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**Rural-urban differences in mental health, resilience, stigma, and social support
among young Australian gay men**

Anthony Lyons, PhD¹

Warwick Hosking, PhD^{1,2}

Tomas Rozbroj, BA (Hons)¹

¹ Australian Research Centre in Sex, Health and Society, La Trobe University, Melbourne, Australia

² Discipline of Psychology, College of Arts, Victoria University, Melbourne, Australia

Correspondence

Anthony Lyons, Australian Research Centre in Sex, Health and Society, La Trobe University
215 Franklin Street, Melbourne, Victoria, 3000, Australia

Phone: +61 3 9479 8719; Fax: +61 3 9479 8711; Email: a.lyons@latrobe.edu.au

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Abstract

Purpose: Depression and anxiety are common among young gay men, particularly in comparison with their heterosexual counterparts. Little is known about the mental health and well-being of those living in rural areas, where access to support and opportunities for connecting with other gay men may be relatively limited. We examined differences in the well-being of young rural and urban Australian gay men, including mental health, resilience, stigma-related challenges, and social support.

Methods: A national online survey was conducted involving 1,034 Australian gay-identified men aged 18-39 years.

Findings: All analyses adjusted for sociodemographic differences between the rural and urban samples. On average, rural men had significantly lower self-esteem, lower life satisfaction, lower social support, and were significantly more likely to be psychologically distressed, to be concerned about acceptance from others, and to conceal their sexual orientation. While resilience was lower, this was no longer significant following sociodemographic adjustment. An examination of psychosocial predictors of psychological distress in the rural sample revealed that lower education and lower tangible support independently predicted greater distress.

Conclusions: Young rural Australian gay men appear to be at a considerable disadvantage with regard to mental health and well-being compared with their urban counterparts, and may need particular attention in mental health prevention and treatment programs.

Keywords

Rural; gay; men who have sex with men; mental health; resilience

Introduction

In 2008, a meta-analysis of 25 studies in 7 countries, including the United States, United Kingdom, and Australia, found rates of depression and anxiety were 1.5 times higher among gay men than among their heterosexual counterparts.¹ This disparity is largely thought to be the result of marginalization and other challenges related to stigma and discrimination.²

Within gay male populations, mental health problems tend to be more prevalent in younger age groups.³ Being younger, this group is also more likely to be working through the challenges of coming out to friends, family, and work colleagues, as well as facing particular forms of discrimination for the first time, any of which may have implications for self-esteem and mental health.^{4,5}

There are reasons to suspect that challenges to mental health and well-being are greater for those living in rural areas. Larger urban areas are, for example, more likely to have gay communities and organizations that help to mitigate feelings of isolation or marginalization by offering support for coming out and other challenges, as well as providing a sense of belonging and opportunities for connecting with other gay men. There is also evidence to suggest that negative attitudes toward homosexuality can be common in some rural areas, perhaps due to more traditional cultures.⁶ It may therefore be harder for men in such areas to be open about their sexual orientation. Sexual identity concealment has been linked with poorer mental health and wellbeing,⁷ and a motivation to conceal may also result in men avoiding other gay men to lower the risk of being identified as gay.

Despite reasons for suspecting that the mental health and wellbeing of young gay men may be poorer in rural areas, there is actually little data available to support this. Of studies reported so far, findings are somewhat mixed. One study aggregated responses from publicly available national surveys of health and well-being in the United States to compare rural and urban gay men of all ages on ratings of happiness, and found that rural men reported feeling

happier on average.⁸ Another study used school-based data to examine differences between secondary school students in rural and urban areas in British Columbia and found that rural gay students were more likely to have considered or attempted suicide.⁹ In contrast, a study of United States university students found no differences in suicidality between rural and urban groups.¹⁰ Other studies have included residential location as a predictor variable in broader analyses of the mental health of gay men. In Australia, one such study found that older rural gay men had lower self-esteem¹¹ while another found that they were no less likely to have positive mental health.¹² Making comparisons between the above studies are problematic given low use of standardized mental health measures, the use of convenience samples, and questions about whether findings from older gay men apply to younger groups. Currently lacking are large-scale national studies of rural-urban differences among young gay men that employ standardized measures of mental health and well-being, including measures of challenges specific to living with a stigmatized identity, such as internalized stigma and experiences of discrimination.

