



Who reports greater lifestyle risk behaviours? A closer look at sociodemographic differences among Australian adolescents

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Background

- Poor diet, alcohol use and tobacco smoking – known chronic disease risk behaviours, with emerging evidence for e-cigarette use.
- Disparities in chronic conditions by socioeconomic status (SES) and geographical location.
- Generally, disadvantaged adolescents (low SES and/or regional) more likely to report poor diet, alcohol use and tobacco smoking....with mixed findings for vaping.
- Adolescence is a critical period for prevention – onset of these chronic disease risk behaviours typically occurs.
- Research gaps:
 - Assessing behaviours individually, not collectively
 - Limited adjustment for gender and psychological distress
 - Not considering the combined effect of SES and geographical disadvantage



Current study

- To examine the prevalence of dietary intake (sugar-sweetened beverages (SSBs); discretionary foods; fruit; vegetables), and alcohol (standard drink; binge drinking), tobacco, and e-cigarette use, across adolescents of diverse socioeconomic status (SES) and geographical locations in Australia.



Methods: Data Source

Cross-sectional data:

- Part of school-based cRCT, *Health4Life* conducted in 71 schools
- Using 36-month follow-up data collected in 2022

Participants:

- 4445 adolescents (Mage = 15.7 years, SD = 0.6; 47.0% female-identifying)
- School types: 51% Independent, 30% Government, 19% Catholic
- Location: 91% Major cities, 9% Regional areas.
- Consent: School-level and active student consent

Intervention:

- Delivered during Year 7 health classes (2019) via 6 interactive cartoon modules.
- Control school received standard health education.



