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Volunteering among Older Lesbian and Gay Adults: Associations with Mental, Physical, and Social Well-Being

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Disclosure of interest

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Abstract

Objectives: Volunteering is associated with positive well-being among older people, providing opportunities to stay active and socially connected. This may be especially relevant for older lesbian and gay people, who are less likely to have a partner, children, or support from their family of origin compared to heterosexual people.

Methods: Patterns of volunteering and mental, physical, and social well-being were examined in a sample of 754 lesbian and gay adults in Australia aged 60 years and older who completed a nationwide survey.

Results: Volunteers reported greater positive mental health than non-volunteers. Among the gay men, volunteers additionally reported higher self-rated health and social support, and lower psychological distress. Both the lesbian women and gay men who volunteered for LGBTI organisations also reported greater LGBTI community connectedness than volunteers for non-LGBTI organisations.

Discussion: These findings provide further insight into potential factors associated with the well-being of older lesbian and gay adults.

Keywords: gay; lesbian; older people; social support; volunteering

Introduction

Research has shown that volunteering is associated with a range of mental and physical health benefits (Binder & Freytag, 2013; Borgonovi, 2008; Kim & Morgül, 2017; Stukas et al., 2015). These benefits may be particularly valuable in older age, when the risk of social isolation and inactivity can increase (Courtin & Knapp, 2017). Studies on older people have found a range of benefits associated with volunteering, including better quality of life (Cattan et al., 2011; Parkinson et al., 2010), life satisfaction (Hansen et al., 2018), well-being (Piliavin & Siegl, 2007), mental and physical health (Lum & Lightfoot, 2005; Morrow-Howell et al., 2003; Onyx & Warburton, 2003; Piliavin & Siegl, 2007; Tang, 2009), and social support (Parkinson et al., 2010; Pilkington et al., 2012), as well as greater health service use (Kim & Konrath, 2016) and improved mortality (Harris & Thoresen, 2005; Konrath et al., 2012; Lum & Lightfoot, 2005; Okun et al., 2013). Therefore, the benefits associated with volunteering may be particularly significant for older people who may face additional challenges in older age, such as lesbian and gay people.

Only one study that we know of has examined volunteering rates among older lesbian and gay people (Houghton, 2018). Despite the lack of research, there are several reasons why the benefits associated with volunteering may be valuable for these groups. Firstly, the risks of loneliness and isolation can be greater for older lesbian and gay people compared to their heterosexual counterparts due to being less likely to have children or a partner (Fredriksen-Goldsen, Kim, et al., 2013) and less likely to rely on their families of origin for support, particularly if they had experienced rejection from family (Frost et al., 2016). Stigma and discrimination towards lesbian and gay people can also lead them to be excluded from many aspects of mainstream society (Meyer, 2003). Furthermore, older lesbian and gay people lived through a time when their sexuality was pathologised and criminalised (Brotman et al., 2015;

Fredriksen-Goldsen et al., 2015; Fredriksen-Goldsen & Muraco, 2010; Lyons et al., 2015), which may make some of them hesitant about engaging in mainstream seniors' communities.

These possibilities are encapsulated by the Health Equity Promotion Model (Fredriksen-Goldsen et al., 2014). This Model was developed to account not only for potential risk factors of poorer health and well-being in lesbian, gay, bisexual, and transgender populations, but also resilience and resources available to people for facilitating positive outcomes. While older lesbian and gay adults have endured long histories of stigma and marginalisation, which is associated with higher rates of mental health and other health challenges (Lyons et al., 2019), not all experience poor health (Lyons et al., 2013; Fredriksen-Goldsen, Emlet, et al., 2013). Resilience and health-promoting factors, such as social support or opportunities for social inclusion, may potentially offset the impact of stigma in some cases (Fredriksen-Goldsen et al., 2014). Volunteering, with its associated health and well-being benefits shown among older adults in general, may be one such factor. However, research is required to first explore whether volunteering is associated with better health among older lesbian and gay adults.

