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Predictors of Loneliness among Older Lesbian and Gay People

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ABSTRACT

This study sought to understand the social and individual factors that predict loneliness among older lesbian and gay people in Australia. A sample of 508 gay men and 241 lesbian women, aged 60 and over, completed a survey including measures of loneliness, internalized homonegativity, sexual orientation discrimination, and connectedness to lesbian and gay communities. A multivariable linear regression predicting loneliness was conducted. Not being in an intimate relationship and having less connection to lesbian and gay communities were significant predictors of loneliness for both older lesbian women and gay men. For the men, younger age, internalized homonegativity and more frequent lifetime experiences of sexual orientation discrimination also appeared to predict greater likelihood of loneliness. More frequent recent experiences of sexual orientation discrimination predicted loneliness for the women. The findings confirmed loneliness as an issue of concern among older lesbian and gay people and identified factors amenable to intervention to address loneliness.

KEYWORDS

Loneliness; lesbian; gay; discrimination; sexuality; older people

Introduction

Older lesbian and gay people face a range of health disparities compared to their heterosexual counterparts, including higher rates of anxiety, depression (Wallace, Cochran, Durazo, & Ford, 2011), and suicide ideation (Fredriksen-Goldsen et al., 2011). They also report more loneliness (Hsieh & Liu, 2021; Kim & Fredriksen-Goldsen, 2016), which itself is associated with lower levels of mental wellbeing (Holt-Lunstad, Smith, Baker, Harris, & Stephenson, 2015) and greater suicide ideation (Bennardi et al., 2019). Older lesbian and gay

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people also encounter challenges accessing the level of care and support afforded to other groups, in part due to actual and expected discrimination (Waling et al., 2019). In the face of these challenges, many older lesbian and gay people have demonstrated considerable individual and community resilience in supporting their partners, friends, family members and community groups, such as during the HIV/AIDS epidemic (Reynolds & Robinson, 2016). In this paper, we examine predictors of loneliness among Australian lesbian and gay people aged 60 and over—noting key factors, such as community connectedness, that assist in ameliorating or preventing loneliness in later life.

Loneliness is a significant social issue that has gained increasing attention from governments and community organizations. It is commonly defined as the negative affective response to perceived social isolation (a lack of social connections) (Dykstra, van Tilburg, & de Jong Gierveld, 2005) or the perceived discrepancy between desired and actual social relationships (Peplau & Perlman, 1982). In Australia, it is estimated that nearly half of adults feel lonely at least one day per week, while just over a quarter feel lonely for three or more days (Australian Psychological Society, 2018). Loneliness is reported to increase the risk of mortality by about 26%: equivalent to the impact of obesity (Holt-Lunstad et al., 2015).

While the deleterious impacts of loneliness are well known, there remain gaps in understanding what factors contribute to loneliness and who are most at risk. A range of socio-demographic factors appear associated with and potentially predict loneliness. Three of the most well documented are not being in an intimate partnership or marriage, having few social connections, and living alone (Cohen-Mansfield, Hazan, Lerman, & Shalom, 2016; Shiovitz-Ezra & Leitsch, 2010), although loneliness is not confined to those who are socially isolated (de Jong Gierveld, Tilburg, & Dykstra, 2018). Of concern are social, cultural and economic factors that may limit people's ability to participate in meaningful social relationships, particularly outside of one's own home. This was brought into sharp relief during the COVID-19 pandemic where the social isolation required of older people was highlighted as a major public health concern (Armitage & Nellums, 2020), and ageist discourses framed older people's lives as expendable compared to the economic impact on younger generations (Brooke & Jackson, 2020).

Key factors associated with loneliness are age and gender. Young adults and those in the older age groups appear more likely to report being lonely (Dykstra, 2009; Lim, Eres, & Peck, 2019), reflecting a U-shaped distribution among adults (Pinquart & Sorensen, 2001). Where studies have not identified an association between older age and loneliness (e.g., Australian Psychological Society, 2018) this may be because they have not sufficiently captured those in the upper age groups (e.g., 80 years and over) (Cohen-Mansfield et al., 2016). Loneliness among older people is likely to be related to the loss of emotional supports, such as due to bereavement or retirement (Coyle & Dugan, 2012;

Fokkema & van Tilburg, 2007). There is mixed evidence on the association between gender and loneliness with one meta-analysis concluding that women are more at risk (Pinquart & Sorensen, 2001) and another suggesting that men are marginally at higher risk (Maes, Qualter, Vanhalst, van Den Noortgate, & Goosens, 2019). Nonetheless, the nature of men's and women's social relationships and life courses suggests different loneliness pathways (Dahlberg, Andersson, McKee, & Lennartsson, 2015).

The experience of loneliness appears to also vary by sexual orientation. As noted, there is emerging evidence that loneliness is more common among older lesbian and gay people, as indicated in research from the United States (Hsieh & Liu, 2021; Kim & Fredriksen-Goldsen, 2016), the Netherlands (Fokkema & Kuyper, 2009), Australia (Hughes, 2016), the United Kingdom (Kneale, Henley, Thomas, & French, 2021; Wilkens, 2015) and Portugal (Pereira et al., 2018). In the United States, Hsieh and Liu (2021) reported that among their nationally representative sample of 3567 adults aged 50 and over, lesbian and gay people were significantly more lonely than heterosexual people. The *Caring and Aging with Pride* study found 53% of the 2560 lesbian, gay, bisexual and transgender participants aged 50 and over reported experiencing loneliness (Fredriksen-Goldsen et al., 2011). In a study of 3618 Dutch people aged 55 to 89, the proportion of those identified as seriously lonely was much greater among gay and bisexual men (19%) than heterosexual men (2%), as well as lesbian and bisexual women (14%) compared to heterosexual women (5%) (Fokkema & Kuyper, 2009). In contrast, Beam and Collins's (2019) research, drawing on a population-based longitudinal study in the United States, concluded that there was no difference in loneliness trajectories for older sexual minority groups compared to heterosexual groups. However, a key limitation of this study was that it did not ask respondents what their sexual orientation was but rather if they had ever had sex with someone of the same gender—potentially incorporating into the sexual minority group people who engaged in same-sex behavior in the past but who now identify as heterosexual.

Some factors associated with loneliness among older lesbian and gay people mirror those in the wider population. As in the general population, older lesbian and gay people in the younger age band (i.e., aged 50 to 64) are less likely to report loneliness than those in the upper age groups (i.e., 80 years of age and over) (Fredriksen-Goldsen et al., 2011; Hughes, 2016). Not being in an intimate partnership or marriage, having few social connections (Hsieh & Liu, 2021) and living alone (Hughes, 2016) also appear associated with loneliness among older lesbian women and gay men. These factors themselves are reported to be more common among older lesbian and gay people than the general population (Kim & Fredriksen-Goldsen, 2016) and thus may contribute to their elevated risk of loneliness (Fish & Weis, 2019). In Fokkema and Kuyper's (2009) research, lower social embeddedness, more common among

older lesbian, gay and bisexual adults, predicted loneliness but was not able to account for all the variation between these variables. In the *Caring and Aging with Pride* study, the significance of living with a partner was identified in particular, with lower levels of loneliness among those living with a partner compared to those living alone or with others. This suggests that living with someone other than a partner may not provide the same level of protection against loneliness (Kim & Fredriksen-Goldsen, 2016). Socio-economic factors, such as income inequality and lower educational status, also appear associated with loneliness among older lesbian and gay people (Fredriksen-Goldsen et al., 2011).

