

# Adverse childhood experiences, resilience and mental health in Australian men

Supplementary materials to Snapshot series #4 | June 2026

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## Acronyms

ACEs	Adverse childhood experiences
aHR	Adjusted hazard ratio
aRR	Adjusted risk ratio
AUDIT	Alcohol Use Disorders Identification Test
CALD	Culturally and linguistically diverse
CI	Confidence interval
GAD-7	Generalised Anxiety Disorder7 scale
GSEM	Generalised structural equation model
IRSD	Index of Relative Socio-Economic Disadvantage
LCA	Latent class analysis
MBS	Medicare Benefits Schedule
MESC	Main English-speaking countries
MDRS-7	Male Depression Risk Scale short form
MESC	Main English-speaking countries
MOS	Medical Outcomes Study
PBS	Pharmaceutical Benefits Scheme
PHQ-9	Patient Health Questionnaire-9
SEIFA	Socio-Economic Indexes for Areas
SES	Socio-economic status

# Methods

## Study cohort

This analysis used data from adult men aged 18 years and older who participated in Wave 5 (2024–25) of *Ten to Men: The Australian Longitudinal Study on Male Health*. *Ten to Men* is a national longitudinal cohort study designed to examine men's health, wellbeing and social determinants across the life course in Australia (Pirkis et al., 2016; Pirkis et al., 2017; Volpe et al., 2025). Wave 5 collected detailed information on mental health, psychosocial factors and health-related behaviours. *Ten to Men* data are also linked with external datasets, including Medicare Benefits Schedule (MBS), Pharmaceutical Benefits Scheme (PBS), Centrelink and National Death Index data (Volpe et al., 2025).

For analyses of mental health service usage, survey data were linked to MBS and PBS records for participants who consented to data linkage.

## Measures

We examined mental health outcomes, adverse childhood experiences (ACEs), resilience-enhancing factors, priority population characteristics and demographic and socio-economic covariates. Variable definitions and coding decisions are described below.

## Outcomes

### 1. Mental health conditions

#### Symptom-based outcomes (Wave 5)

Current mental health symptoms were assessed using validated self-report instruments including the Patient Health Questionnaire-9 (PHQ-9), the Generalized Anxiety Disorder-7 (GAD-7), and the Male Depression Risk Scale short form (MDRS-7) (Herreen et al., 2022; Kroenke et al., 2001; Spitzer et al., 2006;). Four binary symptom-based outcomes were derived:

##### **Moderate to severe depressive symptoms (PHQ-9)**

Depressive symptoms were measured using PHQ-9, a 9-item self-report measure aligned with DSM-IV (Diagnostic and Statistical Manual of Mental Disorders) criteria for depression that assesses symptoms experienced over the past 2 weeks (Kroenke et al., 2001). Each item is rated on a 4-point scale (not at all, several days, more than half the days, nearly every day). Moderate to severe symptoms were defined as PHQ-9  $\geq 10$ .

Participants were asked the following questions, using the standard PHQ-9 item wording with each item rated on a 4-point scale (not at all, several days, more than half the days, nearly every day). Over the last 2 weeks, how often have you been bothered by any of the following problems? Mark one answer in each row.

- a. Feeling down, depressed, irritable or hopeless
- b. Little interest or pleasure in doing things
- c. Trouble falling asleep, staying asleep or sleeping too much
- d. Poor appetite, weight loss or overeating
- e. Feeling tired or having little energy
- f. Feeling bad about yourself – or feeling that you are a failure or that you have let yourself or your family down
- g. Trouble concentrating on things, such as reading the newspaper or watching television
- h. Moving or speaking so slowly that other people could have noticed / Or the opposite – being so fidgety or restless that you were moving around a lot more than usual
- i. Thoughts that you would be better off dead or of hurting yourself in some way

For Aboriginal and/or Torres Strait Islander men, depressive symptoms were assessed using the culturally adapted PHQ-9 (Hackett et al., 2019). The adapted instrument assesses depressive symptoms experienced over the past 2 weeks, with each item rated on a 4-point scale (not at all, several days, more than half the days, nearly every day).

