of family support, but this factor was not incorporated into their respective models. In the proposed conceptual model, an affirming family was important for integration and later for reconciliation. In Group 3, individuals have not reconciled the conflict between their SGM identity and religious beliefs. The two previous models also indicated that not all SGM individuals are able to or choose to reconcile their identities, although the models did not capture those individuals Lastly, Group 4 is a feedback pathway, from Group 2, in which individuals return to a possible conflict between their SGM identity and religious beliefs. "Reinjuring" could occur after exposure to non-affirming beliefs from religious institutions. or at the end of life.

Differences in quality of life were identified in the participant narratives and are proposed in the conceptual model groups. In Groups 1 and 2, integration sustained mental health wellbeing and increased social support. Although participants in Group 1 did not experience personal conflict, some did describe feelings of distress and isolation because of family conflict (Beagan & Hattie, 2015). Thus, they sought out families of choice in churches and other religious spaces. Some participants in Group 2 experienced negative quality of life outcomes, including stress, suicidal ideation, and feelings of loneliness, as they reconciled their conflict. Reconciliation led to improving mental health in addition to increased social support from engagement with an affirming church. Others in Group 2 sought out affirming mental health providers to assist in coming out and reconciliation. Participants in Group 3 had the worst quality of life outcomes, including reporting stress, suicidal ideation, and feelings of loneliness and isolation. They had little or no support from family and were disconnected from affirming church or an SGM community. In Group 4 participants, the level of affirmation from a religious community can be

speculative but can have a substantial influence on SGM church goers in end-of-life care (Escher et al., 2019).

Religious and spiritual support from affirming churches and communities were important pathways for those integrating their beliefs or reconciling conflict. Culturally sensitive religious and spiritual support might play an important role in sustaining integration, reconciling conflict, and preventing reinjuring (Acquaviva, 2017; Cloyes et al., 2018). Future research could further explore how religious leaders and counselors can help promote and sustain religious healing and quality of life in SGM older adults. However, more attention is also needed for SGM older adults who integrate their beliefs by distancing themselves from their childhood religion or religion in general and do not utilize religious and spiritual support. For those with a history of discrimination, experiences with non-affirming healthcare providers or religious support may introduce discomfort or adversely impact their view of themselves as an SGM individual or religious person (Witten, 2014). Research with non-SGM older adults suggests that having a relationship with a religious leader or spiritual counselor is important in end-of-life care (Blank, 2011; Cloyes et al., 2018). Many times, end-of-life care is delivered through religiously affiliated organizations that may also hold non-affirming beliefs (Cloyes et al., 2018). Recent research suggests that SGM older adults entering nursing homes or end-of-life care may go back in the closet because of fear of discrimination or mistreatment (National Resource Center on LGBT Aging, 2011). Cultural sensitivity trainings and affirming non-discrimination polices are needed in aging and end-of-life/palliative care services to better serve SGM older adults of all beliefs.

