

The decline in Australian young male suicide

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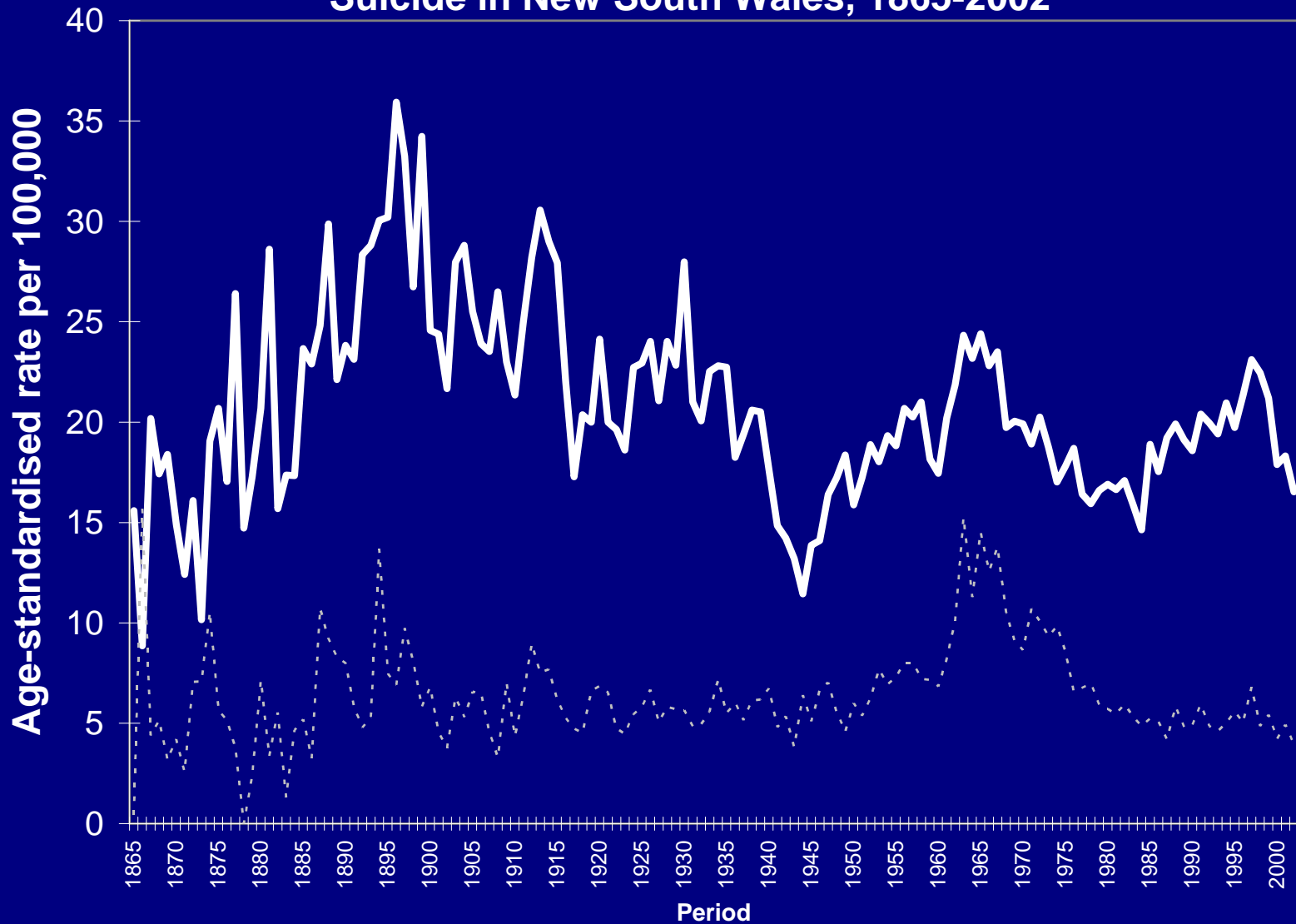
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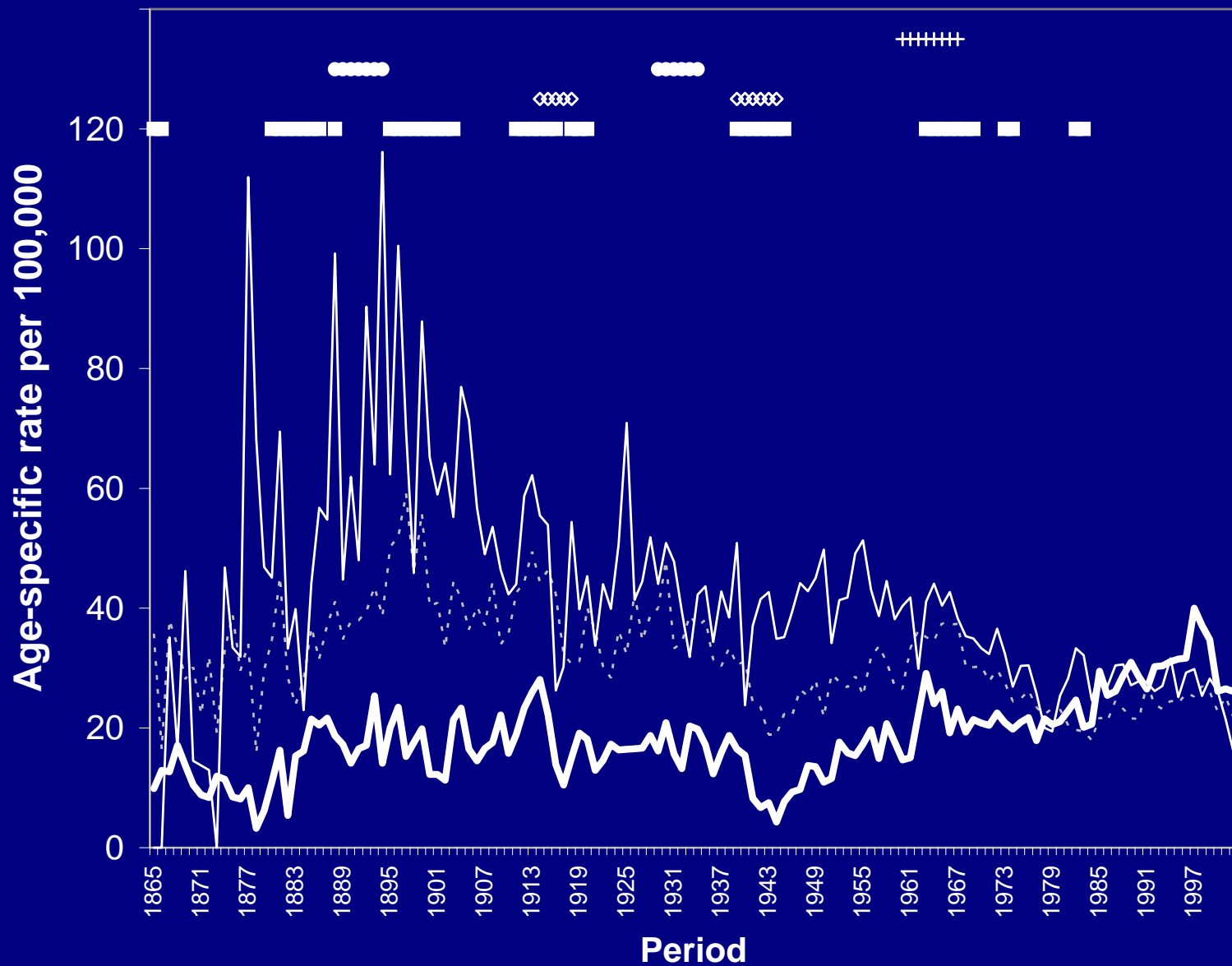
Outline

