MITIGATING RISKS AND BUILDING RESILIENCE TO HIV/AIDS: PERSPECTIVES OF HIV-NEGATIVE, MIDDLE-AGED AND OLDER MEN WHO HAVE SEX WITH MEN

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Purpose: Although ample research has been conducted on resilience to HIV/AIDS, most studies have utilized quantitative methods and focused almost exclusively on people living with HIV/AIDS. A relatively untapped source of knowledge is the perspectives of HIV-negative, middle-aged and older men who have sex with men (MSM) who have been navigating risks and building resilience to HIV/AIDS since the 1980s. Our qualitative, community-based participatory research study examined the perspectives of HIV-negative, middle-aged and older MSM on factors that helped mitigate the risks of and build resilience to HIV/AIDS. Methods: In collaboration with community-based organizations, fourteen participants were recruited for in-depth interviews. Participants were aged 40 or older, identified as HIV-negative MSM, and resided in Ontario, Canada. Thematic analysis of interviews revealed salient themes. Results: Three themes were identified: (1) individual attributes (e.g., self-awareness/control), (2) protective relational factors (e.g., meaningful sexual relationships), and (3) community-based resources (e.g., competent healthcare/service providers). Conclusion: HIV-negative, middle-aged and older MSM recognized factors that helped mitigate risks of contracting and build resilience to HIV/AIDS based on their own lived experiences. Some of these factors have not been explicitly identified or extensively discussed in extant academic literature, and are worth considering in the development of community-based HIV/AIDS prevention and intervention programs.

Keywords: *Community-based participatory research, risks, resilience, HIV/AIDS, older, men who have sex with men.*

1. Introduction

In recent years, men who have sex with men (MSM) have continued to represent the majority of new HIV cases in North America annually, accounting for 69% of new cases in the United States (Center for Disease Control and Prevention [CDC], 2018), and 52.2% of new cases in Canada (Canadian AIDS Treatment Information Exchange [CATIE], 2018), in 2018. Although younger MSM have been documented to have greater functional knowledge of different HIV prevention approaches compared to their middle-aged and older counterparts (Sharma et al., 2018), and concern has been expressed for the need to improve HIV prevention messaging for

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older, sexually active MSM (Conner et al., 2019; Orel et al., 2004; Sharma et al., 2018), the number of new HIV diagnoses among MSM aged 13 to 29 years has recently been found to be four times that of MSM aged 50 years and older (Mitsch et al., 2018). This finding has remained true in recent years despite the fact that middle-aged and older MSM have continued to be the population most impacted by HIV/AIDS in North America since the start of the epidemic (CDC, 2018). While it is heartening to see HIV testing rates increasing in MSM of all ages, more work needs to be done to broaden the scope of prevention efforts in relation to age and other sociodemographic factors (Cooley et al., 2014).

Currently, HIV prevention research involving MSM predominantly focuses on pre-exposure prophylaxis (PrEP), condom use, the reduction of viral loads to undetectable levels, and other intervention efforts. PrEP is a daily medication that people at increased risk of HIV can take to reduce their likelihood of contracting the virus (CDC, 2020). While consistent condom use has been reported to have 70% effectiveness in preventing HIV among MSM (Smith et al., 2015), daily PrEP can raise this effectiveness to about 99% (CDC, 2020). Despite this, recent studies have documented that only 10% to 30% of MSM who decide to use PrEP have continued to consistently use condoms at the same time, often in the context of engaging in casual sex (Aguirrebengoa et al., 2021; Chen et al., 2017; Zimmermann et al., 2020). Research has also focused on other HIV prevention efforts such as computer-based and behavioral interventions that promote counseling, support groups, and community-building, which help reduce HIV risk, as well as bolster efforts to increase testing availability that result in important increases in HIV testing rates (Johnson et al., 2008; Kang et al. 2010; Noar et al., 2009). While all these prevention efforts are important and impactful, it is evident that other strategies to achieve prevention target outcomes are still necessary; strategies that not only take into consideration the important links between HIV and other psychosocial health issues (Stall et al, 2003), but also effectively go beyond simply addressing sexual risks alone.