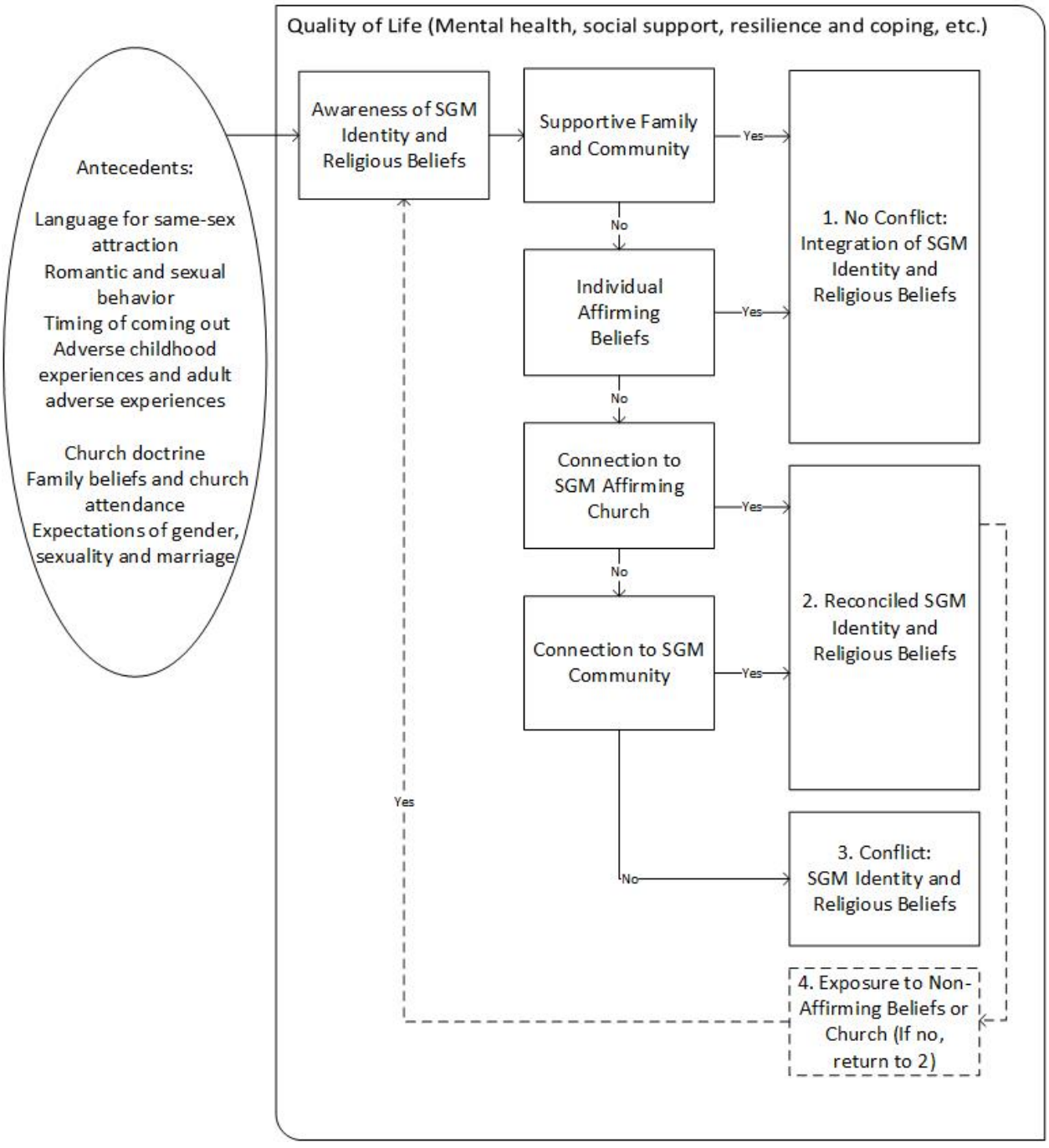
This study has some limitations. First, the majority of study participants were white, lesbian, and cisgender women, making it difficult to examine differences across gender identity or race/ethnicity. Future research should compare experiences of SGM older adults in more

diverse communities and examine if the conceptual model is transferable to other populations. Second, this study included participants with Christian backgrounds. Future research should explore whether the model is transferable to other religious and spiritual populations. Third, this study did not measure religiosity or religious affiliation. Future studies should include measures of both religiosity and spirituality when examining SGM communities as participants in this study described a range of beliefs and practices. Fourth, the lack of data in some groups limit the study findings, although these groups suggest emerging religious and spiritual needs of SGM older adults. Fifth, study participants were from a convenience sample recruited in SGM-affirming spaces. This method of recruitment was beneficial in reaching study participants, but the findings may not be transferable to individuals who are more socially isolated. Finally, the conceptual model reflects relationships represented over time, although data were not collected over time. Longitudinal quantitative and qualitative studies are thus needed to validate the model groups and pathways.

Four groups and specific pathways in which SGM women and gender non-binary adults integrated or reconciled their SGM identity and religious beliefs emerged. Future research on how SGM older adults integrate or reconcile their SGM identity and religious beliefs could expand upon and explore this conceptual model with a similar population as this study and with other SGM older adult populations. Churches and other religious or spiritual communities affirming of SGM individuals were critical for conflict reconciliation for most study participants throughout all stages of life. Reconciliation and sustainability of identities can help promote healthy aging and improve mental health in SGM older adults. The effectiveness of affirming churches and other religious and spiritual communities should be considered when delivering services to older adults focused on mental health and social support as well as end-of-

life/palliative care. These spaces can provide an avenue for healthcare providers and religious leaders to deliver evidenced-based, community informed interventions. However, it is important that these providers and leaders continue to carefully consider cultural sensitivity in these interventions with history and current experiences of discrimination and non-affirming beliefs of SGM older adults by religious individuals and institutions.

