



A review of rural and regional alcohol research in Australia

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Alcohol, Gambling and Substance use

Alcohol in Australia

Most commonly used recreational drug in Australia

- Availability continuing to increase
- Between 1995 and 2005, risky or high-risk alcohol consumption within Australia significantly increased by 50% amongst males and 90% amongst females.
- However, alcohol consumption has gone down for the first time in 4 years due to alcopops tax (ABS data).

High risk levels of alcohol consumption

are associated with:

- hospitalisation
- violent crime
- road accidents
- homicide, and
- suicide.

The approximate cost of alcohol-related harms to the Australian community in 2005 was estimated at more than \$15 billion.

Alcohol-related harm

- Health problems
 - Pancreatic cancer
 - Liver cancer
 - Heart attack and stroke
 - Oral cancer,
 - Esophageal cancer,
 - Head and neck cancer,
 - Laryngeal cancer
 - breast cancer
 - bowel cancer
 - liver cirrhosis
 - Diabetes
 - Acute and chronic pancreatitis
 - addiction
 - And even HIV/AIDS
- Social order problems
 - 45% of homicides in Aus 2001-7
 - 47% assaults in Australia
 - 66% of perpetrator for sexual assault incidents in
 - 53.3 of sexual assault victims
 - 6,800 serious or fatal road injuries per year - Vic
 - 4,800 ambulance attendances in Melbourne 2006/7
 - 24,714 inpatient hospitalisations in Victoria 2006/7
 - 39% of all people seeking help for addiction