- Background to suicide in Australia
 - Historical context
 - Antecedents, risk factors for suicide
 - Emergence of the ‘youth suicide epidemic’
- Recent trends in Australian suicide
 - Sex, age, method, geographic area
- Implications, explanations for decline

Suicide in New South Wales, 1865-2002

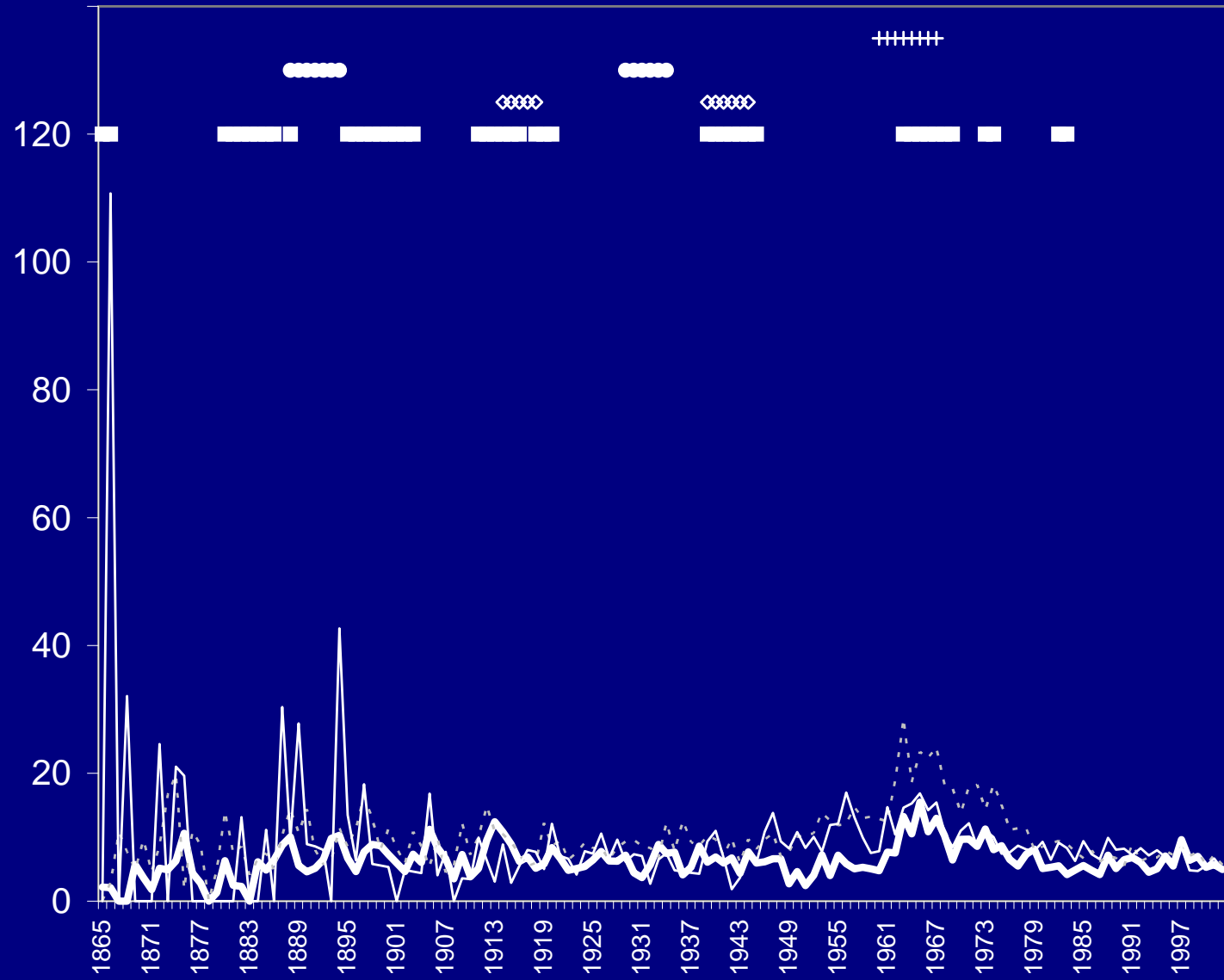


— Male - - - - Female



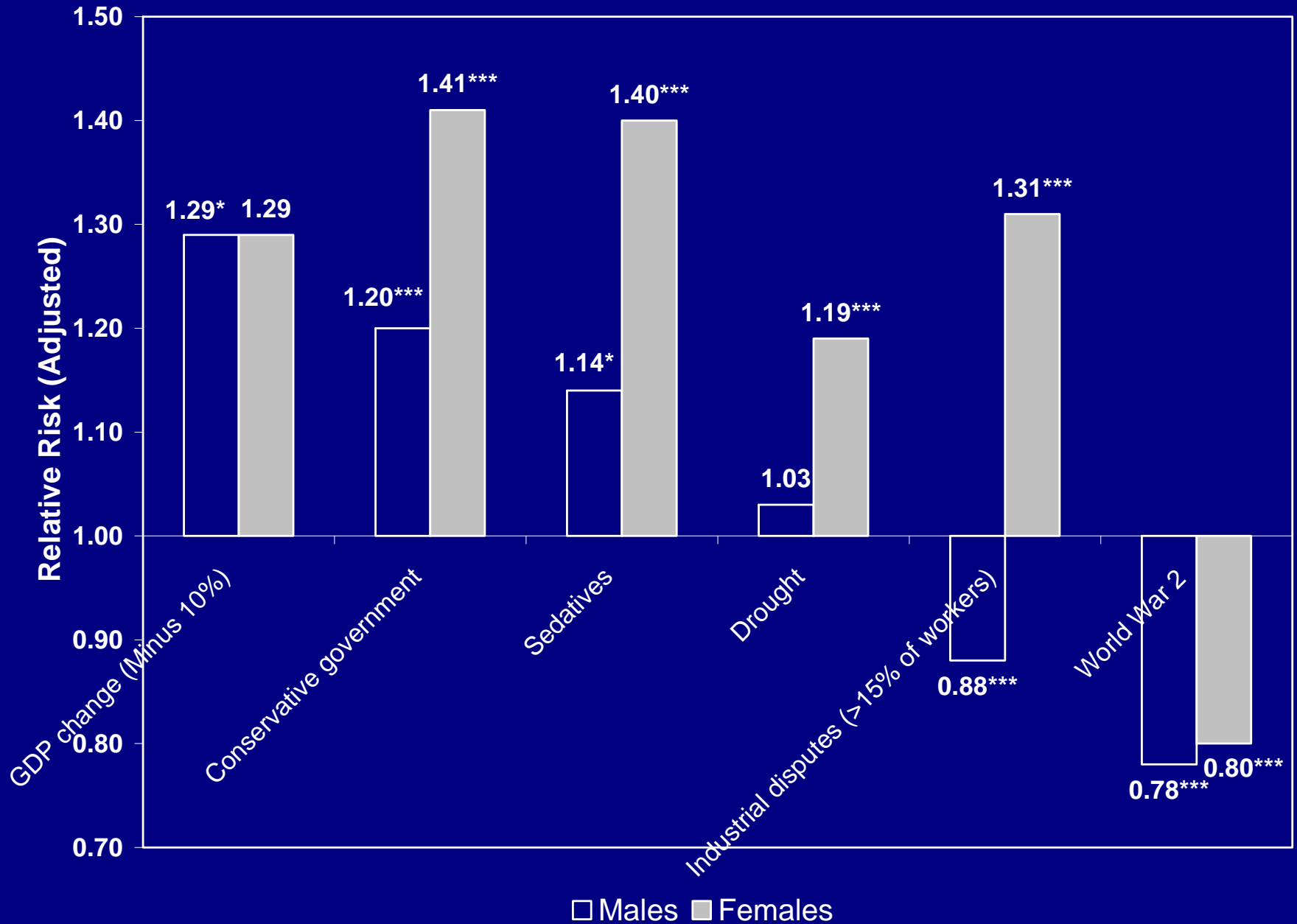
20-34
 35-64
 65+
 Drought
 World War
 Depression
 Sedatives

