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A Qualitative Analysis of the Environmental and Personal Factors which Influence the Help-Seeking Behaviors of Men who have Sex with Men in Light of the Emerging Threat of Antimicrobial Resistance to *Shigella* Bacteria

By:

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B.A., North Georgia University

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ABSTRACT

A Qualitative Analysis of the Environmental and Personal Factors which Influence the Help-Seeking Behaviors of Men who have Sex with Men in Light of the Emerging Threat of Antimicrobial Resistance to *Shigella* Bacteria

By

Kathleen McCready Jacobson

November 29, 2018

INTRODUCTION: Compared to their male counterparts, men who have sex with men (MSM) in the U.S. are burdened by a number of health disparities. Surveillance has confirmed that the MSM population are disproportionately impacted with shigellosis, a diarrheal condition caused by *Shigella* bacteria. The bacteria are showing signs of antimicrobial resistance, resulting in a reduction of treatment options and raising the risk of critical outcomes for those with HIV.

AIM: The aim of this study was to determine which elements of the triadic reciprocal causation model most influences the help-seeking behaviors of men who have sex with men both in general and as they relate to the emerging threat of antimicrobial resistance to *Shigella* bacteria/shigellosis.

METHODS: A total of n=24 participants recruited in metro Atlanta, Georgia took part in one of six focus groups designed to explore the personal and environmental factors which influence and guide their help-seeking behaviors as they relate to the new and emerging threat of antimicrobial resistance to *Shigella* bacteria. Employing the principles of grounded theory, the data were analyzed using MAXqda to identify themes that emerged during the discussions.

RESULTS: Themes surrounding the factors that influence the help-seeking behaviors of MSM are that most use the internet to search for general and sexual health information because it is convenient and widely available; information from the internet is viewed as less credible and trustworthy than the information received from a doctor, many participants stated a preference for a doctor who is gay-friendly; most turn to their social network for help and advice in finding a gay-friendly doctor. Relating to the emerging threat of shigellosis, the participants revealed an absence of or limited knowledge of the condition; they perceive there is a lack of awareness in the wider population and the medical community; they feel targeted by current shigellosis-related health materials; some feel encumbered by one more life-threatening disease; outcome expectancies related to shigellosis may drive help-seeking behaviors; varying opinions as to whether shigellosis should be labeled an STD; and cost may be a barrier to seeking a medical test for this condition.

DISCUSSION: Understanding the factors which influence help-seeking behaviors of MSM will inform those in research and public health and assist in the design of future health communication campaigns to raise awareness of new and emerging threats.

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By

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Author's Statement Page

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Chapter 1 - Introduction

1.1 Background

In the United States, men who have sex with men (MSM) are faced with myriad challenges that negatively impact their overall health and quality of life (TFAH, 2014). Recent research has shown that when compared to their heterosexual counterparts, MSM are disproportionately impacted by a variety of chronic and mental health conditions and are more likely to engage in risky behaviors (TFAH, 2014; CDC, 2018a; Bernstein, Liu, Begier, Koblin, Karpati, & Murrill, 2008). Studies have shown that such health disparities are a result of the interconnected relationship between behavioral factors and the disadvantages that reside within the sociocultural and economic environment, all of which work synergistically to amplify their effect (TFAH, 2014; CDC, 2018a).

The greatest health disparity in the MSM population can be witnessed in the incidence of human immunodeficiency virus (HIV), and although the overall rate of new diagnoses are falling in the general population, they continue to climb in the MSM community (CDC, 2018a). Other chronic conditions, such as sexually transmitted infections (STI's) and several strains of viral hepatitis, are also trending upward and, again, the greatest disparities are observed in the MSM community (CDC 2016a; Hoover et al., 2015). An emerging threat to MSM has been identified in national surveillance data, indicating that the prevalence of the enteric condition, shigellosis, is higher in this population (CDC, 2017c). Typically transmitted via the fecal-oral route and with an extremely low inoculum rate, this diarrheal disease is a manifestation of *Shigella* bacteria invading the gut wall (Lampel, Formal & Maureli, 2018). Sexual practices that involve oral-anal activity increases the risk for this population, and although rarely considered a life-threatening condition in first-world countries, recent epidemiological studies have indicated that the highly-adaptive

Shigella bacteria are showing signs of resistance to several of the preferred antimicrobial therapies (Murray et al., 2017). The implications of shigellosis are greater for those whose immune systems are already compromised by HIV and for whom treatment failure may be fatal (Daskalis & Blaser, 2006).

Reducing the number of health disparities and improving health outcomes within the MSM community is a goal of *Healthy People 2020*, and one factor that is known to influence health outcomes is the ability to access and engage with healthcare services and professionals (ODPHP, 2018). A though search of databases such as PUBMED, MEDLINE, and PSYCH has revealed that the greatest extent of research on help-seeing behaviors is gender specific with few investigating the unique and specific attitudes, beliefs, and behaviors of the MSM community. Of those that do, the main focus is STI testing and/or HIV testing, prevention methods, and treatments. This gap in literature signifies a need to investigate the distinctive help-seeking behaviors of the members of the MSM community from the perspective of shigellosis, an infection which is not an STI but is transmitted and/or acquired via sexual practices, and antimicrobial resistance.

Social cognitive theory (SCT) is considered to be one of the most frequently utilized behavioral theories and has been used in a number of interventions designed to address risky sexual behaviors and/or disease transmission (Safren, Traeger, Skeer, O'Cleirigh, Meade, Covahey, & Mayer, 2010). The triadic reciprocal causation model, viewed as the most significant element of SCT, helps to explain human functioning through the dynamic and complex interplay between the person, the environment, and behavior (Bandura, 1983). This model provides a framework to identify which factors most influence the help-seeking behaviors of the MSM in light of these new and emerging threats.

The purpose of this study was to explore which elements of the triadic reciprocal causation model most influence the help-seeking behaviors of the MSM community as it relates to the risk of shigellosis and antimicrobial resistance. It is crucial to understand and identify key factors which impede or facilitate the complex and dynamic interactions that take place between the MSM population and healthcare systems (and medical professionals). Through an analysis of the data gathered in focus group conversations, this research has provided a more comprehensive understanding of the unique experiences, attitudes, and beliefs the MSM community hold as it relates to help-seeking behaviors in light of new and emerging threats. This study has contributed new information to existing literature surrounding help-seeking behaviors within the MSM community and will assist in the design of future interventions aimed at reducing the impact of new and emerging threats and antimicrobial drug resistance.

Chapter 2 - Literature Review

2.1 Health Disparities in the MSM Community

The Department of Health and Human Resources (HHS) first added MSM and lesbians as its own population group in 2000 (Trust for America's Health [TFAH], 2014). Just over a decade later, the inclusion of the lesbian, gay, bisexual, and transsexual (LGBT) population to the National Health Disparities Report together with the release of a highly significant publication on the health of the LGBT population by the Institute of Medicine (IOM) provided evidence that, when compared to their heterosexual counterparts, those in the LGBT community experience higher rates of a variety of chronic health and mental health conditions and are more likely to engage in risky behaviors (TFAH, 2014; CDC, 2018a; Martos, Wilson, Gordon, Lightfoot, & Meyer, 2018). The *Healthy People 2020* report defines health disparities as "a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage" (ODPHP, 2018a).

The greatest health inequity in the MSM population is witnessed in the numbers of those affected by human immunodeficiency virus (HIV). The Centers for Disease Control and Prevention (CDC) confirms that while the overall rate of new HIV diagnoses is falling, the numbers for the MSM community continue to rise (CDC, 2018a). A 2014 report states that 56% of those living with HIV and 70% of all new infections were accounted for in the MSM population, even though they make up only 2% of the overall U.S. population (CDC, 2018a). The CDC estimates that almost 18%, or 1 in 6, of those living with HIV in the MSM community have yet to receive a diagnosis (CDC, 2018a). This factor promotes the risk of transmission in two different ways. First, due to the higher prevalence rate, there is a greater chance of engaging in a sexual encounter with someone who is HIV positive but unaware, and second, the individual who unwittingly carries the infection will not be in receipt of a treatment plan to decrease the virulence of the virus (TFAH, 2014; CDC, 2018a).

Data collected from the National Notifiable Diseases Surveillance System (NNDSS), the Gonococcal Isolate Surveillance Project (GISP), and the STD Surveillance Network (SSuN) all point toward higher prevalence rates of sexually transmitted diseases (STD's) in the MSM population (CDC, 2017a). In 2016, MSM accounted for 80.6% of all diagnoses of primary and secondary (P&S) syphilis in males, with a disproportionate number of cases residing in African-American and Hispanic populations (CDC, 2017a; Abara, Hess, Fanfair, Bernstein, & Paz-Bailey, 2016). From 2012 to 2016, a total of 36 states were able to identify the sexual orientation in 70% of reported P&S syphilis cases and found that, during this period, there was a 63.7% increase within the MSM population (CDC, 2017a). GISP data indicates that the proportion of gonococcal isolates collected those who identified as MSM expanded from 3.9% in 1989 to 37.8% in 2016 (CDC, 2017a). Data further suggests that when compared to men who have sex with women (MSW), antimicrobial resistant strains of gonorrhea are present at a higher rate in MSM (CDC, 2017a). U.S. clinics collecting data on chlamydia found that from 2012 to 2016 the number of reported cases in males and females increased by 26.8% and 2.9%, respectively (CDC, 2017b). However, because sexual practices and partner preference information are not collected at these sites, it is unclear if this significant increase in males can be attributed to increased exposure in the MSM community (CDC, 2017b).

Rates of other physical chronic conditions are, in most instances, similar within the LGB[1] and heterosexual communities (TFAH, 2014; CDC, 2016a). One exception is the increased burden of viral hepatitis, especially hepatitis A (Hep A), B (HBV) and C (HCV) (CDC, 2016a; Hoover et

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[1] The transgender community is not referenced in this section of the cited article.

al., 2015). The CDC confirms that one-tenth of all new Hep A cases occur in the MSM population (CDC, 2016a). Transmitted through contact with fecal matter during oral-anal activity, the condition is considered fairly easy to treat and does not lead to negative, long-term health outcomes (Hoover et al., 2015). Nevertheless, in instances of co-infection with HIV and HCV, the onset of Hep A can quickly escalate to a critical and sometimes fatal level (Hoover et al., 2015). HBV and HCV are transmitted through contact with infected bodily fluids and occur in the MSM population primarily through intravenous drug use (IDU) and sexual practices (CDC 2016a; Hoover et al, 2015; Lin, Sridhar, Wong, Lau, & Woo, 2015). The CDC reports that 20% of all new HBV cases take place in the MSM community, and, if not treated in a timely manner, may lead to chronic hepatitis, cirrhosis, or hepatocellular cancer (CDC, 2016a; Inoue & Tanaka, 2016). The transmission of HCV through discordant sexual activity in heterosexual couples is considered to be a somewhat inefficient process, but recent epidemiological studies indicate that this is not the case for MSM who are HIV positive (Hoover, et al., 2015; Medland, Chow, Bradshaw, Read, Sasadeusz, & Fairley, 2017). Most commonly transferred via blood to blood, there is evidence to suggest that the virus is present in the semen of an individual with a high HIV viral load, and recent studies have reported cases of transmission that can be attributed to serosorting, group sex, rough sex, anal fisting, and multiple sex partners (CDC, 2016a; Chan, Sun, Hong, Lee, & Wong, 2016; Hoover et al., 2015).

Although large-scale, national data do not exist on mental health in the LGB population, evidence collected from community studies suggests that in comparison to heterosexual males, those who identify as MSM are vulnerable to higher rates of mental health disorders, such as depression and anxiety, and are more likely to have attempted suicide (TFAH, 2014; CDC 2016a; Bernstein et al., 2008; Storholm, Siconolfi, Halkitis, Moeller, Eddy, & Bare, 2013). A study using data collected from males residing in one of four large U.S. cities found that the rate of depression in the MSM community was 17.2% higher than in heterosexual males (Mills et al., 2004). The rate of attempted suicides is four times higher in males than in females, and for youth in grades 7 to 12 who identify as gay or bisexual, the rate is twice that of their heterosexual peers (CDC, 2016a). Supporting these findings are additional studies which indicate that 20 – 40% of LGB youth have attempted suicide, a number that is much higher than the four percent reported in heterosexual youth (Storholm et al., 2013).

An emerging threat to the MSM community is the increasing incidence of shigellosis, a diarrheal condition caused by *Shigella* bacteria (Murray et al., 2017; CDC, 2016d). The disease is transmitted via the fecal-oral route, and, with a small inoculum rate of 10 – 100 bacteria, it is considered highly infectious and is capable of causing large outbreaks (Puzari, Sharma, & Chetia, 2017; Lampel, Formal, & Maurelli, 2018). The condition usually arises from contact with contaminated food and/or water, and in the U.S. it is typically seen in travelers who return from countries with poor sanitation systems and/or food hygiene habits, people who living in crowded conditions, those of low socio-economic status, and in daycare centers (Taneja & Mewara, 2016; Murray et al., 2017). MSM are at risk because it can be transmitted by oral-anal sex practices (Murray et al., 2017; CDC, 2016d). From 2014 to 2015, national surveillance data revealed a 26% increase in culture-confirmed cases of shigellosis and an increase in the incidence rate from 3.4 to 4.3 per 100,000 (CDC, 2017c). A recent study from New York City indicated *Shigella* bacteria were resistant to azithromycin in almost 20% of all non-outbreak shigellosis cases (Murray et al., 2017). Those living with HIV are particularly vulnerable because the probability of acquiring or transmitting shigellosis can be enhanced because of a suppressed immune response and a prolonged carriage and shedding of the *Shigella* bacteria (Daskalakis & Blaser, 2006). In addition to this, current treatment options for many STD's are the same therapies used for shigellosis, contributing to the growing trend witnessed in antimicrobial resistance (Murray et al., 2017).

2.2 Determinants of Health

The World Health Organization (WHO) and CDC confirm that the factors driving health disparities are directly related to the environment that people are born into, age, reside, work, and play (WHO, 2018; CDC, 2018a). The determinants work in varying degrees to influence the overall health outcomes, human functioning, and standard of living for the populace, and are fueled by the inequitable distribution of wealth, power, and resources not only globally, but also at a national and local level (ODPHP, 2018; WHO, 2018). While earlier public health work concentrated solely on the social and environmental determinants of health, by the late 20th century the focus shifted towards addressing risky behaviors (Nutbeam, 2006). The current consensus is that although health outcomes are connected to lifestyle and personal attributes, they are considerably impacted by the social, economic, and physical environments (Nutbeam, 2006). The *Healthy People 2020* report has highlighted the specific determinants of health under the domains of policymaking, health services, social factors, individual behavior, and biology and genetics, and it is the interrelated nature of each of these, which work synergistically to create the conditions in which health outcomes are impacted (ODPHP, 2018). Contained under the egis of the social environment, the features of policy making, social factors, and health services have the ability to directly impact the immediate environment through circumstances that are generally external to personal control, whereas individual behaviors together with biology and genetics influence the environment in ways that are unique to the individual (TFAH, 2014; Beltran, Harrison, Hall, & Dean, 2011).