This article reports on a large national survey of young rural and urban Australian gay men. A focus on young gay men is particularly warranted given higher rates of mental health problems in this group compared with older men. It is also likely that the younger group face a range of different challenges to their well-being, such as challenges around forming a sexual identity and coming out. The survey included numerous standardized measures of mental health and well-being, including measures of resilience, social support, and stigma-related challenges faced by gay men. There were 2 main aims: 1) to identify similarities and differences in the mental health and wellbeing of young rural and urban Australian gay men, and; 2) to provide guidance for the provision of mental health prevention and treatment programs in rural areas by identifying factors associated with poorer mental health in the rural sample, including sociodemographics, stigma-related challenges, and social support. For

this second aim, we focused on a measure of psychological distress, which includes symptoms of both depression and anxiety.

Methods

Sample

Data reported in this article is from a larger survey we conducted of the health and well-being of young Australian gay men.¹³ The survey was completed by 1,177 men living in Australia. Of this sample, 17 were older than 39 years. This group was too small to form a separate age category and was therefore excluded from analyses. Although the survey was targeted to gay men, 126 men reported a sexual identity other than gay or homosexual, including 38 heterosexual-identified and 66 bisexual-identified men. These groups were also excluded from analyses due to small numbers and to focus on gay-identified men. The remaining sample for analysis therefore comprised 1,034 gay-identified men aged 18-39 years. The mean age of this sample was 26.8 years (SD = 6.27).

Procedure

The study was granted ethical approval by [removed for blind review] University Human Ethics Committee. The survey was conducted online between July 2012 and September 2012. Recruitment advertisements that targeted gay-identified men were posted to Facebook, and sent to a large email database of men living with HIV and to gay and lesbian organizations for distributing to members and promoting on their websites. Advertisements linked directly to the survey. At the start of the survey, men were informed that their responses were anonymous and confidential. It took 23 minutes on average to complete the survey. No rewards or incentives were offered for participating.

Measures

The following measures were included in the survey:

Sociodemographics

To identify urban and rural groups, men were asked about whether they were living in an inner city area, outer suburban area, a regional town (population 5,000 or more), or a rural area (population less than 5,000). Other sociodemographic items included age, educational attainment (secondary or lower, non-university tertiary, university undergraduate degree, university postgraduate degree), employment status (full-time, part-time or casual, not working), income (Australian dollars: \$0-19,999, \$20,000-\$49,999, \$50,000-\$99,999, \$100,000 or above), state or territory of residence, country of birth, ethnic background (Anglo-Celtic, non-Anglo-Celtic European, other), relationship status (in an ongoing relationship or not), and HIV status (positive, negative, unknown).

Mental Health, Well-being, and Resilience

We assessed psychological distress, self-esteem, life satisfaction, and resilience.

Psychological distress was assessed with the K10 Psychological Distress Scale.¹⁴ This measure is commonly used to indicate having or potentially developing depression or anxiety. Total scores on the K10 have a scale range of 10 (no distress) – 50 (very high distress). Self-esteem was assessed with the Rosenberg Self-Esteem Scale.¹⁵ Total scores have a scale range of 0 (low self-esteem) – 30 (high self-esteem). Satisfaction with life was assessed with the Satisfaction with Life Scale,¹⁶ which is widely used as an indicator of overall well-being. Total scores have a scale range of 5 (low satisfaction) – 35 (high satisfaction). Resilience was assessed with the Brief Resilience Scale.¹⁷ This scale specifically measures the capacity to “bounce back” from challenging life events and predicts

a range of health-related outcomes.¹⁸ Scores are averaged across items and have a scale range of 1 (low resilience) – 5 (high resilience).

Stigma and Discrimination

We first examined experiences of discrimination by asking, “When did you last feel you were treated unfairly as a direct result of your sexual orientation?” Response options included: in the last year; between 1 and 2 years ago; between 2 and 10 years ago; more than 10 years ago; never. For analysis, responses were dichotomized to indicate whether or not men felt they had been treated unfairly in the last year. We also examined a range of other stigma-related challenges faced by gay men by using 4 subscales from the Lesbian, Gay, and Bisexual Identity Scale.¹⁹ These were Acceptance Concerns (degree to which they felt that their sexual orientation was not accepted by others), Identity Concealment (degree to which they felt motivated to conceal their orientation from others), Internalized Stigma (degree to which they had internalized negative beliefs and attitudes about gay men), and Difficult Process (degree to which the process of forming and accepting their sexual identity had been difficult). Scores on each of the 4 subscales are typically averaged across items and have a scale range of 1 – 6.