In addition to these commonalities with the general population, there are initial signs of other factors—unique to older lesbian and gay people’s experience—that may impact on the prevalence of loneliness among this group. Older lesbian and gay people grew up and lived most of their adult lives in an era when homosexuality was criminalized and pathologised (Waling et al., 2021) and these experiences may have led some to feel isolated and disconnected from wider society. Internalized homonegativity (same-sex attracted people holding negative perceptions about homosexuality) was identified as contributing to loneliness in a study of 802 gay men aged 40 to 94 years (Jacobs & Kane, 2012). Similarly, internalized stigma and concealment of sexual identity, along with lower social support and smaller social networks, have been reported as predictors of loneliness after controlling for other socio-demographic variables (Kim & Fredriksen-Goldsen, 2016). Lower rates of community participation were identified in Hsieh and Liu’s (2021) study as related to higher levels of loneliness. Challenges to forming connections to lesbian and gay communities may include lack of socio-economic resources, and the youth-oriented nature of many venues catering to same-sex attracted people (Kneale et al., 2021). The HIV/AIDS epidemic devastated many older gay men’s social networks (Kneale et al., 2021); one man reflected on the long-lasting effects of this trauma by saying: “Everyone is gone” (de Vries et al., 2019, p. 367). Despite the significance of past experiences of discrimination and their impact on older lesbian and gay people’s physical and mental health (Fredriksen-Goldsen, Kim, Shiu, Goldsen, & Emler, 2015), we have not been able to identify prior studies that have looked specifically at recent or lifetime experiences of sexual orientation discrimination in relation to loneliness. Thus, while there is emerging evidence about the experience of loneliness among older lesbian women and gay men, there is a need for more research, particularly to identify the social and individual factors, such as discrimination, that predict loneliness in this group.

Loneliness among older lesbian women and gay men can be understood by drawing on the Health Equity Promotion Model (Fredriksen-Goldsen et al., 2014), which considers the impact of both adverse and positive circumstances, including resilience demonstrated by many older lesbian and gay people. It

conceptualizes health outcomes (including disparities compared to the general population) as products of intersecting contextual forces across the life course and as influenced by individuals' social positions. These forces include structural level dynamics such as social exclusion and individual forces such as micro-aggression. The impact of these forces on health is mediated by behavioral, social and community, psychological, and biological health-promoting or adverse pathways. As loneliness may be conceived as an outcome related to quality of life, then factors contributing to loneliness can be located across the spectrum of the model, including socio-economic disadvantage (social positions), recent and lifetime experiences of discrimination (individual contextual forces), living arrangements, personal relationships and community connectedness (social and community contextual forces), and internalized homonegativity (psychological contextual forces).

The present study was part of a larger research project that examined diverse aspects of the health and well-being of older lesbian and gay adults living in Australia. We investigated key demographic factors and their association with loneliness separately for older lesbian women and older gay men. This is important given the potentially different loneliness pathways for women and men. We also looked at a range of social and individual factors identified in the literature as related to loneliness and that can be understood in the context of the Health Equity Promotion Model. These included connectedness to lesbian and gay communities and internalized homonegativity. In addition, we examined past experiences of sexual orientation discrimination, both in the recent past and across the lifespan.

Method

Participants

The initial sample involved 895 participants. For the present paper, we needed a sufficiently large number of participants in each group to facilitate statistical analysis. We therefore focused on those who indicated they were cisgender and either a lesbian woman or gay man. Other groups, such as those who identify as bisexual or who are trans or gender diverse, are likely to have specific experiences regarding social connectedness that would deserve separate dedicated analyses. Of the 895 participants, 48 identified as bisexual and 56 as another sexual orientation. There were also 39 participants who reported they were trans or gender diverse. A further 16 reported as neither male, female, trans or gender diverse, or did not specify their gender. Therefore, these groups did not form part of the analysis for the present paper. We also excluded two lesbian women and five gay men who did not respond to the

loneliness measure. Altogether, this left a final sample for analysis of 508 gay men and 241 lesbian women. This sample was aged 60 to 81 years ($M = 65.90$, $SD = 4.65$).

Materials

In addition to a measure of loneliness, the survey included a range of socio-demographic questions, and measures of discrimination, community connectedness and internalized homonegativity.

Loneliness

We used the 3-item Loneliness Scale (Hughes, Waite, Hawkey, & Cacioppo, 2004), adapted from the UCLA Loneliness Scale, as our measure of loneliness. This scale has been widely used in loneliness studies, particularly those involving a large number of variables and where loneliness has been one of a number of foci (Coyle & Dugan, 2012). The scale has been demonstrated to have good internal reliability and discriminant and convergent validity (Hughes et al., 2004), and has been used in studies involving older people (Coyle & Dugan, 2012), and older lesbian and gay people (Hughes, 2016). It is constructed as an indirect measure of loneliness because it does not directly ask participants if they have felt lonely to avoid the potential effect of the stigma of being characterized as lonely (Shiovitz-Ezra & Ayalon, 2012). The scale comprises three items: “How often do you feel that you lack companionship?,” “How often do you feel left out?,” and “How often do you feel isolated from others?” Each item is scored 1 (hardly ever), 2 (some of the time) and 3 (often). Scores are summed to produce a total score ranging from 3 to 9, with the higher score indicating the greater experience of loneliness. In this study, the Cronbach’s alpha for the 3-item Loneliness Scale was $\alpha = .88$.

Community connectedness

Connectedness to lesbian, gay, bisexual, transgender and intersex communities was examined through the following question: “How much do you feel a part of either lesbian, gay, bisexual, transgender or intersex communities?” The scale of 1 = “A lot” to 4 = “None” was reverse scored so that higher scores indicated greater community connectedness.

Sexual orientation discrimination

We incorporated two questions about sexual orientation discrimination to assess both recent and lifetime experiences of discrimination. For recent experiences, we asked, “In the last 12 months, how often were you treated unfairly as a direct result of your sexual orientation?” For lifetime experiences,

the question posed was, “Thinking back across your lifetime, to what degree have you been treated unfairly as a direct result of your sexual orientation?” Both questions were ranked from: 1 = “Not at all” to 5 = “Very often.”

Internalized homonegativity

One of the subscales of the Lesbian, Gay, and Bisexual Identity Scale (LGBIS) (Mohr & Kendra, 2011) was used to measure internalized homonegativity. This involved three items: “If it were possible, I would choose to be straight”; “I wish I were heterosexual”; “I believe it is unfair that I am attracted to people of the same sex.” Participants responded on a scale ranging from 1 = “Disagree strongly” to 6 = “Agree strongly.” The scores were averaged to produce a subscale score, with a higher score indicating a greater degree of internalized homonegativity. In this study, the Cronbach’s alpha for the internalized homonegativity scale was $\alpha = .77$.