Our society, like others in Western civilization, is based on the principles of a heterosexual culture (Ferguson, 2018). Rather than pertaining to the sexual attraction between man and woman and the perpetuation of society through procreation, this concept relates to societal expectations and idealistic notions that are conveyed both implicitly and explicitly through social norms and the sociopolitical and institutional structures (Ferguson, 2018). Under these principles and until fairly recently, the LGBT community has been excluded from the same legal protections and social privileges that are afforded to other population groups (TFAH, 2014). Historically, sexual minorities were marginalized and consigned to live in the shadows, but events like the Stonewall Riots in 1969, the decriminalization of homosexuality, mobilization through social activism, and the declassification of homosexuality as a psychiatric disorder paved the way for their coming out (TFAH, 2014; Martos, Wilson, & Meyer, 2017). Even in the face of the momentous progressions made by the LGBT community in the previous half century, the increased visibility has triggered a counter movement, led mainly by religious institutions, to label homosexuality as aberrant and problematic in order to perpetuate the marginalization (TFAH, 2014; Bishin, Hayes, Incantalupo, & Smith, 2016).

Excess stress arising from the forces of persistent and pervasive stigma and discrimination has long been associated with adverse health outcomes in the LGBT community (TFAH, 2014; Stahlman, Hargreaves, Sprague, Stangl, & Baral, 2017). Stigma is defined by the sociologist Erving Goffman as "a social process that discredits individuals with characteristics that do not conform to what society considers normal" (Windsor, Benoit, Ream, & Forenza, 2013). Considered an element of the social environment, stigma and discrimination can be communicated in a variety of ways (TFAH, 2014). First, enacted stigma occurs when the sexual minorities are overtly discriminated against through acts of violence, verbal assault, ostracism, employment and housing (TFAH, 2014; Balaji et al., 2017). Next, felt (or perceived) stigma refers to the explicit anti-gay sentiment that arises through acts of violence, legislation, and the push for religious freedoms, all of which cultivate a climate of stigmatization (HealthyAmerican, 2014; Stahlman et al., 2017). Laws and policies which deny LGBT's the same rights as their heterosexual counterparts are another classification of stigma referred to as structural stigma, and although great strides have been made of late in terms of equality through measures like Supreme Court's decision to overturn the Defense of Marriage Act and the revocation of *Don't Ask Don't Tell* within the military, there are efforts underway to undermine these societal advancements (Jones & Brewster, 2017). Lastly, self-stigma is the internalized homophobia that one develops when he or she starts to believe the persistent negative representations of the LGBT population (TFAH, 2014; Stahlman et al., 2017).

Myriad studies have shown the varying degrees to which stigma and discrimination impact the physical and mental health of the MSM community. For example, excess stress can arise from the practice of concealing sexual orientation either through pretending to be straight or suppressing characteristics that may lead others to conclude that the individual is gay or bisexual (TFAH, 2014). The act of self-censorship can stifle opportunities to develop romantic relationships, friendships, and/or receive social support, all of which hold health-protective qualities (TFAH, 2014). Higher rates of mental health, attempted suicides, risky behaviors, and vagrancy are witnessed in LGB youth who have been rejected by their families (Storholm, et al., 2013; TFAH, 2014). Homeless LGB youth are more likely to be participate in survival sex and/or prostitution (TFAH, 2014). Additionally, population-based analyses have found that when compared to those living in inclusive, low-stigma settings, LGB who reside in communities which are hostile to the gay lifestyle die, on average, 12 years sooner and are more likely to die from suicide (Hatzenbuehler, Bellatorre, Lee, Finch, Muennig, & Fiscellathan, 2014; TFAH, 2014).

The socioeconomic factors related to poverty and education fall under the domain of the social environment (TFAH, 2014). Disparities can be witnessed in employment rates, and research shows us that, when compared to their different-sex counterparts, higher rates of unemployment are present in same-sex couples who have graduated from high school (Badget, Durso, & Schneebaum, 2013). However, the gap vanishes between these groups with any type of college experience and/or professional licensing (Badget et al., 2013). In contrast to heterosexuals, LGB are more likely to be poor, and African-American same-sex couples are twice as likely to live in poverty as white same-sex couples (Badget et al., 2014). The effects of poverty are pervasive and contribute to the high concentration of HIV and STI's in low socioeconomic communities (Denning & DiNenno, 2017). Factors such as lower educational levels and access to healthcare together with higher rates of unemployment and imprisonment may help explain why African-American MSM are at an increased risk of exposure to and acquisition of HIV (CDC, 2018b).

Less attention has been paid to the function that the physical environment plays as a health determinant in the MSM community, resulting in a paucity of research (TFAH, 2014). Nevertheless, there is evidence to suggest that those living rural areas are more isolated from health services, while those living in cities with high levels of income inequality see rates of HIV that are similar to those seen sub-Saharan Africa (TFAH, 2014). Higher rates of HIV have also been associated with lower social capital and living in crime-ridden, run-down areas, the latter of which attributed to increased levels of IDU among MSM (Fuller et al., 2005; Holtgrave & Crosby, 2003; Tieu et al., 2018).

Health disparities in LGBT may be incited by the lack of access to quality healthcare services (Knights & Jarrett, 2015). Although some population-based studies fail to detect statistically-significant differences in access to such services within the MSM community, others indicate that the relational attributes of the providers and the patient's unwillingness to disclose sexual orientation may be factors that prejudice the healthcare transaction (Conron, Mimiaga, & Landers, 2010; TFAH, 2014; Eliason & Schope, 2001). Structural barriers such as lack of health insurance, and a scarcity of appropriate programs that are designed to meet the needs of the MSM population may also impede access to care (TFAH, 2014)

Falling under the domain of personal behaviors, studies have shown that LGB populations are more likely to engage risky behaviors like substance and alcohol abuse, both of which correlate with HIV and STD transmission (CDC, 2016c; Boone, Cook, & Wilson, 2013). There is strong evidence to suggest that MSM use stimulants like methamphetamines and amyl nitrate to heighten the sexual experience, and it is the use of these drugs and others such as cocaine and ecstasy, that result in a failure to determine HIV status before sex, and a willingness to engage in unprotected anal sex (Boone et al., 2012; Hatfield, Horvath, Jacoby, & Rosser, 2009). Amyl nitrate is also correlated with a lower self-efficacy surrounding condom use, putting the discordant partner at risk (Hatfield et al., 2009). Impaired judgment through alcohol use, while not unique to the MSM population, is more harmful because the increased prevalence of HIV and STDs amplifies the likelihood of having unprotected sex with someone who is a carrier (Allen, Myers, & Ray, 2015). Reports further suggest that youth who identify as gay or bisexual are more likely to start drinking alcohol at a younger age and consume it at a level that is dangerous for their overall health and safety (Coker, Austin, & Schuster, 2010).

Biology and genetics relate to the bodily functions and mechanisms that assist and encourage transmission of disease, and disparities observed in the prevalence of HIV in MSM bear witness to the role this factor plays as a determinant (Beltran et al., 2011; Pellowski et al., 2013). First, the probability of HIV transmission is heightened when the viral load is high, an event that usually occurs in the earliest stages of acquiring the infection or at the end stages of AIDS (Pellowski et al., 2013). Next, the presence of a high number of infectable cells at the time of exposure can foster HIV transmission (Pellowski et al., 2013). Lastly, the co-occurrence of other health conditions like syphilis, herpes simplex virus type 2, and human papilloma virus (HPV), the effects of which vitiate the mucosal linings, can magnify both the infectiousness of and susceptibility to HIV (Pellowski et al., 2013; Breyer et al., 2012). These biological features coupled with the act of anal sex, which increases the risk of transmission by 18 times when compared to vaginal sex, and the practice of positional switching from receptor to penetrator and vice versa, elucidates, at least partially, the efficiency of HIV transmission within the MSM population (Breyer et al., 2012).

2.3 Syndemics

The relationship between the determinants of health and health outcomes is complex but undeniable. Although each of the determinants may work autonomously, there is evidence to suggest that they are mutually reinforcing and interact to produce a more pronounced and persistent effect. The concept of syndemics, first proposed in the mid 1990's by the anthropologist Merrill Singer, attempts to explain the enormity of the health challenges some populations are confronted with (Wilson, Nanin, Amesty, Wallace, Cherenack, & Fullilove, 2014). After witnessing the interconnected relationship between substance abuse, mental health, violence, and AIDS among an underprivileged and marginalized MSM population, Singer determined that addressing only one of those health conditions in isolation would fail to advance health outcomes (Wilson et al., 2014). These findings led the anthropologist to develop the syndemic theoretical framework, which seeks to explain the existence of multiple epidemics that occur simultaneously and operate synergistically to establish an encumbrance of disease within a particular community (Jie, Ciyong, Xueping, Hui, & Lingyao, 2012; Tsai and Venkataramani, 2016). As it pertains to the concept of syndemics, epidemic is deemed to represent both the disease(s) and the environmental factors that work in unison to encourage poor health outcomes (Wilson et al., 2014).

Highlighting the characteristics of a syndemic phenomenon is a 2003 study involving 3,000 MSM living in one of four U.S. metropolitan areas, 21% of whom identified as ethnic and racial minorities (Stall et al., 2003). The researchers determined that multi-drug use, depression, and intimate partner violence were interrelated and significantly associated with HIV and risky sexual practices (Stall et al., 2003; Wilson et al., 2014). Subsequent studies have investigated the temporal progression of syndemics within the MSM population and found that isolation, victimization, sexual abuse, low social connectedness, and feelings of inadequacy in younger years laid the groundwork for the advancement of syndemic conditions in later life (Herrick et al., 2013; TFAH, 2014).

2.4 Help-Seeking Behaviors

Falling under the auspices of the determinant of health services is help-seeking. Studying the behaviors associated with help-seeking is a relatively new practice within the field of public health (Poortaghi, Raiesifar, Bozorgzad, Golzari, Parvizy, & Rafii, 2015). Used interchangeably with health-seeking, both terms had, until recently, remained relatively ambiguous and the concept(s) behind them lacked clarity (Poortaghi et al., 2015). After a comprehensive literature review using both help-seeking and health-seeking, Poortaghi et al., define this behavior as "the individual’s deeds to the promotion of maximum well-being, recovery and rehabilitation; this could happen with or without health concerns and within a range of potential to real health concerns" (2015, p. 2). The help-seeking behaviors of individuals are influenced by myriad factors. The resulting actions are predicated by a complex decision-making process that is guided by the attitudes and beliefs of the individual and those within his or her social network, social norms, financial considerations, expectations, and the healthcare professional’s characteristics and behaviors (Oberoi, Chaudhary, Patnaik, & Singh, 2016; Afolabi, Daropale, Irinoye, & Adegoke, 2013).

2.5 Theoretical Framework – Social Cognitive Theory

Considered one of the pre-eminent psychologists of recent times, Albert Bandura is responsible for the development of social cognitive theory (SCT) **(**DiClemente, Salazar, & Crosby, 2013). Evolving from his seminal work on social learning theory (SLT), the introduction of this new concept in 1986 brought about a paradigm shift in the field of psychology when it transferred the focus of human learning from behavioral to cognitive (Connor & Norman, 2005). Bandura proposes that humans are neither independent agents nor conduits of mechanical and unthinking responses to their environmental influences but are, instead, interactive agents who, through motivation and action, are causal contributors within a triadic structure (Bandura, 1989). While SLT submits that individuals learn new behaviors in a social context through the practice of observational and vicarious learning together with negative and positive reinforcing processes, SCT contends that learning goes beyond response mimicry and, through the principles of human agency, employs cognitive, self-regulatory, and self-reflective processes (Connor & Norman, 2005; Riley et al., 2016). Stated more succinctly, “They (humans) are contributors to their life circumstances not just products of them” (Bandura, 2005, p. 1). Human agency refers not only to the personal transactions that individuals have with the environment but also includes the concepts of proxy and collective agency (Bandura, 1999, 2004). The former refers to the reliance on the efforts, knowledge, skills, and actions of intermediaries, whereas the latter signifies the shared views, mutual aspirations, and group actions of the collective (Bandura, 1999, 2004).

Central to SCT is the triadic reciprocal causation model (Bandura, 1999; DiClemente et al., 2013). This causal model asserts that personal factors, behavioral patterns, and the environment function as interacting and influencing determinants in a dynamic and bidirectional nature (Bandura, 1999).

Although SCT was not originally intended to describe health behaviors, its application has shown it to be effective in doing so (DiClemente et al., 2013). This revision has been assisted by the relatively recent and significant re-conceptualization of human health from that of a disease model to a health model (Bandura, 1998). Recognizing the substantial effect that the environment and social structures have on health outcomes, Bandura states, “Human health is a social matter, not just an individual one” (2004, p. 143). Stemming from his 2004 groundbreaking paper on SCT within the perspective of health promotion, Bandura has identified the key determinants to be perceived self-efficacy, which is the individual’s perception of his or her capacity to perform a specific task under a varying degree of conditions, and outcome expectancies, which pertains to the after-effect that the individual believes will occur as a result of his or her engagement in a particular behavior (DiClemente et al, 2013; Bandura, 2004; Connor & Norman, 2005; Riley et al., 2016). The remaining and equally important constructs are knowledge, goal formation, and socio-structural factors (DiClemente et al, 2013; Bandura, 2004; Connor & Norman, 2005).

Within this model, knowledge is considered a pre-qualifier for the adoption or cessation of a health behavior (Bandura, 2004). Bandura asserts that when an individual is unaware of the health risks posed by a particular lifestyle habit, it is unlikely that he or she will see the need to alter the harmful practices (Bandura, 1998, 2004; DiClemente et al., 2013). The presence of knowledge, however, is not enough to elicit change, and other self-influencers are necessary if the individual is to conquer the obstacles that hamper behavior change and ongoing maintenance (Bandura, 1998, 2004; DiClemente et al., 2013).

Perceived self-efficacy is the bedrock of human agency and central to the tenets of SCT (Bandura, 1999). The ability to govern control over one's own thought processes, actions, and motivations is a distinctive human quality, and self-efficacy beliefs operate as a proximal determinant of these (Bandura, 1989). While these beliefs have the ability to directly impact behavior, they also play a regulatory function within this theoretical framework and determine whether action will be undertaken, how much energy will be expended in the process, and if the action is to be maintained or abandoned (Bandura, 2004; Connor & Norman, 2005; Riley et al., 2016). Efficacy beliefs also have a regulating effect on motivation (Bandura, 1998; DiClemente et al., 2013). Individuals with low levels of self-efficacy are more likely to hold negative views on their ability to achieve the goals they set and, therefore, are less likely to be motivated into action, and the converse is true (Bandura, 2004; Connor & Norman, 2005).