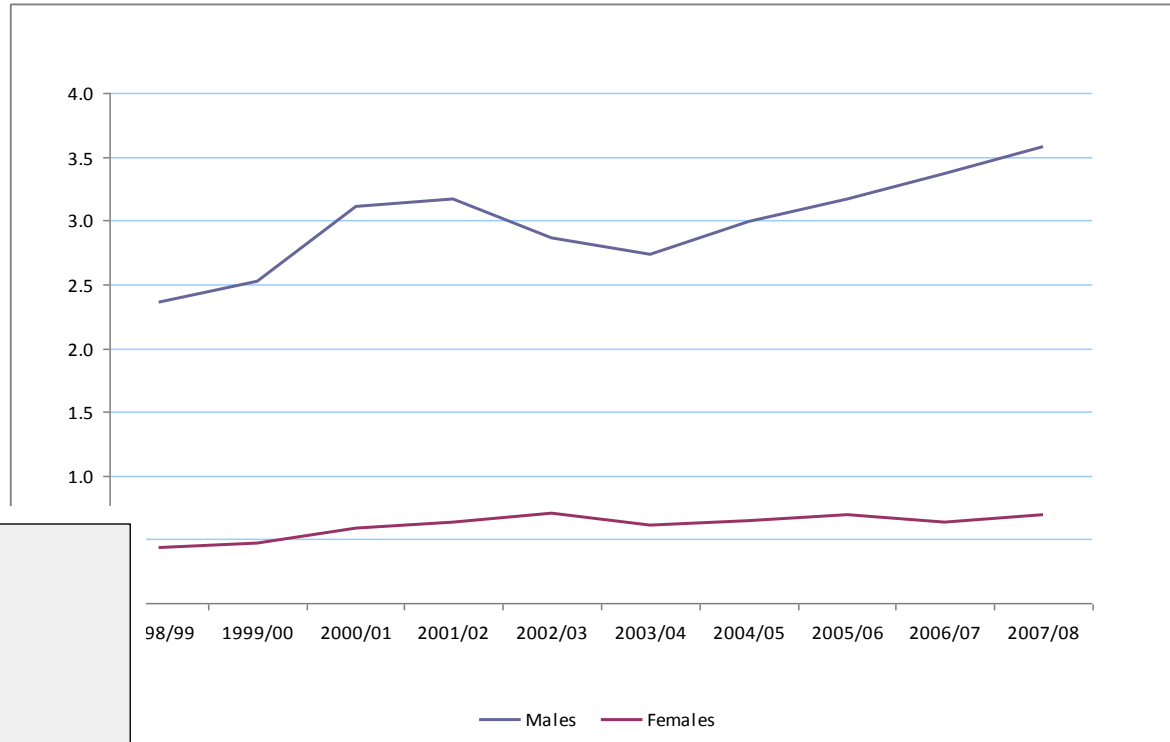


Diagnostic group	Deaths	%
Alcoholic liver cirrhosis	163	21
Motor vehicle accidents	92	12
Ischaemic stroke	77	10
Haemorrhagic stroke	75	10
Alc related mental/behavioural	56	7
Suicide	51	7
Fall injuries	37	5
Liver cancer	28	4
Hypertension	24	3
Oesophageal cancer	21	3
Female breast cancer	19	3
Assault	18	2

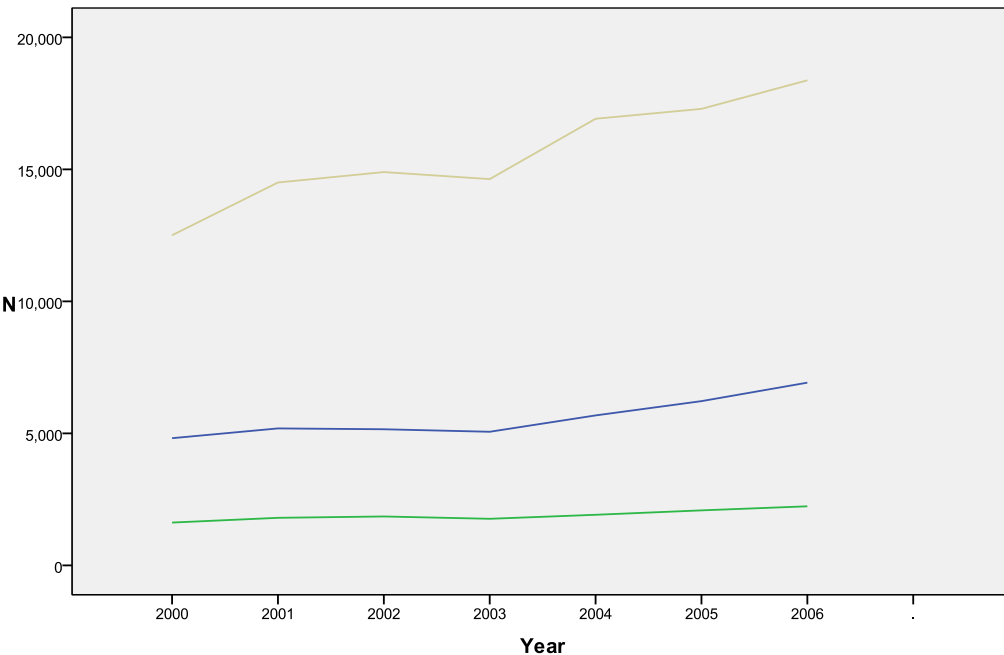
Responses to
substance use

Violence associated with Alcohol in Victoria

Alcohol assault hospital admissions 1998/99–2007/08: Trend over time (Rates) by gender



Assaults occurring during high, medium and low alcohol hours, Victoria 2000/01 to 2006/07



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Even cardio-protective effect being disproved

Past association studies have been confounded by:

- sick ex-drinkers
- Declining drinking with increased illness
- Poor investigation of socio-economic influences

“Moderate alcohol drinkers display a more favorable clinical and biological profile, consistent with lower CV risk as compared with nondrinkers and heavy drinkers. Therefore, **moderate alcohol consumption may represent a marker of higher social level, superior health status and lower CV risk.**”

European Journal of Clinical Nutrition advance online publication 19 May 2010;
Relationship between alcohol intake, health and social status and cardiovascular risk factors in the urban Paris-Ile-De-France Cohort: is the cardioprotective action of alcohol a myth?

B Hansel^{1,2}, F Thomas³, B Pannier³, K Bean³, A Kontush²,
M J Chapman², L Guize³— and E Bruckert^{1,2}

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It'll even rot your teeth!

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"Really, Kevin! You'll ruin your teeth!"

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What about non-metro?

- ☹ Living in a rural or regional area has been associated with high-risk alcohol consumption
- ☹ Little research has been conducted which systematically examines this issue within the Australian context.
- ☹ Recently released NHMRC guidelines did not mention differences between rural and urban drinking patterns and consequences.