Given the multiple ways that stigma can impact the lives of gay and lesbian people, it may also be important to compare outcomes between those who volunteer specifically for organisations within the lesbian, gay, bisexual, transgender, or intersex (LGBTI) community and those who do not. In Australia, such organisations are specifically set up to support and/or advocate for improving the lives of lesbian and gay adults. Some organisations may be specifically focused on one or more sub-populations, but many focus on LGBTI populations as a whole. In this article, non-LGBTI organisations refer to those that are not specifically focused on LGBTI populations, such as charities that work with older people more generally. On the whole, LGBTI organisations are perhaps more likely to ensure culturally safe environments and supportive networks, and might also give opportunities for older people to

connect with younger lesbian and gay people (Gates et al., 2016; Paceley et al., 2015). At least in some cases, the potential benefits to well-being of volunteering in non-LGBTI organisations may be countered if older lesbian or gay volunteers have concerns about experiencing stigma or discrimination within the organisations. Although it is likely that older lesbian and gay people will choose to volunteer in spaces where they feel safe, what is not known is whether volunteering within the LGBTI community is associated with additional benefits for older lesbian and gay people.

There is a lack of evidence on the extent to which older lesbian and gay adults volunteer, including volunteering for LGBTI versus mainstream or non-LGBTI organisations. It is also not currently known whether they derive similar benefits from volunteering as their heterosexual counterparts, particularly given the additional challenges of stigma that many can face. Given this, our study sought to provide data on patterns of volunteering in a sample of lesbian and gay adults aged 60 years and older living in Australia, including volunteering for LGBTI and non-LGBTI organisations. As part of this aim, we also assessed the degree to which volunteering was associated with well-being by comparing volunteers and non-volunteers on self-rated health, positive mental health, psychological distress, and social support. To assess whether volunteering for mainstream organisations was just as beneficial, we also compared those volunteering for LGBTI organisations with those volunteering only for non-LGBTI organisations.

Method

Participants

A sample of 895 adults aged 60 years and older completed a nationwide survey. Of this sample, 35 participants identified as transgender women and four as transgender men, and

16 participants had a gender identity other than male, female, transgender, or did not specify. Forty-eight participants identified as bisexual and 56 participants had a sexual orientation other than lesbian, gay, or bisexual. Due to small numbers in each of these groups, we included only the gay men and lesbian women in the analysis for this paper. Two participants did not report whether or not they were volunteers and were therefore excluded. This left a sample of 511 cisgender gay men and 243 cisgender lesbian women who were aged between 60 and 85 years (M = 65.94, SD = 4.71).

Materials

The survey encompassed a wide range of topics such as physical and mental health, social well-being, experiences of sexual orientation discrimination, and health and aged care service use. This study involved a subset of questions, which included the following:

Volunteering. Participants were asked: "In the last twelve months, have you volunteered or given unpaid help, in the form of time, service or skills, through an organisation or group?" (Yes/No). If participants responded "Yes", they were asked: "Were any of these lesbian, gay, bisexual, transgender or intersex based organisations?" (Yes/No). We referred to LGBTI for this question to allow for the survey to cater to a diverse range of participants.

Self-rated health. We asked, "In general, would you say your health is…" (1 = poor, 2 = fair, 3 = good, 4 = very good, 5 = excellent). This measure has been found to reliably predict physical health when measured through objective means (DeSalvo et al., 2006; Idler & Benyamini, 1997).

Positive mental health. We used the Short Warwick Edinburgh Mental Well-Being Scale (SWEMWBS) (Stewart-Brown et al., 2009). Research has found that this shorter,

seven-item version of the scale has similar validity to the longer version (Fat et al., 2017). Participants were asked to describe their feelings over the last two weeks on a five-point scale ranging from 1 (None of the time) to 5 (All of the time). Example items include "I've been feeling optimistic about the future" and "I've been dealing with problems well." A total score ranging from 5 to 35 was calculated by summing the item scores. Internal reliability (Cronbach's alpha) for the SWEMWBS in this study was $\alpha = .91$.