A strength-based strategy that has been proposed in academic literature is to mitigate risks by building resilience to HIV/AIDS, particularly through the promotion of individual and community level attributes, resources, and protective factors (Colpitts & Gahagan, 2016; Woodward et al., 2017; Zhang et al., 2015). Resilience is often defined as the ability to handle, adapt to, or bounce back from adversity (American Psychological Association [APA], 2020; Liu et al., 2017). It is built through different pathways (Fredriksen-Goldsen et al., 2017a; Fredriksen-Goldsen et al., 2017b), and once built, these resilience processes tend to cluster into cognitive processes, behavioral practices, social support, and empowerment (Fredriksen-Goldsen et al., 2017a; Fredriksen-Goldsen et al., 2017b; Handlovsky et al., 2018; Harper et al., 2014; Wexler et al., 2009). Resilience helps protect against the detrimental effects of life stress from being consistently at risk of or living with HIV/AIDS, which could lead to disability and depression (Fang et al., 2015; Fredriksen-Goldsen et al., 2013; Spies & Seedat, 2014; Zhang et al., 2015). Although research on the effects of resilience on condomless anal sex has reported mixed results, HIV prevention has been more than just about promoting the use of condoms since the 1980s (Dawson et al., 2019). Resilience to HIV/AIDS has been found to be associated with lower overall HIV risk, as well as essential to facilitating use of important health services, which could be key to preventing and identifying new cases (Green & Wheeler, 2019; Halkitis et al., 2017; McNair et al., 2018).

In addition to potentially focusing on the different pathways that help build the resilience of lesbian, gay, bisexual and trans (LGBT) individuals (Fredriksen-Goldsen et al., 2017a; Fredriksen-Goldsen et al., 2017b), specifically in the conduct of empirical research examining resilience of MSM to HIV/AIDS, an important step researchers could take would be to consider the value of a multi-level social ecological lens that has been successfully

utilized in prior research on HIV prevention and care (Kaufman et al., 2014; Mustanski et al., 2011). Studies have documented the value of a social ecological lens in the analysis of strengths and other positive factors that are relevant to LGBT concerns and issues, particularly utilizing (a) individual, (b) interpersonal/relational, and (c) community/structural levels of consideration (Garrido et al., 2021; Harper et al., 2007; Kaufman et al., 2014; Mustanski et al., 2011).

Some researchers have called attention to the preponderance of deficit-based HIV prevention studies, and have advocated for more research that utilize a strength-based approach (McNair et al., 2018; Woodward et al., 2017). While deficit-based approaches may often reinforce negative stereotypes, a strength-based approach may better focus on positive identity development, education, and social support, which builds resilience, community, and empowerment (Barry et al., 2018; Hussen et al., 2017). In order to highlight the resilience, positive attributes, and positive subjective experiences of MSM and other LGBT individuals, some researchers, particularly those in the field of Community Psychology, have in prior studies purposefully chosen to promote and utilize strength-based concepts, models, and approaches in their work (D'Augelli, 1989; Vaughan & Rodriguez, 2014; Zimmerman et al., 2015).

When given the opportunity to describe their resilience on their own terms, many HIV-positive aging adults expressed resilience in terms of strengths (Emlet at al., 2011). As the population that has apparently exhibited the longest and most resilience to the risks and impacts of HIV/AIDS in the United States and Canada since the beginning of the epidemic (CDC, 2018), it would be logical to argue that the lived experiences of middle-aged and older MSM would be a significant source of information to gain perspectives on factors that could help mitigate the risks of and build resilience to HIV/AIDS. The objective of the qualitative study described in this paper was to identify and examine the perspectives of HIV-negative, middle-aged and older MSM on what they believe are factors that help mitigate the risks of and build resilience to HIV/AIDS, particularly based on their lived experiences as a population at heightened risks of contracting and transmitting HIV since the 1980s.

