

# Cancer Prevalence And Cancer Risk Factors Among Australian Sexual Minority Women

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# Acknowledgments

- Research Team

- Dr Rhonda Brown – Deakin University
- Assoc Prof Trish Livingston – Deakin University
- Assoc Prof Ruth McNair – University of Melbourne
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# Cancer in Australia

- A leading cause of disease burden
- 46,000 people diagnosed with cancer each year
- Over 12,700 with breast cancer - most commonly diagnosed cancer among women (1 in 9)
  - Other commonly diagnosed cancers skin (1 in 24 women), prostate cancer, bowel cancer (1 in 14 women)
- While cancer mortality between 1982 and 2007 decreased in Australia (by 16%), lung cancer mortality in women increased by 56%

(AIWA 2010)

# Lesbian Cancer Research

- Much of the research comes from the USA
- Focus to date has been on risk factors
- Data on the rates and incidence of cancer among lesbians and bisexual women not routinely collected
- Unknown how prevalent cancer is among women of different sexual orientation
- No Australian studies have specifically focused on sexual minority women and cancer risk factors

# Lesbian Risks for Cancer

- **Higher rates of smoking** (Aaron, et al., 2001; Case, et al., 2004; Gruskin, Greenwood, Matevia, Pollack, & Bye, 2007; Gruskin, Hart, Gordon, & Ackerson, 2001; Matthers et al 2011)
- **Higher alcohol use** (Brown & Tracy, 2008; Case et al., 2004; Drabble et al 2005; T. L. Hughes et al., 2006; McCabe et al, 2010; Wilsnack et al., 2008; Zaritsky & Dibble, 2010; \*Hughes, Szulacha, McNair 2010; \*Hillier , De Visser, Kavanagh, McNair, 2003)
- **Increased rates of obesity** (Boehmer, Bowen, & Bauer, 2007; Case, et al., 2004; Cochran, et al., 2001; Yancey, Cochran, Corliss, & Mays, 2003)
- **Lower levels exercise and poorer diet** (Case, Austin, Hunter, Manson, Malspeis, Willett, Spiegelman, 2004; Cochran et al., 2001)
- **Lifetime violence/victimisation** (Brandenburg, et al., 2007; Case, et al., 2004; Jorm, Korten, Rodgers, Jacomb, & Christensen, 2002; Matthews, Hughes, Johnson, Razano, & Cassidy, 2002; McNair, Kavanagh, & Tong, 2005; Meyer, 2003)

# Lesbian Risks for Cancer

- Reduced rates of cancer screening
  - Pap test (Rankowand Tessaro, 1998; O'Hanlan, 1995; White and Dull, 1997)
  - Mammography although conflicting reports reduced rates (Cochran et al., 2001), equal with heterosexual women (Diamant, Schuster, Lever, 2000), increased among lesbians (Arron, Marjovic, Danielson, Honnold, Janosky, Schmidt (2001)).
- Nulliparity and reduced contraceptive pill use (Cochran, et al., 2001; Dibble, et al., 2004)
- Reduced access to routine health care as a result of concerns regarding discrimination in health care settings (Carroll, 1999; Roberts and Sorenson, 1995)

# Recent Australian Study

Recent study of the health status of young lesbian and bisexual women (LBW) aged 25-30 yrs

- **more likely to report cancer diagnosis**, representing 3.1% compared to 1.1% of heterosexual and 1% for bisexual women
- **also less likely to have ever had a Pap test and more likely to be under screened**

(McNair, Szalacha, & Hughes, 2011)

These risk factors potentiate a cumulative risk profile that places lesbians at higher risk of developing cancer than heterosexual women

(Brown and Tracy, 2008)





# Cancer rates and risk factors among Australian lesbians and bisexual women

(Brown, Livingston, McNair, Hughes, 2012)

## Aim:

To examine rates of cancer, and related risk factors, among Australian mid-age women comparing “exclusive heterosexual” with sexual minority (lesbian, bisexual, and mainly heterosexual) women

## Method:

Secondary data analysis of the Australian Longitudinal Study of Women’s Health (ALSWH) for those women born in 1946-1951 (n=10,845)



# The sample

Exclusively heterosexual	10,200	94.1%
Mostly heterosexual	117	1.1%
Bi-sexual	18	0.2%
Mostly homosexual/lesbian	16	0.1%
Exclusively lesbian	100	0.9%
Did not know	61	0.6%
Did not answer	333	3.1%

