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The Impact of Drought on Mental Health and Alcohol Use

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Anex 09 Drugs Conference:

Drugs in Hard Times

Melbourne 1 October 2009

Drought and families: what do we know?

No large-scale studies in Australia or internationally

In Australia, focus on in-depth studies of particular communities:

- Drought in the 1990's- 103 adults in NSW & QLD (Stehlik, Gray & Lawrence, 1999)
- Social impacts of drought -3 NSW communities, 62 interviews (Alston & Kent, 2004)
- Children & drought - 334 children in a NSW community (Dean & Stain, 2007)



What is drought?



Increasing
Impact
On
Farming

1. Meteorological –degree & duration of dryness compared to an average for the area
2. Hydrological –on water supply (stream flow, reservoir/lake water levels & ground water levels)
3. Agricultural -1 & 2 with agricultural impacts, soil moisture deficits
4. Social definitions -drought based on personal experience of the above

Many indices, no agreed measure, Bureau of Rural Sciences define drought as a 1 in 20 year event



Mental health and medication for stress

- **Mental Health Inventory from the SF-36 (less than 52)**
- **In the last 12 months, have you been prescribed drugs by a doctor, such as anti-depressants, to help you cope?**



Alcohol Use

High or hazardous drinking

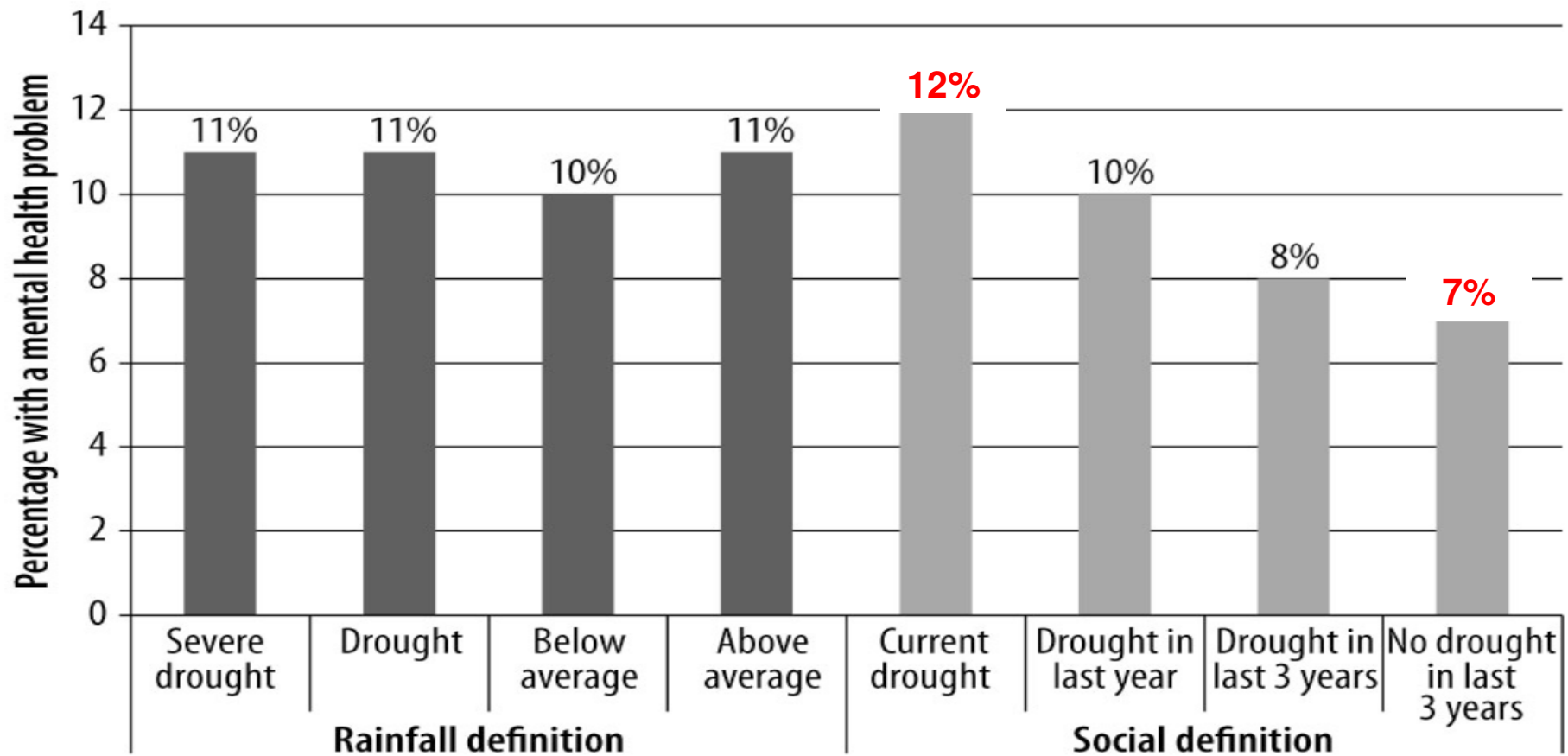
- Men: 15 or more standard drinks per week
- Women: 8 or more standard drinks per week