Psychological distress. The widely used and validated K10 Scale (Anderson et al., 2013; Andrews & Slade, 2001; Furukawa et al., 2003; Kessler et al., 2002) was used to measure symptoms of psychological distress. Participants were asked to report how often they experienced 10 symptoms in the past 30 days on a scale ranging from 1 (None of the time) to 5 (All of the time). Example items include "About how often did you feel hopeless" and "About how often did you feel depressed." Scores were summed to calculate a total between 10 and 50 (Cronbach's $\alpha = .92$).

Social support. We used the 12-item version of the Interpersonal Support Evaluation List (ISEL) (Cohen et al., 1985) to measure the extent to which participants felt socially supported. The scale has been used in research on older Australian gay men (Lyons et al., 2017). Example items include "I feel that there is no one I can share my most private worries and fears with" and "When I need suggestions on how to deal with a personal problem, I know someone I can turn to." Responses were measured on a scale from 1 (Definitely false) to 4 (Definitely true). Negatively worded items were reverse-scored, then all items added to calculate a total between 12 and 48 (Cronbach's $\alpha = .90$).

LGBTI community connectedness. We measured LGBTI community connectedness by asking, "How much do you feel a part of either lesbian, gay, bisexual, transgender or

intersex communities?" Participants responded on a scale from 1 (A lot) to 4 (None) that was then reverse-scored, whereby higher scores reflected greater community connectedness.

Socio-demographic variables. We asked participants for information on a range of socio-demographic questions including gender, sexual orientation, age, residential location, highest educational qualification, employment status, pre-tax income, country of birth, and relationship status.

Procedure

The survey was distributed between August 2017 and December 2017 and was available either online or on paper. Promotion included adverts in newsletters, email lists of ageing and aged care community organisations, and paid Facebook advertising. The paper version of the survey was available on request with instructions provided in the advertisements. Survey advertisements and paper copies were also made available at an LGBTI ageing conference and other LGBTI seniors' events in Victoria, Australia. This variety of recruitment methods was used to enhance the socio-demographic diversity of the sample. An information statement at the beginning of the survey informed participants of the purpose of the research and explained that responses were anonymous. The study had ethical approval from the *[blinded for review]* Human Ethics Committee [*project number*].

Statistical Analysis

We compiled separate sample profiles of descriptive statistics of the socio-demographic variables for the volunteers and non-volunteers, and conducted chi-square tests to assess differences between these groups. Volunteers and non-volunteers were then compared using separate linear regressions on self-rated health, positive mental health,

psychological distress, and social support. We then compared volunteers for whom this included one or more LGBTI organisations to those who were volunteering only for non-LGBTI organisations on the same variables as above using separate linear regressions. However, we additionally compared them on LGBTI community connectedness. We conducted each regression analysis without adjustment for the socio-demographic variables and then with adjustment for the socio-demographic variables, given that well-being outcomes are often linked to socio-demographics. Where a participant had missing data on one or more variables for a specific analysis, that participant was excluded from the analysis. All analyses were conducted separately for women and men using Stata Version 14.1 (StataCorp, College Station, TX).

Results

Sample Profile

Almost all participants (98.9%) completed the survey online. Table 1 presents a sample profile. The majority of the sample were gay men, and most participants were under the age of 70 years. Approximately one-third lived in a capital city or inner suburban area, and roughly a quarter each in a suburban area and a regional area. Just over half of the sample had a university education, and more than half were retired. The majority of participants had an income between AU$20,000 and AU$99,000 and were born in Australia, and over half were in a relationship.