As at the most recent survey from 2010 these women were aged 59 - 64

Heterosexual 10,200  
Sexual minority 251

**Total 10,451**



# Cancer incidence

	Exclusively Heterosexual	Sexual Minority	$\chi^2$ Test
	(n = 10,200) N %	(n = 251) % N %	
Diagnosed Cancer Past 3 yrs	1,526 18.0%	41 19.0%	(df = 1) ns

*ns = not significant \*p<.05 \*\*p<.01 \*\*\*p<.001*



# Cancer Screening - Breast



	Exclusively Heterosexual	Sexual Minority	$\chi^2$ Test
<b>Self-Breast Exam</b>	<b>4,665 54.4%</b>	<b>102 46.8%</b>	<b>(df = 1) 5.43*</b>
Clinical Breast Exam	5,228 61.3%	132 60.6%	(df = 1) ns
Mammogram			
In last 2 years	7,086 83.5%	168 77.4%	
Past 2-5 years	728 8.6%	17 7.8%	
More than 5 ears	361 4.3%	16 7.4%	
<b>Never</b>	<b>269 3.2%</b>	<b>15 6.9%</b>	<b>(df = 3) 14.91**</b>
<b>Ever had mammogram</b>	<b>8,175 96.8%</b>	<b>201 93.1%</b>	<b>(df = 1) 9.38***</b>
Abnormal result from a mammogram	1,980 23.6	38 17.9%	(df = 1) ns



# Cancer screening - cervical

Pap Smear	Exclusively Heterosexual	Sexual Minority	$\chi^2$ Test
In last 2 years	5,013 59.3%	122 56.7%	
Past 2-5 years	1,011 12.0%	23 0.7%	
More than 5 years	1,996 23.6%	52 24.2%	
<b>Never</b>	<b>146 1.7%</b>	<b>10 4.7%</b>	<b>(df = 3) 10.57*</b>
<b>Ever had pap smear</b>	<b>8,020 98.2%</b>	<b>197 95.2%</b>	<b>(df = 1) 10.22***</b>
Abnormal result from a pap smear	1,716 20.4%	48 22.5%	(df = 1) ns

<b>Cancer Screening: Colon</b>	<b>2,889 33.9%</b>	<b>75 34.4%</b>	<b>(df = 1) ns</b>
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# Behavioural cancer risk factors

Alcohol Drinking Pattern				
Abstainer	1,154	13.6%	32	14.7%
Low Risk – drinks less than weekly	6,602	78.1%	156	71.9%
Low Risk– drinks more than weekly	125	1.5%	5	2.3%
<b>High Risk Drinker</b>	<b>572</b>	<b>6.8%</b>	<b>24</b>	<b>11.1%</b>
				<b>7.87*</b>



# Behavioural cancer risk factors

Tobacco Use: Smoking Status				
Never smoked	5,227	61.2%	105	48.2%
Ex-smoker	2,596	30.4%	80	36.7%
Few than 10 cigarettes a day	175	2.1%	11	5.0%
10-19 cigarettes a day	249	2.9%	8	3.7%
<b>More than 20 cigarettes a day</b>	<b>287</b>	<b>3.8%</b>	<b>14</b>	<b>6.4%</b>
<b>Ever smoked</b>		<b>14%</b>		<b>28%</b>

(df = 4)  
23.88\*\*\*



# Physical health

	Exclusively Heterosexual		Sexual Minority		Independent T-test Statistic
	M	SD	M	SD	
<b>Physical Functioning</b>	79.31	20.78	78.93	20.76	ns
<b>Role Physical</b>	74.49	37.68	71.14	39.58	ns
<b>Pain Index</b>	67.21	23.47	65.81	23.85	ns
<b>General Health</b>	71.08	20.22	69.48	21.03	ns
<b>Vitality</b>	61.03	20.08	59.08	20.31	ns





# Physical health

BMI	Exclusively Heterosexual		Sexual Minority		$\chi^2$ Test
Underweight < 18.5	112	1.3%	3	1.4%	
Healthy weight 18.6-25.0	3009	36.0%	94	43.9%	
Overweight < 25.1-30.0	2892	34.6%	67	31.3%	(df = 3)
Obese >30.1	2354	28.1%	50	23.4%	6.00 ns
Hormone Replacement Therapy - Current	1,014	11.9%	30	13.9%	(df = 1) ns