Bandura proposes that self-efficacy can be shaped from four different perspectives (Bandura, 1998; Connor & Norman, 2005). First, the practice of personal accomplishment, which states that prior successes bolster the level of self-efficacy and may act as a moderating factor against future failures. However, if the individual has not yet developed a strong sense of resiliency, they are more likely to be discouraged by failure (Bandura, 1998; Connor & Norman, 2005). Second, vicarious learning through social modeling has the ability to increase the belief that he or she, too, can execute the given task (Bandura, 1998; DiClemente et al., 2013; Connor &

Norman, 2005). This is even more effective when the spectator's characteristics reflect that of the actor (Connor & Norman, 2005). Third, through verbal or social persuasion, Bandura posits that when people are encouraged to believe that they possess the necessary skills to perform a given task, they are more disposed to be mobilized into a state of action than those who are filled with self-doubt (Bandura, 1998; Connor & Norman, 2005). Bandura, however, cautions that persuading an individual to believe they possess the skills necessary to perform a behavior that is, in fact, beyond his or her competency level can have a deleterious effect on self-efficacy (DiClemente et al., 2013). Fourth, is emotional arousal, and high levels of stress and tension can be interpreted by the individual as a sign of ineptitude, whereas someone who feels little to no apprehension may feel better equipped to master the new behavior (Bandura, 1998; Connor & Norman, 2005). Likewise, positive and negative moods may also be moderating factors in an individual's level of self-efficacy (Bandura, 1998; Connor & Norman, 2005).

Another essential construct of SCT is outcome expectations, and while perceived self-efficacy refers to personal action control, this construct represents the individual's own perceptions surrounding the outcomes of future actions (Connor & Norman, 2005; Riley et al, 2015; Bandura, 1998). Outcome expectations are based on the capacity of humans to envisage positive and/or negative outcomes of prospective behaviors which then function as regulators to either heighten or dampen the motivation and action of the individual (Bandura, 1989, 1998; DiClemente et al., 2013). These judgments are constructed around the subjective perceptions of outcomes from past events and experiences, observational learning, and/or self-regulation (Riley et al., 2015). The motivation to act can be hampered by low-self efficacy, even if the outcome expectation is appealing to the individual (Bandura, 1989). Bandura proposes that there are three different dimensions: area of consequence; positive or negative behaviors; and short-term or long-term consequences (Connor & Norman, 2005). The area of consequence holds three separate and distinct domains, the first being physical outcome expectations (Bandura, 2004; Connor & Norman, 2005). This refers to the physical effects that are anticipated as a result of the behavior, and while affirmative sensory experiences and physical pleasures fall into the positive zones, adverse sensory experiences, pain, and discomfort fall into the negative zones (Bandura, 2004; Connor & Norman, 2005). In the second domain of positive and negative social sanctions, the individual's actions may be regulated by the expected responses from those within their social circle, communities, and society at large (Bandura, 2004; Connor & Norman, 2005). The third domain is that of self-evaluation and concerns the personal feelings that one may expect following the adoption of the new behavior (Bandura, 2004; Connor & Norman, 2005).

Goal formation is the initial step to behavior change, and although it is a precondition, it is not a guarantee that the goal will be pursued (DiClemente et al., 2013; Connor & Norman, 2005). Embedded in a value system, goals act as self-structured incentives and help guide the individual's health behaviors (Bandura, 1998; Connor & Norman, 2005). According to SCT, goals can be clearly defined as either proximal or distal (Bandura, 1998, 2004; Connor & Norman, 2005). The latter serves as an orienting function for long-term behavior change, whereas the former regulates the actions and efforts of the individual in the present time (Bandura, 1998, 2004; DiClemente et al., 2013; Connor & Norman, 2005). Motivation is connected to goal setting, and individuals who self-monitor progress can react positively or negatively depending on how goal attainment is measured against goal aspirations (Bandura, 1998). Additionally, self-efficacy can regulate both the self-belief that the individual holds about his or her ability to effect change and determines whether poor outcomes will stifle continued action or foster greater effort (Bandura, 1998).

Another determinant of goal formation and resulting health behaviors are sociocultural factors (Bandura, 1998, 2004; Diclemente et al., 2013; Connor & Norman, 2005). These factors encompass the perceived impediments or facilitators that exist within the proximal living environment, the community at large, as well as the health, political and economic systems (Connor & Norman, 2005). SCT distinguishes between the different types of barriers (Bandura, 1998). The personal barriers which obstruct the adoption and execution of a health behavior form an essential element of the self-efficacy evaluation process (Bandura, 1998; 2004). Individuals with a positive sense of self-efficacy are more resourceful and flexible and tend to perceive opportunities and obstacles in a different light than those at the opposite end of the efficacy spectrum (Connor & Norman, 2005). The impediments that reside within the larger institutions and political structures, although distal, have a regulatory effect on efficacy beliefs, goal formation, and behavior (Bandura, 2004; Connor & Norman, 2005).

2.6 Triadic Reciprocal Causation Model

The causal model of triadic determinism is considered to be the most significant element of SCT (DiClemente, 2013). Bandura rejects prior theories which submit that human behavior is governed and controlled by environmental influences and innate dispositions in a purely unidirectional, non-reciprocal manner (Bandura, 1989; DiClemente et al., 2013). Instead, Bandura proposes a triadic model of determinism (see Figure 1) that explains human functioning through the dynamic and complex interplay between behavior, the environment, and personal factors (Bandura, 1983). Bandura states, “Personal and environmental factors do not function as independent determinants; rather they determine each other. Nor can ‘persons’ be considered independent of their behaviors” (1978, p. 345). The personal factors are considered to be cognitive attributes, beliefs, affects, and biological features, and the socio-structural elements and events refer to the environmental factors (Jones & Brewster, 2017). SCT suggests that the environment can be further categorized as either imposed, selected, or constructed. It is important to note that each of the determinants do not interact at the same strength, nor do they act simultaneously (Bandura, 1989).

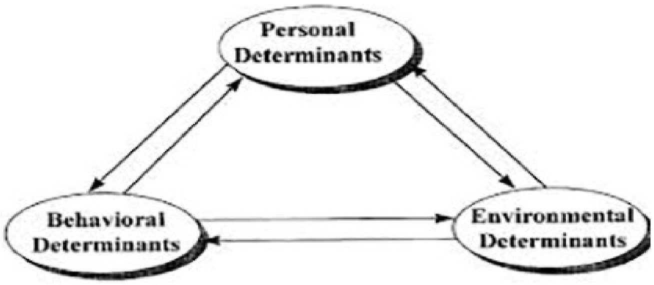

Figure 1. Triadic Reciprocal Causation Model shows the bi-directional and interactive nature between each leg of the causation model. This figure was taken from “Social Cognitive Theory” by Bandura, A. 1989b, *Annals of child development. Vol. 6. Six theories of child development.* (pp. 1-60). Reprinted with permission.

The segment of the causation model that relates to person and behavior is explained by the interactive and reciprocal relationship between cognitive processes, affect, and actions. (Bandura, 1989). Behavior is influenced and guided by the individual’s expectations, beliefs, self-efficacy, objectives, and intentions, while the external effects of behavior play a role in the cognitive and emotional responses (Bandura, 1989). The biological makeup of the person is also a factor (Bandura, 1989). Behavior can be tempered by the individual’s physical and mental capabilities and, conversely, sensory and neural systems can be positively and/or negatively adapted by the experiential outcomes of past practices (Bandura, 1989).

The dynamic relationship between the personal attributes and environmental factors is another arm of the triadic model (Bandura, 1989). The environment relates to the social influences, physical structures, institutional and political systems (DiClemente et al., 2013). The individual's beliefs, attitudes, expectations, and intellectual characteristics are advanced and shaped by the environmental stimuli that impart information and conjure emotional responses through social modeling and persuasion (Bandura, 1989). Individuals can evoke a response from the social environment by means of their physical characteristics in addition to their social status and given roles (Bandura, 1989). Conversely, social responses can modify how individuals perceive themselves in a manner that can reinforce or weaken environmental biases (Bandura, 1989). One point of view is that an interactive and reciprocal relationship between the person and environmental structures refers to person in the collective sense (DiClemente et al., 2013). It is thought that collective agency has the ability to shape the sociocultural environment and, in turn, the response from the environment can influence beliefs, values, and expectancies of the collective community (DiClemente et al., 2013).

The bidirectional and reciprocal relationship between behavior and the environment is the final element of the triadic model (Bandura, 1989; DiClemente et al., 2013). Bandura confers that through the course of everyday events and circumstance, the behaviors of individuals and/or the collective community determine the conditions of the surrounding environment (Bandura, 1989; Diclemente et al., 2013). Conversely and in reciprocal fashion, behaviors can be modified by the environmental circumstances the initial behaviors created (Bandura, 1989). The mutual and interlocking nature of the relationship between behavior and environmental experiences gives rise to the notion that individuals are not only products of their environment, but also the creators of it (Bandura, 1989a, b). In situations where people may have little or no control over the physical and sociocultural structures of the imposed environment, they do have command over how they interpret and respond to them (Bandura, 1999). Not every element of the environment will serve to influence or modify behavior, and it is only through the activation of certain behaviors, such as choice of friends, career, activities, and living quarters, that the potential environment becomes the actual environment (Bandura, 1989). However, the view that the environment is a potentiality, waiting to be chosen and actuated, is rejected and, instead, SCT proposes that environments are construed, chosen, and developed through the collective efforts of the citizenship (Bandura, 1999). This concept is considered the selected environment (Bandura, 1999).

2.7 Help-Seeking Behaviors within the Context of the Triadic Reciprocal Causation Model

The environmental aspects of help-seeking are found within the social and political framework of the country, and encompasses access to healthcare, culturally-competent service providers, stigma and discrimination, and social norms (TFAH, 2014). The person refers to the cognitive processes and relates specifically knowledge, efficacy, outcome expectations, perceived impediments and facilitators, and motivational factors (Bandura, 2004). Lastly, help-seeking behaviors are the actions taken to boost one's overall wellbeing and pursue treatments when ill (Poortaghi et al., 2016). Each of the elements of help-seeking are to be viewed neither in isolation nor causally; instead, they are to be considered as bi-directional and mutually reinforcing (Jie, Ciyong, Hui & Lingyao, 2012).

Environment ⟷ Behavior

Health insurance is the most commonly-used vehicle to access the U.S. system (Ridic, Gleason, & Ridic, 2012). The U.S. Census reported that in 2016 91.2% of the population was insured, and of those 55.7% were insured through the workplace, 16.2% through the private marketplace, and the remainder were government-based programs (Barnet & Berchick, 2017). Recent political and cultural advances have afforded the LGBT community protections that they had previously not enjoyed, the most significant of which can be observed in the gender and sexual orientation safeguards built into the Affordable Care Act (ACA), and the legalization of same-sex marriage in all 50 states as a result of the Supreme Court ruling in *Obergefell v. Hodges* (Kates, Ranji, Beamesderfer, Salganicoff, & Dawson, 2018; Dahlhamer, Galinsky, Joestl, & Ward, 2016). Along with the landmark legal decision came the guarantee of spousal insurance for same-sex couples for those working in federal and state agencies (Kates et al., 2018). In those states which have not yet added anti-discrimination protections for LGBT, such coverage is at discretion of the employer (Kates et al., 2018). Even so, large-scale national surveys indicate that 57% of all U.S. companies offer health insurance to the same-sex spouse of an employee (Kates, et al., 2018).

Existing literature on the behavioral protective factors associated with health insurance have been contradictory, and while some show that having insurance improves health through disease-prevention behaviors, other studies suggest that those with insurance are more likely to have a poor diet and exercise less than those without (Brunsberg, Rosser, & Smolenski, 2012). A study of health insurance utilization in MSM by Burnsberg et al., (2012) found that having and using health insurance was associated with lower rates of unprotected anal sex with male partners. The researchers concluded that the increased contact with health professionals provided more opportunities to promote safe-sex practices, HIV testing, and health-wellness programs (Brunsberg et al., 2012). Cost of healthcare services can also be an environmental barrier for MSM accessing the healthcare system in the U.S. (Underhill et al., 2014). This can be demonstrated with the out-of-pocket expenses associated with the pre-exposure prophylactic (PrEP) known as Truvada, which works to inhibit the uptake of HIV; in 2015, the cost for a 30-day supply was estimated as $1,646 and its use required frequent doctor visits and blood tests (Adamson, Carlson, Kublin, & Garrison, Jr., 2017). An earlier study suggests that the annual cost for those without insurance can be as much as $17,000 for the medication and $18,000 for ancillary services and professional fees

(Underhill et al., 2014). Additional distal factors, such as laws and policies, also impact health-seeking behaviors (Cahill, Taylor, Elsesser, Mena, Hickson, & Mayer, 2017). The help-seeking behaviors of MSM living in states with religious freedom and anti-gay laws are different from those and live in a less restrictive environment and research indicates that they are less likely to have used or be using PrEP, fail to disclose and discuss their lifestyle with their healthcare provider, and are more likely to have been diagnosed with a psychiatric disorder (Cahill, Taylor, Elsesser, Mena, Hickson, & Mayer, 2017).

The next environmental factor to consider is that of cultural competency, which is defined as "a set of congruent behaviors, attitudes, and policies that come together as a system…to work effectively in cross-cultural situations" (CDC, 2015). This can be seen and felt within the healthcare environment through the portrayals of mostly heterosexual couples in health-related materials, forms that fail to ask lifestyle questions outside of the context of male/female relationship status, and professionals who lack cultural competency (Knight & Jarrett, 2015). The patient-physician relationship is critical for achieving optimal health outcomes, and cultural competency lays the groundwork for the formation of effective relationships that work to surmount any cultural differences (Paez, Allen, Beach, Carson, & Cooper, 2009). Deficiencies in clinical-care relationships can give rise to missed opportunities for screening, preventative-care, and treatments (Paez et al., 2009; Petroll & Mosack, 2011; Dalhamer et al., 2016). A national survey reports that only 27% of physicians take the time to inquire about sexual orientation, and studies indicate that 18% to 27% of physicians report feeling uncomfortable when treating gay patients and feel that they need further training in this area (Petroll & Mosack, 2011; Bernstein et al., 2008). Physician-enacted stigma can act as an environmental barrier and inhibit the accessibility of healthcare services (Martos et al., 2018). This is manifested in circumstances such as a physician's reluctance or refusal to treat MSM patients who are HIV-positive and/or drug users, falsely claiming that their practice is not accepting new patients, and primary care physicians who deliberately refer MSM to a specialist to avoid providing care (Florom-Smith & De Santis, 2012). Evidence of similar behaviors towards the MSM community can be witnessed in rural areas, and studies show incidences of specialists refusing to treat patients with HIV by deceptively claiming that they did not have the knowledge to treat HIV and/or making stigmatizing remarks (Florom-Smith & De Santis, 2012). MSM patients are further stigmatized when practitioners display an unusual level of fear when treating those who have HIV, as illustrated by the reports of a physician donning a mask and double gloves to take the blood pressure of a seropositive patient (Florom-Smith & De Santis, 2012). The fracture in physician-patient relationship can inhibit disclosure behaviors and studies reveal that sexual orientation disclosure for this population ranges from 49% to 70%, and is less frequent for African-American MSM, those who live in rural areas, and among individuals who are less (Petroll & Mosack, 2011; Petroll & Mitchell, 2015). While failure to disclose to doctors has been noted in older MSM, several studies have found evidence of this behavior in adolescents and youth with same-sex attraction (Fisher, Fried, Macapagal, & Mustanski, 2018; Bernstein et al., 2008; Meckler, Elliot Kanouse, Schuster, & Beals, 2006).