Socio-demographic variables

Participants were asked their age, current gender identity, sexual orientation, and residential location (capital city or inner suburban, suburban, regional, rural or remote). Socio-economic variables included educational status (secondary or lower, non-university tertiary, undergraduate university degree, postgraduate university degree), employment status (full-time, part-time or casual, retired, other) and current annual pretax household income. Participants were also asked their country of birth (recoded Australia or overseas), their relationship status (recoded no relationship, relationship), and if they were living alone.

Procedure

The survey comprised an online and paper-based questionnaire distributed through a range of means to recruit a diverse sample. This included paid advertising via Facebook, as well as newsletter advertisements targeting older lesbian and gay people and aged care service providers. Lesbian and gay seniors’ events in Melbourne, including a national aging conference, provided an opportunity to distribute the paper version (which included a reply-paid envelope). The advertisements provided details on how to access the online survey or how to request a copy of the paper version. The research was approved by the Human Ethics Committee of La Trobe University. The survey was available from August to December 2017.

Statistical analysis

Descriptive statistics were computed to present a sample profile for the study variables. Each predictor variable of loneliness (community connectedness, internalized homonegativity, socio-demographics) was then examined separately in a series of univariable linear regressions. A test for multicollinearity was first conducted for all study variables. No problems were detected; all VIFs were below 5 and tolerance scores were above .20. All variables associated with loneliness at $p < .25$ in the univariable analysis were entered into a multivariable linear regression predicting loneliness to identify significant independent predictors. A .25 cutoff was used to allow for the possibility that some associations may not quite reach significance in the univariable analyses but may become significant in the multivariable analyses after controlling for other variables (Hosmer, Lemeshow, & Sturdivant, 2013). Each analysis was conducted separately for women and men using Stata Version 14.1 (StataCorp, College Station, TX).

Results

Sample profile

A sample profile is presented in Table 1. The greatest proportion of participants was aged between 60 and 69 years. The majority lived in a capital city, inner suburban or suburban area, although a larger proportion of men than women lived in a capital city or inner suburban area. About half the sample had a university education and just over half were retired. Just over half the participants' pretax household income was less than \$50,000 per annum and most were born in Australia. Approximately half of the men were in a relationship, compared to about two-thirds of the women. Just over a third reported that they lived alone. There was no significant difference between lesbian women ($M = 4.75, SD = 1.93$) and gay men ($M = 4.86, SD = 1.99$) on the loneliness scale, $t(747) = 0.72, p = .470$.

Predictors of loneliness among older lesbian women

Results for the older lesbian women are displayed in Table 2. In the univariable analysis, lesbian women who were employed or retired were significantly less likely to be lonely than those whose employment status was categorized as "other" ($p = .028$). This included people who were students, unemployed, or selected "other" for this question. Lesbian women with an income of AU\$0–19,999 were significantly more likely to be lonely than those with an income of AU\$20,000–49,999 ($p < .001$). Those not in a relationship ($p < .001$) and those

Table 1. Sample profile ($N = 749$).

	No.	%
Age group		
60–64 years	325	43.4
65–69 years	269	35.9
70 years and older	155	20.7
Residential location		
Capital city or inner suburban	249	33.3
Suburban	195	26.1
Regional	195	26.1
Rural or remote	108	14.5
Education		
Secondary or lower	172	23.0
Non-university tertiary	198	26.4
Undergraduate university degree	220	29.4
Postgraduate university degree	159	21.2
Employment status		
Full-time	120	16.1
Part-time or casual	132	17.7
Retired	417	55.8
Other	78	10.4
Income		
\$0–19,999	85	11.7
\$20,000–49,999	301	41.5
\$50,000–99,999	206	28.4
\$100,000 and over	134	18.5
Country of birth		
Australia	537	73.3
Overseas	196	26.7
Relationship status		
No relationship	328	44.9
Relationship	402	55.1
Living alone		
No	466	62.5
Yes	280	37.5
	<i>M</i>	<i>SD</i>
Community connectedness	2.62	0.99
Recent discrimination	1.65	0.97
Lifetime discrimination	2.72	1.08
Internalized homonegativity	1.48	0.77
Loneliness	4.82	1.97

Note. The “other” category listed under employment status included participants who were unemployed, students, or selected the “other” option.

living alone ($p < .001$) were significantly more likely to be lonely than those in a relationship or living with someone. In terms of the key predictor variables, lesbian women were more likely to be lonely if they were lower on community connectedness ($p < .001$), had more frequent recent experiences of discrimination ($p < .001$), had more frequent experiences of lifetime sexual orientation discrimination ($p < .001$), and were higher on internalized homonegativity ($p = .031$). In the multivariable analysis, only relationship status ($p < .001$), community connectedness ($p = .008$), and recent experiences of sexual orientation discrimination ($p = .009$) remained significant predictors of loneliness.

Table 2. Variables predicting loneliness among lesbian women in Australia aged 60 years and over.

	<i>M (SD)</i>	Univariable		Multivariable ¹	
		<i>b</i> [95% CI]	<i>p</i>	<i>b</i> [95% CI]	<i>p</i>
Age			.939		-
60–64 years	4.75 (2.04)	-			
65–69 years	4.70 (1.89)	-0.04 [-0.59, 0.50]			
70 years and older	4.83 (1.78)	0.09 [-0.61, 0.78]			
Location			.607		-
Capital city or inner suburban	4.53 (1.80)	-			
Suburban	4.97 (2.14)	0.44 [-0.25, 1.12]			
Regional	4.68 (2.04)	0.15 [-0.53, 0.83]			
Rural or remote	4.87 (1.72)	0.33 [-0.38, 1.05]			
Education			.220		.794
Secondary or lower	4.95 (2.00)	0.22 [-0.54, 0.99]		0.18 [-0.58, 0.94]	
Non-university tertiary	5.07 (2.01)	0.34 [-0.32, 1.00]		0.15 [-0.46, 0.77]	
Undergraduate university degree	4.72 (1.97)	-		-	
Postgraduate university degree	4.39 (1.77)	-0.33 [-0.96, 0.31]		-0.13 [-0.72, 0.46]	
Employment			.028		.580
Full-time	4.69 (2.08)	-0.06 [-0.78, 0.66]		0.51 [-0.30, 1.32]	
Part-time or casual	4.24 (1.49)	-0.50 [-1.13, 0.14]		0.04 [-0.56, 0.65]	
Retired	4.74 (1.95)	-		-	
Other	5.56 (2.11)	0.82 [0.07, 1.57]		0.27 [-0.43, 0.98]	
Income			<.001		.210
\$0–19,999	5.81 (2.45)	0.82 [0.01, 1.63]		0.59 [-0.18, 1.37]	
\$20,000–49,999	4.99 (1.87)	-		-	
\$50,000–99,999	4.46 (1.76)	-0.53 [-1.11, 0.05]		-0.02 [-0.63, 0.58]	
\$100,000 and over	3.93 (1.56)	-1.06 [-1.73, 0.39]		-0.49 [-1.30, 0.32]	
Country of birth			.647		-
Australia	4.69 (1.98)	-			
Overseas	4.82 (1.88)	0.13 [-0.42, 0.67]			
Current relationship			<.001		<.001
No relationship	5.70 (2.19)	-		-	
Relationship	4.18 (1.52)	-1.51 [-1.99, 1.03]		-1.14 [-1.80, -0.47]	
Living alone			<.001		.359
No	4.41 (1.70)	-		-	
Yes	5.60 (2.22)	1.19 [0.67, 1.71]		0.30 [-0.35, 0.95]	
Community connectedness	-	-0.63 [-0.87, 0.39]		-0.35 [-0.61, -0.09]	.008
Recent discrimination	-	0.52 [0.26, 0.78]		0.39 [0.10, 0.67]	.009
Lifetime discrimination	-	0.52 [0.30, 0.74]		0.23 [-0.01, 0.48]	.063
Internalized homonegativity	-	0.42 [0.04, 0.81]		0.23 [-0.16, 0.62]	.247