Figure 1: Model for Reconciliation of SGM Identity and Religious Beliefs



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CONCLUSION

In Aim 1, the community needs of SGM older adults in Texas were identified through a secondary data analysis. The top needs emerged into three categories: aging and LGBTQ culturally sensitive healthcare, mental health and suicide, and social determinants of health. One difference in need across SGM identity was employment discrimination. SGM women and plurisexual adults (bisexual, queer, and pansexual) were more likely to identify employment discrimination as a need compared to SGM men and mono sexual adults (gay and lesbian and straight adults), respectively. The HEPM and other research with SGM older adults suggests differences in lifetime experiences that influence social and healthcare needs across gender and sexual identity. While SGM men and women prioritized mostly similar community needs, implications for research and interventions might vary because of these experiences. To further explore these implications in Aim 2, focus groups were first conducted with SGM older men and women. Second, semi-structured interviews with SGM older women and gender non-binary adults were conducted to exploring emerging needs. The two needs identified in the semi-structured interviews were social support and religion and spirituality.

Resiliency mechanisms and strategies among a sample of SGM older women and gender non-binary adults were explored through semi-structured interviews in Aim 3. Aligning with Aim 2, two common resiliency themes emerged, the role of social support networks, religion, and spirituality in quality of life. In Paper 2, five social support networks types were identified: diverse, diverse/no children, immediate family-focused network, friend-centered/restricted, and fully restricted. Two differences in findings were identified compared to previous studies: a) Friend centered networks were larger and more diverse than previously identified and b) differences in community engagement were reported among those who identified as bisexual, had been married to a mean, and/or had children. Social networks had been developed through

lifetime experiences such as coming out earlier in life. For those in the fully restricted network, losing a partner or moving from a community had restricted their network. Those in more restrictive networks also reported poorer quality of life currently and over their lifetime.

Religion and spirituality were also identified as important resiliency mechanisms. Narratives of possible conflict between one's SGM identity and religious beliefs emerged during the interviews. In Paper 3, four groups of SGM women and gender non-binary older adults were categorized based on if they had conflict between their SGM identity and religious beliefs, and if so, how they reconciled their SGM identity and religious beliefs. A conceptual model highlighted these groups, the importance of affirming churches and communities, and a "reinjuring" pathway after exposure to non-affirming beliefs.

This study has various limitations. First, the survey in Aim 1 might be self-selecting for those who are engaged with the SGM community. Second, the survey was as a small, non-probability sample limiting the generalizability of findings. The survey findings are reflective of experiences of SGM older adults in Texas and may not be generalizable to other SGM older adults. Third, the interviews and focus groups in Aim 2 and 3 were recruited through convenience sampling. Fourth, the findings may not be transferable to other SGM older adults. The findings are consistent with previous literature and provide context to inform future research. Lastly, the study did not reflect the diversity of the SGM older adult community. A small sample of racial and ethnic minorities as well as bisexual individuals participated in the survey and interviews. The demographics of the focus groups were not captured.

The current study explores the healthcare, social support, and religious needs of SGM older adults. The Aim 1 and 2 findings support the community needs identified in previous research but suggest differences across sexual and gender identity. This is a snapchat of needs at

the current time but future longitudinal studies should consider the needs of SGM older adults over time. The Aim 3 findings also support emerging research with SGM older adults, but helps address gaps in research with SGM older women and gender non-binary adults. Future research and interventions should target those in more restrictive networks. Paper 3 findings help address gaps in research surrounding integration and reconciliation of SGM identity and religious beliefs. Longitudinal studies are needed to validate the model groups and pathways across SGM older adult populations. Future research is needed to explore how interventions with religious communities and counselors can help in integration and reconciliation to help improve quality of life in SGM older adults.