Social Support

The 12-item Interpersonal Support Evaluation Checklist²⁰ was used to assess social support. It contains 3 subscales: Appraisal Support, which largely taps emotional and psychological support (eg. having someone to talk to about personal problems); Belonging (eg. having friends or other networks that provide a sense of belonging); Tangible Support (eg. having someone who could help with practical tasks). Total scores on each subscale have a range of

4 (low support) – 16 (high support). An overall support score was also computed by adding the 3 subscales to produce a total score between 12 and 48.

Analysis

Sociodemographic differences between urban and rural men were first assessed using Chi-square analyses. Rural-urban differences on all measures of mental health and well-being, resilience, stigma and discrimination, and social support were then assessed using linear and logistic regressions. Two separate regressions were undertaken for each measure. The first assessed unadjusted differences between urban and rural men. The second adjusted for significant sociodemographic differences between urban and rural men to identify differences between the 2 groups beyond differences in the sociodemographics examined in this study. We then assessed significant independent factors for psychological distress among the rural sample. We focused on variables likely to be linked specifically to experiences of living as a gay man, including stigma and discrimination and social support, while also controlling for sociodemographics. To assess the degree to which particular types of factors accounted for variance in psychological distress, a hierarchical linear regression was conducted involving 3 steps. Sociodemographics were entered as the first step, stigma and discrimination as the second, and social support as the third and final step. Wald tests assessed the overall effect of each factor. Differences were regarded as significant at $P < .05$. Stata 11.1 was used for all analyses.

Results

Sample Profile

A total of 858 men reported living in urban areas (inner city and outer suburban), 125 in regional towns, and 42 in rural areas. To make direct comparisons with the urban group, we

combined the regional and rural groups into a single “rural” group (N = 167). Table 1 compares rural and urban men according to sociodemographics. A significantly greater percentage of rural men were aged 35-39 years ($\chi^2_3 = 9.80, P = .02$), were on lower incomes ($\chi^2_3 = 11.89, P = .008$), and were born in Australia ($\chi^2_1 = 15.74, P < .001$). Numbers of men in some states and territories were small, particularly in Tasmania and the Northern Territory where the total general populations are small comparative to other states and territories. There was, however, a larger percentage of rural men in New South Wales and Queensland compared to urban men ($\chi^2_6 = 23.37, P = .001$). There were no significant rural-urban differences for any other sociodemographics.

[Insert Table 1 about here]

Mental Health, Well-being, and Resilience

Table 2 compares rural and urban men on measures of psychological distress, self-esteem, satisfaction with life, and resilience. In both unadjusted analyses and those that adjusted for significant sociodemographic differences between urban and rural men, the rural group was significantly more likely to be psychologically distressed (unadjusted: $F[1, 982] = 11.12, P < .001$; adjusted: $F[1, 856] = 4.85, P = .03$), and to have lower self-esteem (unadjusted: $F[1, 979] = 12.27, P < .001$; adjusted: $F[1, 851] = 4.66, P = .03$) and lower life satisfaction (unadjusted: $F[1, 1008] = 13.94, P < .001$; adjusted: $F[1, 877] = 4.18, P = .04$). On resilience, rural men reported significantly lower resilience in the unadjusted analysis ($F[1, 981] = 8.16, P = .004$), but this was no longer the case after adjusting for significant sociodemographic differences between urban and rural men ($F[1, 854] = 2.33, P = .13$).

[Insert Table 2 about here]

Stigma and Discrimination

Table 3 compares rural and urban men on experiences of discrimination and 4 subscales from the Lesbian, Gay, and Bisexual Identity Scale. In both unadjusted and adjusted analyses, rural men were significantly more likely than urban men to feel that their sexual orientation was not accepted by others (unadjusted: $F[1, 1009] = 12.07, P < .001$; adjusted: $F[1, 882] = 10.41, P = .001$) and to conceal their sexual identity (unadjusted: $F[1, 1009] = 10.38, P = .001$; adjusted: $F[1, 880] = 9.09, P = .003$). They were also significantly more likely to report internalized stigma in unadjusted analyses ($F[1, 1003] = 4.58, P = .03$). While this was no longer the case in adjusted analyses, it was close to significance ($F[1, 875] = 3.71, P = .05$). There were no significant differences between the 2 groups on experiences of discrimination in the past 12 months or on difficulties faced in forming and accepting their sexual identities.