Method - Comprehensive search

- Databases (e.g. Academic Search Premier ; CINAHL; MEDLINE with Full Text; PsycINFO ; Sociological Abstracts; Google Scholar; etc).
- Relevant Australian government and organisational websites (e.g. Australian Institute of Health and Welfare, the Australian Bureau of Statistics).
- Grey literature
- Reference lists of relevant articles were also hand searched for additional citations.



Search Terms

*Australia,
regional,
rural,
remote,
alcohol,
drinking,
violence,*

*drink driving,
assault,
accidents,
homicide,
health,
suicide,
road trauma.*

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Inclusion criteria

- (i) population under study could be identified as being rural, remote or regional Australian

- (ii) full text of the article was available in English

- (iii) study referred directly to alcohol-use or alcohol-related harms

Exclusion Criteria

- (i) research was not empirical research
(commentaries etc)

- (ii) article did not refer explicitly to alcohol use
and/or related harms

- (iii) population under investigation was specifically
indigenous Australian



RESULTS

4,222 publications were identified,

- 18 studies fulfilling the selection criteria

Approximately half of the articles found were published within the last two years

- the remaining articles published in the late 1990s.

Main studies

data from two prominent alcohol monitoring measures:

the National Drug Strategy Household Survey (NDSHS) (n=5)

the Victorian Youth and Alcohol Drugs Survey (VYADS) (n=one)

Large scale surveys - limitations

- Lend themselves to detailed analysis of groups
 - Information about alcohol consumption and related harms within specific rural towns cannot be isolated,
 - Direct comparisons between rural towns cannot occur.
- Both surveys rely on self-report data
 - Under-reporting due to social desirability
 - Individuals underestimate alcohol consumption

ALCOHOL CONSUMPTION

People living in non-urban areas are more likely to engage in high-risk alcohol consumption than people living in urban areas.

Short-term risky alcohol consumption increases with remoteness:

- 19% in metropolitan areas,
- 23% in rural areas, and
- 31% in remote/very remote regions.



ALCOHOL CONSUMPTION (2)

- Approximate odd ratios for high-risk drinking in rural areas are 1.2-1.4, as compared to urban ratio of 1.0.
- Being a male with a rural residence predicts high-risk alcohol consumption in youth and young offenders.
- Alcohol use within rural youth has also been increasing at a rate that exceeds that of metropolitan youth.

Hospitalisation

Hospitalisation rates are generally higher in rural areas than metropolitan areas.

Up to 24.7% of men living in rural or remote areas experience hospitalisations due to alcohol-related disease (such as cirrhosis of the liver) and alcohol-related injury (such as road injuries) as compared to 17.6% of men from metro areas.

Women living in rural or remote areas also had a higher rate of hospitalisations due to alcohol-related injury.



Morbidity

Hospitalisation rate for chronic alcohol-related physical health conditions is higher within rural areas than urban areas

Medium/High risk drinkers: significantly more problems with mobility, pain/discomfort and anxiety/depression

Very-high risk drinkers: lowered health outcomes in relation to self-care, usual activities, pain/discomfort and anxiety/depression

Interpersonal Violence

Alcohol-related emergency presentations for assault and violence within rural Victoria continue to increase faster than the Victorian average for the past three years