2. Methods

A Community-Based Participatory Research (CBPR) approach (Espinoza & Verney, 2020; Israel et al., 1998; Jull et al., 2017) was utilized in this qualitative study to help ensure the meaningful involvement of middle-aged and older MSM at risk of HIV/AIDS in its research process. CBPR is a research paradigm that offers unique opportunities for conducting culturally appropriate research and improving health equity (Espinoza & Verney, 2020). It is an equitable, strength-based approach involving diverse stakeholders throughout the research process with an emphasis on the participation and influence of non-academic researchers in the process of co-creating knowledge with academic researchers (Espinoza & Verney, 2020; Israel et al., 1998). The generation of knowledge in CBPR is dedicated to meet the needs of the healthcare system's knowledge and service users, and requires context-sensitive approaches and research structures, which can support the development and integration of what can be defined by those the knowledge is meant to benefit as best evidence (Jull et al., 2017).

In collaboration with its community partner, *Realize* (a non-profit organization based in Toronto, Ontario, Canada dedicated to supporting older adults at risk of and living with HIV/AIDS), the study's research team established a Community Advisory Committee (CAC) composed of middle-aged and older MSM and providers from LGBT agencies and AIDS service organizations (ASOs). The CAC provided input that guided the direction of the study from the start of the research process. The objective and planned conduct of the study were

approved by the Research Ethics Board (REB) of the Centre for Addiction and Mental Health, Toronto, Ontario, Canada, in 2018.

2.2 Peer researchers

Middle-aged and older MSM were substantially involved in the study in various ways. Apart from their involvement as participants, study recruiters, and CAC members, they also had significant representation as *peer researchers* (Eaton et al., 2019). As a capacity-building effort, two middle-aged and older MSM from the community were hired by the team based on their lived experiences, and then trained so they could participate as peer researchers in the recruitment and co-interviewing of participants. The peer researchers were also involved in the study's data analysis and knowledge dissemination stages. The capacity-building effort in this study was adopted and modified from an extant peer researcher training curriculum (Eaton, 2019; Eaton et al., 2018; Ibañez-Carrasco et al., 2020). Throughout the study, the peer researchers' perspectives, knowledge, skills, and work and lived experiences were critical to the study's success.

2.3 Participants

The findings discussed in this paper are part of a larger study ($N = 55$) that was designed to examine factors that help build resilience to HIV/AIDS based on the perspectives of relevant community stakeholders. The findings presented in this paper were extracted from data that were obtained from 14 participants who identified as HIV-negative MSM, were 40 years or older, and residents of Southwestern or Central Ontario, Canada. The participants were recruited using REB-approved advertisements posted on the websites and premises of LGBT agencies and ASOs across Ontario, as well as REB-approved email recruitment messages posted on the listservs of relevant community-based groups (i.e., purposive sampling) (Palys, 2008). From February to June 2019, the 14 participants were interviewed in the portion of the larger study described in this paper.

Conversely, the rest of the findings of the larger study mentioned were extracted from data obtained from 41 HIV-positive MSM, particularly from MSM with different racial and ethnic backgrounds, as well as other more diverse sociodemographic characteristics. These findings were purposefully discussed using an intersectional perspective in other peer-reviewed journal articles (Liboro et al., 2021a; Liboro et al., 2021b; Liboro et al., in press).

2.4 Procedures

Using a semi-structured interview guide developed with the study's community collaborators and CAC, participants were co-interviewed by both the first author and one of two peer researchers. This co-interviewing process was built in to the research data gathering phase primarily as a capacity-building strategy to engage and support MSM from the community, but the benefits of having the peer researchers' perspectives and lived experiences influence the outcomes of the interviews became apparent from the very beginning. The decision for both the first author and one of the two peer researchers to co-interview participants was made by the research team for two important reasons. First, the co-interviewing process allowed the peer researchers, who had less experience with interviewing participants, to conduct the interviews with more confidence knowing the first author, who had more experience interviewing study participants, was there with them in case any unexpected issues arose during the interviews. Second, and just as importantly, the addition of the peer researchers to the interview process allowed for opportunities for them