Binge drinking

- Women 5 or more standard drinks once in the last month
- Men 7 or more standard drinks once in the last month



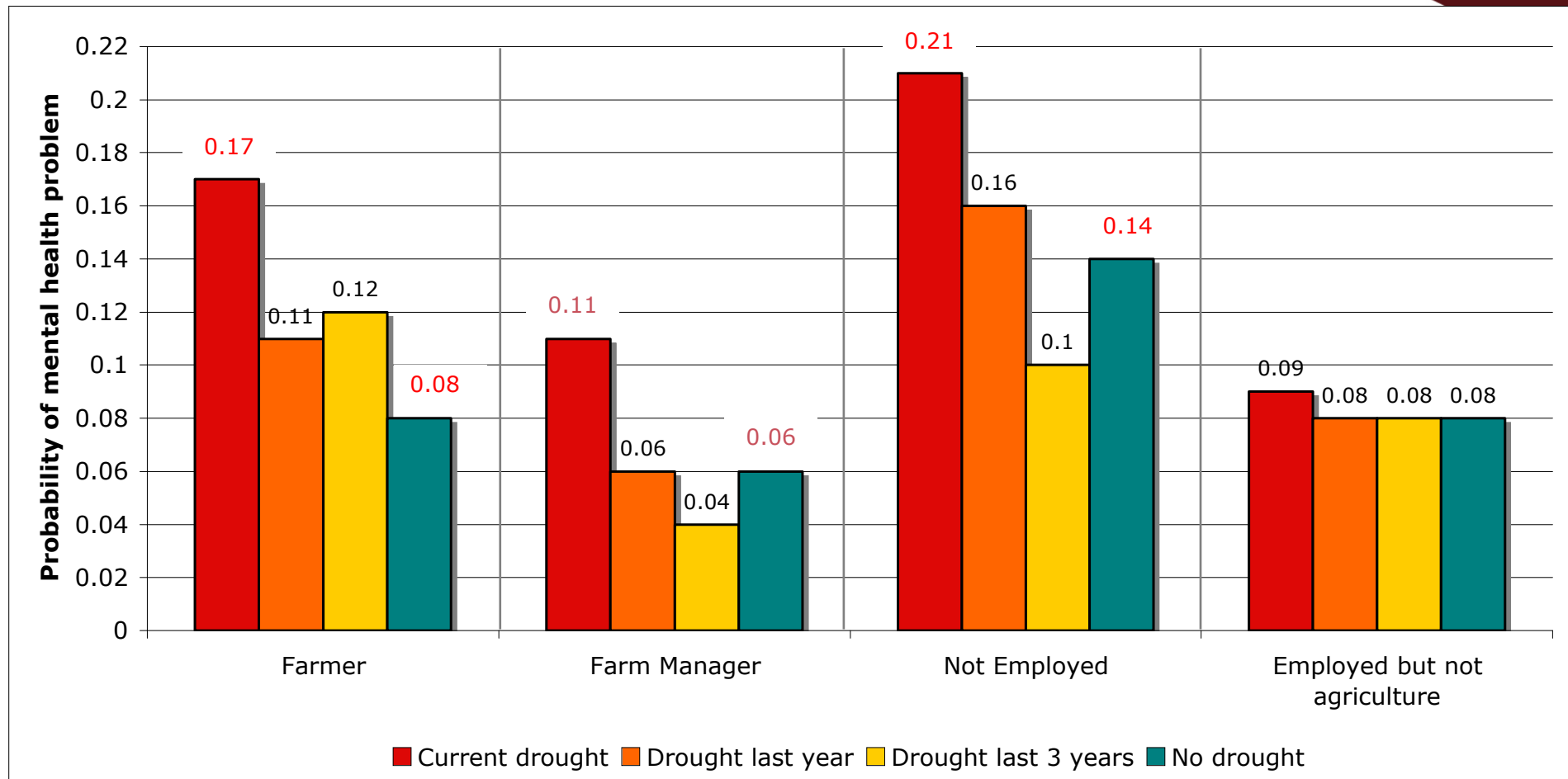
Mental health problems, by drought definition