Participants were asked the following questions, using the culturally adapted PHQ-9 item wording:

In the last two weeks, how often have you been feeling the following:

- a. Have you been feeling slack, not wanting to do anything?
- b. Have you been feeling unhappy, depressed, really no good, that your spirit was sad?
- c. Have you found it hard to sleep at night or had other problems with sleeping?
- d. Have you felt tired or weak, that you have no energy? {fwdaph904}
- e. Have you not felt like eating much even when there was food around?
- f. Have you been eating too much food? {fwdaph95b}
- g. Have you been feeling bad about yourself, that you are useless, no good, that you have let your family down? {fwdaph906}
- h. Have you felt like you can't think straight or clearly, it's hard to learn new things or concentrate?
- i. Have you been talking slowly or moving around really slow?
- j. Have you felt that you can't sit still; you keep moving around too much?
- k. Have you been thinking about hurting yourself or killing yourself?

#### **Moderate to severe anxiety symptoms (GAD-7)**

Anxiety symptoms were measured using GAD-7, a 7-item self-report measure assessing anxiety symptoms over the past 2 weeks. Each item is rated on a 4-point scale (not at all, several days, more than half the days, nearly every day). Moderate to severe symptoms were defined as GAD-7  $\geq 10$  (Spitzer et al., 2006).

Participants were asked the following questions, using the standard GAD-7 item wording: Over the last 2 weeks, how often have you been bothered by the following problems? Mark one answer in each row.

- a. Feeling nervous, anxious or on edge
- b. Not being able to stop or control worrying
- c. Worrying too much about different things
- d. Trouble relaxing
- e. Being so restless that it is hard to sit still
- f. Becoming easily annoyed or irritable
- g. Feeling afraid as if something awful might happen

#### **Moderate to extremely severe male-type depressive symptoms**

Male-type depressive symptoms were measured using the Male Depression Risk Scale (MDRS-7), a 7-item self-report measure designed to capture externalised/male-type depressive symptoms such as anger, risk-taking/substance-related items (Herreen et al., 2022). Moderate to severe symptoms were defined as MDRS-7 score  $\geq 6$ . Each item is rated on a 5-point scale (none of the time, a little of the time, some of the time, most of the time, all of the time).

Participants were asked the following questions, using the standard MDRS-7 item wording:

Please think back over the last month and respond to each item considering how often it applied to you. Mark one answer in each row.

1. none of the time
  2. A little of the time
  3. Some of the time
  4. Most of the time
  5. All of the time
- a. I bottled up my negative feelings
  - b. I had unexplained aches and pains
  - c. I needed alcohol to help me unwind
  - d. I overreacted to situations with aggressive behaviour
  - e. I stopped caring about the consequences of my actions
  - f. It was difficult to manage my anger
  - g. Using drugs provided temporary relief

### Any mental health symptoms

The variable 'Any mental health symptoms' was coded as 'yes' if participants met the threshold for PHQ-9  $\geq 10$ , GAD-7  $\geq 10$  and/or MDRS-7  $\geq 6$ .

## 2. Self-reported mental health diagnoses during adulthood

Participants reported whether they had ever been diagnosed with a mental health condition. Four diagnosis-based outcomes were created:

- Diagnosed depression
- Diagnosed anxiety
- Other diagnosed mental health condition
- Any diagnosed mental health condition.

Diagnoses were coded as 'yes' if participants reported receiving the diagnosis at age 18 years or older. Participants who reported a diagnosis as occurring before age 18 years were excluded. Participants who reported no lifetime diagnosis were coded as 'no'. For participants diagnosed during adulthood, the date of diagnosis was used in analyses. Information from Wave 4 was used to supplement diagnosis timing where dates were missing in Wave 5.