TABLES

Table 1: Aim 1 - Community Needs from Tell Us Texas Survey

Table 1. Community Needs	
Housing/Homelessness	Suicide
Violence	Racial Discrimination
Aging	Gender Discrimination
Healthcare	HIV/STI Prevention
Trans Hormone Access	Pregnancy Prevention
Trans Surgery Access	Better Sex
Active Living/Exercise	Parenting
Intimate Partner Violence /Abuse	Fertility/Adoption Services
HIV Discrimination	Healthy Relationships
Poverty	Eating Disorders
Immigration	Self-harm/Cutting
Drug Use	Body Image
Tobacco Use	Sexual Assault
Alcohol Use	Bi Health
Provider Knowledge of LGBTQ	Trans Health
Mental Health	Employment Discrimination
Bullying	

FIGURES

Figure 1: Health Equity Promotion Framework

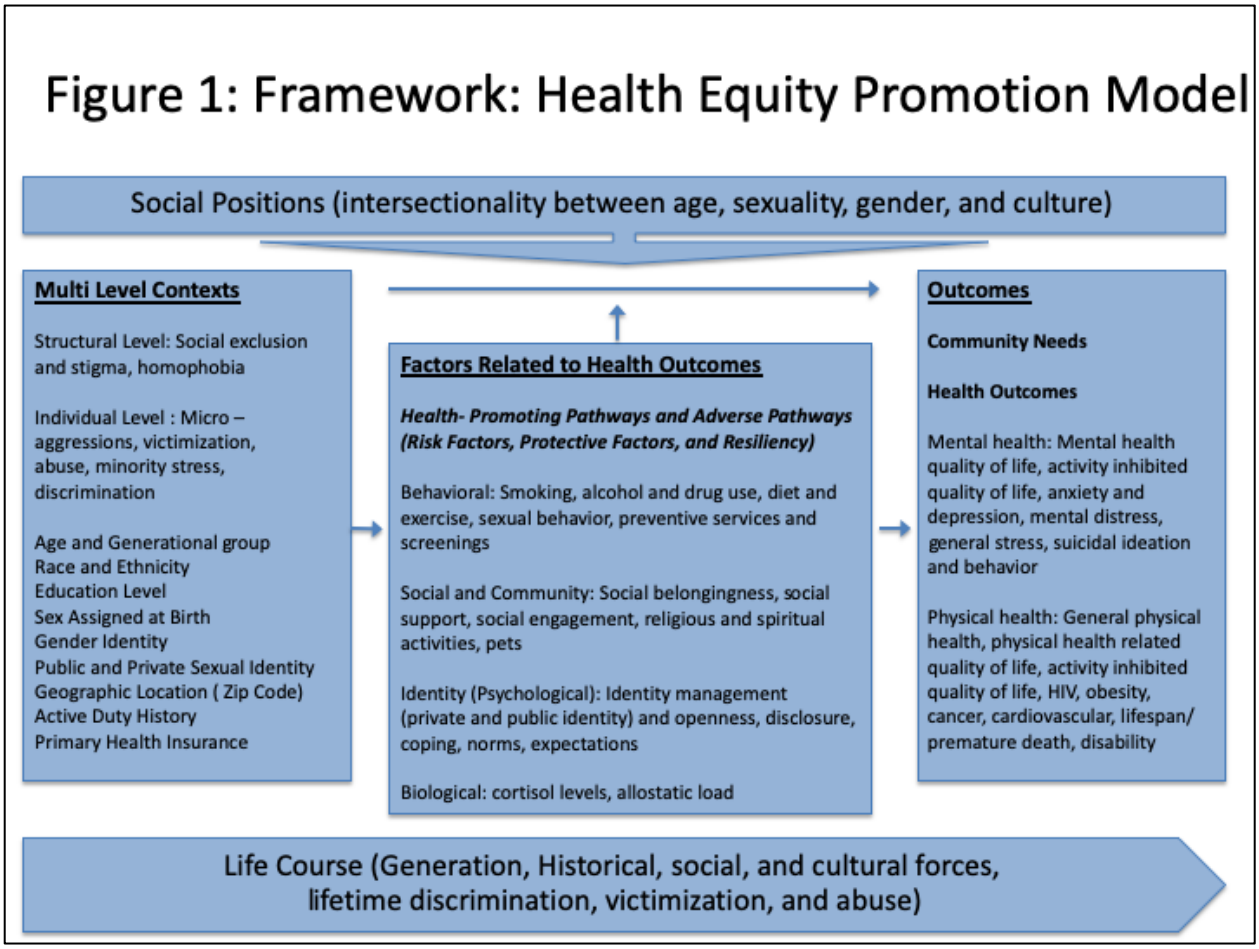