¹Only those variables that were associated with loneliness at $p < .25$ in the univariable analyses were entered into the multivariable analysis.

Predictors of loneliness among older gay men

Results for the older gay men are displayed in Table 3. In the univariable analysis, gay men with an income of AU\$20,000–49,999 were significantly more likely to be lonely than those with an income of AU\$50,000–99,999 and AU\$100,000 and over ($p = .027$). Those not in a relationship ($p < .001$) and those living alone ($p < .001$) were significantly more likely to be lonely than those in a relationship or living with someone. Although confidence intervals suggested that men aged 70 years and older were significantly less likely to be lonely than men aged 60–64 years and those living in a regional area were significantly more likely to be lonely than men in a capital city or inner suburban area, the overall effect of these variables was not significant, which suggests these are relatively weak findings. For the key predictor variables, gay

Table 3. Variables predicting loneliness among gay men in Australia aged 60 years and over.

	<i>M</i> (<i>SD</i>)	Univariable		Multivariable ¹	
		<i>b</i> [95% CI]	<i>p</i>	<i>b</i> [95% CI]	<i>p</i>
Age			.055		.020
60–64 years	5.09 (2.08)	-		-	
65–69 years	4.77 (1.88)	–0.32 [–0.71, 0.08]		–0.13 [–0.47, 0.22]	
70 years and older	4.56 (1.93)	–0.53 [–0.98, –0.08]		–0.58 [–0.99, –0.17]	
Location			.208		.943
Capital city or inner suburban	4.71 (1.91)	-		-	
Suburban	4.79 (1.96)	0.08 [–0.36, 0.52]		0.03 [–0.36, 0.42]	
Regional	5.17 (2.10)	0.46 [0.02, 0.90]		0.07 [–0.32, 0.46]	
Rural or remote	4.79 (2.00)	0.07 [–0.52, 0.67]		–0.09 [–0.61, 0.43]	
Education			.361		-
Secondary or lower	4.69 (2.01)	–0.25 [–0.71, 0.21]			
Non-university tertiary	5.05 (2.17)	0.11 [–0.35, 0.57]			
Undergraduate university degree	4.94 (1.95)	-			
Postgraduate university degree	4.68 (1.66)	–0.26 [–0.78, 0.27]			
Employment			.304		-
Full-time	4.62 (1.81)	–0.21 [–0.69, 0.27]			
Part-time or casual	4.98 (1.94)	0.15 [–0.34, 0.63]			
Retired	4.83 (2.02)	-			
Other	5.28 (2.14)	0.45 [–0.17, 1.07]			
Income			.027		.411
\$0–19,999	4.95 (1.93)	–0.16 [–0.73, 0.41]		–0.24 [–0.74, 0.26]	
\$20,000–49,999	5.11 (2.08)	-		-	
\$50,000–99,999	4.67 (1.93)	–0.43 [–0.86, –0.01]		0.02 [–0.36, 0.41]	
\$100,000 and over	4.42 (1.73)	–0.69 [–1.17, –0.21]		–0.29 [–0.74, 0.16]	
Country of birth			.721		-
Australia	4.89 (2.04)	-			
Overseas	4.81 (1.77)	–0.07 [–0.48, 0.33]			
Current relationship			<.001		<.001
No relationship	5.54 (2.11)	-		-	
Relationship	4.16 (1.55)	–1.39 [–1.71, –1.06]		–1.19 [–1.59, –0.79]	
Living alone			<.001		0.908
No	4.46 (1.83)	-		-	
Yes	5.43 (2.07)	0.97 [0.63, 1.31]		–0.02 [–0.42, 0.37]	
Community connectedness	-	–0.56 [–0.73, –0.39]	<.001	–0.50 [–0.66, –0.35]	<.001
Recent discrimination	-	0.54 [0.37, 0.71]	<.001	0.18 [–0.02, 0.37]	.072
Lifetime discrimination	-	0.59 [0.44, 0.74]	<.001	0.36 [0.19, 0.53]	<.001
Internalized homonegativity	-	0.52 [0.31, 0.73]	<.001	0.27 [0.08, 0.46]	.005

¹Only those variables that were associated with loneliness at $p < .25$ in the univariable analyses were entered into the multivariable analysis.

men were more likely to be lonely if they were lower on community connectedness ($p < .001$), had more frequent recent experiences of sexual orientation discrimination ($p < .001$), had more frequent lifetime experiences of sexual orientation discrimination ($p < .001$), and were higher on internalized homonegativity ($p < .001$). In the multivariable analysis, age became a significant predictor of loneliness, where those aged 70 years and older were significantly less likely to be lonely than those aged 60–64 years ($p = .020$). In addition, relationship status ($p < .001$), community connectedness ($p < .001$), experiences of lifetime sexual orientation discrimination ($p < .001$), and internalized homonegativity ($p = .005$) remained significant predictors of loneliness.

Discussion

While anyone can feel lonely, there are certain groups in the population who appear more likely to experience loneliness and for whom the effects may be most considerable (Cacioppo, Grippo, London, Goosens, & Cacioppo, 2015). In our study, the mean loneliness scores of 4.75 for older lesbian women and 4.86 for older gay men were substantially higher than what has been found in nationally representative samples of the general older population in the United States, which utilized the 3-item Loneliness Scale (Cornwell & Waite, 2009; Coyle & Dugan, 2012). This highlights the issue as one of critical concern for older lesbian women and gay men, especially as loneliness is associated with a range of mental health conditions including suicide ideation (Bennardi et al., 2019) and depression (Ó Luanaigh & Lawlor, 2008). Nonetheless, it is important to stress that loneliness is not a universal experience for older lesbian and gay people (Kneale et al., 2021). And there remains a need for larger population-based or probabilistic studies to determine the prevalence of loneliness among older lesbian women and gay men compared to older heterosexual people (Beam & Collins, 2019).