[Insert Table 3 about here]

Social Support

Table 4 compares rural and urban men on social support. In both unadjusted and adjusted analyses, rural men reported receiving significantly less social support than urban men, including less overall support (unadjusted: $F[1, 984] = 19.77, P < .001$; adjusted: $F[1, 855] = 10.93, P = .001$), emotional support (unadjusted: $F[1, 999] = 18.65, P < .001$; adjusted: $F[1, 870] = 13.09, P < .001$), and belonging (unadjusted: $F[1, 1010] = 18.80, P < .001$; adjusted: $F[1, 880] = 8.19, P = .004$). Rural men also reported significantly lower tangible support in the unadjusted analysis ($F[1, 998] = 5.41, P = .02$), but this was no longer the case following adjustment ($F[1, 869] = 2.23, P = .13$).

[Insert Table 4 about here]

Factors Related to Psychological Distress in the Rural Sample

Table 5 displays the results of a hierarchical linear regression that assessed factors related to psychological distress in the rural sample. In this analysis, HIV status and country of birth were excluded due to low numbers of rural men with HIV or having been born overseas. As shown in Table 5, the remaining sociodemographics accounted for 24% of the variance in psychological distress ($F[14, 107] = 2.44, P = .005$). Variables related to stigma and discrimination accounted for another 20% ($F\text{-change} [5, 100] = 7.15, P < .001$), and social support for a further 14% ($F\text{-change} [3, 92] = 8.38 P < .001$). In the final model (step 3), only educational attainment ($F[2, 92] = 9.34, P < .001$) and tangible support ($F[1, 92] = 5.60, P = .02$) were independently associated with psychological distress, with lower distress significantly linked with higher education and having more tangible support. The overall model accounted for 58% of the variance in psychological distress.

[Insert Table 5 about here]

Discussion

In this national online sample of Australian gay men aged 18-39 years, those living in rural and regional areas were significantly worse off on a range of indicators of mental health and well-being compared with their urban counterparts. To our knowledge, no other study has examined rural-urban differences in mental health and well-being among young Australian gay men. Of the few studies conducted in other countries, measures of mental health were less comprehensive than those used in our study, such as a focus on happiness in one study in the United States⁸ and suicidal behaviors in a study conducted in Canada.⁹ It is also worth

noting that findings from some studies may be localized, perhaps depending on socio-cultural factors such as the degree to which homosexuality is stigmatized. In Australia, acceptance of homosexuality is high, with 79% believing that homosexuality should be accepted by society according to a recent survey.²¹ However, negative attitudes toward homosexuality appear to be more prevalent in many rural and regional areas of Australia.²²

A further indicator of potentially lower acceptance of homosexuality in Australian rural areas comes from our findings on experiences of stigma and discrimination. The rural men were more likely than their urban counterparts to express concern about not feeling accepted by others and to lack a sense of belonging. In light of these differences, it was perhaps not surprising that rural men were also more likely to conceal their sexual orientation, which perhaps explains why experiences of discrimination were no greater between this group and urban men. Interestingly, the rural group was no more likely to report internalized stigma (after adjustment for sociodemographics) or to have had greater difficulty forming and accepting their sexual identity. Thus, disparities with urban men appear to center more on concerns about the acceptance from others rather than issues of self-acceptance. Nevertheless, internalized stigma was significantly linked to greater psychological distress among the rural sample in the hierarchical regression we conducted, although this was no longer a factor after taking into account access to social support. This finding perhaps indicates potential for delivering greater support to rural men as a way of ameliorating mental health problems related to stigma.

Related to this, rural men were less likely to report receiving emotional support and having a sense of belonging than their urban counterparts. Social support also accounted for a significant proportion of the variance in psychological distress. In particular, tangible support appeared to be more critical than emotional support or a sense of belonging, emerging as the only independent social support factor. To our knowledge, other studies of gay men have not

examined the roles of these different forms of social support in mental health outcomes. It is possible that concerns around acceptance may have prevented some men from building social networks that they could have otherwise drawn upon when needing help. Difficult family relationships might also prevent men from seeking practical help from relatives.⁴ Some gay men experience long-term chronic stress, often referred to as minority stress, as detailed in Minority Stress Theory.² Lacking tangible support may add to already high levels of stress for some men, with potential implications for their mental health. Hypotheses along these lines could be examined in future research, particularly in studies that examine multiple forms of stress among young rural gay men.