to explore and probe certain participant responses. These opportunities were informed by the peer researchers' distinct backgrounds, perspectives, and lived experiences as middle-aged and older MSM who have been fully engaged with the regional MSM community involved in the study. During the interviews, the first author and one of the two peer researchers took rehearsed turns asking questions from the semi-structured interview guide. Additionally, both interviewers had equal opportunities to spontaneously ask follow-up or probing questions for the purposes of clarification and elaboration. The confidential, audio-recorded interviews were conducted at the office of one of the interviewers, or a private room of a community-based organization of the participants' choosing. Open-ended questions were used to identify factors that help build and promote resilience to HIV/AIDS based on the perspectives and lived experiences of the participants. Participants were interviewed until data saturation for major themes was achieved. Informed consent was obtained from participants prior to the start of interviews, and participants received CAN$25 as compensation for their time after the interviews. Interviews were transcribed verbatim by the peer researchers, and the transcriptions were then corroborated by the first author.

2.5 Analysis

Thematic analysis (Braun & Clark, 2006) was chosen as the most appropriate approach to analyze the study data because of its characteristic flexibility that allows various perspectives to be gleaned from multiple sources. The first author and peer researchers reviewed all 14 transcripts, identified initial codes, and proceeded to identify themes from the transcripts as separate coders. Next, they compared their initial codes and themes, and together, created a codebook that they later utilized to refine the analysis of the transcripts. The three coders then generated a de-identified report containing the themes, subthemes, and supporting quotes they agreed upon, which they shared with the rest of the research team and CAC for review. A final version of the report with incorporated feedback from the team and CAC was shared with community stakeholders.

During the analysis of the study data, the researchers took into consideration the different pathways participants used to build their resilience to HIV/AIDS (Fredriksen-Goldsen et al., 2017a; Fredriksen-Goldsen et al., 2017b). The researchers also analyzed the study data utilizing a social ecological lens that has been used in prior research on LGBT strengths (Garrido et al., 2021; Harper et al., 2007) as well as previous studies on HIV prevention and care (Kaufman et al., 2014; Mustanski et al., 2011).

3. Results

Three overarching themes were identified during the thematic analysis of the study interviews that not only reflected different pathways LGBT individuals have historically taken to build their resilience (Fredriksen-Goldsen et al., 2017a; Fredriksen-Goldsen et al., 2017b), but also represented multiple social ecological levels of resilience-building (Garrido et al., 2021; Harper et al., 2007; Kaufman et al., 2014; Mustanski et al., 2011): (a) individual attributes, (b) protective relational factors, and (c) community-based resources, which helped mitigate the risks of and build resilience to HIV/AIDS. In order to maintain confidentiality, participants were assigned pseudonyms from the time their interviews were conducted (see Table 1 for pseudonyms and sociodemographic characteristics of participants). Participants candidly shared their perspectives surrounding these themes during the interviews.

Table 1. Participants' pseudonyms and sociodemographic characteristics

Pseudonym	Age	Identified As	Race	Location
Abe	45	Gay	White	Downtown Toronto
Alex	48	Two-spirit	First Nations	Downtown Toronto
Allan	60	Gay	White	Downtown Toronto
Ben	58	Gay	White (Latino)	Downtown Toronto
David	50	Gay	White	Downtown Toronto
Donald	53	Gay	White	Downtown Toronto
Eric	55	Gay	Black	Greater Toronto Area
Felix	42	Gay	Asian	Greater Toronto Area
Francis	45	Gay	White (Latino)	Downtown Toronto
Gordon	77	Gay	White	Downtown Toronto
Joe	57	Bisexual	Black	Greater Toronto Area
Kyle	40	MSM	White	Downtown Toronto
Stephen	54	Bisexual	White	Southwestern Ontario
Vic	64	Gay	White	Downtown Toronto