**Table S1: Mental health conditions included in the analysis**

Variable	Survey question
Depression An anxiety disorder Any other mental health condition	Has a doctor or other health professional ever told you that you had any of the following health conditions? Possible responses 1. No 2. Yes 3. Don't know 4. Prefer not to say
Depression	If answered 'Yes' to Depression a. Which type of depression were you told you had? Select all that apply. b. Cyclothymic disorder: Diagnosis date (if answer 'Yes') c. Dysthymic disorder: Diagnosis date (if answer 'Yes') d. Major depression/major depressive disorder: Diagnosis date (if answer 'Yes') e. Melancholia: Diagnosis date (if answer 'Yes') f. Postnatal depression (PND): Diagnosis date (if answer 'Yes') g. Psychotic depression: Diagnosis date (if answer 'Yes') h. Seasonal affective disorder (SAD): Diagnosis date (if answer 'Yes') i. Other type of depression: Diagnosis date (if answer 'Yes')
Anxiety disorder	If answered 'Yes' to Anxiety disorder a. Which type of anxiety disorder were you told you had? Select all that apply. b. Generalised anxiety disorder (GAD): Diagnosis date (if answer 'Yes') c. Obsessive compulsive disorder (OCD): Diagnosis date (if answer 'Yes') d. Panic disorder: Diagnosis date (if answer 'Yes') e. Post-traumatic stress disorder (PTSD): Diagnosis date (if answer 'Yes') f. Social anxiety disorder: Diagnosis date (if answer 'Yes') g. Other anxiety disorder: Diagnosis date (if answer 'Yes') h. Not sure which type: Diagnosis date (if answer 'Yes')
Any other mental health condition	If answered 'Yes' to Any other mental health condition Which type of mental health condition were you told you had? Select all that apply. a. Bipolar disorder: Diagnosis date (if answer 'Yes') b. Personality disorder: Diagnosis date (if answer 'Yes') c. Schizophrenia: Diagnosis date (if answer 'Yes') d. Other mental health condition: Diagnosis date (if answer 'Yes') e. Not sure which type: Diagnosis date (if answer 'Yes')
Any mental health conditions	Diagnosed with at least one of the above mental health conditions

### 3. Medicare-recorded mental health services or prescriptions

Mental health service access was measured using linked Medicare data (MBS or PBS) for participants who consented to linkage. Participants were coded as having used mental health services if they had  $\geq 1$  MBS claim with an item number included in the Better Access initiative (Department of Health, Disability and Ageing, 2026), and/or  $\geq 1$  PBS supply for a medicine in Anatomical Therapeutic Chemical (ATC) groups (Australian Institute of Health and Welfare [AIHW], 2025).

Mental health services included:

- preparation and review of mental health treatment plans
- preparation and review of psychiatrist assessment and management plans
- initial patient consultations
- mental health treatment consultations
- psychological therapy health services
- focused psychological strategies services (individual and group)
- group psychological therapy services
- three-step mental health process services.

PBS mental health prescriptions were identified using ATC codes and classified in 5 medication groups (AIHW, 2025):

- antidepressants
- antipsychotics
- anxiolytics
- hypnotics and sedatives
- psychostimulants.

For PBS records, supply/dispensing dates were used to indicate that medication was actually received.

### ACE exposure (main predictor)

Childhood adversity was measured using a 10-item Adverse Childhood Experiences questionnaire (ACE 10), covering neglect, abuse and household dysfunction (Centers for Disease Control and Prevention [CDC], 2026; Felitti et al., 1998). Specifically, the questionnaire asked whether participants had ever experienced the following:

- Did you feel that you didn't have enough to eat, had to wear dirty clothes or had no one to protect or take care of you?
- Did you lose a parent through divorce, abandonment, death or other reason?
- Did you live with anyone who was depressed, mentally ill or attempted suicide?
- Did you live with anyone who had a problem with drinking or using drugs, including prescription drugs?
- Did your parents or adults in your home ever hit, punch, beat or threaten to harm each other?
- Did you live with anyone who went to jail or prison?
- Did a parent or adult in your home ever swear at you, insult you or put you down?
- Did a parent or adult in your home ever hit, beat, kick or physically hurt you in any way?
- Did you feel that no one in your family loved you or thought you were special?
- Did you experience unwanted sexual contact (such as fondling or oral/anal/vaginal/intercourse/penetration)?