Age-specific rate per 100,000

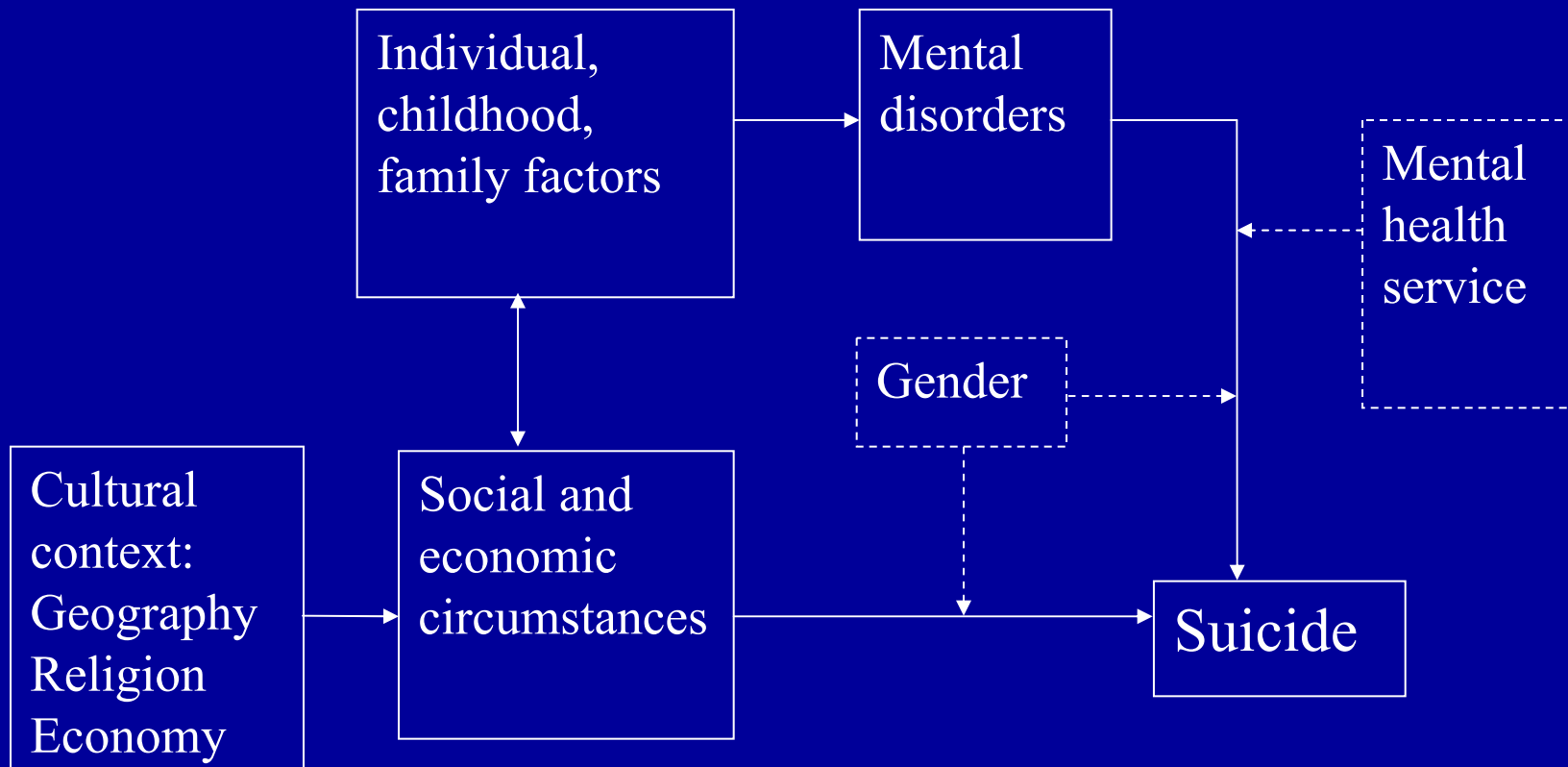


— 20-34 35-64 - - - - 65+ ■ Drought ◇ World War ● Depression + Sedatives

Selected social risk factors for suicide, NSW 1901-1998



A conceptual model of suicide



Modified from: Taylor R, Page A, Morrell S, Harrison J, Carter G. Social and psychiatric influences on urban-rural differentials in Australian suicide. *Suic & Life-Threat Behav* 2005;35(3):277-90.