3.1 Individual attributes

Participants defined their individual attributes in terms of personal strengths, with most participants recognizing the value of their own *proactiveness*, and *self-awareness coupled with self-control* (*self-awareness/control*). In terms of *proactiveness*, participants reported that not only did they proactively research relevant information, seek their own doctors, and undergo laboratory tests (e.g., for sexually transmitted infections) to mitigate their risks of acquiring HIV, but they also made a point to discuss their expectations and preferences with prospective sexual partners, as well as their concerns and needs with their healthcare and service providers. In terms of *self-awareness/control*, many participants revealed that they decided to make conscious choices to keep people they believed were good influences on them in their lives, keep sexual partners they trusted, and curtail their own tendencies to get involved in difficult relationships and situations.

Table 2. Individual attributes that mitigate the risk of and build resilience to HIV/AIDS

Individual attributes	Pseudonym	Quotes
Proactiveness	David	*I took charge of my life, looked after my health… made the right decisions.*
	Eric	*If you're shy or afraid to be outed, you won't be able to get what you need. You have to be comfortable about being gay and proactive.*
Self-awareness/control	Alex	*At the heat of the moment in bath houses, there is no talk about HIV among us…*
	Francis	*Party 'n play's effects: big money for drug traffickers; big health and security risks for MSM.*
	Ben	*Bath houses are where you get hooked on heavy drugs…the risks get higher, so I just avoid them at all costs.*

For most participants who discussed these individual attributes, they reported that their *self-awareness* increased with more life experiences, and accordingly, they made efforts to develop their *self-control* as they became more self-aware. Interestingly, participants noted that as they encountered different challenges to living with HIV/AIDS as they grew older, they also began to recognize their need to develop and nurture these personal strengths (i.e., *proactiveness* and *self-awareness/control*) to build their resilience to HIV/AIDS (See Table 2 for quotes from participants on individual attributes).

3.2 Protective relational factors

The majority of participants identified three protective relational factors that helped mitigate their risks of acquiring HIV and build resilience to it. These protective relational factors include *volunteering*, *meaningful sexual relationships*, and *the trauma of losing many lives during the first two decades of the epidemic*. Participants explained that *volunteering* at LGBT agencies and ASOs was a practical way of gaining easier access to information about HIV prevention, interacting with people knowledgeable about HIV/AIDS, and giving back to the community that gave them a sense of belonging. Having *meaningful sexual relationships* (with or without a commitment to monogamy in the traditional sense) that revolved around companionship, intimacy, communication, trust, loyalty, taking care of one another, sharing resources, and/or sharing a life together were also identified by many participants as resilience-building. Lastly, many middle-aged and older MSM shared stories about *the trauma of losing so many significant people in their lives to HIV/AIDS in the first two decades of the HIV/AIDS epidemic*. Depression, survivor's guilt, fear, paranoia, hypervigilance, anxiety, social withdrawal and isolation, loss of libido, and celibacy resulted from the trauma, and were later retrospectively deemed protective by the participants (See Table 3 for quotes from participants on protective relational factors).

Table 3. Protective relational factors that mitigate the risk of and build resilience to HIV/AIDS.

Protective relational factors	Pseudonym	Quotes
Volunteering	Joe	*I volunteered at [names of an LGBT agency and ASOs]. It kept me in the loop about HIV prevention.*
	Donald	*It was important to me; our [volunteer] work was raising awareness on how HIV criminalization is institutionalizing stigma.*
Meaningful sexual relationships	Allan	*Eventually, I went into a relationship of 29 years.* *We had a bond and we were committed to taking care of each other.*
	Stephen	*We take care of each other. We're not exclusive, we sleep around with other guys…but our companionship and trust go a very long way.*
Losing so many to HIV/AIDS	Vic	*Seeing so many of my friends drop like flies.* *It scared the shit out of me!*
	Ben	*So much death in so little time.* *I knew I had to get out of the Toronto bath house scene!*