Socio-demographic Factors Associated with Volunteering

In total, 147 women (60.5%) and 272 men (53.2%) in our sample had volunteered in the last 12 months. This is considerably higher than rates for older people more generally in

Australia, where 35% have been reported as having volunteered through an organisation or group in the last 12 months (Australian Bureau of Statistics, 2015). There was no significant gender difference in the likelihood of being a volunteer, $\chi^2(1) = 3.52$, $p = .061$. Table 2 presents a comparison between volunteers and non-volunteers separately for women and men. Among the women, volunteers were more likely to live in a rural or remote area than non-volunteers, $p = .013$, and volunteers were less likely to have a non-university tertiary degree and more likely to have a postgraduate university degree than non-volunteers, $p = .041$. Among the men, volunteers were less likely to have a secondary or lower education and more likely to have a postgraduate university degree than non-volunteers, $p = <.001$. Men who were volunteers were also less likely to be working full-time and more likely to be working part-time or casually compared to non-volunteers, $p = .021$. There were no differences between volunteers and non-volunteers on age, income, country of birth, or relationship status among the men or the women.

Volunteering and Well-being

Table 3 presents comparisons between volunteers and non-volunteers on the well-being measures. Among the lesbian women, we found no differences between volunteers and non-volunteers prior to adjusting for socio-demographic variables. However, after adjustment, volunteers were significantly higher than non-volunteers on positive mental health, $F(1, 199) = 4.20$, $p = .042$. Among the gay men, and prior to socio-demographic adjustment, volunteers were significantly lower than non-volunteers on psychological distress, $F(1, 489) = 3.91$, $p = .049$, and higher on social support, $F(1, 487) = 6.98$, $p = .009$. After adjustment, the gay men who were volunteers were lower than non-volunteers on psychological distress, $F(1, 438) = 8.89$, $p = .003$, and higher on self-rated health, $F(1, 457) = 5.17$, $p = .023$, positive mental health, $F(1, 454) = 4.87$, $p = .029$, and social support, $F(1, 438) = 14.05$, $p < .001$.

Volunteering for LGBTI Organisations vs Non-LGBTI Organisations

Among those who volunteered, 46 of the women (31.7%) and 91 of the men (33.7%) were volunteering for at least one LGBTI organisation. Table 4 displays comparisons between volunteers for LGBTI organisations and those who were volunteering only for non-LGBTI organisations. We found no differences between these two groups on self-rated health, positive mental health, psychological distress, or social support among either the lesbian women or the gay men both prior to and after adjusting for socio-demographic variables. However, those who volunteered for LGBTI organisations were higher on LGBTI community connectedness. This was the case for the lesbian women and the gay men, prior to socio-demographic adjustment [women: $F(1, 142) = 26.84$, $p < .001$; men: $F(1, 268) = 69.04$, $p < .001$] and following adjustment [women: $F(1, 112) = 23.91$, $p < .001$; men: $F(1, 231) = 69.29$, $p < .001$].

Discussion

This study focused on volunteering among older lesbian women and gay men living in Australia. Overall, 60.5% of older lesbian women in our sample and 53.2% of older gay men reported volunteering their time for at least one group or organisation, however this gender difference was not statistically significant. There were a small number of demographic differences among volunteers and non-volunteers. Among the lesbian women, volunteers were more likely to live in a rural or remote area, less likely to have a non-university tertiary degree, and more likely to have a postgraduate university degree than non-volunteers. Among the gay men, volunteers were less likely to have a secondary or lower education, more likely to have a postgraduate university degree, less likely to be working full-time, and more likely

to be working part-time or casually than non-volunteers. Associations with higher levels of education in particular are similar to studies of the older general population (Principi et al., 2016). Although further research is needed to explain the connection in this particular population, it could potentially be indicative of socio-economic status, where those of a higher status may have greater social or individual capital to facilitate opportunities for volunteering (Principi et al., 2016).