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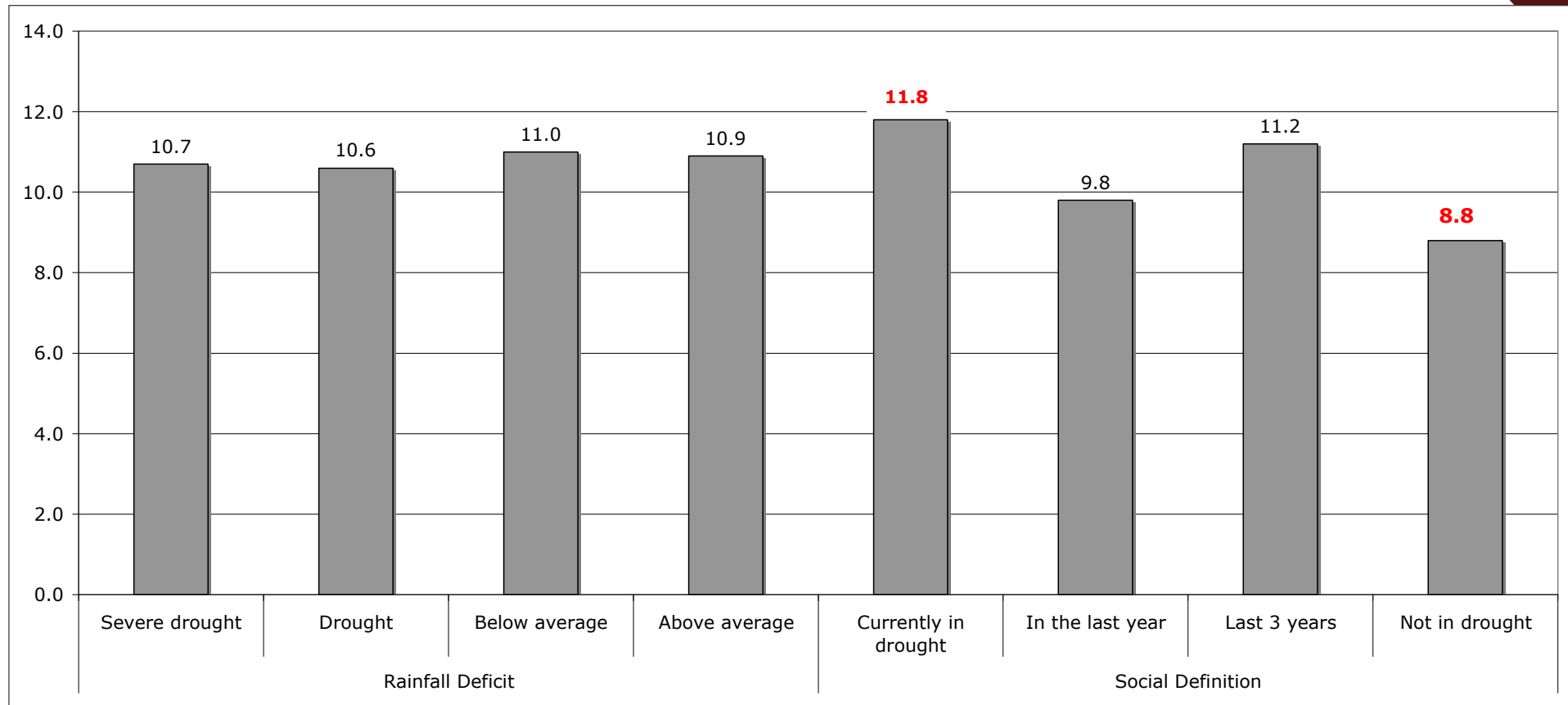
Mental health by Social Definition and employment status