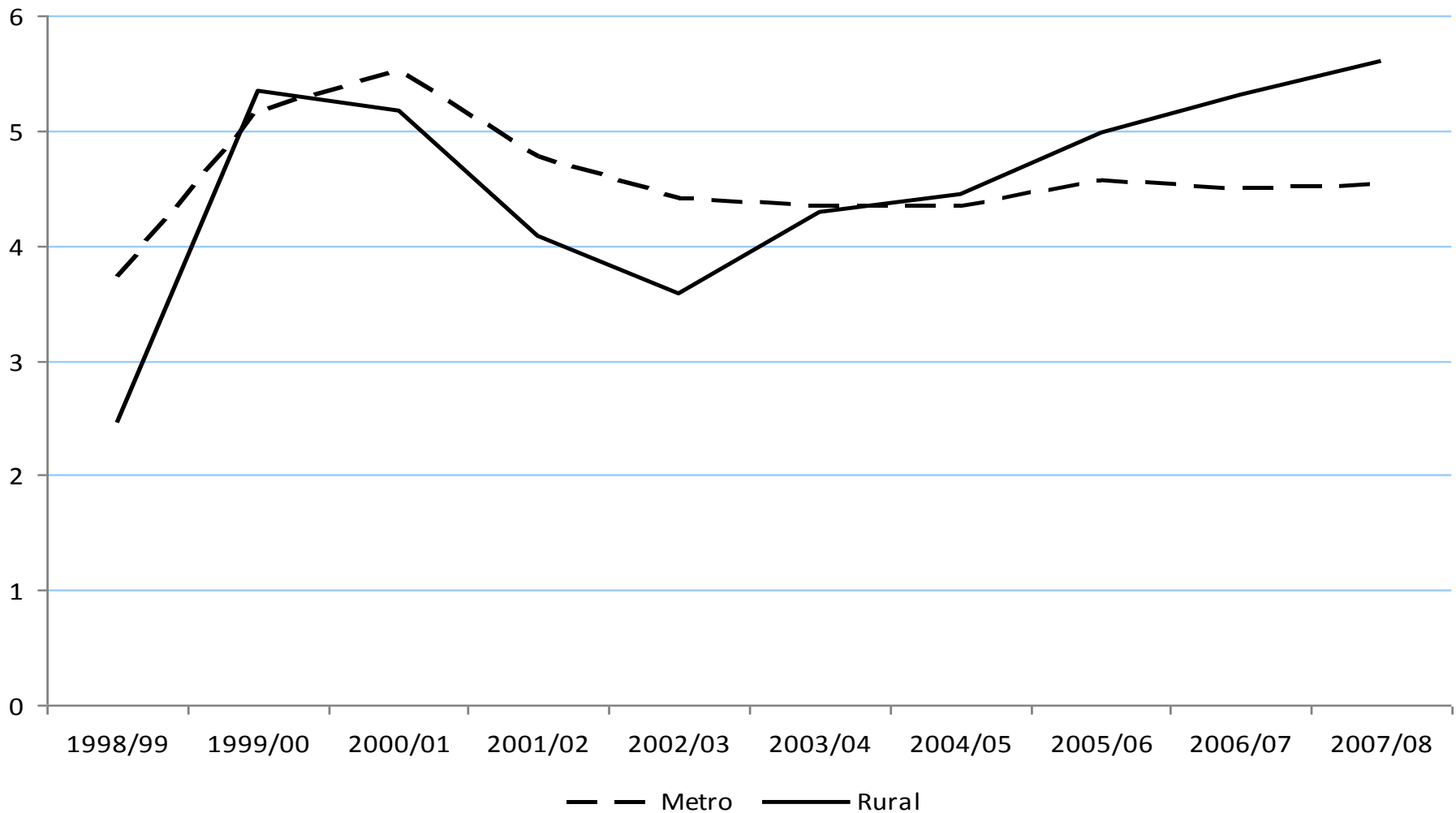
Coincides with a relative decrease in hospitalisations within metropolitan areas

Seasonal trends:

- a doubling in alcohol-related incidents and hospital costs within warmer months (Broken Hill)