Figure 2: Healthy Equity Promotion Framework Modified with Study Aims

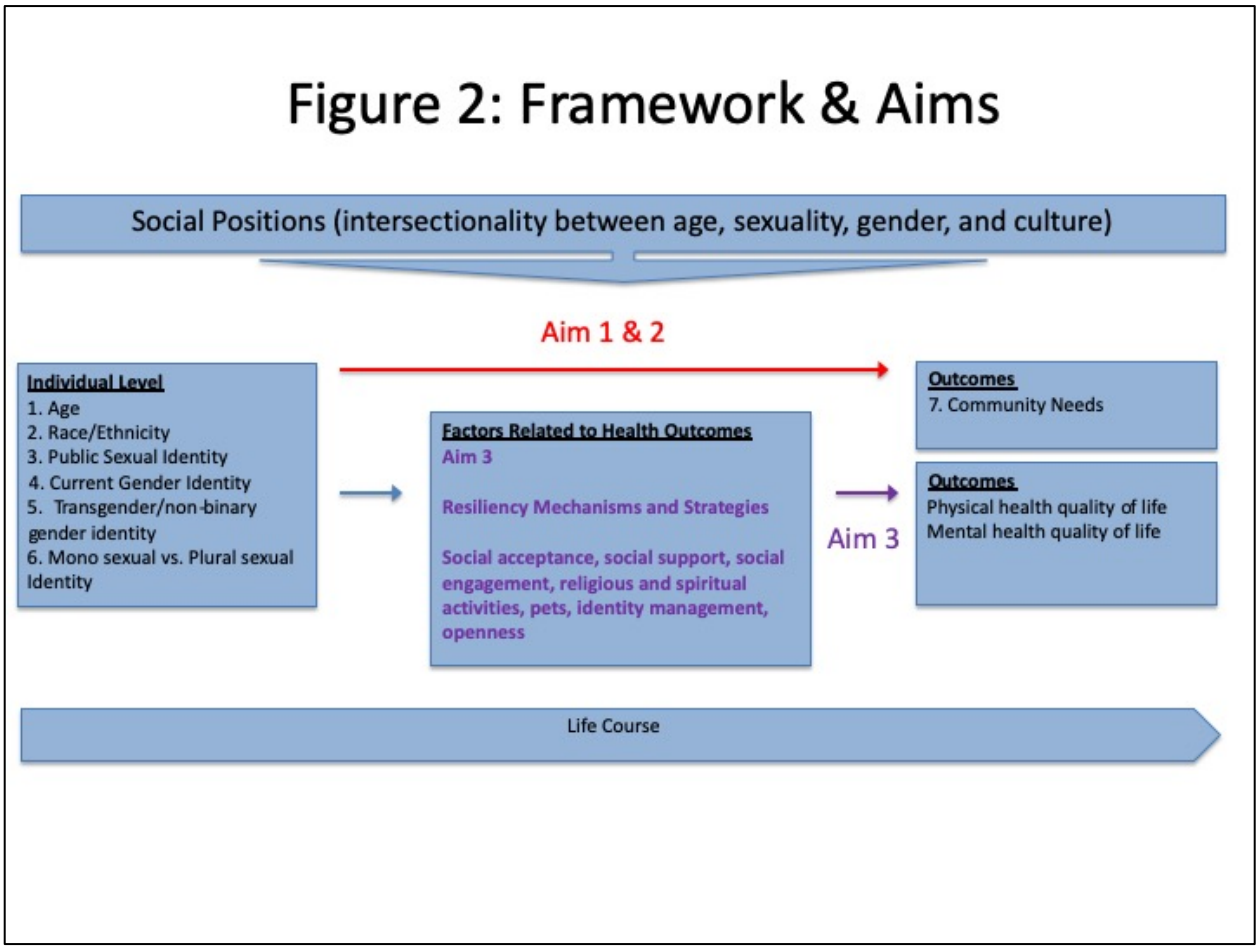

Figure 3: Effect size and power

```
. power onemean 5.2, power(0.9) n(1273) sd(0.43)

Performing iteration ...

Estimated target mean for a one-sample mean test
t test
Ho: m = m0  versus  Ha: m != m0; ma > m0

Study parameters:

        alpha =    0.0500
        power =    0.9000
            N =     1,273
           m0 =    5.2000
           sd =    0.4300

Estimated effect size and target mean:

        delta =    0.0909
           ma =    5.2391
```

APPENDICES

Appendix 1: Aim 2 - Interview Guide

I first want to ask you about health and how you take care of your health.