Given the high co-occurrence of ACEs, latent class analysis (LCA) was used to identify distinct profiles of exposure. Three mutually exclusive ACE classes/profiles were identified (see Analysis section for details). Each participant was assigned to the class to which they had the highest posterior probability.

## Effect modifiers/moderators

### 1. Priority population groups

An effect modifier (also called a moderator) is a variable that changes the strength or direction of the association between ACE exposure and mental health outcomes (Porta, 2008; Rothman et al., 2008). Effect modification occurs when the association between ACEs and mental health is weaker or stronger for different categories of the moderator.

In this report, moderators are priority population groups that may experience structural disadvantage or differential access to supports (see Figure 1). We included 7 of the 9 priority population groups identified in the National Men's Health Strategy (Department of Health, 2019).

- men from culturally and linguistically diverse (CALD) backgrounds, measured using country of birth and language spoken at home
- men living in regional or remote areas
- men with disability
- members of the LGBTQA+ community (see call-out box below)
- Aboriginal and/or Torres Strait Islander men
- men living in areas of high socio-economic disadvantage (area-level proxy)
- men who had served in the Australian Defence Force.

Membership of the LGBTQA+ community was measured using self-reported sexual orientation and gender identity.

Gender identity was assessed by asking participants, '*How do you describe your gender?*', with response options *man or male; woman or female; nonbinary; and I use a different term (please specify)*. A binary gender identity variable was created, grouping participants who identified as man or male versus those who identified as woman or female, non-binary or who used a different term.

Sexual orientation was assessed by asking participants, '*How do you describe your sexual orientation?*', with response options *straight (heterosexual); bisexual; gay or lesbian; asexual; pansexual; queer; and I use a different term (please specify)*. Based on data availability, sexual orientation was grouped in 4 categories: straight (heterosexual); bisexual; gay or lesbian; and other (including asexual, pansexual, queer and different terms).

A combined sexual orientation and/or gender identity variable was also created, comparing men who identified as male and heterosexual (referred to as 'heterosexual male' in the tables below) with those who were non-heterosexual and/or did not identify as male ('LGBTQA+' in tables). Men identifying as male and heterosexual were defined as those who selected *man or male* for gender identity and *straight (heterosexual)* for sexual orientation.

Of the remaining 2 priority population groups, men in the criminal justice system could not be considered due to data unavailability. Social isolation – measured using loneliness and social support – was conceptualised and analysed as a mediator rather than as a moderator, as it was hypothesised to represent a modifiable resilience-enhancing factor on the causal pathway between ACE exposure and adult mental health outcomes.

## Intersecting factors

Social positions and identities can combine to shape experiences and outcomes in ways that are not captured by examining each characteristic in isolation (Chaplin et al., 2019). In this study, intersectionality was operationalised by treating specific combinations of priority population characteristics as moderators, examining whether the association between ACE exposure and mental health outcomes differed for men experiencing multiple, intersecting characteristics (e.g. men who were both from a CALD background and had disability), where data permitted.

## Mediators (resilience-enhancing factors)

A mediator is an intermediate variable on the causal pathway between exposure and outcome through which part of the total effect operates (VanderWeele, 2009). In this study, mediators were conceptualised as resilience-enhancing factors that are influenced by ACE exposure and, in turn, influence adult mental health outcomes (Figure 1).

## Social support

Social support provides a psychosocial buffer that can reduce the mental-health impact of ACEs. Social support was measured using the Medical Outcomes Study (MOS) Emotional/Informational Support subscale (8 items; 5 response options from none of the time to all of the time). These items are commonly scored by calculating the mean across the 8 items (Sherbourne & Stewart, 1991). For this snapshot, social support was dichotomised as strong social support (yes/no), defined as reporting support *most or all of the time, on average*, across the following items:

- someone you can count on to listen when you need to talk
- someone to give you good advice about a crisis

- someone to give you information to help you understand a situation
- someone to confide in or talk to about yourself or your problems
- someone whose advice you really value
- someone to share your most private worries and fears with
- someone to turn to for suggestions about dealing with a personal problem
- someone who understands your problems.