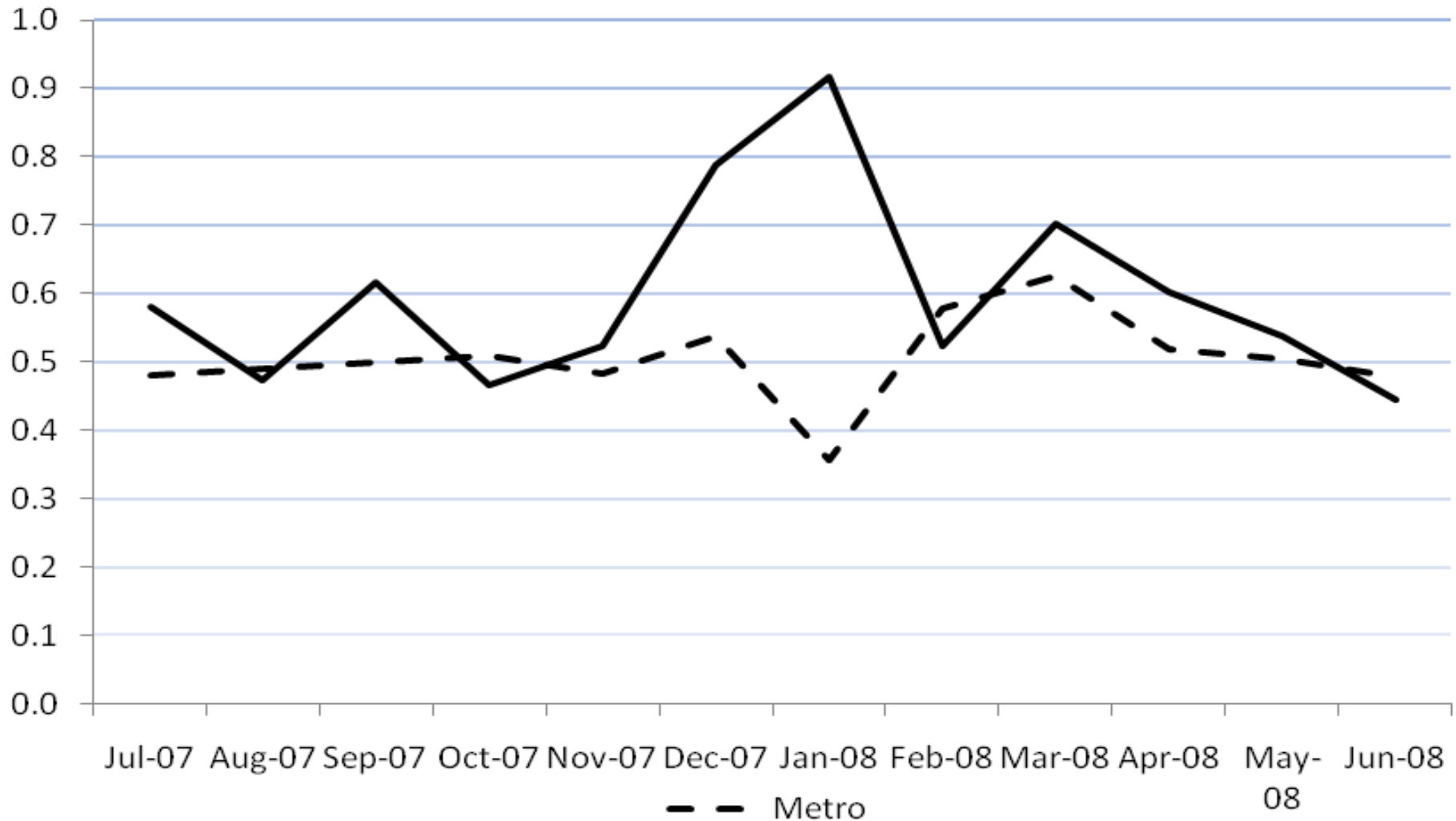


Alcohol assault emergency presentations 1998/99-2007/08: Trend over time (Rates) by geographical location - high alcohol hours





Alcohol assault emergency presentations 2007/08: Trend over time (Rates) by geographical location - high alcohol hours



Drink-Driving

In 2008, 54% of alcohol-related road fatalities (driver BAC >0.05g/100ml) were on country roads.

In 2001, 14 to 19yr old drunk driving:

- drive a motor vehicle (10.3% rural, 7.4% metro)
- operate hazardous machinery (3.4% rural, 1.3% metro).

Mortality

acute and chronic alcohol-related death rates were higher within non-metropolitan than metropolitan areas

Age-standardised mortality rate per 10,000 adults (depending on the state):

- Metro: 0.74 - 2.42
- Rural: 0.95 - 4.07

Conclusions

Too few studies of this major health risk, but:

- People living in rural Australia are more likely to experience alcohol-related harm through violence, drink driving, and acute and chronic health problems.

No studies able to differentiate between different types of rural communities (i.e. coastal, farming or mining).

A need for targeted research examining alcohol use and related harms in rural Australia