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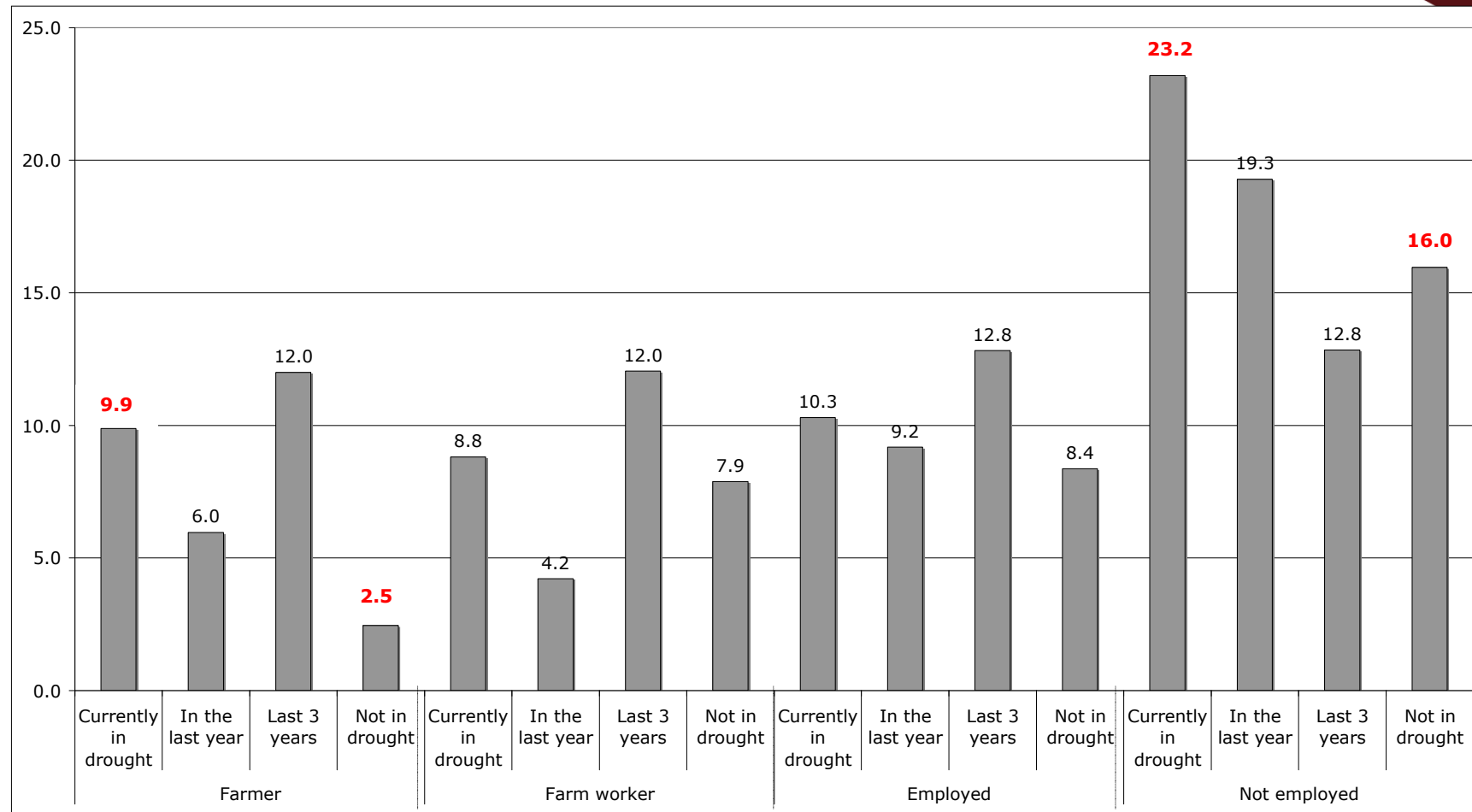
Medication use for stress, by drought definition



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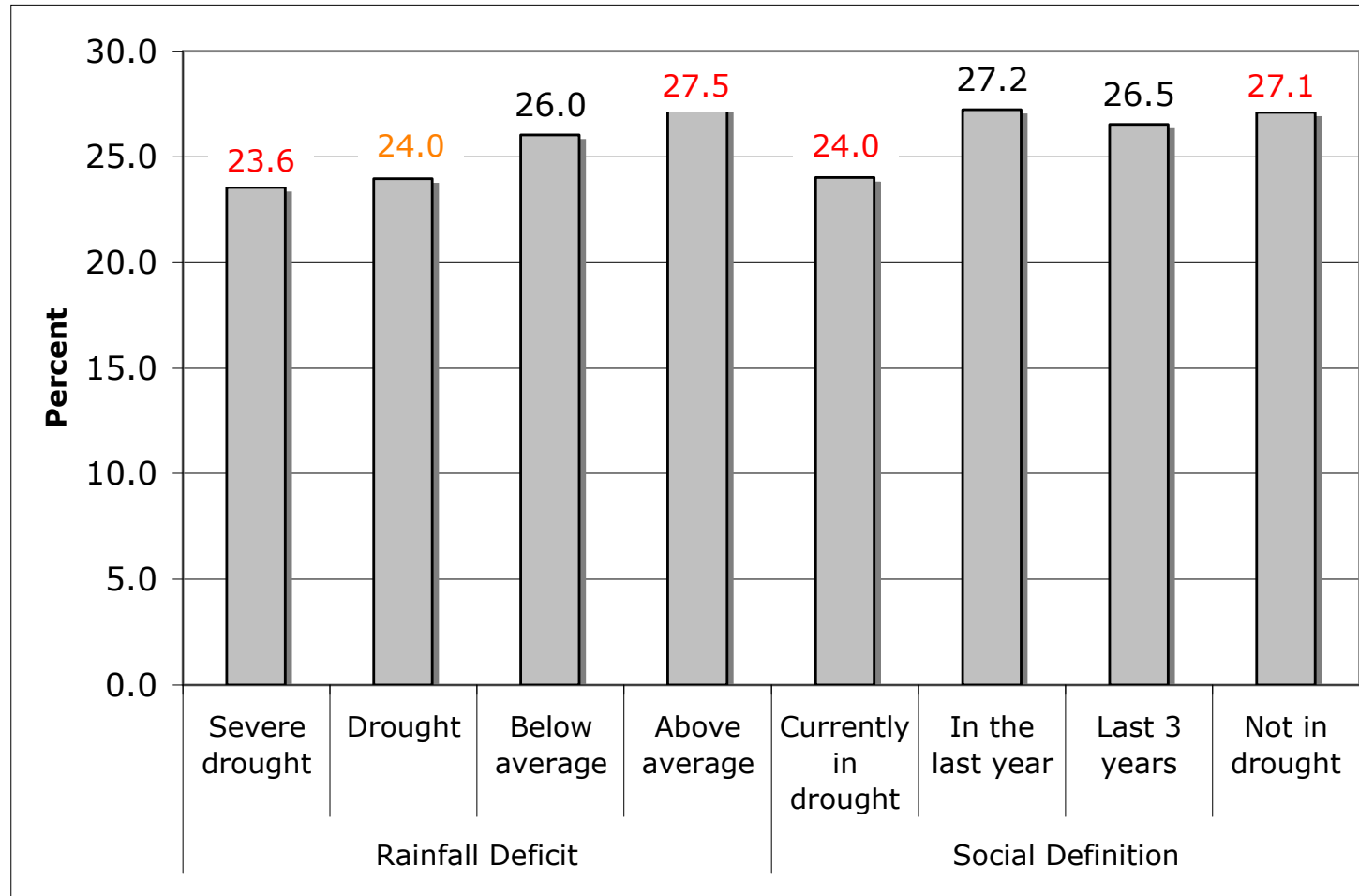
Medication use for stress by Social Definition and Employment Status