In our study, age did not initially appear to be associated with loneliness, but in the multivariable analysis age did appear as a predictor of loneliness among older gay men. However, in contrast to the literature on the general older population (Pinquart & Sorensen, 2001) and on older lesbian women and gay men (Fredriksen-Goldsen et al., 2011; Hughes, 2016), it was the men in the younger age group (i.e., 60 to 64 years) who were more likely to experience loneliness than those in the upper age group (i.e., 70 years and older). It is possible that for these men the social losses that occur at that age (typically retirement) may be more impactful in terms of loneliness than the losses experienced later in life. It is also possible that 60 to 64 years old gay men may feel more acutely than older men a perceived exclusion from youth-centric commercial gay culture. It may be the case that our findings did not fully reflect the extent of loneliness among the upper age groups—who may be more at risk of loneliness (Dykstra, 2009)—because our sample included relatively few people aged 80 and over (Cohen-Mansfield et al., 2016). Further research into the experience and rate of loneliness across the age ranges is warranted.

As in prior research (Fredriksen-Goldsen et al., 2011), the univariable analysis revealed associations between indicators of lower socio-economic status and loneliness. However, none of these remained significant after entering them into the multivariable linear regression. This included those in the lower income brackets (lesbian women in the bracket AU\$0 to 19,000 and gay men in the AU\$20,000 to 49,999 bracket) who initially appeared more at risk of loneliness. Similarly, older lesbian women whose employment was reported as “other” (including being unemployed) initially appeared more

likely than those who were employed or retired to experience loneliness, although this was not a significant independent predictor of loneliness in the multivariable analysis. Older gay men's employment status did not appear associated with loneliness, as was neither the men's nor women's educational backgrounds.

For both older lesbian women and older gay men in this study, not being in an intimate relationship was a predictor of loneliness at both the univariable and multivariable analysis stages. The value of being in an intimate relationship to protect against loneliness confirms findings on both the general older population (Cohen-Mansfield et al., 2016; Shiovitz-Ezra & Leitsch, 2010) and on older lesbian and gay people (Fish & Weis, 2019; Hsieh & Liu, 2021; Hughes, 2016; Kim & Fredriksen-Goldsen, 2016). Hsieh and Liu (2021) stress the importance of the companionship provided by an intimate partner, especially when cohabiting. Despite marriage equality having been achieved in Australia, some lesbian and gay people may not be favorably disposed toward marriage (Hsieh & Liu, 2021). Nonetheless, "having a spouse/partner, especially in the context of a legally protected and culturally accepted relationship, has long been identified as a key mechanism for cultivating a sense of belonging and meaning and expanding social connections" (Hsieh & Liu, 2021, pp. 12–13). This highlights the potential for services to support same-sex partnerships and marriages, such as relationship counseling and mediation, as a strategy to prevent loneliness. It also signifies the risk of loneliness facing those who are single and the need for resources to assist them to establish and maintain meaningful social relationships. Psychotherapeutic approaches, such as existential therapy, that enable people to explore the deep meaning of the lived experience of loneliness, may be beneficial (Ratanashevorn & Brown, 2021).

In part, this may be facilitated by building connections to lesbian and gay communities, which was another key predictor of loneliness for older lesbian women and gay men in this study, both at the univariable and multivariable stages of analysis. Lack of connectedness to gay communities has been associated with loneliness in prior research on gay and bisexual men, which also suggested that the effects of recently accessing gay and bisexual community resources on loneliness were mediated by perceived connectedness to the gay and bisexual male community (Li, Hubach, & Dodge, 2015). Similarly, Hsieh and Liu (2021) found loneliness was associated with community connectedness, although the impact of this variable was not as important as being in an intimate partnership. Community volunteering has been identified as a key factor in promoting community connectedness and positive mental health (Lyons et al., 2021b), as well as to significantly reduce loneliness among older adults by facilitating meaningful activities and social relationships (Carr, Lennox Kail, Matz-Costa, & Shavit, 2018). There are well developed lesbian and gay community organizations and programs in Australia that could be

further deployed to those at risk of loneliness and to strengthen their community connectedness. Examples include the Coming Back Out Ball and the LGBTI Community Visitors programs run in most states. Counseling programs that have involved peer counselors in group contexts have also been found to be beneficial in reducing loneliness (Hart et al., 2016).

While living alone was associated with loneliness initially it did not remain as a predictor once the other predictor variables were incorporated into the multivariable analysis. Although this appears in contrast with much of the literature identifying a link between living alone and loneliness (Fish & Weis, 2019; Hughes, 2016; Kim & Fredriksen-Goldsen, 2016), it does accord somewhat with Kim and Fredriksen-Goldsen's (2016) conclusion that what is most important in living with other people in protecting against loneliness is living with an intimate partner or spouse. Thus, for older lesbian women and gay men it may be that it is the nature and depth of their intimate relationships and connections to lesbian and gay communities that are more important with respect to loneliness than their living arrangements. Further research on past living arrangements of older lesbian and gay people may provide insights from those living alone across the lifespan about what strategies they engaged in to prevent or address loneliness. Resources and supports are needed to strengthen the complex ways that older lesbian women and gay men organize their living arrangements and relationships. Mainstream services, such as those targeting loneliness among older people, need to recognize and support the alternate ways of living (e.g., with extended friendship groups and with ex-partners) that some older lesbian and gay people value.

While the rate of loneliness did not appear to vary by gender among this sample, there were some differences between the women and men regarding predictors of loneliness—especially those relating to discrimination. This suggests different loneliness pathways for older lesbian women and older gay men. Notably, for older gay men, internalized homonegativity and lifetime experiences of sexual orientation discrimination appeared as predictors of loneliness, which they did not for older lesbian women. This is consistent with previous research that found that older gay men, compared to lesbian women, report higher rates of lifetime sexual orientation discrimination, which may have a cumulative effect across the life course (Fredriksen-Goldsen et al., 2011). Among the general male population, loneliness has been identified as common among those who identify strongly with traditional masculine ideology, potentially reflective of a fragile sense of masculine identity (Blazina, Eddins, Burrige, & Settle, 2007). We do not know, as yet, if this is also the case for gay men, although there may be some indication of this in our study with the identification of internalized homonegativity as a predictor of loneliness for older gay men. For these men, it is possible that their sexuality undermines or problematizes their masculinity (Coston & Kimmel, 2012).