3.3 Community-based resources

Most participants referred to *the LGBT community*, and their *healthcare and service providers*, as valuable resources that helped mitigate the risks of acquiring HIV and build resilience to it. They viewed *the LGBT community* not only as an essential source of social and moral support, but also as a dependable resource for word-of-mouth information that helped them gain a greater understanding of HIV/AIDS, as well as navigate HIV/AIDS programs and services within the larger community. Within the *LGBT community*, participants noted that a more specific resource was LGBT not-for-profit agencies that were led, run, or managed by members of their community. LGBT agencies were a vital resource for programs and services focused on sexual health and the prevention of HIV/AIDS and other sexually transmitted

infections, not only for young adults, but also for older community members. Many participants emphasized the importance of having access to excellent *healthcare and service providers*, particularly openly gay, gay-friendly, and/or non-judgmental doctors and other *healthcare or service providers* to mitigating HIV risks and resilience-building. (See Table 4 for quotes from participants on community-based resources).

Table 4. Community-based resources that mitigate the risk of and build resilience to HIV/AIDS

Community-based resources	Pseudonym	Quotes
LGBT community	Joe	*We had a vibrant gay community when I grew up in the streets of Toronto. When the epidemic hit, we rallied together as a community.*
	Kyle	*The [name of an LGBT agency] has the community where I got information on HIV and where I could find the right doctors.*
Healthcare and service providers	Abe	*Having a gay doctor is great!* *I don't have to do so much explaining about what I need [as a gay man].*
	Francis	*My doctor's the best! He's very knowledgeable, goes out of his way to explain things to me, and he builds me up…*

4. Discussion

Factors that helped build resilience to HIV/AIDS among middle-aged and older MSM were identified in different pathways, which could be categorized as identity (i.e., individual attributes), experiential/adversity-oriented (i.e., protective relational factors), and social (i.e., community-based resources) pathways (Fredriksen-Goldsen et al., 2017; Fredriksen-Goldsen et al., 2017). Identity pathways were built through individual attributes such as *proactiveness* and *self-awareness/control*. Experiential/adversity-oriented pathways involved *volunteering*, finding *meaningful sexual relationships*, and navigating through *the trauma of losing significant others in the early years of the epidemic*. Lastly, social pathways included resources such as the *LGBT community*, as well as *competent and accepting providers*.

Consistent with previous research, participants reported that personal strengths were critical to taking one of the different pathways to mitigate risks of contracting, and build resilience to HIV/AIDS (Emlet et al., 2011); adding credence to the notion that utilizing a strength-based approach over one that focuses on deficits would not only be intuitive but also productive. Much of the data found from this qualitative investigation mirrored results from past research, most of which involved responses of people living with HIV/AIDS. The importance of *self-awareness* and *proactiveness* in terms of engaging in healthy sexual behavioral practices or STI testing as factors for mitigating risks of contracting HIV (Brody et al., 2016; Durongritichai, 2012; Harper et al., 2014; Kang et al., 2010) was supported by the participant interviews. It is important to note that these identity or individual attributes described by the participants would necessarily require certain levels of privilege and capacity, which not everyone always has in abundance in terms of their life circumstances. The participants' perspectives also supported extant research findings that underscore the value of developing group identity and social support as alternative pathways to building resilience (Fredriksen-Goldsen et al., 2013; Wexler et al., 2009), particularly as goals that could be achieved through activities considered as protective relational factors, such as *volunteering*, maintaining *meaningful sexual relationships*, and nurturing a sense of

belonging to the *LGBT community*. The participants' views on the value of having openly gay, gay-friendly, and/or non-judgmental *healthcare or service providers* echoed existing research findings that emphasize the importance of individuals' comfort with their medical providers, and having providers knowledgeable in LGBT issues, in resilience-building (Green & Wheeler, 2019).