As an element of the environment, social norms are the unwritten rules and expectations which direct the attitudes and behaviors of a particular group of people to set it apart from other subgroups (McDonald & Crandall, 2015). People are more heavily influenced by those with whom they share similarities, and this is no different for the MSM community (Hamilton & Mahalik, 2009). Cultural models of health emphasize that help seeking requires an engagement with the social network, and researchers suggest that by observing the behaviors of others in their environment, MSM will gain vital information on which health-seeking behaviors to embrace or reject (Saint Arnault, 2009; Hamilton & Mahalik, 2009). Although numerous articles exist on social norms in relation to the risky health behaviors of MSM, there is a distinct dearth on its association to the help-seeking behaviors of this group, and the research that does exist provides only a brief glimpse into this subject. The increased rates of PrEP uptake from 8,768 in 2008 to 77,120 in 2016, and HIV testing from 63% in 2008 to 71.1% in 2014 indicates that these practices may be more socially acceptable, but it is not enough to infer whether these behaviors were impacted by the norms of the proximal networks (Rosenberg, 2018: Hall et al., 2017). From a distal level, the societal constructs surrounding masculinity and male gender roles may fracture the help-seeking efforts of the MSM community, with one study observing that the influence of societal masculinity expectations can lead to a reduced willingness to both disclose sexuality to healthcare professionals and seek care after a sexual assault (Donne et al., 2018).

Person ⟷ Behavior

The intrapersonal barriers and facilitators related to help-seeking are complex and dynamic in nature, but invariably, the initial and essential component to the inductive process is knowledge (Bandura, 2004). The absence of knowing can be highlighted, in part, in the HIV and STD screening behaviors of the MSM community. The CDC recommends HIV and STD screenings for MSM either annually or every three months for those who have a high number of sexual partners, engage in unprotected anal sex, use amphetamines and poppers, and have been previously diagnosed with a bacterial STD (Barbee, Dhanireddy, Tat, & Mirrazzo, 2015; DiNenno et al., 2017). Regardless of these advices, an estimated 67% of MSM participating the National Health Behavioral Study (NHBS) in 20 major U.S. cities were tested for HIV in 2011 (Cooley, Oster, Rose, Wejnert, Le, & Paz-Bailey, 2014). A review of eight HIV clinics in the U.S. confirmed that, of those who attended, only 2.3% to 18.3% were tested annually for extra-genital chlamydia and gonorrhea (Barbee et al., 2015). A number of studies have found evidence that a barrier to testing for MSM is the lack of awareness in need for testing (Nelson, Pantalone, Gamarel, Carey, & Simoni, 2018; Tieu et al., 2018). The importance of HIV and STD testing awareness is several fold. First, being aware of HIV and STD status has been shown to help in the reduction of risky behaviors; second, ART and PrEP can help to reduce the viral load and mitigate the risk of transmission or acquisition; and third, the biological features and responses associated with HIV and STD's can assist in the acquisition of additional STD's (Paz-Bailey et al., 2013). Low awareness levels of PrEP have been recorded in myriad studies, with the numbers ranging from 16% to 36% (Bauermeister, Meanley, Pingel, Soler, & Harper, 2013; Cahill et al., 2017; Dubrov, Altice, & Fraenkel, 2018). One study reported a higher level of PrEP awareness in youth MSM who already had an STI and concluded that their help-seeking behaviors were driven by a desire to learn more about any new up-and-coming treatment options (Bauermeister et al., 2013).

The self-regulating forces that drive behavior can be found within the self-efficacy beliefs of the individual. The level of self-efficacy, or the belief that that one has the ability to perform a specific task and achieve a particular outcome, is formed by a unique combination of cognition, motivation, and affect (Burke et al., 2009). These factors can impede or assist help seeking behaviors in a number of ways. First, several studies investigating MSM disease management behaviors, specifically adherence to therapies such as ART and PrEP, found that these are influenced by the individual's belief that he will be able to stick to the regimen and/or have the ability to manage the effects of a chronic disease (Li, Huang, Wang, Fennie, He, & Williams, 2011; Dubov, Altice, & Fraenkel, 2018). A 2014 study of young BMSM reported that the participants' internalized homophobia contributed to suboptimal adherence to ART (Levy et al., 2014). The complex nature of the factors associated with self-efficacy can be seen in another study involving young BMSM (Hightow-Weidman, LeGrand, Choi, Egger, Hurt, & Muessig, 2017). The researchers found that even though the participants reported high self-efficacy in their interactions with health care providers, substance abuse behaviors and depressive affect, both of which impair the cognitive processes, negatively impacted disease management behaviors (Hightow-Weidman et al., 2017; Tieu et al., 2018). Evidence that low self-efficacy can be revised as a result of help-seeking behaviors is supported by research involving people living with AIDS, and one study found that improvements of self-efficacy in participants who engaged in motivational interviewing (MI), and this, in turn, resulted in less risky HIV exposure behaviors. (Chariyeva et al., 2013).

Perceived stigma and internalized homophobia have both been associated with affective disorders, such as anxiety and excess stress, and are found to moderate the help-seeking behaviors of sexual minorities (Petroll & Mosack, 2011; Levy et al., 2014; Knight & Jarrett, 2015; Tieu et al., 2018). For example, perceived stigma in African-American MSM and LGBT may lead to psychological issues that negatively impact the level of healthcare engagement, and those individuals with a negative self-image as a black, gay man reported lower self-efficacy in HIV prevention services (Levy et al., 2014). Feelings of depression has been identified as a barrier to testing, accessing care, and medication adherence (Tieu et al., 2018; Pellowski et al., 2013).

Outcome expectations act to modify help seeking behaviors and are shaped by a number of intrapersonal factors. For example, perceived stigma and internalized fear surrounding the possibility of a positive HIV test inhibits testing behaviors in some MSM (Mirandolo et al., 2016; Cooley et al., 2014). One study of MSM aged 18 to 24 in Nevada observed that a barrier to testing included the fear of a positive test (Pharr, Lough, & Ezeanolue, 2016). Conversely, the fear of having HIV operated as a facilitator to testing behaviors among this same group (Pharr et al., 2016). Similar patterns of behavior were found in a review of MSM’s HIV-testing practices in the

U.S. and U.K. (Lorenc et al., 2011). Evinced in the review was the theme that having an HIV test would bring about a sense of relief and peace of mind, but this was framed around a keen expectation that the test would yield a negative result (Lorenc et al., 2011).

Person ⟷ Environment

The intrapersonal factors that inhibit or facilitate help-seeking can be influenced by a number of environmental factors, and, as before, knowledge is a prerequisite for the decision-making process. At a distal level, research provides evidence that MSM are less likely to be aware of prevention therapies like PrEP when they live in areas of the country with anti-gay laws and policies, suggesting that treatments for MSM may be more heavily promoted in gay-friendly communities and states (Cahill et al., 2017; Bauermeister et al., 2013). MSM also reported that a barrier to HIV testing was a lack of knowledge or awareness of testing sites within their communities (Tieu et al., 2018).

Self-efficacy can be modified by the effects from the pervasive discrimination and stigma which reside within the institutional structures, such as healthcare and the educational system (Russell & Fish, 2016). Research has shown that negative social reactions can result in internalized homophobia and excess stress and mood disorders in sexual minorities (Russell & Fish, 2016; Storholm et al., 2013). A review of HIV testing in LGBT youth found that African-American participants with same-sex preferences reported lower levels of self-efficacy than their heterosexual counterparts, and LGBT youth who lived in areas with no or limited anti-bullying or victimization protections were twice as like to attempt suicide than LGBT youth who live in areas where such protections are commonplace (Russell & Fish, 2016). Although these circumstances do not directly address help-seeking they provide evidence of the temporal and compounding nature that these environmental forces have on the individual's self-efficacy in later years.

The decision to access healthcare and the quality of the interactions with medical professionals may be regulated by the individual's beliefs, attitudes, and prior experiences. At a purely structural level, MSM who live in a more urban setting are privy to a higher number of HIV testing sites which, by virtue of their location, provide greater levels of anonymity that may not be experienced in a more rural setting (Mirandola et al., 2016). The availability of gay-friendly and/or LGB specific physicians may also be a factor that impacts self-efficacy in help-seeking (Martos et al., 2018; Storholm et al., 2013). Study participants reported that the task of navigating health insurance networks to find gay-friendly or LGB-specific physicians was challenging, and one study participant in Austin, Texas, labelled the task as 'daunting' (Martos et al., 2018). These circumstances are not unique to Texas and similar obstacles were reported by participants in both Tuscon, Arizona, and New York City, a finding which supports the researcher's prior conclusion that there is an uneven distribution of LGB clinics throughout the U.S. (Martos et al., 2018). Fear was also reported as a factor in HIV testing behaviors and concerns about both the possibility of a positive result and the long-term consequences was found to dampen the motivational forces (Lorenc et al., 2011). The attitude towards services like pre-test counseling services for MSM are mixed and while one study found it useful another study reported that it was counterproductive because of the counselor's judgmental and chastising tone (Lorenc et al., 2011). A facilitator to regular HIV testing was the attitude of responsibility to one's own health, with one study noting routine testing behaviors in 70% of participants (Lorenc et al., 2011). The researchers labeled this behavior as health maintenance and concluded the actions were prefaced by an understanding of the risk behaviors associated with HIV transmission coupled with a commitment to intrapersonal well-being (Lorenc et al., 2011).

The patient-doctor relationship is an essential component in the quest for achieving optimal health outcomes, and environmental influencers work to regulate the quality of the partnership. The level of comfort and trust the patient has in his provider can determine whether he is willing to disclose his sexuality and/or risky sexual behaviors, and such endeavors to disclose may be thwarted if the patient expects it will evoke a negative response (Martos et al., 2018). Instances of perceived stigma from medical professionals may compound the effects of internal homo-negativity and hinder future help-seeking activities (Windsor et al., 2013). Studies involving the help-seeking behaviors of black MSM suggest that they were less likely than other MSM subgroups to their discuss sexuality to their healthcare provider because of a lack of trust, low level of comfort, and concerns surrounding confidentiality (Levy et al., 2014; Cheatham, Barksdale, & Rodgers, 2007). This has resulted in MSM seeking support from informal sources, such as friends in their social network who are accepting of their sexual orientation (Donne et al., 2018). Studies involving help-seeking behaviors in adolescent and youth LGB have found that confidentiality was factor in disclosure to physicians, stemming from fear that their sexual orientation would be shared with parents or guardians (Fisher et al., 2018; Meckler et al., 2016). Prior negative experiences can fracture the relationship with the healthcare professional and impede help-seeking behaviors (Cornally & McCarthy, 2011).

At a social level, HIV test-seeking can be inhibited or assisted by the level of perceived social support (Mirandola et al., 2016). Saint Arnault (2009) goes further and suggests that when social norms characterize ill-health or distress negatively, any signs of illness will evoke emotional responses of embarrassment, shame, and anxiety, and, fearful of the social repercussions, those living within the society will fail to disclose the malady. While there are a number of cultural health models, this particular circumstance can be highlighted in studies showing that HIV-test seeking is inhibited and persons are less motivated by the fear that a positive test will result in societal rejection (Saint Arnault, 2009; Pharr et al., 2016).

Summary

The triadic reciprocal causation model provides a framework to understand the interactive and dynamic relationship between the factors that influence the help-seeking behaviors of MSM. The literature review shows a relationship between the determinants of health and the role they play in the disparate health outcomes as they relate to both chronic and mental health issues. Likewise, the literature review demonstrates how multiple diseases and depressed social conditions interact to mutually reinforce each other, creating syndemic conditions which disproportionately encumber the MSM population with poor health outcomes. While evidence is provided of the interconnected nature of the environmental, behavioral, and personal factors that work in unison and bi-directionally to influence help-seeking in the MSM community, the main focus of research is directed at HIV and STD testing practices, PrEP and antiretroviral treatment engagement and adherence, as well as seeking help for mental health conditions. To date, and to my knowledge, a study of the factors that impact help-seeking behaviors as it relates to the specific threat posed by antimicrobial resistance to shigellosis causing *Shigella* bacteria within the MSM community has not been conducted, leaving a gap in the literature. To promote help seeking for shigellosis within this population, it is necessary to examine their attitudes and beliefs and to identify any barriers that may influence these behaviors. Furthermore, an exploration of these concepts from this new perspective will allow researchers to appraise the generalizability of the theory beyond the diseases previously studied within the MSM population. In order to better inform those in research and public health, as well as to guide policy making, this study aims to provide a fuller appreciation of the key personal and environmental factors that impede or facilitate help-seeking behaviors of this high-risk population as they relate to new and emerging threats and beyond the context of HIV, STDs, and mental health conditions.

Chapter 3: Methods and Procedures

The purpose of this study was to qualitatively explore the help-seeking activities of MSM in Atlanta, Georgia. Gaining an understanding of behaviors, attitudes, and perceptions surrounding help-seeking activities through focus group sessions provided the opportunity to analyze the factors that inhibit or enable such activities. Insight into the roles these factors play may help provide solutions for addressing the emerging threat of antibiotic resistance to *Shigella*/shigellosis within the MSM community. This study was part of a collaborative effort between Georgia State University (GSU) and the CDC's Division of Foodborne, Waterborne, and Environmental Diseases. IRB approval was obtained at GSU on August 24, 2017. Included in this chapter is (a) a description of the research design, (b) discussion on recruitment, (c) the instrument used for data collection, and (d) an explanation of the data analysis.