Factors contributing to suicide

- Social, economic and cultural factors
 - Religion
 - Cultural
 - Economic factors
 - Social isolation
 - Position of women in society
 - Lack of access to mental health facilities

Factors contributing to suicide

- Higher risk Indicators (‘situations’):
 - Unemployment
 - Bankruptcy
 - Unresolved sexuality issues
 - Frustrated career/vocational goals
 - Chronic illness/disability (physical and/or mental)
 - Previous attempts
 - High drug/alcohol consumption levels
 - Risk-taking behaviours
 - Availability of means (especially impulsive suicide)
 - Family history of suicide
 - Regularly assaulted or victimised by other(s)

Factors contributing to suicide

- Adverse life events (‘precipitators’):
 - Parental separation
 - Parental abuse (physical, sexual, psychological)
 - Marital separation/widowhood/loss of loved one
 - Exam failure (or the prospect)
 - Bankruptcy (or the prospect)
 - Jail/incarceration (or the prospect)
 - Unemployment
 - Recent conflict with significant other (spouse, parent, etc)

Factors contributing to suicide

- Indicators of intent
 - Talks about death & suicide/threatens to commit suicide
 - Loss of interest in things normally interested by
 - Anxious or panicky
 - Personality change, particularly pessimism, depression or apathy
 - Low self-esteem/self loathing
 - Hopelessness
 - Desire to tidy up personal affairs
 - Gives away treasured possessions
 - Changes in eating or sleeping habits
 - Suicide note

Suicide complex and multidimensional

- Unlikely that any single factor is a sufficient cause of suicide
- Unlikely that any single intervention is sufficient to prevent suicide
- Not uncommon in public health
 - Parallels with e.g. road traffic injury, coronary heart disease
 - Multiple aetiological factors, prevention a combination of mass and high risk strategies

Research on increases in young adult suicide (15-34 years)

- Increased trend in young males (and large sex differences) noted from 1970s
 - (e.g. Dorsch, 1983; Goldney, 1983; Meares, 1983; Cantor, 1994, 2000; Morrell, 1993; Hassan, 1989)
- Trends by method
 - (e.g. Cantor, 1990, 1998)
- More analytic studies also considered sociological factors associated with increases
 - Rural suicide (e.g. Dudley, 1997, 1998)
 - Unemployment, divorce, female labour force participation (e.g. Morrell, 1993, 1998; Lester 1991; Yip 1998)

'Youth suicide' in the popular media

- High community (and government) awareness of the phenomenon of increased suicide rates in young (male) adults.
 - '*Youth suicide numbers soar*' Titelius, R. (Herald Sun, 24/12/98)
 - '*2,500 reasons to bring youth suicide out into the open*' Peatling, S. (SMH, 11/08/1998)
 - '*Youth suicide toll takes 2,500 crosses to bear*' Harvey, C. (Australian, 11/08/98)
 - '*Silent epidemic*' Carr-Gregg, M. (Australian, 22/05/00)
 - '*Youth suicide figures horrify*' Devlin, R. (Age, 23/12/00)
 - '*Town gripped by youth suicide crisis*' Southorn (Courier Mail, 16/6/94)

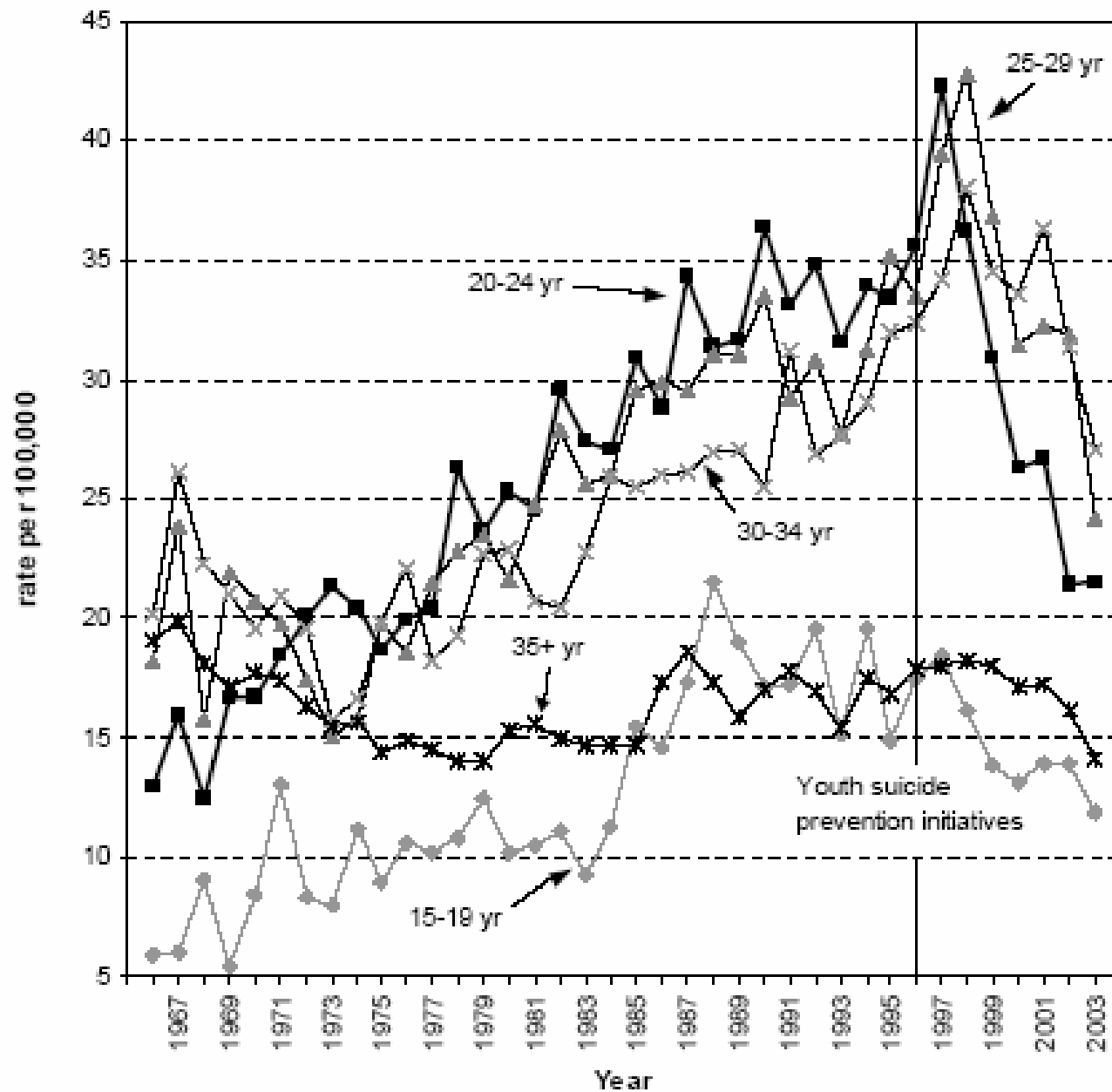
Trends since the late 1990s

- Marked decline in young male suicide (20-34 years)
 - From ≈ 40 per 100,000 to ≈ 20 per 100,000
 - Levels similar to those in 1980, prior to the increase
- Decline predominantly due to decrease in hanging, (to a lesser extent CO poisoning)
- Decline during this period is particular to Australia (AISRAP, 2003)
 - Maybe declines in NZ and Ireland, but nowhere near the same magnitude and in different age groups
 - Continued increases in other Western countries e.g. Canada, US, England, Scotland, N. Ireland