For the older lesbian women, recent experiences of sexual orientation discrimination appeared as a predictor, which it did not for the men. This is similar to our finding reported elsewhere that it is recent, rather than lifetime experiences, of sexual orientation discrimination for women that are most closely linked to lower positive mental health (Lyons et al., 2021a). Despite evidence of these differences, there is a need to investigate the intersection of gender and loneliness in more depth for these groups. For example, among the older gay men, recent discrimination was significantly associated with loneliness in the univariable analysis but was no longer significant after controlling for the sociodemographic and other study variables in the multivariable analysis. This suggests that other aspects of their lives are potentially playing a larger role in their experiences of loneliness, such as experiences of discrimination across their lifetimes and internalized homonegativity. It also suggests a need for further research to examine how different current and historical factors may combine to contribute to loneliness. To understand the role of discrimination in the lives of older lesbian women and gay men, it will be important to assess their experience of different types of discrimination such as everyday bias and micro-aggressions, which have been identified as more commonly experienced by older lesbian women, compared to gay men, after legal marriage (Goldsen et al., 2017). For older lesbian women, we also need a better understanding of how recent experiences of sexual orientation discrimination relate to other experiences of discrimination based on gender and age. Previously we have suggested that the nature of the sexual orientation discrimination faced by older lesbian women is likely to be different from that faced by older gay men and influenced by their experience of gender-based discrimination across the life course (Lyons et al., 2021a). While more detailed quantitative modeling of trajectories and pathways may assist in exploring the influence of these factors on loneliness, qualitative research drawing on an intersectional perspective may also help explore and track these experiences for specific women and men in an in-depth way.

Further research is also needed to understand the cohort and temporal dimensions of loneliness for older lesbian women and gay men. Experiences of discrimination—which in this study have been identified as predictors of loneliness—may vary between different generations, and generational cohorts moving into older age now may not face the same challenges as prior generations. Similarly, generational cohort differences related to other predictor variables may affect experiences of loneliness in the future. For example, the introduction of same-sex marriage in Australia may affect the proportion of lesbian and gay people initiating and maintaining long-term intimate partnerships into later life, which in turn may affect their experience of loneliness. There is also little understanding of the temporal dimensions of loneliness for older lesbian and gay people. Longitudinal research on national populations suggest that people who are lonely at one point in their life do not always

remain that way (Dahlberg et al., 2015). A better understanding of how lesbian and gay people move in and out of loneliness—and how this relates to predictors of loneliness for this group—is essential.

While loneliness is identified as leading to negative physical and mental health outcomes (Hawkey & Cacioppo, 2010; Holt-Lunstad et al., 2015), it is possible to identify loneliness as a mental health or emotional wellbeing outcome in itself. It may also be understood as a component of quality of life and part of the continuum of social support and connectedness as represented in the World Health Organization Quality of Life Scale (Fredriksen-Goldsen & Kim, 2017). Framing loneliness in this way can assist in applying the Health Equity Promotion Model (Fredriksen-Goldsen et al., 2014). If loneliness is identified as a quality of life and wellbeing outcome, then it is possible to track the range of contributing and predictor factors across the model. In particular, the multivariable analysis presented in this paper demonstrates the importance of individual-level contextual forces (recent experiences of discrimination—for older lesbian women; lifetime experiences of discrimination—for older gay men), social and community pathways (not being in an intimate relationship and not being connected to lesbian and gay communities) and psychological pathways (internalized homonegativity—for older gay men). While our study was not able to investigate it, it is likely that these factors emerge and cumulate over the life course in different ways, as conceptualized in the model. A critical question is: what resources, supports and other interventions can be developed to address these factors and help build resilience to loneliness?

Limitations

There were a number of limitations to this study. As the study was cross-sectional, it was not able to identify possible casual relationships nor changing experiences of loneliness over time. Longitudinal studies into loneliness among older lesbian women and gay men are essential to capture changes in loneliness pathways across the life course. Future research would also benefit from a more detailed investigation of loneliness and types of relationships, such as whether or not loneliness is lower among people who are legally married. Unfortunately, there were insufficient number of people in each of the relationship sub-groups for this analysis to be carried out in this study. The research was further limited in its focus on lesbian women and gay men. Future research should target other sexual and gender minority groups for whom the experience of loneliness may be just as, if not more, significant. This should include older bisexual women and men and older people who are trans or gender diverse, who have been identified in prior research as experiencing higher levels of loneliness than older lesbian women and gay men (Fredriksen-Goldsen, Kim, Barkan, Muraco, & Hoy-Ellis, 2013). It will be important to

examine these groups separately, as they are likely to have faced unique challenges with regard to stigma and marginalization. Convenience sampling may have over-represented those with connections to lesbian and gay communities (given the recruitment via community groups and services) and those who are open about their lesbian or gay identity. There is a need for Australian population-based or probabilistic surveys to include sexual orientation as a demographic variable, as has been demonstrated to be successful overseas (e.g., Fredriksen-Goldsen et al., 2013).

With regard to the survey instruments, the investigation of community connectedness and lifetime and recent sexuality discrimination was limited in that we utilized single-item measures. This was necessary to avoid overburdening the survey respondents with too many questions. Examination of community connectedness was also limited in that we solely examined connection to lesbian, gay, bisexual, transgender and intersex communities, rather than including other communities such cultural communities or place-based communities. With respect to examining loneliness, this study employed the 3-item Loneliness Scale. While this scale has demonstrated good reliability and validity (Hughes et al., 2004), it does not capture the nuances in the dimensions of loneliness (such as emotional and social loneliness) that longer scales do, such as the de Jong Gierveld Scale (de Jong Gierveld et al., 2018). Including a direct question about whether respondents felt lonely would also be valuable in future studies to ensure that the full range of participants who experience loneliness is captured. Previous research has identified that specificity and sensitivity differences between direct and indirect measures of loneliness can result in different pictures of loneliness, its prevalence and the characteristics of the people who experience it, across such variables as age, gender and education (Shiovitz-Ezra & Ayalon, 2012).

Conclusion

This study examined factors that predicted loneliness in a sample of older lesbian women and gay men in Australia. It provided unique insight into the impact of recent and lifetime experiences of sexual orientation discrimination on loneliness—with the former identified as a predictor of loneliness among older lesbian women, and the latter a predictor of loneliness among older gay men. This is the first time that experiences of sexual orientation discrimination have been investigated for their impact on loneliness. For older gay men, internalized homophobia also predicted loneliness once other predictor variables were included in the multivariable analysis. For both groups, being in an intimate relationship and being connected to lesbian and gay communities emerged as important protections against loneliness in later life. These and other predictors identified in this study highlight potential risk and protective factors for loneliness among older lesbian and gay adults, which may be

informative in the design of resources and support strategies that seek to alleviate loneliness and its associated impact on health within older lesbian and gay populations. These may include programs to support lesbian and gay people's long-term intimate relationships, as well as programs or therapies to address loneliness among people who are not in relationships. Strategies to strengthen and maintain older lesbian and gay people's connections to communities may also serve to prevent or ameliorate loneliness. Investment in mental health programs targeting lesbian and gay people is essential to address issues such as internalized homonegativity.