Research Design

Focus groups are one method researchers use to collect information about things that are not directly observable, those being the beliefs, attitudes, feelings, and intentions of the participants (Kitzinger, 1995). This interactive and dynamic approach helps to stimulate discussion between the group members and allows the researchers to gather information that may not otherwise be obtained through one-on-one interviews (Guest, Namey, Taylor, Eley, & McKenna, 2017). Smithson (2000) suggests that focus groups can be considered a social event and that, within this context, "language is viewed not as a neutral conveyor of information, but as functional and constructive" (p. 105, para 3). While a moderator facilitates the discussion, the scope and depth of the participants' discussion is assisted by the "piggybacking" off of each other's expressed thoughts and ideas (Leung & Savithiri, 2018). Guest et al., (2017) found that in a comparison of focus group and one-on-one interviews, themes surrounding personal and sensitive information were more likely to be discussed in the former setting. The belief is that those who are usually more reticent are emboldened to share their thoughts when they observe other members of the group freely expressing themselves (Kitzinger, 1995).

Sample

The criteria for participation in the study were that the males had to identify as gay or bisexual, 18 years or older, and must have been sexually active with another male in the prior three months. Members were enlisted using both passive and active recruitment methods. Flyers were posted on message boards at various locations around Georgia State University, gay friendly bars in Midtown and Decatur, several coffee houses, a bathhouse, and doctor’s office that provides services to MSM. Participants were actively recruited during a gay-pride festival and by discussing the study with males at gay-friendly locations in Midtown.

Instrumentation and Collection

A moderator guide provided the basis for the discussions and ensured that the questions were standardized for each focus group session. The use of focus groups in this study helped to provide information on the help-seeking behaviors of MSM in the metro Atlanta community. The discussions also revealed existing knowledge about *Shigella* bacteria and how it can be spread. The overall purpose of the study was to determine how health-seeking behaviors, in light of the emerging threat of antimicrobial resistance to *Shigella* bacteria, are influenced by environmental factors and the attitudes and beliefs of the participants. as well as feedback on developing health promotion materials. The overarching research question used was:

> Which elements of the triadic reciprocal causation model are most influential in the help-seeking behaviors of MSM in light of the emerging threat of antimicrobial resistance to *Shigella* bacteria?

The questions within the moderator’s guide were designed to explore help-seeking behaviors of MSM both in general and as they relate to shigellosis. The strategy of each inquiry was to explore the beliefs and attitudes of the participants while not drifting from the intent of the research question and theoretical framework. The questions used in the focus groups were:

1. Where do you go if you have a health-related question?
2. What sources do you trust for health information?
3. Do you trust the CDC or the Georgia Department of Public Health?
4. What about other sources (e.g. internet, doctor, friends, etc.)?
5. Where would you go if you have a question about your sexual health?
6. Who here, by a show of hands, has ever heard of *Shigella* or shigellosis?
7. After listening to the description of shigellosis, what is your initial reaction?
8. Do you think men like yourself are at risk for shigellosis?
9. What do you think men like you need to know about *Shigella*?
10. Because shigellosis can be sexually transmitted, would men like you be more or less likely to hear the message if *Shigella* was called an STD?

The principal investigator (PI) stationed at Georgia State University was the chief moderator, and a doctoral research assistant (DRA) was the alternate. The focus groups were led by the chief moderator in all but one of the sessions. To safeguard the data collection process, the discussions were recorded using two audio-recording devices, each of which were connected to different computers that captured the dialogue in an audio file. In addition to this, abbreviated notes of the participants' responses were documented using pen and paper by an additional one to two graduate research assistants (GRAs). It has been found that audio recording increases both the researcher’s ability to analyze and interpret the participant’s responses and replay when further clarity is needed, and hand-written notes allows for both cross-referencing of the audio and a further investigation of some of the complexities of a discussion that are not typically captured by audio recording (Ranney, Meisel, Choo, Garro, Sasson, & Morrow, 2015). The recordings were transcribed by an outside agency contracted by the CDC. The transcripts were found to contain several errors and were cleaned by the DRA, GRAs and one member of the CDC team by a repeated replaying of the audio recording and cross-checking against handwritten notes.

Analysis

The demographic data were analyzed using Microsoft EXCEL and MAXqda, a mixed-methods software analysis program, was used to analyze qualitative data. A team, consisting of the DRA, two GRAs, and one member of the CDC team, met regularly over a period of four months to complete the code book. The initial process started with a data immersion through repeated reading of the transcripts. Although this step was conducted by each individual separately, it allowed for an incubation of ideas and laid the groundwork for the connection of these within the coding process (Green et al., 2007). Next, the team chose one transcript to focus on, and, individually and using an open coding approach, analyzed the data inductively, line by line, to allow conceptual categories, or themes, to arise from the text (Ranney et al., 2015). The team then met to compare the newly created codes and discuss the meaning behind each, consistently testing the association between the data and team member's interpretations (Green et al., 2007). Each transcript was coded in this manner, and while new codes were added after the analysis of each focus group session, others were refined to increase clarity, merged if too similar, or removed if superfluous. If it was determined that there was an association between individual codes, they were linked and categorized under a parent code that described the overall theme. Although the sub-codes were linked to the parent code, great care was taken to ensure each have a specific and clearly defined definition. Each code included five components: the name of the code; a description; an explanation on when to use; an explanation on when not to use; and, an example of when the code was applied within the transcripts. Saturation was reached when explanations of the data are deemed sufficient, coherent, and no further interpretation can be extricated (Green et al., 2007). The last step was the identification of themes, which necessitates testing the created codes with both the data and the theoretical concepts germane to the study (Green et al., 2007). The help-seeking themes were tested by explaining the MSM's attitudes and beliefs of the factors that inhibit or facilitate their help-seeking behaviors of the MSM in the study within the framework of the triadic reciprocal causation model. This is seen as the most essential component of coding, because it connects the results of our exploration to what we know about populations in other settings, allowing for generalizability (Green et al., 2007). Once the code book was completely developed, a complete review of all the transcripts was completed once more to ensure that all the data were analyzed using the finished product.

Chapter 4 – Results

Demographics

The participants all resided within the metro Atlanta area of Georgia. After an initial phone screening to determine eligibility, a total of 24 (n=24) males were enrolled in the study. During the screening process, each identified as being either gay or bisexual, with one of those identifying as both gay and transgender. The participants' age ranged from 21 – 59, with a mean of 36 (± 9.8). Of the 24 participants, 13 (54.2%) identified as African-American, nine (34.5%) as Caucasian, and two (8.3%) as Hispanic. The level of educational attainment was one (4.2%) who reported some high school, two (8.3%) completed high school, four (16.7%) reported some college, 11 (45.8%) had completed a four-year college degree, and six (25%) participants had a doctoral degree.

Focus Groups

The data for this study were collected in a series of six focus groups held over a four-week period in November and December 2017. These were conducted in one of several meeting rooms at the GSU campus in downtown Atlanta, Georgia. The participants who traveled on public transport were refunded for their travel costs and those that drove were refunded for any parking fees. Once on campus, a GRA met the participants at a central location and accompanied them to the focus group location. The participants were required to register their arrival by completing a sign-in form, and to ensure anonymity during the focus groups and analysis stage, were asked to select a pseudonym, which was also recorded on the sign-in sheet. Each participant wrote their chosen name on both a wearable name tag and a place card that was to be placed in front of them during the focus group session. Each individual was provided with a copy of the ground rules and a consent form to read and sign prior to the start of the group discussions.

The tables were set up in a rectangular “donut” fashion depending on which room was used and how many participants attended. The chairs were placed on the outside of this configuration to ensure that every participant was facing inward and each would be visible to the other attendees. Two audio-recording devices were placed on a separate table set up in the center space of the table configuration. The recording devices were tested at the beginning of each focus group to ensure they were working as intended. The GRAs were seated in chairs set at the edge of the room and took handwritten notes. On entering the room, the participants were allowed to sit on any of the chairs, except that of the moderator. They were asked to set their place card with their pseudonym in front of them so that everyone could see it. The moderator read aloud the ground rules and did an introductory icebreaker with each participant. The smallest focus group had two participants, while the largest had seven, and the sessions ranged in length from 43 to 70 minutes. After completion, each participant was compensated for their time with a VISA gift card valued at $40.

Themes

Using MAXqda analysis software, themes relating to the general help-seeking behaviors of the MSM community are identified as:

- MSM use the internet to search for general and sexual health information
- MSM believe that, when compared to a primary care physician (PCP), general and sexual health information posted online is less trustworthy and credible
- MSM believe that a gay-friendly doctor and/or a doctor who understands the gay lifestyle is more important than having a doctor who self-identifies as gay
- When searching for a gay-friendly doctor, MSM rely on their social networks for help

MSM use the internet to search for general and sexual health information. Twenty two (92%) of the participants reported using an internet search engine or health-based website to acquire more information on general and/or sexual health topics. The main reasons provided centered on convenience and the high level of connectivity that phones, tablets, and computers now provide. This can be displayed in the following statements:

> "Yeah, but yeah … so … and it's always, it's in the palm of my hands 'cause I always have my phone." (Courage, fg6)
>
> "We're so connected to the Internet now so." (Matt, fg3)

One participant went further, stating the Internet, aside from the convenience factor, also provides a level of privacy that is generally unavailable within a physical healthcare setting. He alludes that the ability to remain anonymous provides a safeguard from negative judgments. He states:

> "Internet. Convenience. Quick, um, and nobody can really…I don't have to show my face, I don't have to open my mouth, I can just type." (Courage, fg6)

Conversely, the general criticisms regarding health-information websites, such as WEBMD, were that search results would often produce findings ranging from the mildest to the most severe disease outcomes, those being cancer or death. Several participants found this alarming and remarked that this feature elicits fear and anxiety in the user. These perspectives can be demonstrated by the following:

> "I'd probably say the same, I have a lot of friends that are nurses so I tend to ask them, and if I'm too embarrassed to ask them [*coughing]* usually, my doctor. And then sometimes the Internet, but that tends to just freak me out even more, so I try not to do that." (Brian, fg5)
>
> **"**Because everything is like 'Okay great, I have cancer and I have this and I have that and I have that,' you're like 'Oh my god I have every symptom, so I'm dying'" (Beyoncé, fg6)
>
> "Or things that could be misconstrued and then you just get yourself anxious." (John, fg5)

MSM believe that, when compared to a primary care physician (PCP), general and sexual health information posted online is less trustworthy and credible. Even though the overwhelming majority of the participants reported using an internet search engine or health-information websites to gain more general and/or sexual health knowledge, many of them felt that the information the sites provide to be less credible and trustworthy than the advice they receive from their PCP. Several examples which display this point of view are:

> "The reason why I said that is that even though I search online, like I had a cold, I searched online, like what is the common cures for colds and everybody kept, to me, it felt like it was just giving me an indirect answer when I just wanted one answer. Tell me this, tell me what I need to go buy. So, I would say a physical doctor versus the internet. But, we all use it." (Tee, fg4)

> "The same thing, a doctor. Because like he said, I know when you sick you sick, and you go on the internet it comes up with everything else and it's like you want one specific thing and the internet gives you every disease, every other and then you start getting scared like, 'Do I have this?' And everything has the same symptoms. And it's like, so you like, do I have this, oh my god, and then you start panicking when it could just be a cold so, I just trust a doctor more than anything." (DJ, fg4)

MSM believe that a gay-friendly doctor and/or a doctor who understands the gay lifestyle may be more important than having a doctor who self-identifies as gay. When the participants were asked if they prefer a doctor who self-identifies as gay, the responses were mixed, but most felt this was less important than having a doctor who is gay friendly and understanding of the gay lifestyle. For those who prefer a doctor who self-identifies as gay, three (12%) confirmed that they actively searched for a gay doctor. The reasons cited were that they feel more comfortable asking sexual-health questions to a doctor who self-identifies as gay, as well as the belief that a gay doctor will be more understanding of their concerns and needs. One participant stated:

> "Yep that's what I have. Like, I have a gay physician who specifically, like I sought him out because of that, like, its, the primary care then also like all the other doctors that work for that office are all gay, and then

> specifically they do a lot of treatment for on, people who are on PREP, like me. So for me it's better to kind of have that because they can understand certain questions that I have or certain issues that arise and I'm like, 'Okay, I don't feel comfortable talking to a straight doctor about this,' but with a gay doctor, it's a little bit better because they can understand what I'm going through." (Beyoncé, fg6)
>
> "That was one of the reasons why I chose a gay doctor, so I'd feel more comfortable asking questions." (Griffin, fg3)

A total of seven (29%) of the participants reported that they visit their PCP for both general and sexual health needs and eight (33%) stated that it was important that their doctor is gay friendly and makes them feel both comfortable and at ease, no matter the health topic. This can be highlighted in the following discussion:

> "Yes because like they said I feel so comfortable about everything where it doesn't matter to me what the questions is." (Bradley, fg1)
>
> "Yeah, if I have any questions I tend to go to him first. He's, like I said, I've been with him for ten years and we have a rapport and I feel very comfortable with him and it's very easy to ask questions and things that may come up along the way, as far as sexual health and so forth so" (Doug, fg2)
>
> "I don't know. Like my doctor's old, like really, really, really old. Like he's an older Indian guy. He's real like goofy and funny, like he makes you comfortable, that's why I guess we all trust him because he knows us. He's known us since we were kids and I'm 25 now, so you know it's just like you've known me all my life pretty much, so if something's going on, I know what's going on with you so that's why I trust him." (DJ, fg4)

Still on this theme, three (12%) participants stated they specifically did not want an LGBT doctor, proclaiming that they found them too rash and/or judgmental. Some of these feelings were based on personal experiences and others on comments from those in their social network. This belief can be revealed in the commentary below:

> "Rash, like, just, they're not, they're not accommodating or yeah." (Deon)

> "And sometimes it's really bizarre what you hear socially about one doctor over another and like this one gave him the talk and this one doesn't, uh even though they are an LGBT-centric doctor and they, you know, did some shaming about somebody and you, you know, pick up on that real quick." (August, fg1)

> "Some of them are just horrible. They're just horrible. And I think that they're there just because of the pay and just because of saying they're giving back to the community but not really actually passionate about what they're doing so." (Deon, fg1)

A subtheme that emerged within this area was that of medical-provider stigma. Four (17%) of the participants discussed negative experiences with doctors that made them feel stigmatized, resulting in them seeking out friendlier, less judgmental practitioners. The following highlights their experiences:

> "And I searched that, I looked for that particularly because I had a situation where I was going to a doctor off Windy Hill and as part of my yearly physical, I asked for an HIV test as part of just my bloodwork. And um, the second time I went to him he was like you routinely ask for an HIV test and proceeded to lecture me on condom use and I didn't appreciate that. I don't feel like once a year is routine, I'm not in there every three months you know because I think I'd done something wrong or, made a mistake or something and needed a test. So I looked for somebody who would understand issues better, gay men's issues better." (Matt, fg3)