Trends since the late 1990s

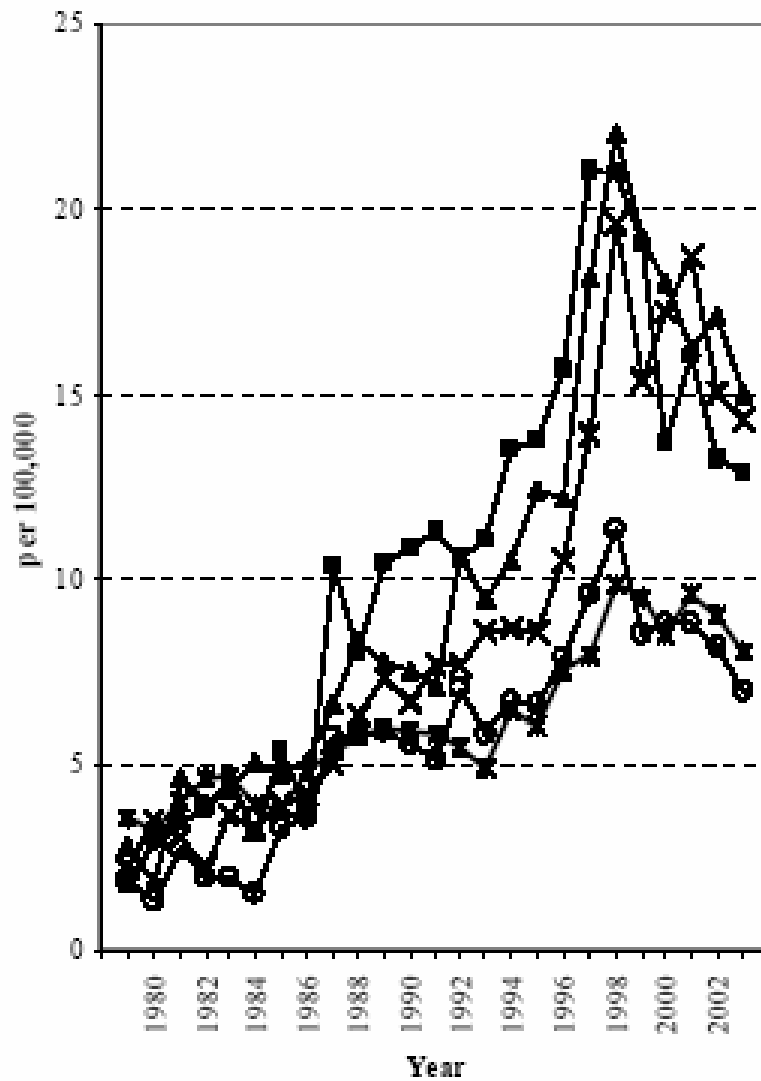
- Differential reductions by geographic area
 - Decreases in higher SES areas, continued increases in low SES
 - Decreases in metropolitan and regional centres, continued increases in remote areas
- Suggestive contiguity between prevention programs and also employment indicators
 - NYSPS implementation (and NSPS)
 - Change in association between suicide and unemployment