Along with tangible support, having a higher education was the only other significant independent factor linked to lower psychological distress. An increased likelihood of depression has been linked with lower education in young people generally,²³ and this also appears to be the case for young rural gay men. There are several possible explanations for links between education and mental health. Those who attended university may have had access to university-based support, such as social or support groups for same-sex attracted students, or were able to form peer groups with other gay men. Having a higher educational background may also provide greater capacity for accessing financial and other resources to cope with life challenges, including experiences of discrimination. Education is also an indicator of socioeconomic status. A recent study of gay men living in New York found that those who attributed their experiences of discrimination to having a lower socioeconomic position had elevated depressive and anxious symptoms.²⁴ More generally, lower socioeconomic status has been linked with poorer mental health in the general population.²⁵ Any of the above could potentially result in links between greater education and better mental health. A longitudinal study that tracks young gay men prior to and following higher education would help to identify the most likely explanations, including a test of the

possibility that simply having better mental health may make it more likely for an individual to complete higher education.

In Australia, there is little evidence of large differences in the mental health between urban and non-urban areas in the general population,²⁶ although one study found that suicide rates were higher in rural areas.²⁷ At least from our findings, which were attained from a large national survey, there appears to be a more substantial rural-urban divide among young gay men, and well-being indicators that are specifically linked to a gay identity, such as acceptance concerns and identity concealment, suggest that some rural environments are particularly problematic for these men. According to the World Health Organization, depression is now the leading cause of disability worldwide.²⁸ Making substantial inroads into reducing rates of mental health problems is likely to require the targeting of higher-risk groups, such as young gay men. Our study suggests that those living in rural areas, at least in Australia, may also warrant attention. In particular, findings from our study point to a need for delivering support to young gay men and for ensuring access to education. To help facilitate greater support and to reduce marginalization from within communities and families, social and educational initiatives may also be needed to prevent discrimination and to promote acceptance of same-sex attracted people, especially given that the rural sample expressed greater concern about acceptance than the urban sample.

There were some limitations to this study. First, men were classified into rural and urban groups based on whether they reported living in urban areas, regional towns, or rural areas. While we expect few to have misclassified their residential location, future studies could perhaps consider classifications based on postal codes to provide an alternative measure of residential location. Due to low numbers in regional towns and rural areas, we also combined these 2 groups into a single “rural” category. In future, larger samples might allow for separate analysis of these 2 groups; it is possible that those in regional towns have

different experiences, such as greater support, than those in more remote locations. Second, findings are restricted to an online sample. Australia has high levels of Internet access. In 2010-2011, 79% reported Internet access at home, including 75% in rural areas, and more than 90% among those aged 18-44 years.²⁹ Nevertheless, any men without Internet access would not have been able to complete the survey. Third, the study was limited to men aged 18-39 years, to specifically focus on a younger group. However, older rural gay men may also face stigma-related challenges to their mental health and well-being.³⁰ Rural-urban comparisons of the older group are lacking and would provide important information about challenges specific to living as a middle-aged or older gay man in rural areas. Fourth, the sample size of the rural group was only moderate, and some states and territories were under-represented. Particularly for the hierarchical regression, some factors may have been significantly associated with psychological distress in a larger sample. For instance, some age and employment status categories were significantly linked with psychological distress, but the overall variables were not. In future studies, we recommend over-sampling men in rural areas to allow finer-grained analyses of this group.

Finally, this study focused specifically on gay-identified men. There appears to be a number of differences in mental health and well-being between bisexual- and gay-identified men.³¹ Bisexual-identified men, for example, often report feeling stigmatized both within gay communities and in the broader community,³² and may be viewed more negatively than gay men by the heterosexual population.³³ They also report a range of differences in sexual and relationship patterns,³⁴ which may present different life challenges. For these reasons, we specifically examined gay-identified men separately to bisexual-identified men. Although some bisexual-identified men found and completed the survey, this number was too small for conducting separate rural-urban analyses. In future, we recommend studies that examine rural-urban differences among bisexual-identified men as well as other men who have sex

with men but who do not identify as gay or bisexual. Such studies may require over-sampling of particular sexual minority subgroups to gain large enough samples for analysis and would also benefit from including survey questions that target specific issues faced by these groups.