We found significant differences between volunteers and non-volunteers on all the outcome variables among the gay men, with volunteers significantly higher than non-volunteers on self-rated health, positive mental health, and social support, and significantly lower on psychological distress after adjusting for socio-demographic variables. However, among the lesbian women, the only significant difference was that volunteers were significantly higher on positive mental health than non-volunteers after adjusting for socio-demographic variables. In a similar vein, a relatively recent study conducted in the United States showed that community engagement was linked to resilience in a group of older gay and bisexual men who were living with HIV (Emlet et al., 2017). Overall, these results lend support to the Health Equity Promotion Model by highlighting a potential pathway for better health outcomes among older lesbian and gay adults, and add to possible protective factors for this stigmatised population. These results are also consistent with studies that have found volunteering linked to positive health and well-being outcomes among older people in general (Cattan et al., 2011; Hansen et al., 2018; Kim & Konrath, 2016; Konrath et al., 2012; Lum & Lightfoot, 2005; Onyx & Warburton, 2003; Piliavin & Siegl, 2007; Tang, 2009). The finding that the older gay men had higher self-rated health if they were volunteers further suggests that positive outcomes may not simply be limited to mental health but may relate to health more generally. Studies have found that volunteering may have overall health benefits, perhaps due to greater physical and social activity (Barron, et al., 2009). While it is also

possible that those who are healthier may be more likely to have capacity to volunteer, it is worth noting that longitudinal studies involving older people have found that volunteering has a causal impact on well-being (Hansen et al., 2018; Kim & Konrath, 2016; Konrath et al., 2012; Lum & Lightfoot, 2005; Morrow-Howell et al., 2003; Parkinson et al., 2010; Piliavin & Siegl, 2007; Tang, 2009).

While the gender differences we found in well-being patterns may be partly due to the smaller sample size for the women, it may also be the case that older gay men benefit more from volunteering. It is possible, for example, that older lesbian women have greater social support in other areas of their lives, such as greater social networks and less social isolation (Fredriksen-Goldsen, Emlet, et al., 2013, Grossman et al., 2001). If so, volunteering may serve more of the social needs of older gay men than of lesbian women. A recent qualitative study conducted in Canada, for example, found that older adults who were living with HIV associated healthy ageing with engagement in generativity, such as mentoring and supporting younger generations, and social connections (Emlet & Harris, 2020). This, and the fact that our sample overall reported considerably higher rates of volunteering than the 35% reported for the older general population in Australia (Australian Bureau of Statistics, 2015), could also suggest a collective community sense of volunteering as a responsibility. That said, our results suggest that older lesbian women may nevertheless receive benefits through volunteering such as greater levels of happiness and therefore positive mental health, and were just as likely to be volunteers as older gay men. While our study reveals some gender differences, these differences cannot be fully explained without additional follow-up research. In particular, studies are needed that explore the full range of experiences that older lesbian women and gay men have in relation to volunteering.

Among those who were volunteers, approximately one-third of participants volunteered for at least one LGBTI organisation, and these participants were compared to

those volunteering for non-LGBTI organisations. We found no significant differences on the well-being measures. This suggests there are similar well-being outcomes irrespective of whether individuals volunteer for LGBTI or only non-LGBTI organisations. It may be the act of volunteering that matters most, or that perhaps those who volunteered only for non-LGBTI organisations were in environments where they intrinsically felt safe and were therefore no less beneficial to well-being. However, we found that both the lesbian women and the gay men who volunteered for LGBTI organisations were higher on connectedness to the LGBTI community. Our study was cross-sectional, so it is not certain whether those who volunteered for LGBTI organisations were already more closely connected to these communities or whether volunteering for LGBTI organisations provides a greater sense of connectedness that they would not have otherwise had. While no previous research has made this comparison for older lesbian and gay people, studies involving American lesbian and gay volunteers of all ages found participants were motivated to volunteer with such organisations out of a desire for social connectedness to the associated communities (Gates et al., 2016; Paceley et al., 2015). Studies could be conducted in future that explore the social and community networks of older lesbian women and gay men, and how volunteering within LGBTI communities, plays a part in connectedness. Exploration of possible factors such as mutual support and generativity (Emlet & Harris, 2020) through community connections and volunteering could be important areas of focus.