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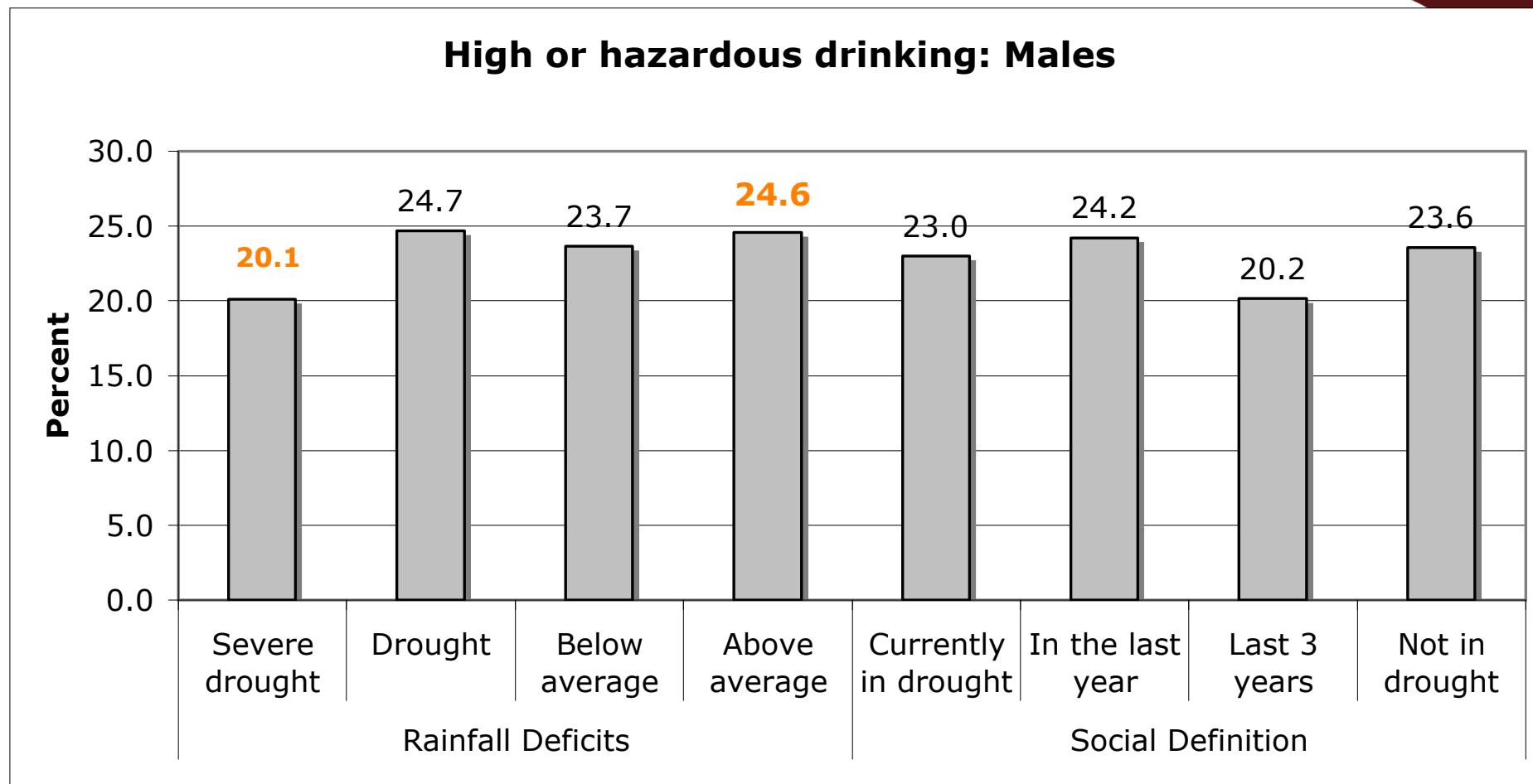
High or hazardous drinking