1. What does it mean to you to be healthy?

2. Do you consider yourself healthy?

    a. Yes---- What are some ways you keep yourself healthy?
    b. No---- What are some ways that you could improve your health?

3. What role does your provider play in keeping you healthy? Helping you become healthy or healthier?

Now that we have discussed health and what it means to be healthy to you, I want to move on to your experiences with healthcare provider.

4. What do you look for in a healthcare provider? What are the desirable qualities of a 'good healthcare provider?' A 'good' provider?

5. Do your healthcare providers know your sexual orientation?

    a. Yes: Which doctors?
    b. How did you come out to your healthcare provider?
    c. When did you come out to your healthcare provider? How did you know it was safe to come out to your healthcare provider?
    d. No: Do you have any providers who do not know your sexual orientation? Have you ever?

6. Has your healthcare experience as a LGB woman changed over the years?

    a. Probe: How so?

In our last section for this interview, I want to talk about poor or negative experiences with healthcare providers as a LGB or as a senior woman.

7. Has there ever been a time you felt discriminated against by a healthcare provider because of your sexual orientation? Can you tell me about this experience?

    Probes:

    a. Because of your sexual behavior?
    b. Because of your age?
    c. Used negative or offensive language behavior? Inaccurate language?
    d. How did this make you feel?

8. Does a caregiver, friend, family member, and/or partner come with you to your healthcare appointments?

   Probe:

   a. Which appointments?
   b. Why so?

9. If answer with 'partner':
   a. Has your partner ever been asked to wait outside your exam room? Or been treated poorly when they were at the healthcare provider with you?
   b. Can you tell me about this experience?

10. Are you connected to the LGBT community? Does this help in healthcare?

11. Has there ever been a time that you felt a healthcare provider treated you differently because of your sexual orientation, behavior, or gender and/or sex of your partner? Tell me about this experience?
    Probe:

    a. Different from a person who identifies as heterosexual or straight or is in a heterosexual relationship?
    b. Because of your age?
    c. Related to sexual health like an STI/HIV test, Pap test or other preventative screening

12. Why do you think a provider would discriminate against or treat a LGB older woman differently?

    Probe:

    a. Provider attitude or knowledge?
    b. Can these be changed?
    c. Do you have a role? What is it?

13. What makes it hard for you to go to the doctor or another healthcare provider?

    a. Can probe with health insurance, transportation or parking, money, fear, uncomfortable with provider
    b. Anything else?
    c. Can you tell me about this experience?
    d. Does this affect your health?

14. Why would you want to return to a healthcare provider or regularly see them?

    a. What would make it better?
    b. What makes it a good experience?

15. To end the interview, what are the most important things healthcare providers should know about LGBT older adults?

    a. Probes: What could help improve provider and patient relationship?

We have finished the interview for today. I want to thank you again for your time. These interviews will help develop trainings for healthcare providers serving LGB senior women. Do you have any questions?

Appendix 2: Aim 3 - Interview Guide

1. First, I want to start about asking how you define being healthy? What does being healthy mean to you? Has it changed in your life?

Resiliency Mechanisms - Inhibited physical, mental, and activity quality of life

2. Tell me about a specific time in which you had poor physical health like an illness and injury.

a. What lead that physical illness and injury?
b. Or made your physical health worse?

Resiliency Strategies - Inhibited physical, mental, and activity quality of life

3. Think about that time when your physical was poor, tell me a story about how you took care of yourself.

a. How did you "bounce back?"
b. What strategies helped to improve your physical health or mental health?
c. What strategies helped you improve or complete activities, such as self-care,

work, or recreation?

4. Reflecting on that story or time, what strategies would have helped? a. Why do you think these strategies helped you?

a. Probe with specific strategies mentioned

Resiliency Mechanisms - Inhibited physical, mental, and activity quality of life

5. Now thinking about your mental health, which includes stress, depression, and problems with emotions, tell me about a specific time in which you had poor mental health.

a. What lead to poor mental health?
b. Or made your mental health worse?