Given our findings, volunteering may be an effective way of promoting well-being among older lesbian and gay people. Older gay men appear likely to benefit in a wider range of ways, potentially reducing mental health challenges and promoting positive well-being, while for older lesbian women the benefits appear to be focused more on positive well-being. Furthermore, while volunteering for LGBTI organisations may not necessarily be linked to greater well-being outcomes, at least based on the measures used in our study, it was linked to

greater LGBTI community connectedness for both older lesbian women and gay men. These findings may be useful to health services and support workers who may be seeking ways of understanding and improving well-being or increasing social or community engagement among older lesbian and gay clients. Health, mobility, and other challenges would need to be taken into account, but for those who are able, finding opportunities for older lesbian women and gay men to engage in volunteering may be one way to help promote social connections and well-being.

Limitations and Future Directions

There were a few limitations to this study. First, the cross-sectional design meant that we were unable to infer causality regarding the differences found in well-being. It is possible that those who have better well-being are more likely to volunteer, due to the fact that lower well-being might prevent people from being able to volunteer. In particular, those who have lower physical health may face limitations in the physical activity required for many volunteer roles. However, as noted earlier, longitudinal studies have shown volunteering to have causal benefits to well-being. That said, future studies would be useful that longitudinally examine volunteering experiences among older lesbian and gay adults to track changes in experiences and well-being over time, including social and community connectedness.

Second, we cannot be certain of how representative our sample was of the older lesbian and gay population in Australia. The Australian census does not currently collect sufficient data on this population and therefore the population demographics of older lesbian and gay people remain unknown. In addition, our sample had a larger proportion of men than women, as well as a larger proportion of participants who were aged in their 60s compared to

older age groups. Apart from this, our sample was relatively large overall and comprised participants from a range of other demographic backgrounds, such as different education levels, incomes, and residential locations. We also controlled for the demographic variables in our analyses to account for demographic variations. That said, it will be important for future studies to be conducted that involve different samples and participant recruitment methods, with particular focus on recruiting larger proportions of older lesbian women and participants in upper age groups, such as those in their 70s, 80s, and 90s, to further corroborate our findings.

Third, the survey did not include questions on how long participants had volunteered, time spent per week volunteering, or whether volunteering was a positive experience for them, which may be important questions to examine in future research. In addition to poorer health and well-being being a potential barrier to volunteering, there may be other barriers to involvement in volunteering, such as concerns around sexual orientation disclosure or a perceived lack of diversity within organisations (Paceley, et al., 2016). Future research is needed to examine volunteering activities in older lesbian and gay people in greater detail, and how these factors may be related to well-being outcomes. Studies could also examine other reasons why people may not volunteer, or why they choose to volunteer for LGBTI versus non-LGBTI organisations. Perceptions of the cultural safety of non-LGBTI organisations could also be examined, and how this impacts choices around volunteering.

Finally, we did not have sufficient numbers of participants who were bisexual, transgender, intersex, or had other sexual orientations and gender identities to analyse these groups. Future research on volunteering should aim to examine the volunteering experiences of these groups, as each group is likely to have different experiences and challenges.

Conclusions

In our sample of lesbian and gay adults aged 60 years and over, approximately 60% of the women and just over half of the men had volunteered in the last year. Consistent with previous research on general populations, we found that volunteering was associated with positive mental health among older lesbian and gay people in Australia, and for the gay men it was also associated with better self-rated physical health, social support, and lower psychological distress. Similar levels of well-being were found even for those who were volunteering only for non-LGBTI organisations, although volunteering for LGBTI organisations was additionally associated with greater LGBTI community connectedness. Overall, this research points to a range of possible well-being and social benefits of volunteering among older lesbian and gay people where individuals have capacity to engage in volunteer work. It also adds to the body of knowledge of potential factors linked to well-being in this older age group, and may inform health and support services, community organisations, and policymakers in developing practices and programs that help to support healthy ageing among older lesbian and gay people.