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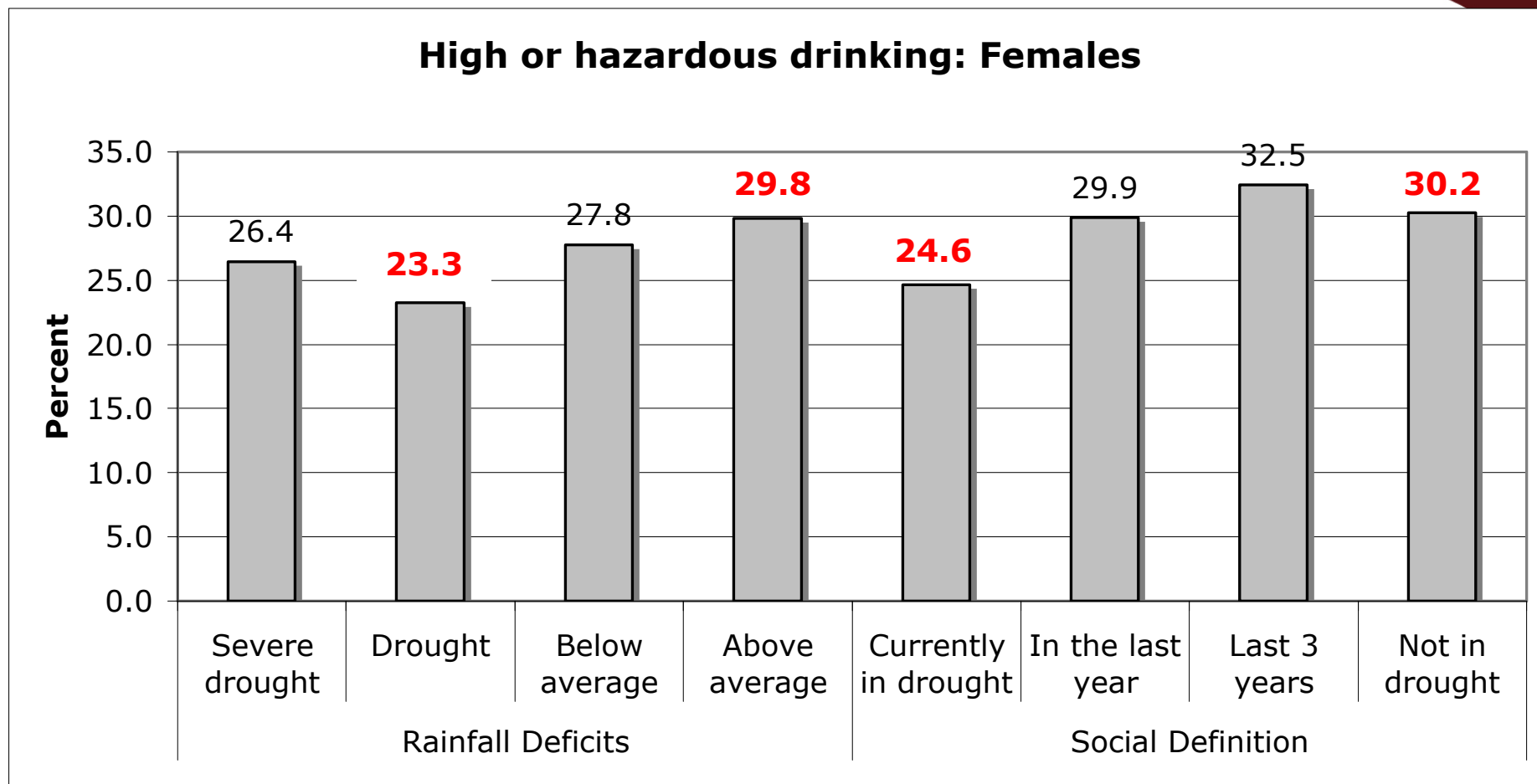
High or hazardous drinking: Males