## Social connectedness (not feeling lonely)

Social connectedness is associated with stronger coping resources and reduced social isolation, which may buffer the adverse mental health impacts of childhood adversity (Holt-Lunstad et al., 2015; Hughes et al., 2004).

Loneliness was assessed using the validated 3-item scale, capturing feelings of lacking companionship, feeling left out and feeling isolated from others. The measure was sourced from a Short Scale for Measuring Loneliness (Hughes et al., 2004). Participants were asked: 'Currently, how often did you feel that you lacked companionship, felt left out or felt isolated from others?' Response options were originally recorded using a 5-category frequency scale (never, rarely, sometimes, often, and always) and were recoded to 3 categories (never/rarely, sometimes, often/always) to align with established practice in the literature. Responses were then averaged across items (range 1-3) and dichotomised to classify participants as lonely (mean  $\geq 1.5$ ) or not lonely (mean  $< 1.5$ ).

## No substance use

Absence of illicit drug use may reduce behavioural and psychosocial pathways through which childhood adversity contributes to poorer adult mental health outcomes (Dube et al., 2003; Felitti et al., 1998).

Substance use was assessed with the self-reported use of 6 illicit substances in the past 12 months (marijuana, heroin, other opiates, amphetamines, ecstasy and cocaine). A binary indicator was created to classify participants as reporting any illicit drug use or no illicit drug use.

## Low-risk alcohol use

Low-risk alcohol use may limit alcohol-related behaviours that exacerbate the mental health consequences of childhood adversity, including emotional dysregulation and co-occurring substance-related harms (Babor et al., 2001; Dube et al., 2006).

Alcohol risk was measured using the Alcohol Use Disorders Identification Test (AUDIT), a 10-item WHO screening tool (score range 0-40). Scores were classified as low-risk (0-7), hazardous (8-15), harmful (16-19) or probable dependence (20+) (Babor et al., 2001).

## Confounders

Confounders were defined as factors that may influence both ACE exposure and adult mental health outcomes. All multivariable models adjusted for age, education, employment status, occupation, household income, financial stress and living arrangements.

**Table S2: Confounders/covariates included in the analysis**

Variables	Questions asked in the surveys
Age at the time of the survey 1. 18-29 years 2. 30-39 years 3. 40-49 years 4. 50+ years	Age at the time of the survey
Education 1. Less than year 12 2. Up to some qualification 3. Undergraduate or more	What is the level of the highest qualification that you have completed? 1. Postgraduate degree 2. Graduate diploma/Graduate certificate 3. Bachelor degree (with or without honours) 4. Advanced diploma/diploma 5. Certificate III/IV (including trade certificate) 6. Certificate I/II 7. Other non-school qualification 8. Year 12 or equivalent 9. Year 11 or equivalent 10. Year 10 or equivalent 11. Year 9 or equivalent 12. Year 8 or below
Employment 1. Unemployed/not looking for work 2. Employed self/casual/fixed term 3. Employed permanent or ongoing	Of the following categories, which best describes your current employment status? 1. Full-time employee 2. Part-time employee 3. Self-employed 4. Employed - unpaid worker in family business 5. Unemployed - seeking employment 6. Not employed - not seeking employment (e.g. due to injury or disability, retired, primary caregiver) 7. What is your form of employment in your main job? 8. Permanent or ongoing 9. Casual or temporary 10. Fixed-term contract (employed for a specific period of time) 11. Self-employed - not employing others 12. Self-employed - also employing others
Occupation 1. Machinery operators to trades workers 2. Professionals or managers	What is your current occupation in your main job?
Household income 1. <\$80,000 2. \$80,000-\$124,999 3. \$125,000+	Which of these categories contains the combined income in your household, before tax and other deductions are taken out, during the last financial year 1. \$3,840 or more per week (\$200,000 or more per year) 2. \$2,880-\$3,839 per week (\$150,000-\$199,999 per year) 3. \$2,400-\$2,879 per week (\$125,000-\$149,999 per year) 4. \$1,920-\$2,399 per week (\$100,000-\$124,999 per year) 5. \$1,530-\$1,919 per week (\$80,000-\$99,999 per year) 6. \$1,150-\$1,529 per week (\$60,000-\$79,999 per year) 7. \$960-\$1,149 per week (\$50,000-\$59,999 per year) 8. \$770-\$959 per week (\$40,000-\$49,999 per year) 9. \$580-\$769 per week (\$30,000-\$39,999 per year) 10. \$380-\$579 per week (\$20,000-\$29,999 per year) 11. \$190-\$379 per week (\$10,000-\$19,999 per year) 12. \$1-\$189 per week (\$1-\$9,999 per year) 13. Nil income 14. Negative income