The findings, themes, and sub-themes that were identified in the analysis of the interview data support the fundamental understanding proposed in prior studies that there are different pathways sexual and gender minorities may take to building resilience, specifically, resilience to HIV/AIDS (Fredriksen-Goldsen et al., 2017a; Fredriksen-Goldsen et al., 2017b). A distinct finding identified in the interviews is that participants stressed the importance of nurturing and developing as many of the individual attributes, protective relational factors, and community-based resources in their respective pathways as possible. Participants reported that although the different pathways were discrete from each other, they intersected and interacted, and their impacts were complementary and synergistic based on their lived experiences. This finding highlights the need for LGBT not-for-profit agencies and ASOs to consider, develop, and create HIV prevention services, programs, and policies that promote these different pathways to mitigating risks of and building resilience to HIV/AIDS. In order to prevent services and programs from becoming too individualized, it is important to recognize broader contexts and emphasize the roles systemic privilege and oppression play in facilitating or impeding the different pathways to mitigating risks of and building resilience to HIV/AIDS while developing the creation of such services and programs.

Analyzed from a social ecological lens (Garrido et al., 2021; Harper et al., 2007; Kaufman et al., 2014; Mustanski et al., 2011), the findings derived from the study data could also be viewed as significant factors for building resilience to HIV/AIDS that exist at multiple levels of consideration: individual (i.e., personal strengths), interpersonal (i.e., protective relational factors) and community/structural (i.e., community-based resources) levels. The benefit of analyzing these factors from a social ecological lens is that each of the findings identified by the participants as a factor that helps build their resilience to HIV/AIDS could be used to inform and influence the development, creation, and/or modification of HIV prevention and care programs and policies at multiple levels. At an individual level, community-based programs and policies dedicated to supporting middle-aged and older MSM could focus on adjusting their counseling services and self-help interventions to promote more *proactiveness* and greater *self-awareness/control* among clients struggling to build their HIV resilience. At an interpersonal level, community-based programs and policies could concentrate on promoting the merits of *volunteering*, establishing *meaningful sexual relationships*, and seeking or working on personal growth after *traumatic loss experiences* in their HIV services and interventions. At a community level, community-based programs and policies could be utilized to maximize the accessibility of much needed community-based resources that would supplement or even make up for the lack of resilience-building factors of middle-aged and older MSM at the individual or interpersonal levels. Most importantly, from a social ecological standpoint (Garrido et al., 2021; Harper et al., 2007; Kaufman et al., 2014; Mustanski et al., 2011), these different factors at multiple levels are meant to be considered as interconnected, interdependent, and symbiotic in nature, in order to produce positive outcomes that could not be achieved by any of the identified factors alone if they were utilized in programs and policies independently. Whether identified through the different pathways that were taken to build resilience to HIV/AIDS or analyzed through a social ecological lens, the factors discussed from the findings of the study should be considered together for their noteworthy potential to produce synergistic and symbiotic positive outcomes in HIV prevention and care efforts.

Despite their similarities, an important distinction between many past studies on HIV resilience and the current study is that none of the previous studies intentionally focused on the

perspectives and lived experiences of HIV-negative, middle-aged and older MSM. This distinction may be the reason why there were certain findings in the current study that did not necessarily mirror the findings of prior cognate research. As far as this study's literature review could determine, no prior research identified the traumatic effects of losing significant others to HIV/AIDS in the early years of the epidemic, specifically as a protective relational factor that may help mitigate risk of contracting HIV. This points to a perspective that would typically not be derived from quantitative surveys since this perspective emerged as a sub-theme in the thematic analysis of the interview data.

A possible direction future research could potentially take is to conduct studies that would harness the important lessons that could be learned from examining the traumatic experiences of losing countless lives during the peak of the HIV/AIDS epidemic in North America, and the long-lasting impacts of such tragic loss. How could the lessons from such tragic loss be utilized and be made saliently relevant to younger generations who have never experienced the same kind of loss? What efforts could be employed to conscientize new generations of MSM at risk of HIV/AIDS? Could campaigns to raise awareness and conscientization on what is at stake make a difference? Are there possible intervening factors (e.g., post-traumatic growth) that mediate the positive effects of traumatic loss which future studies could explore?