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Table 1

Sample profile (N = 754)

	No.	%
Gender		
Men	511	67.8
Women	243	32.2
Age		
60-64 years	328	43.5
65-69 years	268	35.5
70+ years	158	21.0
Residential location		
Capital city or inner suburban	253	33.6
Suburban	195	25.9
Regional	196	26.1
Rural or remote	108	14.4
Education		
Secondary or lower	173	22.9
Non-university tertiary	198	26.3
Undergraduate university degree	221	29.3
Postgraduate university degree	162	21.5
Employment status		
Full-time	121	16.1
Part-time or casual	132	17.6
Retired	421	56.0
Other	78	10.4
Annual pre-tax household income		
$0-19,999	85	11.6
$20,000-49,999	304	41.6
$50,000-99,999	208	28.5

$100,000+	134	18.3
Country of birth		
Australia	541	73.3
Overseas	197	26.7
Relationship status		
No relationship	330	44.9
Relationship	405	55.1
	M	*SD*
Self-rated health	3.35	1.08
Positive mental health	26.78	5.11
Psychological distress	15.98	6.55
Social support	36.92	8.02

Note. The 'other' category for employment status included those who were unemployed, students, or selected the 'other' option.

Table 2

Sociodemographic comparisons between volunteers and non-volunteers

	Volunteers		Non-volunteers			
	No.	%	No.	%	χ^2	*p*
Lesbian Women						
Age					.38	.825
60-64 years	65	44.2	46	47.9		
65-69 years	54	36.7	34	35.4		
70+ years	28	19.0	16	16.7		
Residential location					10.84	.013
Capital city or inner suburban	45	30.8	20	20.8		
Suburban	31	21.2	31	32.3		
Regional	32	21.9	31	32.3		
Rural or remote	38	26.0	14	14.6		
Education					8.26	.041
Secondary or lower	20	13.6	18	18.8		
Non-university tertiary	30	20.4	31	32.3		
Undergraduate university degree	46	31.3	27	28.1		
Postgraduate university degree	51	34.7	20	20.8		
Employment status					0.69	.875
Full-time	19	13.0	16	16.7		
Part-time or casual	30	20.5	19	19.8		
Retired	78	53.4	48	50.0		
Other	19	13.0	13	13.5		
Annual pre-tax household income					0.89	.827
$0-19,999	17	11.8	9	9.9		
$20,000-49,999	60	41.7	38	41.8		
$50,000-99,999	39	27.1	29	31.9		
$100,000+	28	19.4	15	16.5		

Country of birth					0.42	.516
Australia	96	67.6	68	71.6		
Overseas	46	32.4	27	28.4		
Relationship status					0.84	.358
No relationship	47	32.9	36	38.7		
Relationship	96	67.1	57	61.3		
Gay Men						
Age					0.99	.610
60-64 years	121	44.5	96	40.2		
65-69 years	93	34.2	87	36.4		
70+ years	58	21.3	56	23.4		
Residential location					3.83	.280
Capital city or inner suburban	96	35.4	92	38.5		
Suburban	65	24.0	68	28.5		
Regional	75	27.7	58	24.3		
Rural or remote	35	12.9	21	8.8		
Education					20.79	<.001
Secondary or lower	53	19.5	82	34.3		
Non-university tertiary	70	25.7	67	28.0		
Undergraduate university degree	87	32.0	61	25.5		
Postgraduate university degree	62	22.8	29	12.1		
Employment status					9.68	.021
Full-time	37	13.7	49	20.5		
Part-time or casual	54	19.9	29	12.1		
Retired	152	56.1	143	59.8		
Other	28	10.3	18	7.5		
Annual pre-tax household income					4.84	.184
$0-19,999	31	11.7	28	12.2		
$20,000-49,999	122	45.9	84	36.5		

$50,000-99,999	67	25.2	73	31.7		
$100,000+	46	17.3	45	19.6		
Country of birth					0.00	.986
Australia	201	75.3	176	75.2		
Overseas	66	24.7	58	24.8		
Relationship status					0.91	.340
No relationship	136	51.5	111	47.2		
Relationship	128	48.5	124	52.8		

Note. The 'other' category for employment status included those who were unemployed, students, or selected the 'other' option.