Age specific suicide rates 1966-2003, Australia

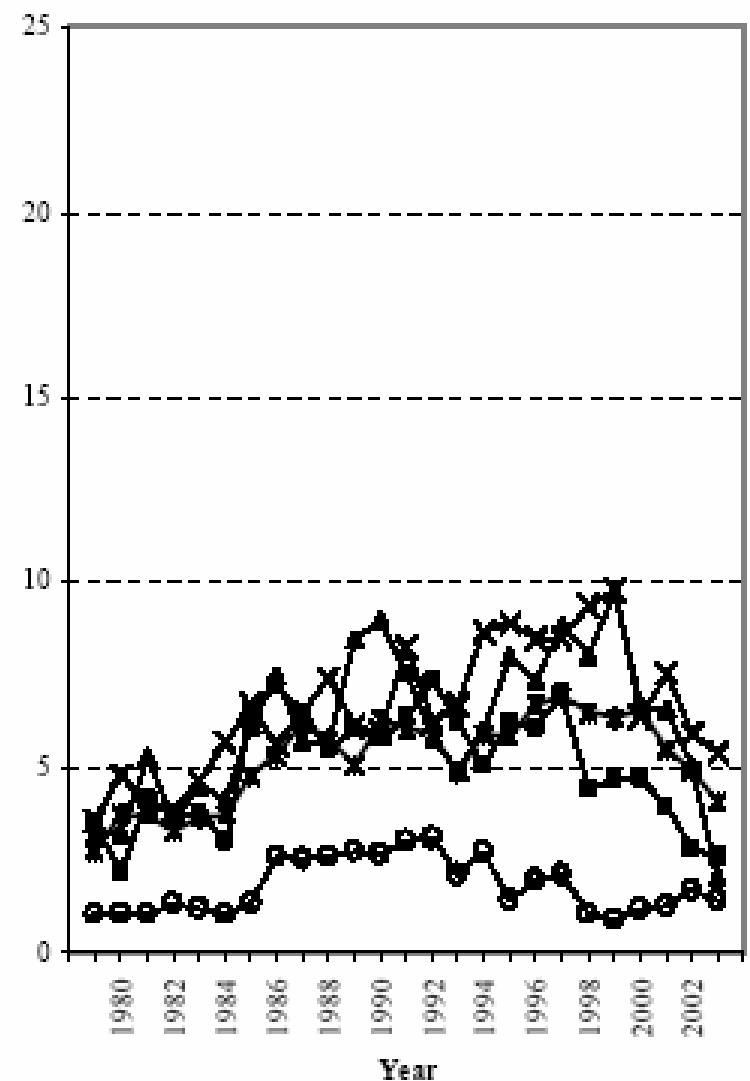


Age specific suicide rates by method, 1966-2003, Australia

Hanging



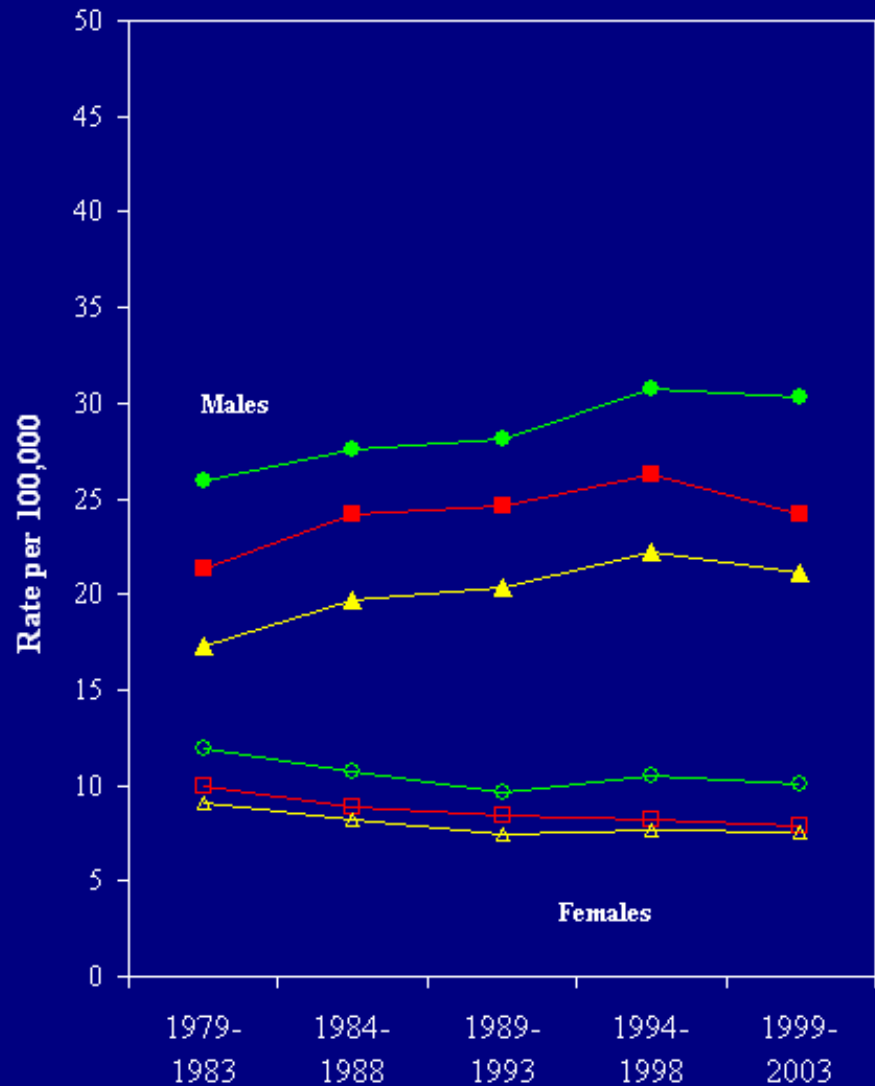
Motor vehicle exhaust and other gas



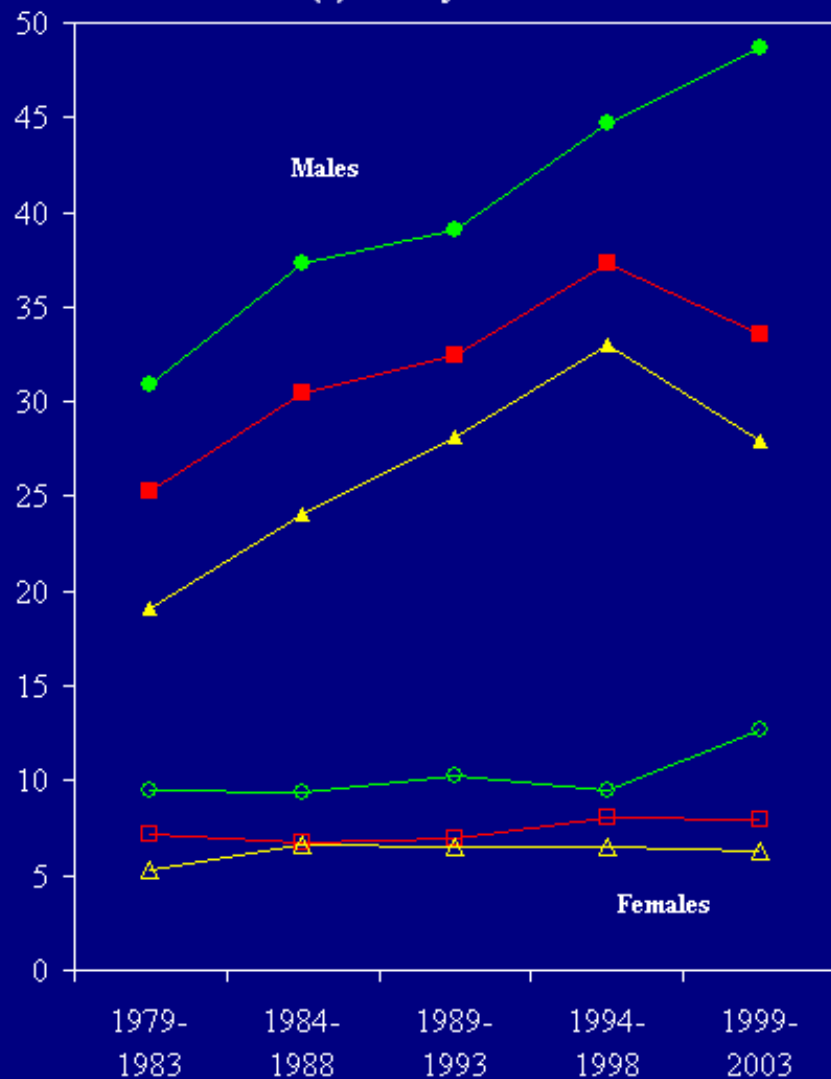
15-19
 20-24
 25-29
 30-34
 35+ yr

Australian suicide rates by low, middle and high SES groups, 1979-2003 (rate per 100,000)