Many participants considered the *LGBT community* as a vital resource for building resilience to HIV/AIDS. However, some participants reported that they did not feel fully connected to the *LGBT community*. Some were not completely comfortable with disclosing their sexual orientation to members of the community, while others were simply not as at ease with becoming involved in the *LGBT community*'s social activities. It would be important to investigate in future studies how services and programs of LGBT agencies and ASOs could promote a sense of belonging to the *LGBT community* among more middle-aged and older MSM at risk of HIV/AIDS, particularly as a pathway for them to mitigate risks of contracting HIV/AIDS, as well as build resilience to it.

5. Limitations and strengths

One limitation of the study is that it relied heavily on the support of LGBT agencies and ASOs during its participant recruitment. Based on the study findings, many participants placed a huge importance in having their *LGBT community* as a vital resource for resilience-building. Participants recruited through LGBT agencies may value the *LGBT community* more than other individuals who could not be recruited through LGBT agencies. It stands to reason that when recruiting from the LGBT population, some difficulty reaching individuals who may not be as comfortable disclosing their sexual orientation, or may not be as meaningfully engaged with LGBT agencies, would be encountered. These prospective participants may not feel as comfortable disclosing details about their sexuality with researchers, and as such, may be unwilling to participate and share their perspectives. Another limitation of this study is that its findings are based on an investigation conducted in a North American context, and would not be necessarily applicable or generalizable to other regions and contexts where LGBT rights are much more suppressed and where LGBT resilience-building is constrained by hostile social and legal environments. Despite these potential limitations, the strengths associated with conducting qualitative research (e.g., obtaining detailed input based on relevant lived experiences) (Henwood & Pidgeon, 1992) were apparent in this study.

One of the considerable strengths of this study was its use of CBPR as its approach to examining resilience to HIV/AIDS based on the perspectives and lived experiences of HIV-

negative, middle-aged and older MSM. Not only did the choice of using a CBPR approach to collaboratively conduct the study in partnership with LGBT not-for-profit agencies, ASOs, the study's CAC and peer researchers, and other relevant community stakeholders, significantly increase the study's access to prospective participants from the larger community, it also provided the study substantial access to the input and feedback of all the relevant community partners and supporters involved in every stage of the research process. The input and feedback of the study's CAC and peer researchers, community partners and supporters, especially the middle-aged and older MSM directly involved in the study, were critical to the nuanced decisions that were made regarding its conduct and data analysis. Prospectively, this means that CBPR would be an excellent approach that could be contextualized and used in future research studies exploring the resilience of middle-aged and older MSM to HIV/AIDS.

6. Conclusions

HIV-negative, middle-aged and older MSM have taken different pathways to mitigate their risks of contracting, and build resilience to HIV/AIDS, including by way of individual attributes, protective relational factors, and community-based resources, which can be categorized as identity, experiential/adversity-oriented, and social pathways, respectively. Identity pathways have included sub-themes such as maintaining *proactiveness* and *self-awareness/self-control*; experiential/adversity-oriented pathways have included *volunteering*, maintaining *meaningful sexual relationships*, and navigating through *the trauma of losing many loved ones in the early years of the HIV/AIDS epidemic*; and social pathways have included the *LGTBQ community*, and *valuable healthcare and service providers*. The findings of this qualitative CBPR study not only supported results of prior quantitative studies on resilience to HIV/AIDS involving HIV-positive MSM, but also provided distinct insights to different pathways HIV-negative, middle-aged and older MSM could take to mitigate risks of contracting, and build resilience to HIV/AIDS. Community-based structural and policy supports dedicated to promoting access to these different pathways are needed to build greater resilience to HIV/AIDS. Viewed from a social ecological lens, the findings of this study support the premise that factors that help build the resilience of HIV-negative, middle-aged and older MSM to HIV/AIDS could not only be found at individual, interpersonal, and community levels, but could also be concurrently utilized at multiple levels to promote HIV prevention and care, as well as produce synergistic and symbiotic positive health outcomes.

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