Table 3

Well-being and social support among volunteers and non-volunteers

		Mean (SD)		Unadjusted[1]		Adjusted[2]	
	n	Volunteers	Non- volunteers	*b* [95% CI]	*p*	*b* [95% CI]	*p*
Lesbian Women							
Self-rated health	243	3.24 (1.10)	3.25 (1.09)	0.01 [-0.28, 0.29]	.972	0.12 [-0.16, 0.40]	.406
Positive mental health	240	26.50 (4.98)	26.73 (5.30)	0.23 [-1.10, 1.56]	.734	1.32 [0.05, 2.58]	.042
Psychological distress	231	16.22 (6.72)	16.41 (6.71)	0.20 [-1.58, 1.97]	.828	-1.20 [-2.91 0.50]	.166
Social support	230	38.78 (7.50)	37.80 (8.31)	-0.98 [-3.06, 1.11]	.356	-0.35 [-2.42, 1.72]	.739
Gay Men							
Self-rated health	510	3.46 (1.08)	3.32 (1.06)	-0.14 [-0.33, 0.05]	.142	-0.22 [-0.41, -0.03]	.023
Positive mental health	506	27.16 (5.27)	26.55 (4.92)	-0.61 [-1.50, 0.29]	.183	-1.01 [-1.92, -0.11]	.029
Psychological distress	491	15.29 (6.09)	16.45 (6.87)	1.16 [0.01, 2.30]	.049	1.81 [0.62, 3.00]	.003
Social support	489	37.13 (7.63)	35.22 (8.37)	-1.91 [-3.33, -0.49]	.009	-2.69 [-4.11, -1.28]	<.001

[1] Not adjusted for socio-demographic variables.

[2] Adjusted for the following socio-demographic variables: age, residential location, education, employment status, income, country of birth, and relationship status.

Table 4

Well-being and social support among those who volunteer for LGBTI organisations and those who volunteer for non-LGBTI organisations

		Mean (SD)		Unadjusted[1]		Adjusted[2]	
	n	LGBTI	Non-LGBTI	*b* [95% CI]	*p*	*b* [95% CI]	*p*
Lesbian Women							
Self-rated health	145	3.15 (1.19)	3.28 (1.07)	0.13 [-0.26, 0.52]	.510	-0.01 [-0.40, 0.38]	.956
Positive mental health	142	26.87 (5.00)	26.26 (4.99)	-0.61 [-2.39, 1.17]	.500	-0.28 [-2.10, 1.55]	.764
Psychological distress	136	15.43 (5.53)	16.64 (7.19)	1.21 [-1.26, 3.68]	.334	1.12 [-1.40, 3.64]	.379
Social support	138	38.32 (6.83)	38.95 (7.87)	0.63 [-2.10, 3.36]	.649	0.41 [-2.41, 3.24]	.772
LGBTI community connectedness	144	3.36 (0.68)	2.56 (0.93)	-0.80 [-1.11, -0.49]	<.001	-0.80 [-1.13, -0.48]	<.001
Gay Men							
Self-rated health	270	3.52 (1.09)	3.42 (1.09)	-0.09 [-0.37, 0.18]	.512	0.02 [-0.26, 0.30]	.878
Positive mental health	267	27.37 (5.06)	27.05 (5.42)	-0.32 [-1.67, 1.03]	.646	-0.14 [-1.50, 1.21]	.836
Psychological distress	260	15.04 (5.82)	15.44 (6.25)	0.40 [-1.19, 2.00]	.617	0.53 [-1.11, 2.18]	.524
Social support	259	37.83 (6.68)	36.76 (8.07)	-1.07 [-3.04, 0.89]	.283	-1.16 [-3.12, 0.79]	.242
LGBTI community connectedness	270	3.35 (0.74)	2.40 (0.96)	-0.96 [-1.18, -0.73]	<.001	-1.02 [-1.26, -0.78]	<.001

[1] Not adjusted for socio-demographic variables.

[2] Adjusted for the following socio-demographic variables: age, residential location, education, employment status, income, country of birth, and relationship status.