# Mental health

	Exclusively Heterosexual		Sexual Minority		Independent T-test Statistic
	M	SD	M	SD	
<b>Social Functioning</b>	<b>84.05</b>	<b>23.00</b>	<b>79.36</b>	<b>25.86</b>	<b>t = 2.64**</b>
<b>Role Emotional</b>	<b>84.39</b>	<b>31.68</b>	<b>78.50</b>	<b>24.56</b>	<b>t = 2.47*</b>
<b>Mental Health Index</b>	77.08	17.07	75.36	17.76	ns
<b>Life Satisfaction</b>	3.17	.48	3.14	.44	ns
<b>Depression</b>	<b>5.39</b>	<b>5.10</b>	<b>6.44</b>	<b>5.46</b>	<b>t = 2.78**</b>
<b>Stress</b>	.50	.42	.55	.44	ns
<b>Life Events</b>	.06	.06	.06	.06	ns
<b>Anxiety</b>	3.59	2.65	3.58	2.66	ns



# Experiences of violence

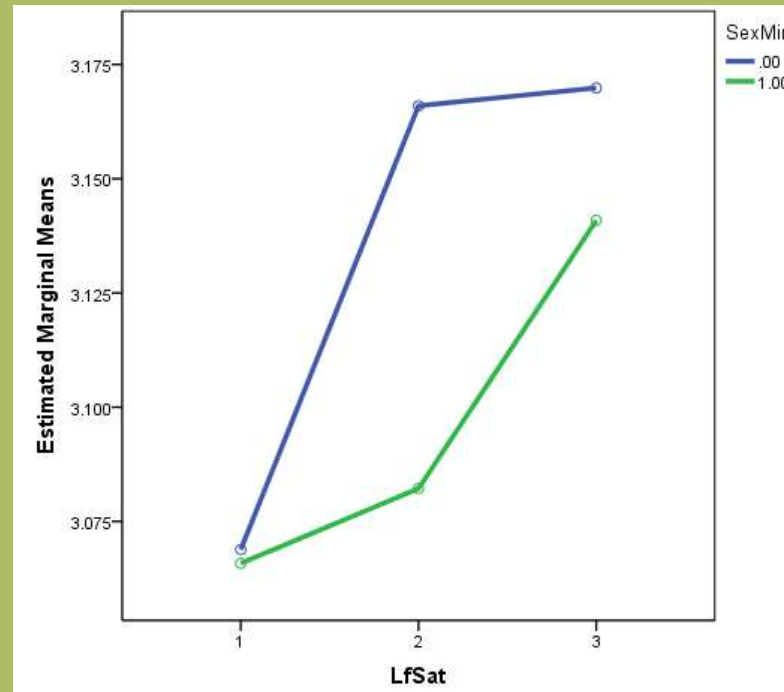
	Exclusively Heterosexual		Sexual Minority		Chi-Square Statistic
	N	%	N	%	
<b>Past Year</b>					
Pushed, grabbed, shoved, kicked or hit	74	.9	3	1.4	(df = 1) ns
Forced unwanted sexual activity	27	.3	2	.9	(df = 1) ns
<b>Ever</b>					
<b>Pushed, grabbed, shoved, kicked or hit</b>	<b>432</b>	<b>5.1</b>	<b>22</b>	<b>10.1</b>	<b>(df = 1) X<sup>2</sup> = 10.95***</b>
Forced unwanted sexual activity	317	3.7	13	6.0	(df = 1) ns
<b>Been in violent relationship with a partner/spouse</b>	<b>1,091</b>	<b>12.8</b>	<b>53</b>	<b>27.2</b>	<b>(df = 1) X<sup>2</sup> = 24.87***</b>
<b>Recently</b>					
<b>Uncomfortable with anyone in family</b>	<b>1,691</b>	<b>19.9</b>	<b>59</b>	<b>27.2</b>	<b>(df = 1) X<sup>2</sup> = 6.90***</b>
<b>Forced you to do things you did not want to do</b>	<b>403</b>	<b>4.7</b>	<b>18</b>	<b>8.3</b>	<b>(df = 1) X<sup>2</sup> = 5.83***</b>
Anyone close tried to hurt or harm you	181	2.1	4	1.9	(df = 1) ns
Anyone close called you names/put you down/made you feel bad	989	1.6	25	11.5	(df = 1) ns
Afraid of anyone in your family	270	3.2	2	.9	(df = 1) ns