Resiliency Strategies - Inhibited physical, mental, and activity quality of life

6. Think about that time when your mental health was poor, tell me a story about how you took care of yourself.

a. How did you "bounce back?"
b. What strategies helped to improve your physical health or mental health?
c. What strategies helped you improve or complete activities, such as self-care, work, or recreation?

7. Reflecting on that story or time, what strategies would have helped? a. Why do you think these strategies helped you?

a. Probe with specific strategies mentioned

8. Does your physical or mental health ever keep you from doing your usual activities, such as self-care, work, or recreation? Tell me about a specific time.

a. How?

Resiliency Strategies – Lifespan

9. Think about that time when your physical or mental health was poor.

a. How have your strategies of self-care during a time of poor physical or mental
b. health changed throughout your life?
c. Childhood, adolescent/teenage years, young adult, middle age, and now
d. Why do you think these have these changed? Or not?

Resiliency Mechanisms and Strategies - Social isolation and loneliness

10. Think about that time when were or felt social isolation and loneliness, tell me a story about how you took care of yourself.

a. What lead to being socially isolated and loneliness?
b. Does social isolation and loneliness affect your physical and mental health?
c. How?

11. Think about that time when you were or felt socially isolated or lonely, tell me a story about how did you take care of yourself?

a. How did you "bounce back?"
b. What strategies helped during a time of social isolation or loneliness?
c. What strategies help to improve physical and mental health problems related to social isolation?

12. Reflecting on that story or time, what strategies would have helped?

a. Why do you think these strategies helped you? a. Probe with specific strategies mentioned

Resiliency Strategies – Lifespan

13. Think about that time when you were or felt socially isolated or lonely.

a. How have your strategies of self-care during social isolation and loneliness changed throughout your life?

b. Childhood, adolescent/teenage years, young adult, middle age, and now
c. Why do you think these have these changed? Or not?

14. Is there anything important we didn't talk about or I didn't ask you today? Is there anything important I should know?

Appendix 3: Aim 2 and 3 - Interview Informed Consent

INFORMED CONSENT FORM TO TAKE PART IN A RESEARCH STUDY

You are invited to take part in this research project with the University of Texas Health Science Center at Houston. Your participation in this study and interview is voluntary. You can refuse to answer any question without ending the interview. You can also end the interview at any time. A decision not to take part or to stop being a part of the research project will not change the services available to you.

Procedure

If you agree to participate and are able to take part in this study, you will first sign the informed consent form before the interview. The interview contains 12 -15 open-ended questions. The interview will be a conversation about experiences around resiliency around physical and mental health.

The interview today will take no longer than one hour.

Your quotations and stories may be highlighted in future reports, presentations, or publications. They will be in no way connected with you. Your answers are confidential and will not be identified with you only a three-digit number.

You will be recorded during the interview today and the interviewer will be taking notes. The recorder and notes will be stored in a locked cabinet at The University of Texas Health Science Center at Houston: School of Public Health.

The interview will be transcribed or written out word for word. The recording will then be deleted.

Risks

There are no known risks for participation in this study. There is always the risk associated with possible breach of confidentiality.

Benefits

You may not receive any benefit from taking part in the study.

Cost and Compensation

There is no cost to take part in the study. You will receive a CVS Gift Card $10.00 for your time to take part in this study.

This study aims to improve the lives of those in LGBT older adult community.

Alternatives:

You have the alternative to not take part in this study.

Study Withdrawal:

You can withdraw from the study at any time. If you withdraw from the study the information collected will not be used.

Confidentiality:

You will not be personally identified in any reports or publications that may result from this study.

Questions

If you have questions at any time about this research study, please feel free to contact the study coordinator, Jenny Holcomb at University of Texas Health Science Center at Houston Jennifer.L.holcomb@uth.tmc.edu as she will be glad to answer your questions. You can contact the study coordinator to discuss problems, voice concerns, obtain information, and offer input in addition to asking questions about the research.

Signatures

Sign below only if you understand the information given to you about the research and you choose to take part. Make sure that any questions have been answered and that you understand the study. If you have any questions or concerns about your rights as a research subject, call the Committee for the Protection of Human Subjects at (713) 500-7943. You may also call the Committee if you wish to discuss problems, concerns, and questions; obtain information about the research; and offer input about current or past participation in a research study. If you decide to take part in this research study, a copy of this signed consent form will be given to you.

_____ _____

Signature of Subject Date

_____ _____

Signature of Person Obtaining Consent Date

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