Conclusions

This study is among the first systematic national investigations of differences in mental health and well-being between rural and urban gay men. From a national sample of young Australian gay men, those living in rural and regional areas were found to have poorer overall mental health and well-being than those in urban areas, including a greater likelihood of psychological distress, lower self-esteem, lower life satisfaction, greater concerns around acceptance from others, less emotional support, and a lower sense of belonging. Resilience was also lower, but disparities with urban men were accounted for by sociodemographic differences. Mental health prevention and treatment strategies in rural areas ought to include a focus on young gay men. In particular, improving access to practical forms of support and education may need to be included in practice and policy initiatives. Further research using larger samples is also recommended to identify particular regions in which rural men may face challenges, such as differences between men living in regional towns versus more remote locations.

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Table 1 Sociodemographic characteristics of the urban and rural samples

	Urban		Rural		<i>P</i> value
	No.	%	No.	%	
Age					.02
18-24	368	43	77	46	
25-29	205	24	30	18	
30-34	152	18	21	13	
35-39	133	15	39	23	
Educational attainment					.34
Secondary or lower	327	38	73	44	
Non-university tertiary	206	24	42	25	
University – undergraduate	226	26	39	23	
University – postgraduate	98	11	13	8	
Employment status					.06
Full-time	436	51	68	41	
Part-time or casual	151	18	36	22	
Not working	265	31	62	37	
Income (Australian dollars)					.008
0-19,999	215	27	48	31	
20,000-49,999	235	29	60	39	
50,000-99,999	285	35	39	25	
100,000+	72	9	7	5	
State/territory of residence					.001
New South Wales	217	27	54	35	
Victoria	263	33	37	24	
Queensland	171	21	43	28	
South Australia	56	7	5	3	
Western Australia	75	9	9	6	
Tasmania	11	1	8	5	
Northern Territory	5	1	0	0	
Country of birth					<.001
Australia	691	81	155	94	
Overseas	158	19	10	6	

Ethnic background					.68
Anglo-Celtic	556	72	110	75	
European non-Anglo-Celtic	110	14	19	13	
Other	107	14	17	12	
Relationship status					.08
In an ongoing relationship	422	49	70	42	
Not in an ongoing relationship	433	51	97	58	
HIV status					
Positive	27	3	7	4	.61
Negative	595	69	110	66	
Unknown	236	27	50	30	

Note. Comparisons between urban and rural men were conducted using chi-square analyses.

Table 2 Mental health, well-being, and resilience among urban and rural young gay men

	Urban		Rural		<i>P</i> value	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	Unadjusted	Adjusted ^a
Psychological distress	21.7	8.3	24.1	9.2	<.001	.03
Self-esteem	19.3	6.0	17.4	6.8	<.001	.03
Satisfaction with life	21.7	6.8	19.5	7.9	<.001	.04
Resilience	3.4	0.8	3.2	0.8	.004	.13

Note. Comparisons between urban and rural men were conducted using linear regressions for each mental health, well-being, and resilience variable. Psychological distress was measured with the K10 Psychological Distress Scale. Self-esteem was measured with the Rosenberg Self-Esteem Scale. Satisfaction with life was measured with the Satisfaction with Life Scale. Resilience was measured with the Brief Resilience Scale. ^a Adjusted for significant sociodemographic differences between urban and rural men, that is, age, income, state or territory of residence, and country of birth.

Table 3 Experiences related to stigma and discrimination among urban and rural young gay men

	Urban		Rural		<i>P</i> value	
	No.	%	No.	%	Unadjusted	Adjusted ^a
Experienced discrimination in the past 12 months	386	45	78	47	.74	.90
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Concerned about acceptance from others	3.2	1.3	3.6	1.4	<.001	.001
Concealing sexual identity	2.9	1.2	3.2	1.4	.001	.003
Internalized stigma	1.9	1.2	2.2	1.5	.03	.05
Difficult process accepting sexual identity	3.0	1.4	3.0	1.4	.57	.48

Note. Comparisons between urban and rural men were conducted using logistic regressions for experiences of discrimination and linear regressions for all other stigma related variables. Degree of concern about acceptance from others, concealing one's sexual identity, internalized stigma, and degree of difficulty accepting sexual identity were measured with the Acceptance Concerns, Identity Concealment, Internalized Stigma, and Difficult Process subscales of the Lesbian, Gay, and Bisexual Identity Scale. ^a Adjusted for significant sociodemographic differences between urban and rural men, that is, age, income, state or territory of residence, and country of birth.