# Overtime ...



# Life Satisfaction

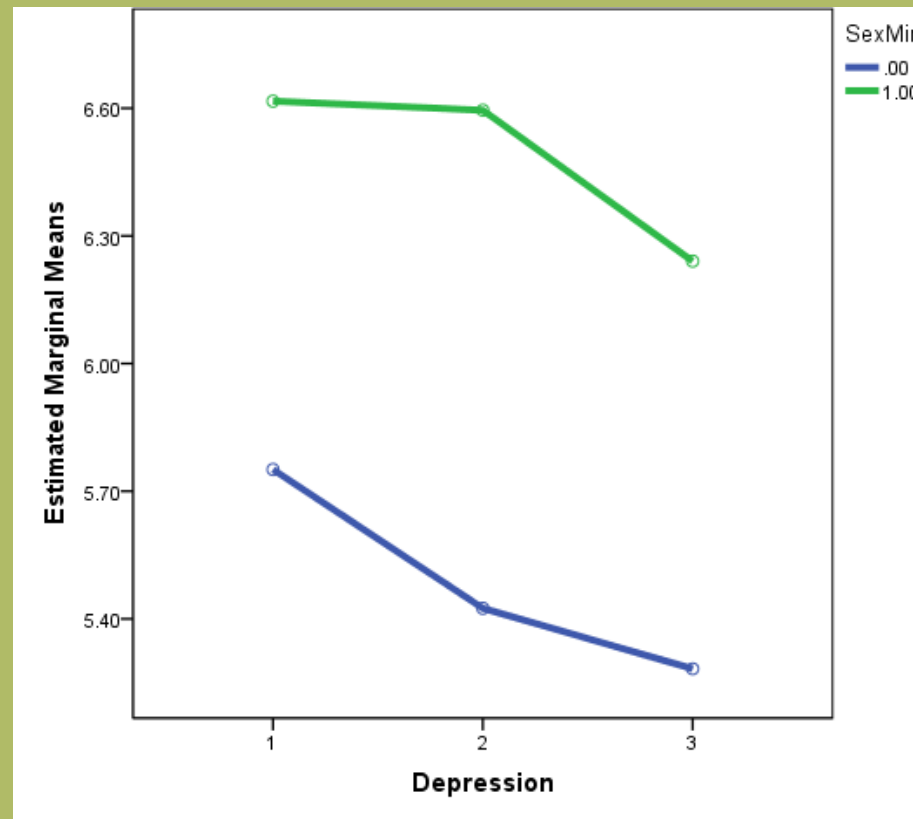


Heterosexual

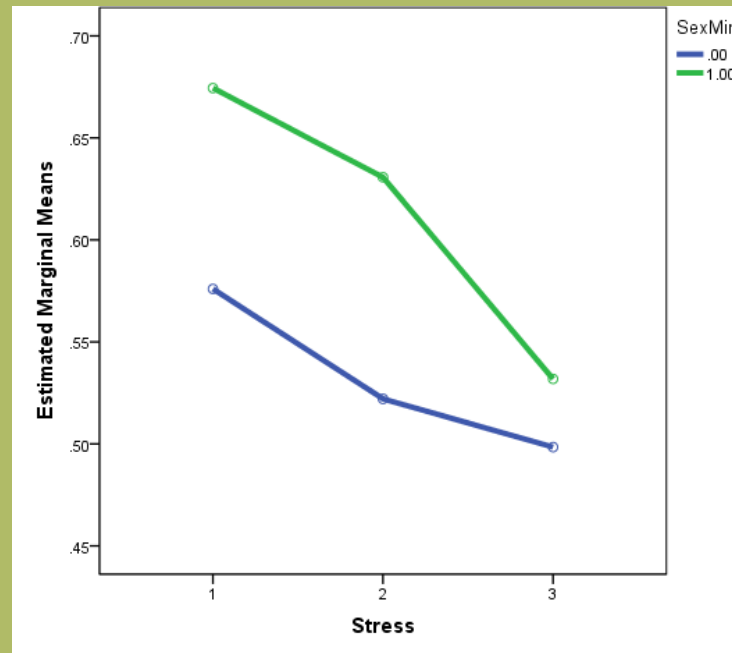
Sexual Minority



# Depression



# Stress



# Limitations

- Only asked sexual identity in Survey 3
- Questions in relation to cancer reporting on last three years
- Focus on breast, cervical, skin and bowel





# In sum

- Sexual minority women several increase cancer risk factors – has implications for health promotion and for health care providers
- To date has not resulted in increased incidence of cancer - need to follow as they age
- Important to include questions about sexuality in future research to understand more about the health disparities in this population