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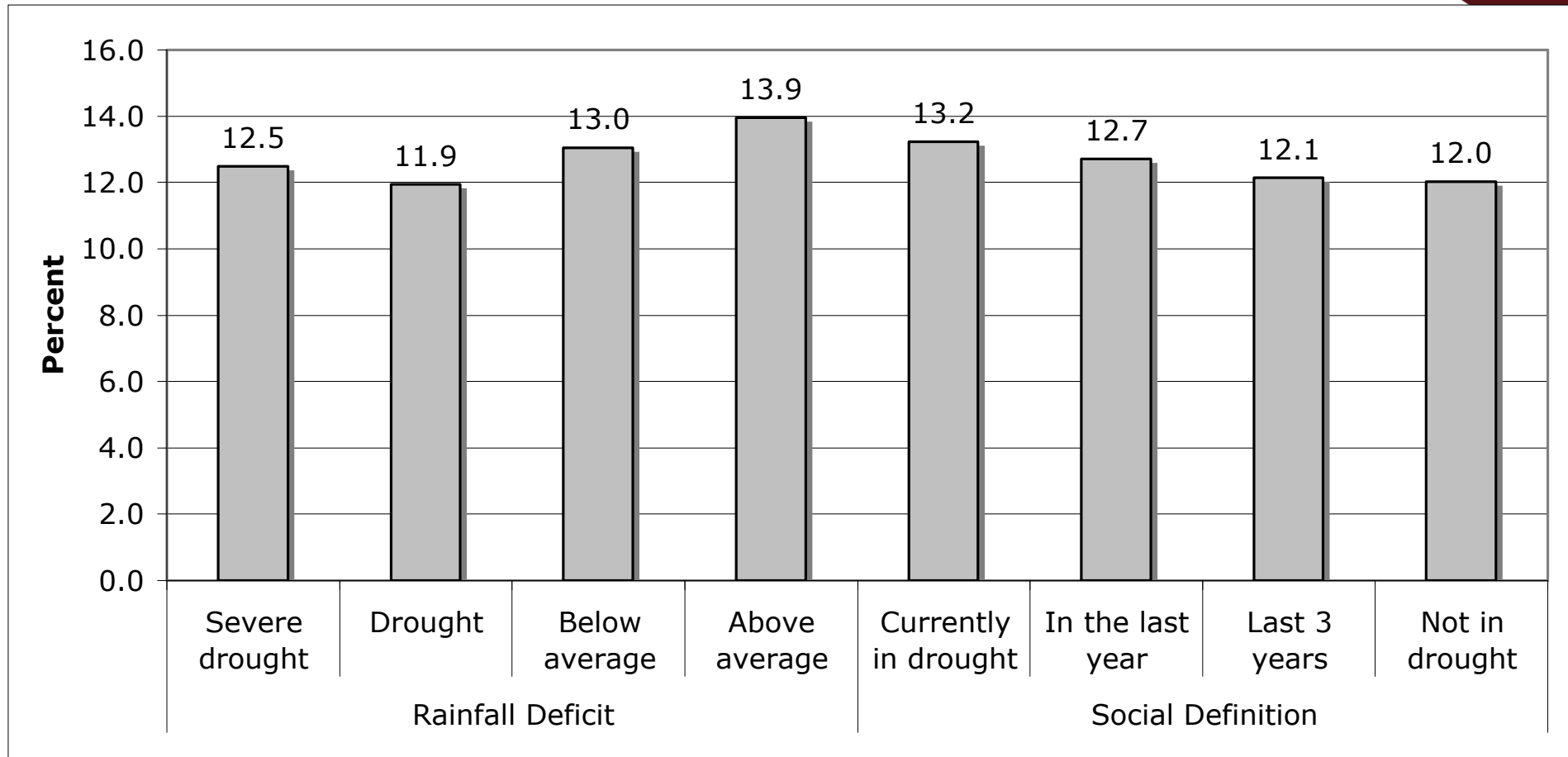
High or hazardous drinking: Females



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Binge Drinking



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Conclusions

- Significant impact of drought, socially defined, on mental health and medication use for stress, in particular farmers and the not employed
- Lower rates of high or hazardous drinking in drought areas (rainfall and social definition)
 - ◆ For females in particular
- No evidence of self-medication



Residential Mobility and Drought

- Relatively high rates of mobility between areas may be an effect of drought and threaten the validity of a cross-sectional study
- Area-level migration data from the last three Australian census linked with rainfall data (Hunter & Biddle, 2009)



Net-migration by drought (rainfall)