Table 4 Social support received by urban and rural young gay men

	Urban		Rural		<i>P</i> value	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	Unadjusted	Adjusted ^a
Overall social support	35.9	6.8	33.2	8.0	<.001	.001
Emotional support	11.4	2.1	10.6	2.6	<.001	<.001
Belonging	11.9	3.1	10.7	3.6	<.001	.004
Tangible support	12.6	2.7	12.0	3.0	.02	.13

Note. Comparisons between urban and rural men were conducted using linear regressions for each social support variable. Social support was measured with the Interpersonal Support Evaluation List (ISEL). Emotional support, belonging, and tangible support were measured using the ISEL subscales Appraisal Support, Belonging, and Tangible Support. ^a Adjusted for significant sociodemographic differences between urban and rural men, that is, age, income, state or territory of residence, and country of birth.

Table 5 Factors associated with psychological distress among rural young gay men

	Regression Coefficients for Psychological Distress					
	Step 1		Step 2		Step 3	
	<i>B</i>	β	<i>B</i>	β	<i>B</i>	β
Age ^{a, h}						
25-29	-0.59	-0.02	0.10	0.00	0.84	0.04
30-34	7.44	0.29**	7.47	0.28**	5.55	0.21*
35-39	0.71	0.03	2.21	0.11	1.32	0.06
Educational attainment^{b, j}						
Non-university tertiary	-0.83	-0.04	-1.88	-0.08	-2.48	-0.11
University	-5.19	-0.28**	-5.98	-0.32**	-6.79	-0.36***
Employment status ^{c, h}						
Part-time or casual	-2.34	-0.11	-2.56	-0.12	-4.21	-0.19*
Not working	-0.31	-0.02	-0.38	-0.02	-1.53	-0.08
Income (Australian dollars) ^{d, j}						
20,000-49,999	1.24	0.07	1.34	0.07	0.51	0.03
50,000+	3.91	0.19	4.06	0.20	1.18	0.06
State/territory of residence ^{e, h, j}						
Victoria	-0.60	-0.03	0.15	0.01	0.38	0.02
Queensland	-4.55	-0.22*	-3.25	-0.16	-3.50	-0.17*
Other states/territories	-4.58	-0.18	-3.94	-0.15	-2.87	-0.11
Non-Anglo-Celtic ethnicity ^{f, j}	3.10	0.15	1.91	0.09	1.62	0.08
In an ongoing relationship ^g	-2.66	-0.15	-1.44	-0.08	0.70	0.04
Experienced discrimination in the past 12 months			1.44	0.08	2.31	0.13
Concerned about acceptance from others			1.03	0.15	0.67	0.10
Concealing sexual identity			-0.71	-0.10	-0.62	-0.09
Internalized homonegativity			2.19	0.36**	1.21	0.20
Difficult process accepting sexual identity			-0.09	-0.01	0.16	0.02
Emotional support					-0.57	-0.17

Belonging		-0.17	-0.07
Tangible support		-0.73	-0.24*
ΔR^2		0.20***	0.14***
Total R^2	0.24**	0.44***	0.58***

Note: Results are from a hierarchical regression of psychological distress for sociodemographic factors, stigma and discrimination, and social support. Boldface indicates variables that were significantly associated with psychological distress in the final model (step 3) according to Wald tests of the overall effect of the variable. ^a 18-24 is the reference category. ^b Secondary education or below is the reference category. ^c Working full-time is the reference category. ^d \$0-\$19,999 is the reference category. ^e New South Wales is the reference category. ^f Anglo-Celtic ethnic background is the reference category. ^g Not being in an ongoing relationship is the reference category. ^h Despite one category in the variable being significantly different from the reference category in the final model, the overall effect of the variable was not significant. ⁱ Some categories in these variables were combined into larger categories due to low numbers of rural men in the original categories (e.g., \$50,000 and \$100,000+ was combined to create a category of \$50,000+ due to low numbers earning \$100,000+). *B* = unstandardized coefficient; β = standardized coefficient; ΔR^2 = change in R^2 between each step of the regression. * $P < .05$; ** $P < .01$; *** $P < .001$