> "You know, that does make sense because when I first got my primary care doctor, and I was just on Google and I really just went to Google and I, I wanted one in my area where I was working at the moment and I found a practice down the road, and googled em. I was like 'Okay, I'd like a male guy and I'd prefer him to be black.' So um, he was a younger guy so I went, and he was a really nice guy, so I went to ask him about PREP. He's like, he didn't know about it. I wouldn't say he didn't know about it, but he didn't wanna give it to me. So I was like, 'Okay cool, I can just go to another doctor and get it.' You know, find other resources, but I was like, 'Why wouldn't he…' and he was like, 'Well you don't, if you want to do something to put your life in danger, why would you want something to help you not get it whatever, whatever.' So I was like, you know, I was kinda thinking, like, you know how's that make sense? I'm asking you for something to help me, you know who we are, and all the more now that he had a lack of knowledge of it, like he really didn't know 'cause I was asking him questions like, 'What are the effects? Will

> it do this or that?' Even though I kinda already did the research, he was like, 'I'm not really sure,' 'cause I normally have the knowledge on it. So now when I find a new primary care doctor, I want to find a doctor like that, to know that you can help me and know what I need." (Fruit, fg6)

> "Yeah, I haven't had the best experience with AID Atlanta either. I prefer like, 'cause like Positive Impact and Mister have been a little bit more approachable. There's been, I don't know, I feel like the employees are a just a little bit better, but with AID Atlanta, I've always had a negative experience whenever I wanted to go in for a test and then that's why I switched over to my primary physician, I was just like nope, I can't do it, I mean—" (Beyoncé, fg6)

MSM turn to their social networks with help in searching out a gay or gay-friendly doctor. During discussions on the mechanisms the participants use to find a gay or gay-friendly doctor, 11 (46%) participants revealed that they sought the advice of those within their social networks. This suggests that the opinions and beliefs of those within their social network play an important role in the decision-making processes. This can be shown in the following commentary:

> "Just like, hey, who do you guys trust for x, y, and z and who's good? And not gonna give me a lot of flack." (August, fg1)

> "I was already going to, no I think I reached out to some friends who had a doctor they liked who was gay. He's no longer in practice, but then he referred me to my current doctor who is also gay so, referral." (Matt, fg3)

> "Like most of my friends are gay men, so I tend to trust their opinion about that sort of stuff a little bit more and if … like I said a lot of them are like nurses and stuff so, usually if they suggest somebody, and they're close to where I live, then that's just kind of how I pick my physician, and I've been with them ever since." (Brian, fg5)

The following themes relate to the environmental and personal factors which influence help-seeking behaviors of MSM in relation to the emerging threat to antimicrobial resistance to *Shigella* bacteria/shigellosis. Rather than addressing the themes separately, they are explored collectively and within the context of the triadic reciprocal causation model. This framework which helps to illuminate the dynamic and interactive relationship between each of the three elements of person, environment, and behavior:

- There is very little knowledge of *Shigella* bacteria/shigellosis within the MSM community
- MSM believe that there is a need for increased societal and physician awareness of *Shigella* bacteria/shigellosis
- MSM perceive the emerging threat of *Shigella* bacteria/shigellosis is just another disease to add to the list of existing diseases within their community
- Outcomes expectations work to regulate help-seeking behaviors of MSM
- MSM perceive that the shigellosis informational material made them feel targeted and stigmatized
- MSM are divided on whether shigellosis should be labeled an STD

Person ⟷ Environment

The focus group discussions revealed the participants had either a complete absence or limited knowledge of *Shigella* bacteria and/or shigellosis, and of the 24 participants present, only four (17%) had heard of the word *Shigella*, two (8%) knew it was a bacteria, and two (8%) knew it was transmitted via contact with infected fecal matter. On hearing the word *Shigella*, six (25%) participants associated it with the medical condition shingles, stating it sounded the same.

Shifting to the theme of awareness, every participant, with the exception of four (17%), had not heard of *Shigella* bacteria/shigellosis, leading them to conclude that if they are unaware, those within their social network and the MSM community at large must also be unaware. Most expressed a need greater awareness of the threat that shigellosis poses to the MSM population, with several stating:

> “Yeah. I mean this hasn’t been widely talked about so I suspect once it gets out there and people start being educated about it then you can have that conversation because people be like, “Oh, okay”.” (Calhoun, fg3)
>
> “It’s always the next thing. It’s hard to keep it consistent, which this kind of problem would need to be consistent. There needs to be a way to get it in your face and kind of keep it in your face for a little while.” (August, fg1)
>
> “Uh, not so much that anyone’s trying to hide it but it’s just that the awareness isn’t out there or maybe something that’s not common, but common within the MSM community, but not something that we speak on as often, such as, like, AIDS or any other STI so—.” (Blake, fg1)
>
> “Especially if they’re going to the doctor like they’re supposed to. With cramps and fever, cause an un-, cause an uneducated person would quickly say it’s nothing but a stomach virus. And the truth of the matter is, it’s more than just a stomach virus. Something that can possibly take you out of here so—.” (Tee, fg4)

Continuing on this theme, the participants’ comments suggest that they perceive there to be a low level of awareness of shigellosis within the medical community, thus limiting their ability to receive an accurate diagnosis and treatment plan. One attendee, recently hospitalized for an undiagnosed diarrheal condition, remarked that the medical team did not mention shigellosis as a possible cause and, as far as he is aware, he was neither tested nor treated for it. Others expressed similar concerns, stating:

> “That’s a, that would be a fear of mine is the dehydration, ‘cause that can lead to other health care, I mean health problems. And it also makes me wonder, like, how many health care providers are even aware, or, like, think to bring it up.” (Blake, fg1)
>
> “I probably, in like addition to those two suggestions, like I feel like it’s probably like it’s a good thing to probably tell people in different like um LGBT health clinics to talk about it, about it more. Um because like, I’ve been to, you know, Mister and all those clinics here in Atlanta and I’ve never heard, I mean like, I think in our community we always stress like … obviously like HIV and AIDS.” (Brian, fg5)

After being informed on transmission, symptoms, and outcomes associated with *Shigella* bacteria/shigellosis, the participants were asked to consider how serious this is for the well-being of the MSM community. The initial responses were mixed, ranging from indifference to concern. Examples of both perspectives can be seen in the following commentary:

> “I just dismissed it. I mean, like, if it’s not in a Top 10 list somewhere, like, your common, I’m like it’s either so rare you’re screwed or it’s not a big deal. No, I’m saying like right now I’m immediately going, I don’t know what this is but it can’t be that big of a deal.” (Bradley)
>
> “I think it’s concerning and something to be aware of. Um, I feel better knowing that it’s out there, and can take precautions.” (Griffin)

An additional theme to emerge is the participants’ perception of the threat that shigellosis and antimicrobial resistance poses to the MSM population. Falling under the domain of outcome expectancies, the general belief is that, when compared to risks associated with HIV/AIDS, this relatively new threat is both less concerning and critical. Several of the participants discussed the impact of HIV/AIDS from both a historical and contemporary position, suggesting that any new threat to the MSM community is weighted against the prior and ongoing dangers posed by the retrovirus. These perspectives can be shown in the following:

> “I’m gonna say this as well. Um *Shigella*, it can become an epidemic or something but right now, as of now, being that people do not know about it, and as people looking at it only as a stomach virus, it’s not going to be taken as serious as if it was HIV or AIDS. Not to say that gay people don’t care but like, to them, this is very, very minute, it’s very small, a very small thing. ‘Cause that’s just their way of thinking, I can get rid of this in a week or I can have HIV for the rest of my life, like that’s the way they’re gonna look at it. That’s the way they’re gonna weigh it. You feel me? ” (Deon, fg1)
>
> “Because gay men over the last several decades have dealt with dying so this is nothing compared to what there is so, in comparison I think because HIV/AIDs is so heavily identified in the gay community, um, this isn’t, I mean like I said it’s good to know about this, but it’s not terribly concerning.” (Griffin, fg3)

> "Exactly, and people are not going to worry about it. If there's no long-term health risk" (Deon, fg1)

Continuing on the theme of seriousness and comparisons to HIV/AIDS, the participants' attitudes and level of concern were modified when they came to more fully understand the implications of shigellosis and possible treatment failure, especially for those who are immunocompromised. Up to this point, several noted that because shigellosis is treatable and curable, it is nothing more than a short-lived inconvenience. Two participants (4%) believe that the body's defenses will take care of shigellosis, negating the need for seek any type of medical intervention. However, these positions were revised when the participants came to realize the negative health consequences of antimicrobial resistance to those with HIV. This attitude adjustment can be highlighted by the following:

> "I mean that's what I just caught, the, it's resistant to two antibiotics, uh which means that it could develop resistance to all antibiotics and become like a more recurrent thing. So, that's definitely a concern." (Blake, fg1)

> "If you're, because I went back and looked at this and it's only on one little point whereas this is one of the main things. So if it, I think one, an honest objective perception weighting of is that a rare case, very rare and it's just the potential that it can happen? Or is that very likely to happen for people who have HIV. If this is very likely to happen with people with HIV then that needs to be much more the outreach…" (Bradley, fg1)

Within the context of health concerns, a new theme emerged. Ten (42%) participants noted that the emergence of shigellosis further encumbers the MSM population, noting it is one more thing to add to the list of existing threats. This attitude can be demonstrated by the following:

> "There's enough things that we, you just added on the list, you've got syphilis, gonorrhea, you just tag it onto the list." (August, fg1)

> "So now maybe I'll put it on the list." (Doug, fg1)

> “I mean, it would just be added to the list of all the STDs that we already know about, that we’ve been learning about, like I said, people gon’ do what they want to do at the end of the day.” (DJ, fg4)

> “Okay, I can really laugh at this, but you know I’m being educated on it, um, yeah, ‘cause I mean, I know, me personally, here’s one more thing that I got to worry about, so this is one more thing I have to think about, wow, I’m—.” (Rose, fg6)

The theme of feeling targeted and stigmatized arose after the participants were asked to read an informational handout designed to raise awareness of the risks associated with shigellosis to the MSM population. Upon reading the material, some participants revealed that the content made them feel targeted, with several commenting that straight people also engage in some of the high-risk behaviors, such as anal sex or “booty play”. One participant expressed concern that targeted messaging would perpetuate discrimination and further stigmatize the MSM community. Enacted stigma has been shown to negatively impact engagement with healthcare professionals. The emergence of this theme can be demonstrated elucidated with the following statements:

> “ Um, I guess because of what the gay community has faced over the last several decades, um maybe I have a tendency of looking at things a little more critically. Um, it’s slightly, it’s slightly offensive to me for some reason, um because it’s such a targeted population.” (Griffin, fg3)

> “Simply because it only talks about being bisexual and um gay, which I think could potentially further perpetuate stigma and this is only something that gay men and bisexual men get.” (Griffin, fg3)

> “..’Cause there’s already like, you know, there’s a lot of bad, you know, things that are already said about, like, gay people and diseases, as far as like the HIV and whatever that we already have to kinda deal with and, um, I feel like this is just, this would just kinda fuel that because they’re not gonna read it, they’re not gonna see oh, this kinda affects everybody or I don’t know, it just [*background coughing*] seems like it would be bad PR for like the gay community.” (Chris, fg5)

The last theme to emerge under this domain was whether shigellosis should be labeled an STD. The discussion on different modes of transmission outside of sexual practices left the participants divided, with eight (33%) stating that it should not be labeled an STD, five (21%) who were undecided, and five (21%) who agreed it should be. One participant felt that labeling it as such would encourage more people to get tested for it. However, those with the opposing views felt that either it would not matter or since it can be transmitted non-sexually, it would be incorrect to label it an STD. The differing of opinions are exhibited below:

> "I think identifying it as an STD would probably make more of an impact." (Griffin, fg3)
>
> "I think you should label it as an STD simply because that will make the, uh, get tested for -" (Rose, fg6)
>
> "Well not necessarily an STD you can get it from like changing a baby's diaper or something." (Aiden, fg3)
>
> "Hm no. They don't listen to the STDs that they got now. You know how long we been hearing about STD's, even since middle school, and still catch em?" (DJ, fg4)

Person ⟷ Behavior

The theme of knowledge as it relates to help-seeking behaviors for shigellosis was revealed within the discussions. Participants were, for the most part, unaware of when to get tested, the type of test(s) currently available, as well as available treatment options; discussions of a shot or vaccine provide further evidence of a knowledge gap. Such a deficiency will play a pivotal role in the individual's decision-making process of when and how to seek help for a possible case of shigellosis. The participants stated:

> "Do they have a specific test for it, or if you go to the doctor, and if they do bloodwork for everything, is it in there? (Chip, fg1)
>
> "Um, what are the, how do you know if you have it or not? What are the symptoms? And what's, you say antibiotics treat it?" (Chip, fg1)
>
> "How do you test for it?" (Brian, fg5)
>
> "No blood tests or anything of that nature?" (Shilo, fg6)

> "I just thought it was just a little like I use the bathroom, then have to get a shot and be done with it." (DJ, fg4)

Still on the theme of testing, two (8%) of the participants expressed disgust when they discovered that providing a stool sample is currently the only available method to test for the presence of *Shigella* bacteria. This feeling of disgust may serve as a barrier to testing behaviors. The discussion thread below reveals this attitude:

> **"**So, the only way to test for this is through a stool sample?" (Shilo, fg6)
>
> "Oh wow!" (?, fg6)
>
> "Yeah. That's.." (Shilo, fg6)
>
> "Oh my God." (Rose, fg6)
>
> "That's a turn off for the most part (laughter)." (Shilo, fg6)

Concluding in the theme of knowledge, the participants expressed a willingness to acquire a deeper understanding of *Shigella* bacteria/shigellosis, indicating that the foundational information had a motivating effect. This may signify that the participants want to be better equipped to make help-seeking decisions related to this emerging threat. A sample of the questions demonstrate their eagerness for more information:

> "Yeah, and I would like to hear what the effects would be on somebody who is HIV-positive. I would also like something to be written about what happens to the, uh, people who are HIV-positive, or on various other medications." (Calhoun, fg3)
>
> "So, if it's becoming resistant does that … don't that mean, like, um, they will have it forever?" (Mario, fg4)
>
> **"**If you don't have HIV and you get it though, and you get one that's not, doesn't have a vaccination or whatever, does that just mean, you just have it longer or it just has to take longer for it to get better on its own? Or what?" (Chris, fg4)

> “Yeah, does the bacteria stay in your body at any point? Is it dormant?” (Beyoncé, fg6)

Outcomes expectancies as a regulator of help-seeking behaviors emerged as a theme during the discussions. This can be seen in several areas. First, several participants discussed how the need for shigellosis testing is negated because the effects of the condition will have cleared by the time the results came back. This can be demonstrated in the following discussion thread in focus group one:

> “…by the time you get your bloodwork back, it’s gone. I mean, just…” (Bradley, fg1)
>
> “I cringe every time I get a testing bill I’m like, ‘just give me the shot.’ (August, fg1)
>
> “Well even with that, I mean, by the time, like, I mean it’s, a week is nothing” (Bradley, fg1)

Continuing on the theme of outcome expectancies, the participants’ perception of the generally mild and self-limiting symptoms associated with shigellosis may help to regulate help-seeking behaviors, with several expressing that such outcomes negate the necessity for engaging with a healthcare professional. The following comments exhibit these beliefs:

> “And your body handles it, you don’t necessarily need medication” (Bradley fg1)
>
> “But it almost just seems like, ‘Oh, this will pass,’ or like, like that, it doesn’t seem, it’s kinda like, ‘Oh, this is a huge inconvenience, it feels awful, but I don’t really have anything to worry about,’ as opposed to, ‘Oh, this is a big deal because if left untreated or whatever I might not, like, antibiotics might not even help it.’ Where I feel like, that’s kind of, like, uh the focus that people are putting on like gonorrhea and stuff now is because, you— people just think like, ‘oh I’ll just take a shot,’ But now, people are saying, ‘Well, this is why it’s important’ is because there’s like these other strands, like I feel like I haven’t seen that anywhere really, just saying like, ‘Why this is important?’ ‘Cause right now, it just seems like more or less a stomach flu that just lasts several days longer, you know what I mean?” (Brian, fg5)

Nevertheless, a revision in these attitudes followed when the participants came to realize the threat that an increase in antimicrobial resistance and the critical nature of the disease with those with HIV. This change can be demonstrated with the following comments:

> "There's something different with this that I'm noticing on this that I haven't seen, and that we haven't really discussed. It says that it's life-threatening especially if you're living with HIV. So that changes the perception of the longer term. So if…" (Bradley, fg1)
>
> "Um, because I know a lot of people even kind of downplay chlamydia and gonorrhea because they can be treated. But like I said, once you saw the HIV connection, then its like, 'oh, well my perception is a little different.'" (Blake, fg1)
>
> "I mean that's what I just caught, the, it's resistant to two antibiotics, uh which means that it could develop resistance to all antibiotics and become like a more recurrent thing. So, that's definitely a concern." (Blake, fg1)
>
> "So that changes the priority of its relevancy now, you know what I'm saying? Because if you are living with HIV, then that is something that can potentially kill you, if not treated." (Deon, fg2)

As previously discussed, the theme of stigma emerged as several participants revealed that they felt targeted by the CDC informational literature. While the participants did not address stigma as a specific barrier to help-seeking behaviors for shigellosis, such perceptions could ignite and/or magnify internalized homophobia, a factor which is seen to negatively impact the desire to engage with healthcare professionals. This can be displayed in the following commentary:

> "Um, I wouldn't go too far into that, I'd hate for those kind of things to be out there and leak in to the straight community. I think it really gives a bad perception of the gay life." (Aiden, fg3)
>
> "So there's an assumption that you already have *Shigella*, which I don't appreciate." (Griffin, fg3)
>
> "Cause that sends another message to the gay community that we're dirty. Possibly." (Griffin, fg3)

Environment⟷ Behavior

The theme of help-seeking behaviors relating to testing for shigellosis emerged, and several participants felt that it should be added to the list of tests done when they visit their doctor and/or sexual health clinic. However, three (12%) stated that cost to test for shigellosis was a barrier to accessing the healthcare system. One example of this can be seen in this thread:

> "The question is how much is that test how accessible is that test to (mumble) everyone because that's what's killing me every time like I said—." (August, fg1)
>
> "It's only about $500." (Deon, fg1)
>
> "See that's-." (August, fg1)
>
> "I don't know, I'm just saying" (Deon, fg1)
>
> "Even 50 bucks for a bacteria is too much. It has to… It's, cause it's like, it just gets expensive." (August, fg1)

Commentary relating to social networks reveal the important role these play in the MSM community, influencing the decision-making processes on which behaviors to embrace or reject. Although not directly connected to help-seeking behaviors for shigellosis, pre-sex discussion behaviors relating to inquiry about and/or disclosure of a recent episode of diarrhea with prospective sex partners may shed some light on the participants' perceptions surrounding possible societal rejection, guiding which behaviors to embrace and reject. Relating to inquiry, three (12%) participants stated that prior to this study, they made health-status inquiries prior to sex, nine (38%) did not, and as a result of this study, six (25%) said the threat of shigellosis has motivated them to change their pre-sex inquiry behaviors. Exhibiting these attitudes are the following comments:

> "And now that I know this, I want to tell every person that I know, and I even, like sexual, like a friend, like 'We gotta talk about this, it's important.' You need to start asking, 'Have you had diarrhea? You been pooping a lot lately?' before you put your tongue down there." (Fruit, fg6)

> "I ask a lot of questions, now knowing this just adds another question. Do you know what *Shigella* is?" (Tee, fg4)

> "Well if it's someone I really like and I'm thinking about rimming or something, then I'd probably ask them now, because I wasn't aware of this before. But yeah I'd probably be more cautious." (Aiden, fg3)

With regards to pre-sex disclosure conversations, nine (38%) participants stated they would tell their partners they recently had an episode of diarrhea. However, it is important to point out that no distinction was made to determine if this will be a newly adopted behavior as a result of the study or the continuation of an existing one. One participant, who is currently in gender transition from male to female, discussed her fear of rejections in the following statement:

> "You have to have will and power when it comes to just the attraction of encountering, you know with the encounter, um, you don't wanna be talked about, you wanna be comfortable of course, but I mean, you want it to be nice, a well, situation even if your hormones get the best of you." (Pink, fg2)

Chapter 5 - Discussion and Conclusion

Research Question

Which elements of the triadic reciprocal causation model are most influential in the help-seeking behaviors of MSM in light of the emerging threat of antimicrobial resistance to *Shigella* bacteria?

Discussion

This study provides valuable insights into general help-seeking behaviors of MSM, as well as the environmental and personal factors which influence those behaviors in relation to the emerging threat of antimicrobial resistance to *Shigella* bacteria. First, the discussions highlight that an overwhelming majority of the MSM in the study use the internet to seek out information on general and sexual health topics, and this behavior is motivated by the convenience and high level of connectivity that the internet provides. Even as frequent consumers, however, they judge that much of information they read to lack both credibility and veracity, believing traditional intermediaries of health information to be more trustworthy. This point-of-view may be driven by several factors. First, a search result on the internet requires the consumer to engage cognitively in order to evaluate the content and its source before coming to a conclusion of its accuracy, and the proliferation of information that has flooded the internet can make this a daunting enterprise (Metzger & Flanagin, 2013). Second, the consumer may feel that the traditional intermediary, in this instance the doctor, is more expert and a better arbiter at judging the credibility of the information before it is conveyed to the patient (Metzger & Flanagin, 2013). The internet-use behaviors of those in the study suggest that when seeking general and sexual health information, convenience and connectivity may initially be more important than credibility and veracity, but, ultimately, the consumer will turn to those they believe to be more trustworthy purveyors of information. One caveat is that the MSM in the study who are aware of the CDC website, perceive the information posted on this site to be reliable and trustworthy.

Next, the MSM revealed that, rather than self-identifying as gay, it is more important that their doctor is gay-friendly and understanding of the gay lifestyle. While some felt it was important that their doctor is gay, several more took the opposite position and said they purposefully stay away from those who self-identify in this way. These judgements, based on prior experiences, guide their decision-making processes on doctor selection. The doctor-patient relationship is a vital component for healthcare engagement, both for advice and for services, and prior research has demonstrated that a relational deficit can result in the help-seeker's decision to abandon their efforts to seek care and/or continue with vital services (Paz et al., 2009: Petroll & Mossack, 2011). Several of the MSM within the study discussed feeling stigmatized by negative experiences with healthcare professionals, forcing them to search out providers that would be less judgmental of their lifestyle. This is another environmental barrier that fractures the doctor-patient relationship and a recent study reveals that patients in the Deep South are more at risk of experiencing HIV-related stigma within a healthcare setting (Stringer et al., 2016).

Using the framework of the triadic reciprocal causation model, a component of Social Cognitive Theory, these focus group discussions revealed which factors most influence their help-seeking behaviors as it relates to the emerging threat to shigellosis and antimicrobial resistance. By far, the majority of the factors that influence help-seeking were found to reside within person-environment segment of the triadic model. First, discussions with the MSM in the study revealed either an absence of or very limited knowledge of shigellosis and/or *Shigella* bacteria. This lack of knowledge will surely have impacted any prior help-seeking in relation to shigellosis since this is elemental to the decision-making processes. Similarly, the MSM in the study perceive a lack of awareness in the wider population and, more concerning, within the medical community. Their conclusions are based on the lack of shigellosis-related discussions within their social networks and their doctors. Although both of these factors are impediments to help-seeking behaviors, the latter is more of a threat because the perception that the medical community lacks awareness may influence the decision-making processes when experiencing symptoms related to shigellosis.

The next influencing factor revealed in the discussions was the initial attitudes on the level of risk that *Shigella* bacteria/shigellosis poses to MSM, both personally and for the wider community. The discussions revealed that this new threat, and possibly existing threats such as gonorrhea and syphilis, are measured against the historical and contemporary consequences of HIV. Initially, the perceived risk of shigellosis and its outcomes were low but opinions were modified when the MSM in the study understood the life-threatening implications of treatment failure for those who are immunocompromised. The outcome expectancies related to the long-term consequences may work to encourage future help-seeking behaviors for those with this newly acquired knowledge. Such attitudes, however, may be tempered by the view that the threat of shigellosis is just one more burden for their community, a perception that may dampen the intention to seek help.

Lastly in the segment, the discussions revealed that the some MSM in the study felt targeted by the shigellosis health literature they were asked to read as part of the study. One participant stated that such messaging works to perpetuate enacted stigma, a known barrier to help-seeking. Those in public health must be mindful of the unintended consequences when creating and designing communication campaigns and ensure that the content increases both awareness and acceptability while not unintentionally causing distress. A review of prior mass-media awareness campaigns aimed at reducing risky behaviors for HIV transmission and acquisition determined that although there was some short-term increase in HIV testing, there were no effects on behavioral outcomes or HIV-status disclosure (French, Bonell, Wellings, & Weatherburn, 2014). Although the campaigns were found to be mainly ineffective at meeting their objectives, the researchers found compelling evidence that imagery, phrases, content, and tone could enhance acceptability (French et al., 2014).

In the model segment of person to behavior, the discussions revealed an absence of knowledge surrounding testing and therapies. This is not surprising based on the overall view that of knowledge discussed in the prior section. This deficiency will impact their ability to find and secure the necessary testing and therapies when experiencing shigellosis-related symptoms. Although not significant, a potential barrier to testing was revealed when two participants expressed disgust at having to provide a stool sample for diagnosis.

On the theme of outcome expectancies as a regulator of behavior, the MSM in the study expressed that the mild and relatively short-lived symptoms associated with shigellosis negated the need to seek help for either testing or treatment. However, these feelings were revised when the participants came to appreciate the life-threatening consequences for those with HIV and antimicrobial resistance. This may be an important factor when designing an awareness campaign because without the connection to HIV and treatment failure, the MSM in the study were generally unconcerned about the effects of shigellosis.

Within the segment, and returning to the discussions on feeling targeted by the shigellosis health literature, the perceptions of feeling targeted may promote internalized homophobia, which is a known barrier to help-seeking. As stated before, any awareness campaign must take great care when designing appropriate content.

In the final segment of the triadic model, environment to behavior, the discussions revealed that the cost relating to shigellosis testing may act as a barrier. Costs of healthcare services serve as a barrier for MSM accessing the health system (Underhill et al., 2014). This has been shown to be the case for PrEP use, and the MSM in the study may view that paying for a test for something as common and insignificant as diarrhea may be not be worthwhile. Finding a way to limit exposure to out-of-pocket costs would be one way to reduce this barrier. Another way would be to ensure that both the MSM and physicians recognize when a test for shigellosis is necessary, thus reducing the costs for unnecessary testing.

Finally, discussions revealed the level of import that the MSM in the study place on the attitudes and beliefs of those in their social network. In the general help-seeking discussions, many of the participants discussed that the opinions and beliefs of their friends and close family helped to drive their decision-making processes in their quest to find a doctor. As it relates to help-seeking for shigellosis, the lack of knowledge and awareness in the wider population made it inevitable that there would be no direct discussions on this topic. However, we did get a sense that in the discussions relating to inquiry and disclosure of any diarrheal episodes to a prospective sexual partner, the participants were, for the most part, willing to bring the topic up, even though it may lead to societal rejection. It could be inferred that the risks related to shigellosis may outweigh the fear of such rejections.

Conclusion

This study has contributed to previous knowledge relating to the help-seeking behaviors of the MSM community. It will inform the public health and medical communities about the environmental and personal factors which impede and/or facilitate help-seeking behaviors of MSM. As a result of the discussions, it is evident that there is an urgent need for a public health communication campaign to raise awareness of the risks related to shigellosis and antimicrobial resistance. Persistence in the absence of knowledge on this topic may result in a continued upward trend in the prevalence rate. This study also helps to inform those in the field of public health of possible avenues for the dissemination of an awareness campaign and the factors that influence and guide such behaviors. The challenge will be developing an awareness campaign that reaches those at high risk for shigellosis without making them feel negatively targeted, a factor that drives perceived stigma and internalized homophobia. Lastly, the MSM in the study revealed that they are influenced the attitudes and beliefs of those within their social network. This knowledge could be used to when designing an outreach campaign designed to increase awareness in the MSM population using a snowball effect, especially those considered high risk and/or hard to reach.

There are several limitations to this study. First, the study size was small and represented neither the racial demography nor the educational attainment of the general population. As a result, it is difficult to generalize the results to the population at large. A further limitation is that the participants self-selected, which could introduce bias into the results. The third and final limitation is that not all focus groups were moderated by the same person; the PI conducted five and his understudy moderated over one. The difference in styles, delivery, and discussion prompts may have introduced moderator bias.

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Footnotes

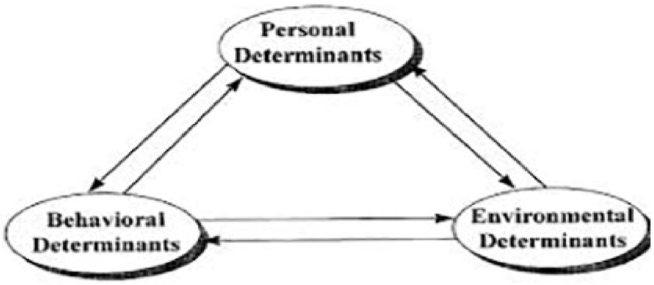
[1] The transgender community is not referenced in this section of the cited article

[2] The transgender community is not referenced in the sections of the publications discussing mental health in the lesbian and gay communities.