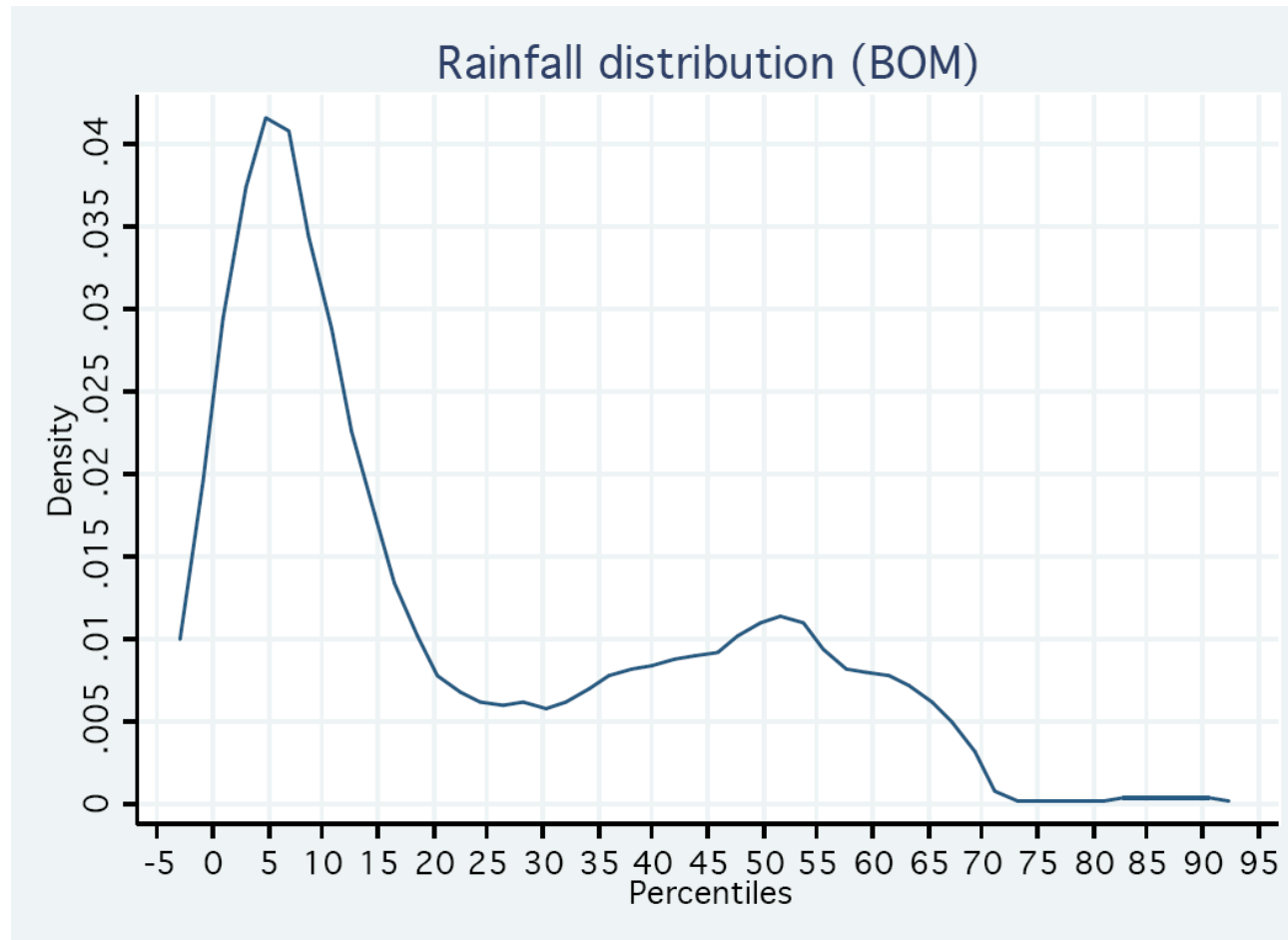
Rainfall deficits 3 years prior to the 2006 census includes (severe and drought)

OLS regression adjusted estimates:

- Drought area $-.60\%$ (1.42) less than non-drought area
- Below average 1.07% (0.93) less than non-drought area



Rainfall percentiles from BOM in the survey data



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Australian policy context -support in the context of climate change

23 April 2008 Federal Government announces a national review of drought policy.

“ The review will support the development of policies to help better prepare farmers and rural communities for a changing climate. The review will include:

- an economic assessment of drought support measures by the Productivity Commission
- an assessment by an expert panel of the social impacts of drought on farm families and rural communities
- a climatic assessment by the CSIRO and the Bureau of Meteorology of the likely future climate patterns and the current Exceptional Circumstances standard of a one-in-20-to-25-year-event.”



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