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References

- Armitage, R., & Nellums, L. (2020). COVID-19 and the consequences of isolating the elderly. *The Lancet*, 5(5), e356. doi:10.1016/S2468-2667(20)30061-X
- Australian Psychological Society. (2018). Australian loneliness report: A survey exploring the loneliness levels of Australians and the impact on their health and wellbeing. Retrieved October 4, 2021, from <https://psychweek.org.au/wp/wp-content/uploads/2018/11/Psychology-Week-2018-Australian-Loneliness-Report-1.pdf>
- Beam, C., & Collins, E. (2019). Trajectories of depressive symptomatology and loneliness in older adult sexual minorities and heterosexual groups. *Clinical Gerontologist*, 42(2), 172–184. doi:10.1080/07317115.2018.1518283
- Bennardi, M., Caballero, F., Mirret, M., Ayuso-Mateos, J., Haro, J., Lara, E., . . . Cabello, M. (2019). Longitudinal relationships between positive affect, loneliness, and suicide ideation: Age-specific factors in a general population. *Suicide and Life Threatening Behavior*, 49(1), 90–103. doi:10.1111/sltb.12424
- Blazina, C., Eddins, R., BurrIDGE, A., & Settle, A. (2007). The relationship between masculinity ideology, loneliness, and separation-individuation difficulties. *The Journal of Men's Studies*, 15(1), 101–109. doi:10.3149/jms.1501.101
- Brooke, J., & Jackson, D. (2020). Older people and COVID-19: Isolation, risk and ageism. *Journal of Clinical Nursing*, 29(13–14), 2044–2046. doi:10.1111/jocn.15274

- Cacioppo, S., Grippo, A., London, S., Goosens, L., & Cacioppo, J. (2015). Loneliness: Clinical import and interventions. *Perspectives on Psychological Science*, 10(2), 238–249. doi:10.1177/1745691615570616
- Carr, D. C., Lennox Kail, B., Matz-Costa, C., & Shavit, Y. Z. (2018). Does becoming a volunteer attenuate loneliness among recently widowed older adults? *Journals of Gerontology: Social Sciences*, 73(3), 501–510. doi:10.1093/geronb/gbx092
- Cohen-Mansfield, J., Hazan, H., Lerman, Y., & Shalom, V. (2016). Correlates and predictors of loneliness in older-adults: A review of quantitative results informed by qualitative insights. *International Psychogeriatrics*, 28(4), 557–576. doi:10.1017/S1041610215001532
- Cornwell, E. Y., & Waite, L. J. (2009). Social disconnectedness, perceived isolation, and health among older adults. *Journal of Health and Social Behavior*, 50(1), 31–48. doi: 10.1177/002214650905000103
- Coston, B., & Kimmel, M. (2012). Seeing privilege where it isn't: Marginalized masculinities and the intersectionality of privilege. *Journal of Social Issues*, 68(1), 97–111. doi:10.1111/j.1540-4560.2011.01738.x
- Coyle, C., & Dugan, E. (2012). Social isolation, loneliness and health among older adults. *Journal of Aging & Health*, 24(8), 1346–1363. doi:10.1177/0898264312460275
- Dahlberg, L., Andersson, L., McKee, K., & Lennartsson, C. (2015). Predictors of loneliness among older women and men in Sweden: A national longitudinal study. *Aging and Mental Health*, 19(5), 409–417. doi:10.1080/13607863.2014.944091
- de Jong Gierveld, J., Tilburg, T., & Dykstra, P. (2018). New ways of theorizing and conducting research in the field of loneliness and social isolation. In A. Vangelisti & D. Perlman (Eds.), *Cambridge handbook of personal relationships* (2nd ed., pp. 391–404). Cambridge, NY: Cambridge University Press.
- de Vries, B., Gutman, G., Humble, A., Gahagan, J., Chamberland, L., Aubert, P., . . . Mock, S. (2019). End-of-life preparations among LGBT older Canadian adults: The missing conversations. *The International Journal of Aging and Human Development*, 88(4), 358–379. doi:10.1177/0091415019836738
- Dykstra, P., van Tilburg, T., & de Jong Gierveld, J. (2005). Changes in older adult loneliness: Results from a seven-year longitudinal study. *Research on Aging*, 27(6), 725–747. doi:10.1177/0164027505279712
- Dykstra, P. (2009). Older adult loneliness: Myths and realities. *European Journal of Ageing*, 6(2), 91–100. doi:10.1007/s10433-009-0110-3
- Fish, J., & Weis, C. (2019). All the lonely people, where do they all belong? An interpretive synthesis of loneliness and social support in older lesbian, gay and bisexual communities. *Quality in Ageing and Older Adults*, 20(3), 130–142. doi:10.1108/QAOA-10-2018-0050
- Fokkema, C., & van Tilburg, T. (2007). Loneliness interventions among older adults: Sense or nonsense? *Tijdschrift Voor Gerontologie En Geriatrie*, 38(4), 185–203.
- Fokkema, T., & Kuyper, L. (2009). The relation between social embeddedness and loneliness among older lesbian, gay, and bisexual adults in the Netherlands. *Archives of Sexual Behavior*, 38(2), 264–275. doi:10.1007/s10508-007-9252-6
- Fredriksen-Goldsen, K., Kim, H.-J., Barkan, S., Muraco, A., & Hoy-Ellis, C. (2013). Health disparities among lesbian, gay, and bisexual older adults: Results from a population-based study. *American Journal of Public Health*, 103(10), 1802–1809. doi:10.2105/AJPH.2012.301110
- Fredriksen-Goldsen, K., Kim, H.-J., Emlet, C., Muraco, A., Erosheva, E., Hoy-Ellis, C., . . . Petry, H. (2011). *The aging and health report: Disparities and resilience among lesbian, gay, bisexual, and transgender older adults*. Seattle, WA: Institute for Multigenerational Health.