Appendix A

Triadic Reciprocal Causation Model

Figure 1. Triadic Reciprocal Causation Model shows the bi-directional and interactive nature between each leg of the causation model. This figure was taken from "Social Cognitive Theory" by Bandura, A. 1989b, *Annals of child development. Vol. 6. Six theories of child development.* (pp. 1-60). Reprinted with permission.



Appendix B

Permission from Dr. Albert Bandura (email: 12/7/2018)

Albert Bandura <bandura@stanford.edu>

Fri 12/7, 10:04 PM

Dear Kathleen:

I grant permission to use the schematic of the triadic reciprocal model. All good wishes for success in your research.

Best wishes,

AB

Albert Bandura
http://professoralbertbandura.com

Appendix C

Participant Recruitment Form

Sexual Health Study for Gay and Bisexual Men

Respondent Name: ____

Respondent Phone: ____

These questions will only take a few minutes. May I ask you the questions now?
___ yes
___ no

So first let me ask, are you interested in participating in a focus group. If yes, proceed with questions. If no, thank them for their time.

Thank you. In order to determine eligibility, I have a few questions.

1. What is your current age?
   [If under 18, thank them for their time and let them know they are not eligible for this particular study.]
2. How do you identify your sex? Male, Female, Transman, Transwoman, or Other
   [If Female or Transwoman, thank them for their time and let them know they are not eligible for this particular study.]
3. Have you had sex with another man in the past 3 months? Yes, No
   [If no, thank them for their time and let them know they are not eligible for this particular study.]

[If not eligible] Thank you for your time and interest, you are not currently eligible

You are eligible to participate. [Read informed consent to eligible candidate.] Would you like to participate in this study?

[If no] Thank you for your time and interest.

Thank you for agreeing to participate in this study. I have a few more questions.

1. Are you Hispanic? Yes No
2. Which of the following do you identify? Black/African American, Latino, White/Caucasian, Other, please identify: __
3. What is your highest level of education? Some or no high school / Completed high school / Some college / completed 4-year college degree / at least some post-graduate
4. Have you ever used social networking apps, like Jack'd, Grindr, or Tinder to meet other men?
5. Which ones?

Thank you for your time.

Would you like a reminder call or e-mail one or two days before our scheduled time? I will destroy your contact information after the completion of your participation to protect your confidentiality. [Note contact information under their nickname or an "R," for reserved, if they do not provide a nickname at screening.]

Any questions before we end? Again, thank you for your interest and have a great day

Appendix D

Phase 1 Focus Group Moderator Guide

Form IRB Approved H17541

Sexual Health Study for Gay and Bisexual Men

Phase 1 Focus Group Moderator Guide

GROUP NUMBER:

DATE:

MODERATOR:

ASSISTANT MODERATOR:

COORDINATOR:

OTHER STAFF PRESENT:

1st FOCUS GROUP MODERATOR GUIDE-Shigellosis among MSM

Moderator: Your instructions for carrying out this focus group are in brackets [*] and are not read to the participants. Anything not in [*] is said out loud to the participants.

FOCUS GROUP INTERVIEW GUIDE

[Before participants arrive, write all ground rules on flip chart and post in a location visible to all participants during the focus group. Write information about shigellosis on a flip chart but wait to post until appropriate point during discussion. Information to be written on a flip chart is as follows]:

[Shigella/Shigellosis]

Shigella is a germ that causes diarrhea that usually lasts between 5 and 7 days.

- Other symptoms can include fever, cramping, and sometimes bloody diarrhea.
- Although most people with shigellosis recover without treatment in about a week, antibiotics are sometimes used to treat patients with shigellosis to help them feel better.
- Some people who catch it may need to be hospitalized.

Shigellosis is spread when *Shigella* germs from a sick person gets into another person's body. This can happen when:

- Food, beverages, or water get contaminated by a sick person and then swallowed by someone else
- A tiny amount of poop on someone's hands or body gets into someone else's mouth through person-to-person contact (e.g. unwashed hands, sex, etc.,)

Shigellosis may be more severe, and poop can contain *Shigella* germs for a longer time among HIV-infected gay and bisexual men.

Shigellosis patients can be treated with drugs called antibiotics that kill or stop the growth of germs.

- Some *Shigella* germs resist the effects of an antibiotic –that is, the germs are not killed and their growth is not stopped.
- Among people with shigellosis, gay and bisexual men are at least 3 times more likely than other people to have *Shigella* germs that resist the effects of an antibiotic.

Because *Shigella* germs can be found in poop even after a person has gotten better, doctors might tell people not to have sex for a few weeks after they get better to prevent the spread of *Shigella* germs.]

[As participants arrive, confirm eligibility by asking each person's age and any other screening questions which may be relevant to the groupings (race, education, etc.). Be discrete so that others around will not hear the individual's response. Have the participant complete the sign-in sheet and assign an ID number to the participant.]

[Give the participants a name tag and ask them to put a nickname on the name tag. Inform the participants that this is the name that will be used during the focus group to protect their privacy. It's important they pick a nickname to which they feel comfortable being referred. We encourage them not to use their given name to further protect their identity. Apply their nickname to their ID
number accordingly.]

[Please take time and read the consent forms.]

Welcome and thank you for agreeing to participate in this focus group. My name is ________. My role is to guide the discussion tonight/today.

I am going to begin by reading the consent form aloud. Please follow along, and after I read the form, you will need to sign it with your given, or legal name. This form will not be shared outside this group, and we will not link your name to your responses.

[Read aloud the consent form with everyone following along or give time for everyone to read the consent on their own. Ask them if they have any questions, and address those questions, including, if you don't know. To build trust, it is important you are honest with participants. Collect the signed forms.]

So, thank you again for joining us today. As a reminder, we asked you to join us today to talk about a germ that can affect the sexual health of gay and bisexual men. You all have been invited to participate because we need your help in developing health communication messages.

I would like to hear your honest opinions about the topics we discuss. There are no right or wrong answers to the questions I'm going to ask. We, myself and the larger research team, want to hear, in your own words, your thoughts, experiences and opinions about the topics we'll be discussing. You can choose not to respond to a question at any time and your participation in this study is completely voluntary, and you can leave at any time.

Before we get started, there are just a few things I'd like to point out. We are audio recording this session so I can listen to what you have to say and not worry about taking notes. The recording will help us write our reports and are used for this purpose only. In addition, other research staff members may be present to observe and take notes. Everything you say will be kept secure and anything that is reported will be done without your names or any identifiers. In other words, no one who reads the final report will know or be able to figure out that any of you participated in this study. Only research staff will have access to this information.

Does anyone have any questions?

[Read the ground rules as posted in the room.]

Ground Rules

There are also a few ground rules that I would like us to adopt for our discussion:

You have been asked here to offer your views and opinions.

- We know that each of you might have different views about this topic. You might hear opinions that you do not agree with, and if this happens, we ask that you respectfully listen and then share your opinion.

To the extent the law allows, the focus group facilitators will keep all comments secure. For example, in the event a participant discusses an instance of abuse or suicide, we are mandated by law to report the incidence.

We ask that you not share comments you hear today with anyone outside this room. You should know that there is the possibility that a focus group participant may not honor this request.

We ask that you please only discuss your own experiences, thoughts, and opinions. Please do not mention information about anyone who is not present for the focus group today. If you have relevant information, please only speak in general terms about the subject, not about specific individuals.

Everyone's input is important; I may call on you if you are being quiet, but you are free not to answer or respond.

Avoid side conversations.
Let one person speak at a time.
I may need to cut a discussion short to get through the whole guide.
Please turn off all cell phones and electronic devices!
There are no right or wrong answers.
All answers will be kept secure and anonymous, so feel free to speak your mind.
Respect one another at all times.
It's okay to disagree.

As a way to help us, please state your nickname- be careful not to use your given/legal name, when you make a comment.

Do you have any questions before we begin? If there are no more questions, I am going to start recording now. [Turn on audio recorder] [Introduction/Warm up.]

1. Let's begin by finding out a little bit about each of you. Please tell us your:
    a. Nickname i.e. the name you want to use today,
    b. Favorite TV show, and
    c. Favorite type of music

[To further build trust] I'll start. My name is [name], my favorite TV show is [name], and my favorite type of music is [name]. [Ask a specific person] Who would like to go next? [Go around the table until everyone has introduced themselves.]. Thank you. [Sources/Severity]

Let's start by talking about where you go for health information….

2. Where do you go if you have a health-related question?

- a. PROBE
    - i. Doctor/healthcare provider? School? Peers/Friends? Family? Computer/internet? Apps? What sites?
    - ii. Does the source of health information change if it's something you're currently experiencing vs. heard about from a friend?

3. What sources do you trust for health information?
    - a. PROBE:
        - i. Have you ever heard of CDC? Have you ever gone to the CDC website for information? Do you trust the CDC?
        - ii. What about the Georgia Health Department? Have you gone to their website for information? Do you trust the health department?
        - iii. Do you trust other sources? (e.g. internet (wiki, WebMD), doctor, friends, school, etc.)

4. Now let's specifically talk about sexual health, where would you go if you had a question about your sexual health?
    - a. PROBE:
        - i. Which of those sources do you trust?

[*Shigella/shigellosis* knowledge]

Okay now I would like to talk about a specific health topic.

5. Who here, by show of hands, has ever heard of *Shigella* or shigellosis? [moderator – note out loud how many hands are raised].
    - a. PROBE
        - i. [if no one has heard of it] what do these words make you think of?
        - ii. [if some have heard of it] We will say more about what it is for those who haven't heard of it in a moment, but for those who have heard, what do you know about it?
            1. [if they say it makes you sick, ask the following] Have you heard about what symptoms people get? Who do you think gets sick? How do people get sick with it? How do you get better if you have it?
            2. [if they say it's spread through poop or feces] Who gets sick? What behaviors give you more of a chance of getting sick? How can you prevent getting sick?

I am now going to read some information about shigellosis [handout information sheet or project on wall]

Shigella is a germ that causes diarrhea that usually lasts between 5 and 7 days. Shigella germs can cause fever, lots of cramping and sometimes bloody diarrhea. Although most people with shigellosis recover without treatment in about a week, antibiotics are sometimes used to treat patients with shigellosis to help them feel better. Some people who catch it may need to be hospitalized. Shigellosis is spread when Shigella germs from a sick person gets into another person's body. This can happen when Shigella germs get into food, drinks, or water that is then swallowed by someone else, or if a tiny amount of poop on someone's hands or body gets into someone else's mouth through person-to-person contact, such as having close contact and then putting your unwashed hands on your food or in your mouth, or during sex. Furthermore, shigellosis may be more severe, and poop can contain Shigella germs for a longer time, among HIV-infected gay and bisexual men. Shigellosis patients can be treated with drugs called antibiotics that kill or stop the growth of bacteria germs. Some Shigella germs resist the effects of an antibiotic –that is, the germs are not killed and their growth is not stopped. This is at least 3 times more common among gay and bisexual men with shigellosis than among other groups of people with shigellosis. Doctors might tell people not to have sex for a few weeks after they get better to prevent the spread of Shigella germs.

6. After listening to that description of shigellosis, what is your initial reaction?
    a. PROBE:
        i. What do you want to know more about? What is confusing?
        ii. Specific words or phrases?

7. Do you think men like yourself are at risk for shigellosis?
    a. PROBE
        i. Why or why not?

8. If you had diarrhea, how likely would you tell your partner before having sex?
    a. PROBE
        i. Why or why not?
        ii. If you had more severe symptoms (e.g. bloody diarrhea), would you be more likely to tell your partner?
        iii. What if you knew that you had shigellosis specifically? Or antibiotic-resistant shigellosis?

9. Before having sex with your partner, would you ask if he recently had diarrhea?
    a. PROBE
        i. Why or why not?
        ii. Would you be more likely to ask someone that you didn't know well? (such as an anonymous partner)
        iii. How would their answers affect you?

[Developing Sexual Health Messages]

I appreciate your honest responses. As mentioned at the beginning of the group, we would like to develop messages about a germ that can affect the sexual health of gay and bisexual men.

10. Imagine that a message was being developed for sexual health. What would make you remember the message?

11. What do you think men like you need to know about Shigella?

12. Tell me, who and/or what do you think is the most effective way to educate gay, bisexual men about various diseases that can be transmitted during sex?
    a. PROBE:
        i. What formats should these messages be? (E.g. poster, flyer, dating apps, health websites, online, clinics, magazines, text message, etc. Video? Audio? Plain text?)
        ii. Anything you don't like to see (e.g. images or words)?

13. Because shigellosis can be sexually transmitted, would men like you be more or less likely to hear the message if *Shigella* was called an STD?
    a. PROBE: Why or why not?

[Health Materials]

Now I would like to get your feedback on some health materials that have recently been used to raise awareness about shigellosis among gay, and bisexual men.

[Show 1st health material (project on wall or give a physical hand out). State aloud the headline of the health material so it is recorded in the transcript. – Repeat for all health materials shown. Allow time for participants to take it in.]

14. What are your initial reactions to this flyer?
    a. PROBE:
        i. What do you like about this flyer?
        ii. What do you dislike?

15. What are the words or phrases that you think work well in this message?
    a. PROBE:
        i. Are there any words or phrases that you like?
        ii. Are there any words or phrases that you *don't like*?
            - What other words can be used in their place?

16. What is confusing, unclear, or hard to understand about the message?
    a. PROBE:
        i. What makes it confusing or hard to understand?
        ii. Any specific words that are confusing or hard to understand?
        iii. What other words can be used to make it easier to understand?

17. [If the flyer contains images] What do you think about the images?

a. PROBE – INCLUDING PROBES ON WHAT THEY COMMENTED ON:
    i. Do they grab your attention? Why or why not?
    ii. Do they make you want to read the message? Why or why not?
    iii. Do they help you understand the message? How so?
    iv. What images help to understand the message?
        o What are the main reasons the images help or are important?
    v. Is there anything confusing or unclear about the images? If so, what?
        o What other images can be used in their place?

18. [If the flyer does not contain images] Do you think this flyer would be better with some images? If so, what kind?

[CLOSING]

19. Is there anything else you would like to add about what we discussed today?

Thank you for your time and your responses. That is all the questions that I have. We have left time at the end to ask if we missed something or do you have something you would like to say about the topics covered tonight/today. Please feel free.

[Give them a long pause and consider asking a particular person if they have something to say.]
Thank you again for taking time out of your day to come talk with us about these topics.

As a gentle reminder, please keep all information that we have discussed confidential.
Before you go, let's take care of incentive payment. I will also give you a flyer with more information about shigellosis. Any final thoughts or questions?

[Pause]

Have a good day/evening, I'm stopping the recorder. [Stop recorder.]