(a) All ages



(b) 20-34 years

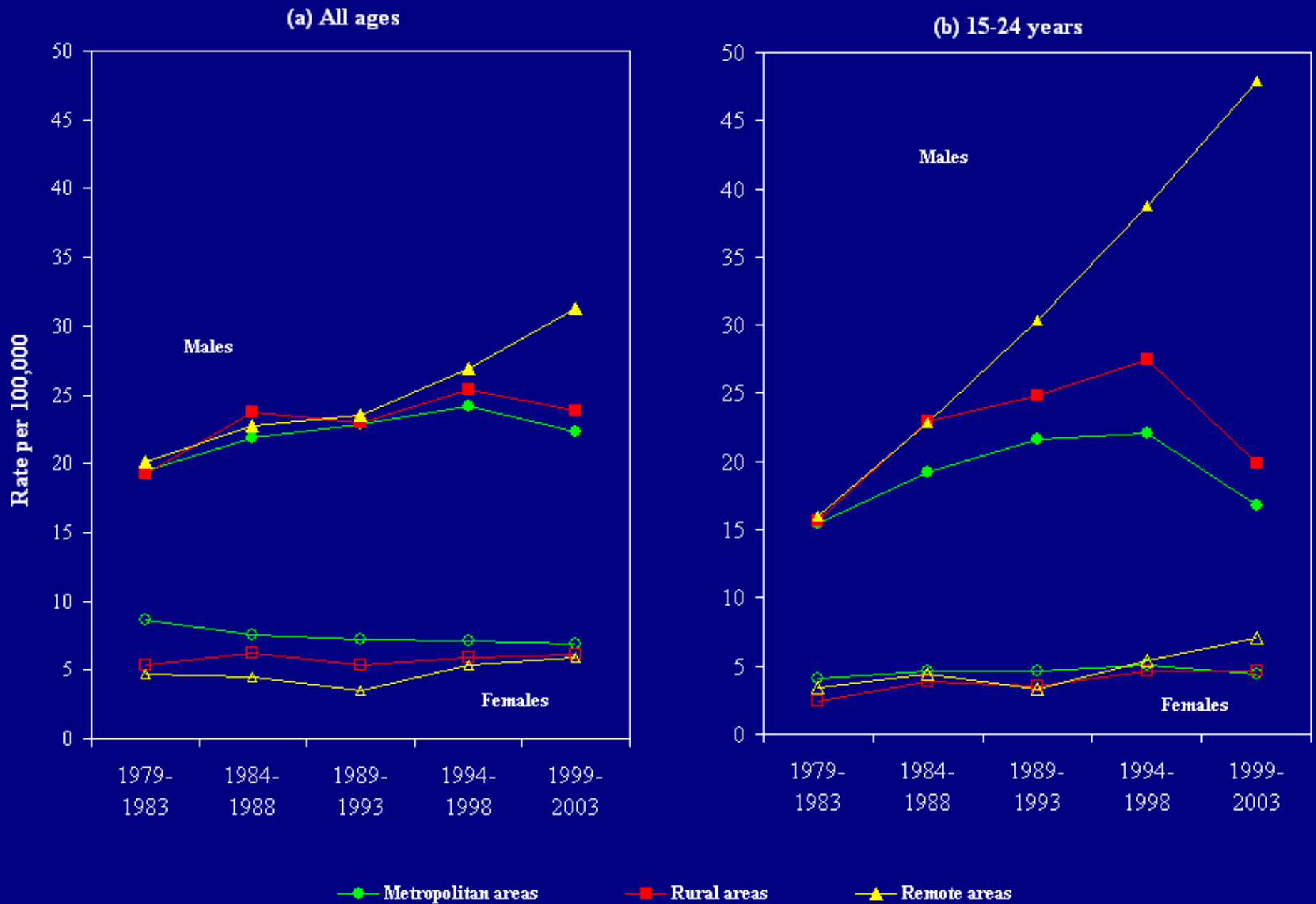


● Low SES

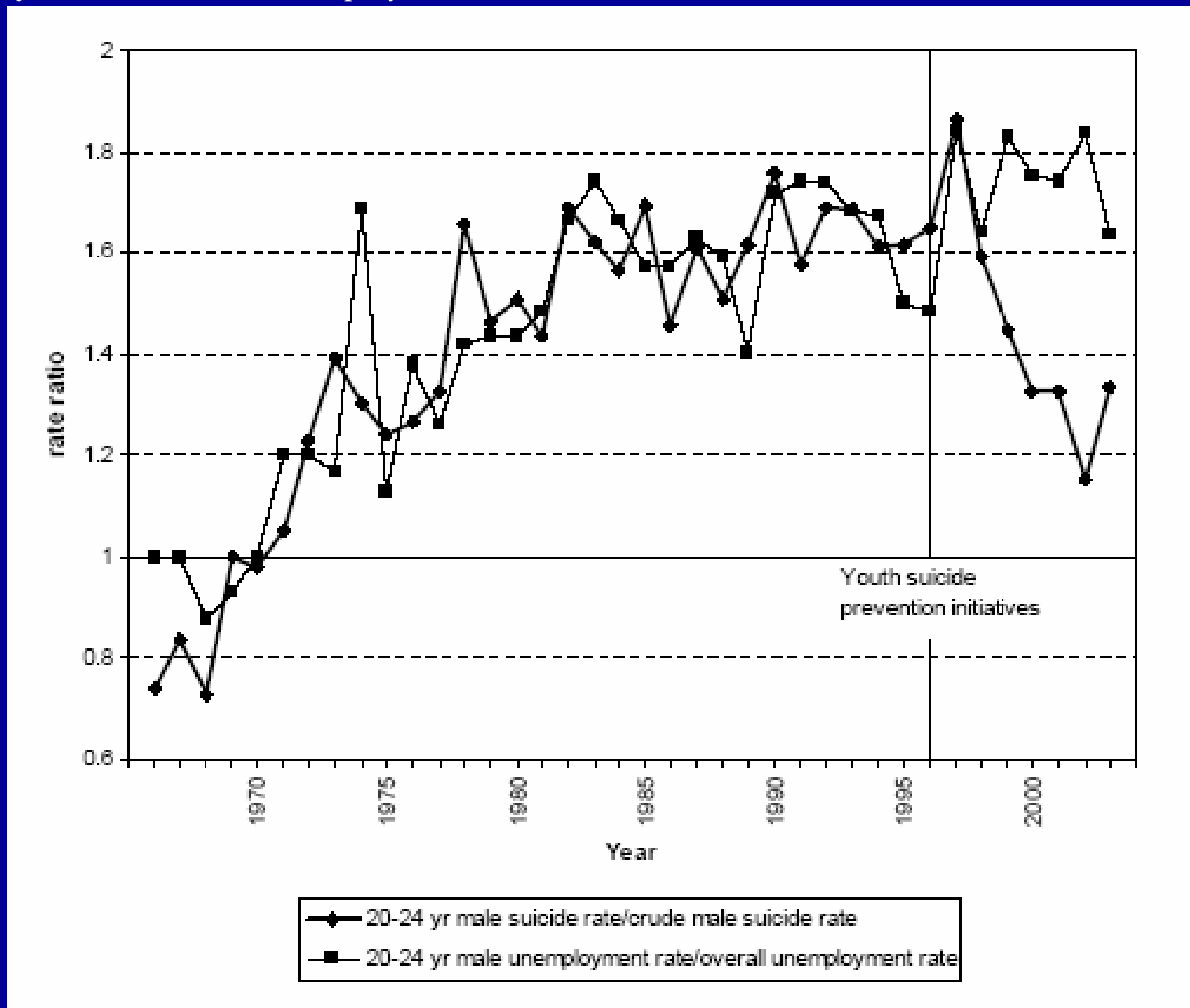
■ Middle SES

▲ High SES

Australian suicide rates by urban-rural residence, 1979-2003 (rate per 100,000)



Ratios of 20-24 year male suicide rate to total crude male suicide rate and of 20-24 year male unemployment rate to total unemployment rate, 1966-2003, Australia



Implications and explanations

- Why a decline in young male suicide, and why a decline in some groups but not others?
 - Overall gains in economic prosperity in 1990s differentially distributed across social strata
 - NYSPS, and NSPS, was successful in reducing suicide in young males in some groups but not others
 - Reduced exposure to proximate psychiatric and psychological risk factors in higher SES and metro areas, but not other areas
 - Standard progression of an “epidemic”. i.e. a sharp increase in incidence, followed by a decline
 - It’s all artefact: suicide under-enumerated in the most recent period (?)