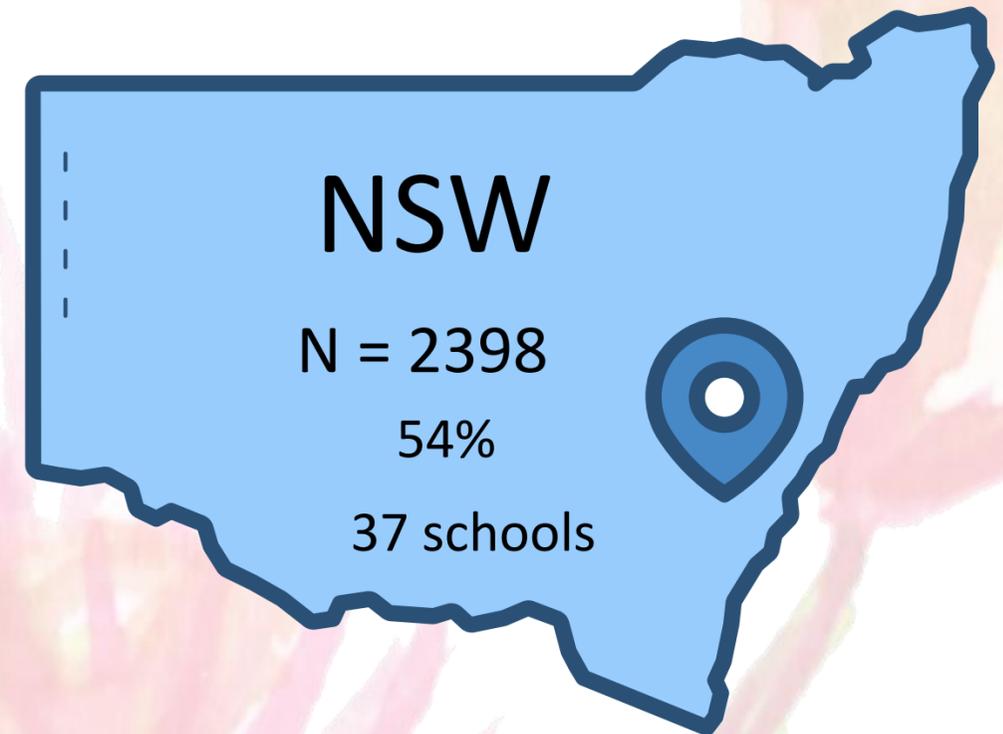
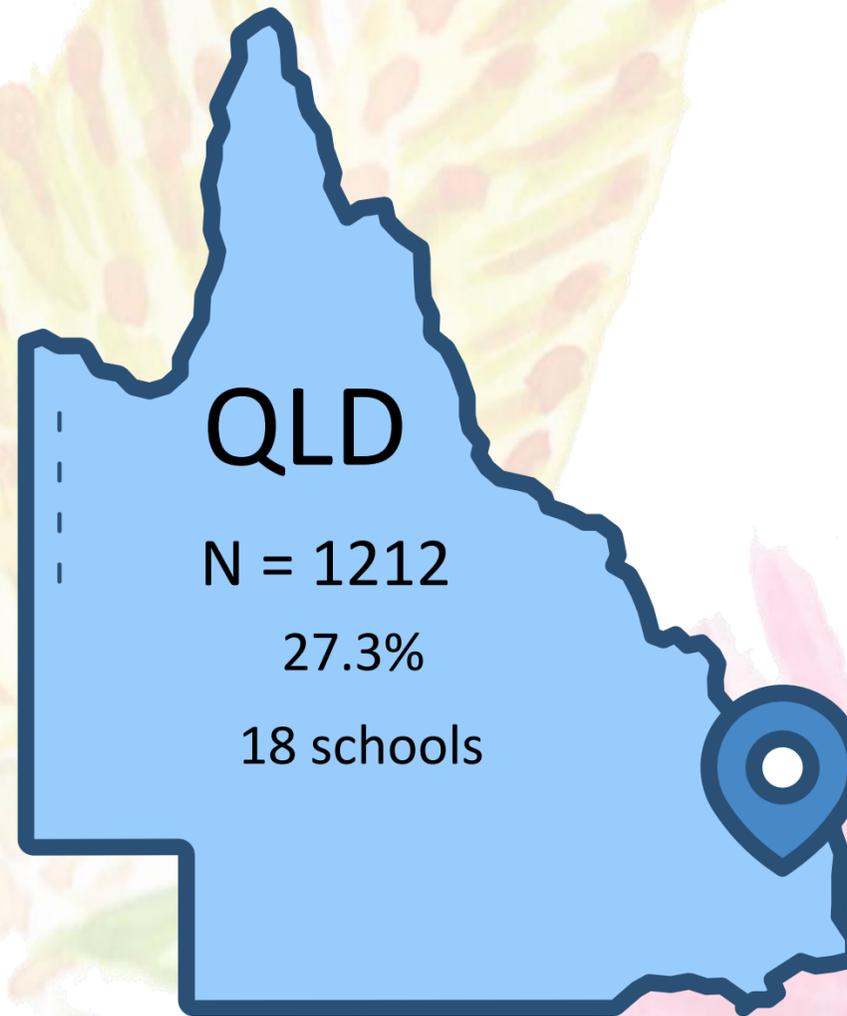
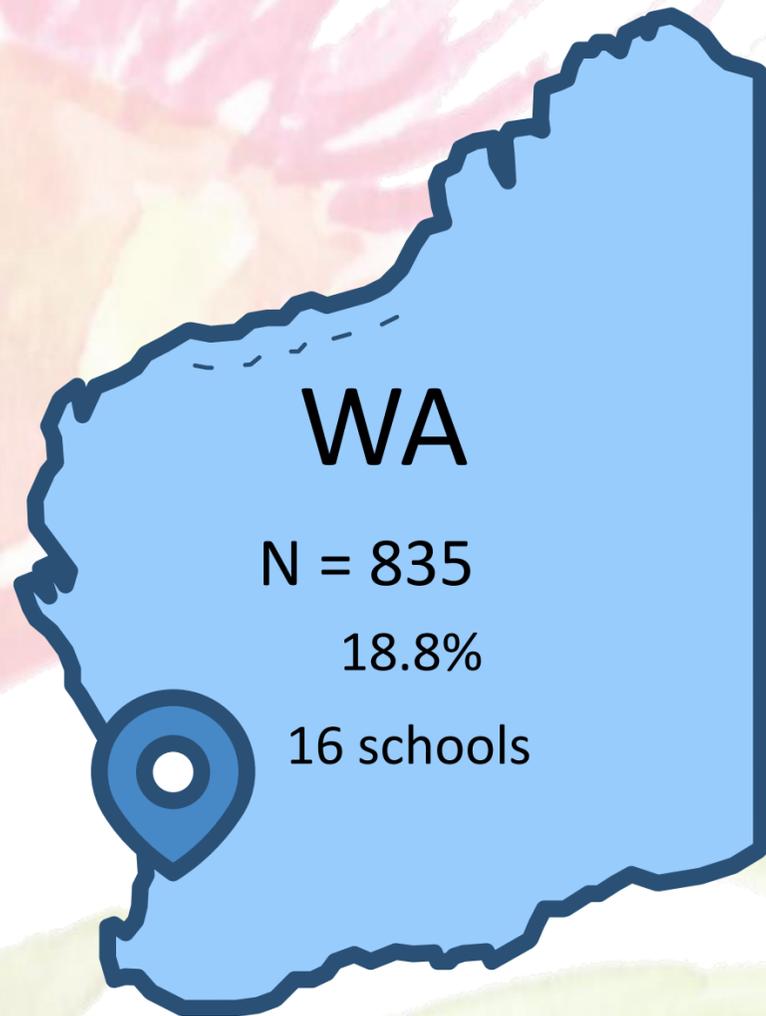
Methods: Measures & Analysis

Measures:

- Demographics:
 - SES (Family Affluence Scale III), geographic location, gender, psychological distress (Kessler K6)
- 8 risk behaviours assessed:
 - Diet: SSBs, discretionary foods, fruit & vegetable intake (SPANS survey)
 - Alcohol: standard drink & binge drinking in past 6-months
 - Tobacco: any use in past 6-months
 - Vaping: Ever used + use in past 6-months

Statistical analysis:

- Descriptive statistics for sample characteristics and prevalence estimates of each chronic disease risk behaviour across three groupings.
- Binary logistic regression (in R) to compare PRs for:
 - Low SES vs. Mid-to-High SES
 - Regional vs. Major City
 - Disadvantaged (low SES and/or regional) vs. more advantaged
- Adjusted for: gender, psychological distress, intervention status, school clustering.
- Significance: 95% CI not crossing 1.
- Missing data: complete case analysis; missing ranged from 4-5.4%.



Low SES (14%; n = 571)

Mid-to-High SES (86%; n = 3518)

Major cities (91%; n = 4046)

Regional (9%; n = 399)

Results

Model 1: SES (Low SES Versus Mid-To-High SES) Comparison

- Compared to mid-to-high SES backgrounds, low SES reported lower:
 - Discretionary food consumption ↓ 13% (PR = 0.87; 95% CI: 0.77-0.99)
 - Standard drink consumption ↓ 22% (PR = 0.78; 95% CI: 0.65-0.93)
 - Binge drinking ↓ 32% (PR = 0.68; 95% CI: 0.50-0.92)
- No significant differences in: SSBs, fruit & vegetable intake, tobacco smoking, and vaping.

Results

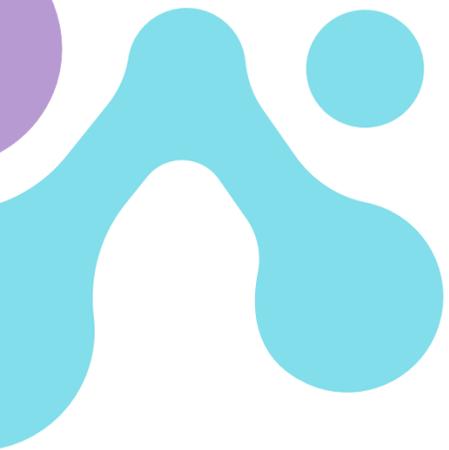
Model 2: Geographical Location (Regional Versus Major City) Comparison

- Compared to major cities, regional reported higher:
 - **Standard drink consumption** ↑ 41% (PR = 1.41; 95% CI: 1.00-1.97)
 - **Binge drinking** ↑ 77% (PR = 1.77; 95% CI: 1.07-2.93)
 - **Tobacco smoking** ↑ two-fold (PR = 2.06; 95% CI: 1.18-3.60)
- No significant differences in: SSBs, fruit & vegetable intake, vaping, and discretionary foods.

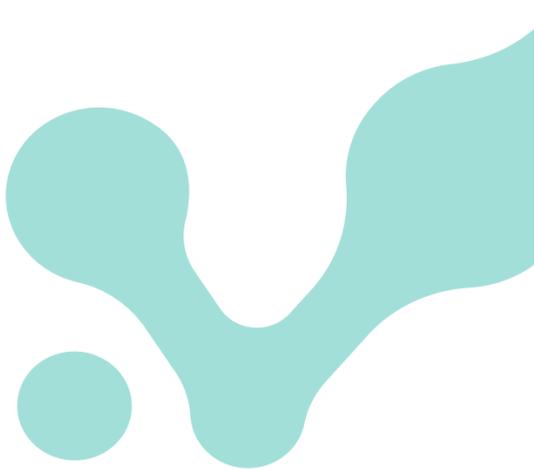
Results

Model 3: Disadvantaged (Low SES and/or Regionally Located) Compared to More Advantaged (Mid-To-High SES and/or Major City)

- Compared to more advantaged adolescents:
 - Discretionary food consumption ↓ 16% (PR = 0.84; 95% CI: 0.76-0.94)
- No significant differences in other behaviours.



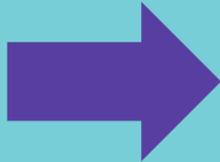
So what?



- Regarding discretionary food consumption – disadvantaged adolescents remain key priority, but value in complementary strategies to support more advantaged adolescents.
- Alcohol, tobacco smoking, and vaping behaviours may require tailoring to SES and geographical location separately.
- Policy and prevention efforts should be holistic:
 - Early intervention and health promotion
 - Stronger partnerships with disadvantaged communities
 - Equitable coverage essential (e.g. via digital for scalability)



THANK YOU

**Read the recently
published findings here:** 

Egan L, O'Dean S, Gardner LA, Newton NC, Champion KE. Who Reports Greater Chronic Disease Risk Behaviours? A Closer Look at Sociodemographic Differences Among Australian Adolescents: A Cross-Sectional Analysis. Health Promotion Journal of Australia. 2025; 36(4):e70079.



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Discussion/Questions

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