- Fredriksen-Goldsen, K., Kim, H.-J., Shiu, C., Goldsen, J., & Emlert, C. (2015). Successful aging among LGBT older adults: Physical and mental health-related quality of life by age group. *The Gerontologist*, 55(1), 154–168. doi:10.1093/geront/gnu081
- Fredriksen-Goldsen, K., & Kim, H.-J. (2017). The science of conducting research with LGBT older adults – An introduction to aging with pride: National, Health, Aging, and Sexuality/Gender Study (NHAS). *The Gerontologist*, 57(suppl 1), S1–S14. doi:10.1093/geront/gnw212
- Fredriksen-Goldsen, K., Simoni, J., Kim, H.-J., Lehavot, K., Walters, K., Yang, J., . . . Muraco, A. (2014). The health equity promotion model: Reconceptualization of lesbian, gay, bisexual, and transgender (LGBT) health disparities. *American Journal of Orthopsychiatry*, 68(6), 653–663. doi:10.1037/ort0000030
- Goldsen, J., Bryan, A., Kim, H.-J., Muraco, A., Jen, S., & Fredriksen-Goldsen, K. (2017). Who says I do: The changing context of marriage and health and quality of life for LGBT older adults. *The Gerontologist*, 57(suppl 1), S50–S62. doi:10.1093/geront/gnw174
- Hart, T. A., Stratton, N., Coleman, T. A., Wilson, H. A., Simpson, S. H., Julien, R. E., . . . Adam, B. D. (2016). A pilot trial of a sexual health counselling intervention for HIV-positive gay and bisexual men who report anal sex without condoms. *PLOS One*, 11(4), e0152762. doi:10.1371/journal.pone.0152762
- Hawkey, L., & Cacioppo, J. (2010). Loneliness matters: A theoretical and empirical review of consequences and mechanisms. *Annals of Behavioral Medicine*, 40(2), 218–227. doi:10.1007/s12160-010-9210-8
- Holt-Lunstad, J., Smith, T., Baker, M., Harris, T., & Stephenson, D. (2015). Loneliness and social isolation as risk factors for mortality: A meta-analytic review. *Perspectives on Psychological Science*, 10(2), 227–237. doi:10.1177/1745691614568352
- Hosmer, D. W., Jr., Lemeshow, S., & Sturdivant, R. X. (2013). *Applied logistic regression* (3rd ed.). Hoboken, NJ: John Wiley.
- Hsieh, N., & Liu, H. (2021). Social relationships and loneliness in late adulthood: Disparities by sexual orientation. *Journal of Marriage and Family*, 83(1), 57–74. doi:10.1111/jomf.12681
- Hughes, M. E., Waite, L., Hawkey, L., & Cacioppo, J. (2004). A short scale for measuring loneliness in large surveys: Results from two population-based studies. *Research on Aging*, 26(6), 655–672. doi:10.1177/0164027504268574
- Hughes, M. (2016). Loneliness and social support among lesbian, gay, bisexual, transgender and intersex people aged 50 and over. *Ageing and Society*, 36(9), 1961–1981. doi:10.1017/S0144686X1500080X
- Jacobs, R., & Kane, M. (2012). Correlates of loneliness in midlife and older gay and bisexual men. *Journal of Gay and Lesbian Social Services*, 24(1), 40–61. doi:10.1080/10538720.2012.643217
- Kim, H., & Fredriksen-Goldsen, K. (2016). Living arrangement and loneliness among lesbian, gay, and bisexual older adults. *The Gerontologist*, 56(3), 548–558. doi:10.1093/geront/gnu083
- Kneale, D., Henley, J., Thomas, J., & French, R. (2021). Inequalities in older LGBT people's health and care needs in the United Kingdom: A systematic scoping review. *Ageing and Society*, 41(3), 493–515. doi:10.1017/S0144686X19001326
- Li, M., Hubach, R., & Dodge, B. (2015). Social milieu and mediators of loneliness among gay and bisexual men in rural Indiana. *Journal of Gay and Lesbian Mental Health*, 19(4), 331–346. doi:10.1080/19359705.2015.1033798
- Lim, M., Eres, R., & Peck, C. (2019). *The young Australian loneliness survey: Understanding loneliness in adolescence and young adulthood*. Hawthorne, Victoria/Australia: Iverson Health Innovation Research Institute and Centre for Mental Health, Swinburne University of Technology.
- Lunaigh, Ó. C., & Lawlor, B. (2008). Loneliness and the health of older people. *International Journal of Geriatric Psychiatry*, 23(12), 1213–1221. doi:10.1002/gps.2054

- Lyons, A., Alba, B., Waling, A., Minichiello, V., Hughes, M., Barrett, C., . . . Blanchard, M. (2021a). Recent versus lifetime experiences of discrimination and the mental and physical health of older lesbian women and gay men. *Ageing and Society*, 41(5), 1072–1093. doi:10.1017/S0144686X19001533
- Lyons, A., Alba, B., Waling, A., Minichiello, V., Hughes, M., Fredriksen-Goldsen, K., . . . Irlam, C. (2021b). Volunteering among older lesbian and gay adults: Associations with mental, physical and social well-being. *Journal of Aging and Health*, 33(1–2), 3–13. doi:10.1177/0898264320952910
- Maes, M., Qualter, P., Vanhalst, J., van Den Noortgate, W., & Goosens, L. (2019). Gender differences in loneliness across the lifespan: A meta-analysis. *European Journal of Personality*, 33(6), 642–654. doi:10.1002/per.2220
- Mohr, J., & Kendra, M. (2011). Revision and extension of a multidimensional measure of sexual minority identity: The lesbian, gay, and bisexual identity scale. *Journal of Counselling Psychology*, 58(2), 234–245. doi:10.1037/a0022858
- Peplau, L., & Perlman, D. (1982). Perspectives on loneliness. In L. Peplau & D. Perlman (Eds.), *Loneliness: A source-book of current theory, research and therapy* (pp. 1–8). New York, NY: Wiley.
- Pereira, H., Serrano, J., de Vries, B., Esgalhado, G., Afonso, R., & Monteiro, S. (2018). Aging perceptions in older gay and bisexual men in Portugal: A qualitative study. *The International Journal of Aging and Human Development*, 87(1), 5–32. doi:10.1177/0091415017720889
- Pinquart, M., & Sorensen, S. (2001). Influences on loneliness in older adults: A meta-analysis. *Basic and Applied Social Psychology*, 23(4), 245–266. doi:10.1207/S15324834BASP2304_2
- Ratanashevorn, R., & Brown, E. C. (2021). “Alone in the Rain(bow)”: Existential therapy for loneliness in LGBTQ+ clients’. *Journal of LGBTQ Issues in Counselling*, 15(1), 110–127. doi:10.1080/15538605.2021.1868375
- Reynolds, R., & Robinson, S. (2016). Australian lesbian and gay life stories: A national oral history project. *Australian Feminist Studies*, 31(89), 363–376. doi:10.1080/08164649.2016.1254026
- Shiovitz-Ezra, S., & Ayalon, L. (2012). Use of direct versus indirect approaches to measure loneliness in later life. *Research on Aging*, 34(5), 572–591. doi:10.1177/0164027511423258
- Shiovitz-Ezra, S., & Leitsch, S. (2010). The role of social relationships in predicting loneliness: The national social life, health and aging project. *Social Work Research*, 34(3), 157–167. doi:10.1093/swr/34.3.157
- Waling, A., Lyons, A., Alba, B., Minichiello, V., Barrett, C., Hughes, M., . . . Edmonds, S. (2019). Experiences and perceptions of residential and in-home care services among older lesbian women and gay men in Australia. *Health and Social Care in the Community*, 27(5), 1251–1259. doi:10.1111/hsc.12760
- Waling, A., Lyons, A., Alba, B., Minichiello, V., Hughes, M., Barrett, C., . . . Edmonds, S. (2021). Older lesbian and gay men’s perceptions on lesbian and gay youth in Australia. *Culture, Health and Sexuality*, 23(2), 143–158. doi:10.1080/13691058.2019.1696984
- Wallace, S., Cochran, S., Durazo, E., & Ford, C. (2011). *Health of aging lesbian, gay and bisexual adults in California*. Los Angeles, CA: UCLA Center for Health Policy Research. Retrieved October 4, 2021, from <http://healthpolicy.ucla.edu/publications/search/pages/detail.aspx?PubID=27>
- Wilkens, J. (2015). Loneliness and belongingness in older lesbians: The role of social groups as “community.” *Journal of Lesbian Studies*, 19(1), 90–101. doi:10.1080/10894160.2015.960295