1. Economic prosperity

- Overall gains in economic prosperity in 1990s differentially distributed across social strata
- Decreased unemployment, wage gains, improved access to education and training
 - Only affected those in middle and upper SES groups. No improvement in low SES group
 - Only affected metropolitan and regional centres. No improvement in remote areas
- Differential effects on ‘distal’ antecedents to suicide
- Evident in widening income inequality in Australia after 1994 (Saunders, 2003)
 - Income in the highest earning quintile increased 9-fold compared to lowest earning quintile (\$111 per week increase compared to \$13 week increase)

2. NYSPS, NSPS

- Suicide prevention strategy was successful, but only in some geographic areas, and only for some methods
- More intensive and better funded in higher SES and metro areas?
- People in these areas more receptive to preventive messages and interventions because of education, social position and connections, financial resources, and access to social/health services
- Primary, secondary, and tertiary prevention initiatives implemented differentially by area, dependent on local area policies, resources and commitment

What was this national strategy?

- ‘Population health’ approach to suicide
 - Universal (distal and proximate factors in whole populations)
 - Selective (sub-groups of population with particular pre-disposing risk factors)
 - Indicated programs (individuals identified in clinical contexts or screening programs)
- 20 main initiatives, ≈\$10 million p.a.

What was this national strategy?

- 156 separate projects in all states and territories
 - Mental health promotion, community capacity building
 - Media education and training programs
 - GP professional development
 - Activities for suicide bereavement (postvention)
 - Development of suicide specific policy frameworks (e.g. Family Court of Australia, Juvenile Justice; Health service protocols for suicide attempts)
 - Definition of suicide research and evaluation priorities

Did they say it worked?

- Evaluations restricted to funded programs only (not other social, economic dimensions)
- Focussed on process indicators (rather than reductions in suicide)
 - Partly due to short period of funding of projects, and partly short period of follow-up (only 3-5 years)
- Unclear what impact the strategy had (from these evaluations)

3. Reduced exposure to proximate risk factors

- Related to NSPS
- Reduced exposure to proximate psychiatric and psychological antecedents reduced suicide
- Mental disorder (esp. depression) a well-known risk factor
- Recent studies suggesting increased antidepressant consumption in the Australian population associated with decreased suicide (although mainly in older age groups)
- But, a bit hard to tell with available data

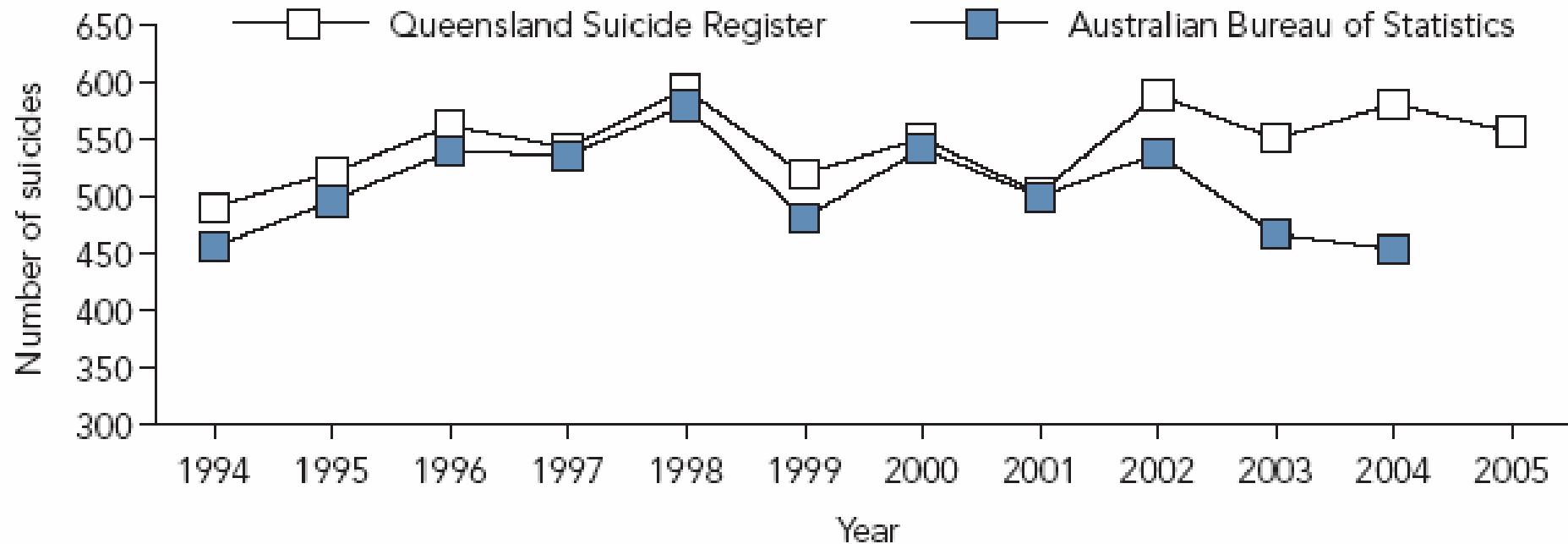
4. Progression of an epidemic

- Standard progression of an ‘epidemic’?
- Decrease may reflect an exhaustion of those individuals susceptible to commit suicide (like in infectious diseases)
- Antecedents that increase susceptibility to suicide (e.g. mental disorder) may be more prevalent in low SES groups and remote areas
- In higher SES groups decrease may reflect an adaptation to social and cultural change resulting from extended period of economic growth

5. It's all artefact

- Decline is due to the under-enumeration of suicide by the ABS
- Decline in suicide due to the increased number of 'open-cases' since 2001 (AISRAP, 2007; De Leo, 2007)
 - Either from cases still under investigation (i.e. a backlog) or given an open verdict by Coroners
- The number of 'open cases' defined as suicides by AISRAP in QLD alone is enough to reverse the national trend (De Leo, 2007).
 - Based on a 'beyond reasonable doubt' decision

Number of suicides in Queensland according to the Australian Bureau of Statistics and the Queensland Suicide Register (QSR)



QSR data were provided by the Office of the State Coroner, the National Coroners Information System and the John Tonge Centre. "Possible" suicides are not included. Data for 2005 are an estimate. ◆

2004 = 580 (QSR) not, 453 (ABS)

Source: De Leo, D. (2007). Suicide mortality data need revision.
MJA, 186(3): 157-158

A long bow?

- Decline in young male suicide occurred prior to 2001, when open-cases were <5% of suicide cases
- Decline predominantly due to hanging
 - Less likely to be an open verdict?
- Decline is different by sex, age, and geographic area
 - Based on (previously validated) sociologically plausible associations
 - Under-enumeration would likely be non-differential (some evidence of this in age-specific comparisons, but no analyses of other key demographic factors)
- If a backlog of cases, then time (and \$\$) is the answer...

Conclusion

- Marked decline in young male suicide (20-34 years) since 1997-98, to levels not seen since the early 1980s
- Decline predominantly due to decreases in hanging
- Decline during this period is particular to Australia
- Unclear what caused this decline, however there are suggestive patterns associated with prevention activity, unemployment, and geographic area that need further investigation
- Unlikely to be an artefactual decline, based on evidence of under-enumeration presented thus far

Thank you