Variables	Questions asked in the surveys
Financial stress 0 No 1 Yes	Experiencing one or more of the following: <sup>a</sup> a. Could not fill or collect a prescription medicine b. Could not get a medical test, treatment, or follow-up that was recommended by a doctor c. Could not go to the doctor when you needed to d. Could not afford to heat your home e. Could not pay electricity, gas or telephone bills on time f. Could not pay the mortgage or rent on time g. Asked for financial help from friends or family
Live alone 0 No 1 Yes	What are your usual living arrangements?

Note: <sup>a</sup> Most of the financial stress items in this report are similar to the Australian Bureau of Statistics (ABS) 2021-22 personal safety survey (ABS, 2023). However, the ABS measures financial stress at a household level and includes a higher number of items compared to *Ten to Men*.

## Analyses

### Selecting the number of ACE classes: Latent class analysis

LCA was conducted using 10 binary indicators of ACEs estimated via a generalised structural equation model (GSEM) with a logit link. Models with 2, 3 and 4 classes were fitted and compared. A 5-class model was also explored but convergence was not achieved and it was therefore not considered further. Model selection considered model fit according to the Bayesian information criterion (BIC), alongside classification quality (entropy and average posterior probabilities), class size and substantive interpretability.

In the 2-class model, overall fit was weaker (BIC = 93,327) but classification quality was highest (entropy = 0.819), reflecting a clear division into a broad low-exposure group and a broad higher-exposure group. However, inspection of class profiles indicated that the higher-exposure class combined men with moderate adversity and those with complex, multidomain adversity, limiting the model's ability to distinguish policy-relevant profiles of exposure.

The 3-class model substantially improved fit (BIC = 91,602) while maintaining good classification quality (entropy = 0.782). Importantly, the 3-class solution produced distinct and interpretable profiles consistent with a gradient from low to high adversity: a large low-exposure class, a moderate class characterised by elevated emotional/physical abuse with household dysfunction, and a smaller high-exposure class marked by multiple adversities across domains.

The 4-class model produced the lowest BIC (BIC = 90,681), indicating improved statistical fit, but classification quality decreased (entropy = 0.747) and the additional class increased complexity. In practice, the extra class tended to subdivide the midrange exposure group without a clearly distinct profile to add interpretive or policy value comparable to the step from 2 to 3 classes.

Final model choice: the 3-class solution was selected because it provided the best balance between (a) improved model fit over the 2-class solution, (b) stronger classification quality than the 4-class solution (higher entropy) and (c) policy-meaningful profiles of ACE exposure that could be carried consistently through subsequent analyses of mental health outcomes and service use.

### Sensitivity analysis

As a sensitivity analysis, we fitted an alternative latent class model in which men reporting no ACEs were grouped separately, and latent class analysis was conducted only among men who reported one or more ACEs. This approach was intended to assess whether additional heterogeneity could be identified among those exposed to adversity. However, the resulting models showed weaker classification quality, with lower entropy and less distinct class separation, limiting interpretability and policy relevance.

## Analyses of prevalence and associations

We estimated prevalence – the proportion of men experiencing each ACE, ACE profile or mental-health outcome – using weighted data. Associations between ACE profiles and mental-health symptom outcomes were examined using modified Poisson regression, with results presented as risk ratios (RRs) and 95% confidence intervals [95% CI]. For diagnosis-based outcomes, we used Cox proportional hazards models to estimate hazard ratios (HRs) for receiving a diagnosed mental-health condition, with follow-up from age 18 until first diagnosis or the survey completion date.

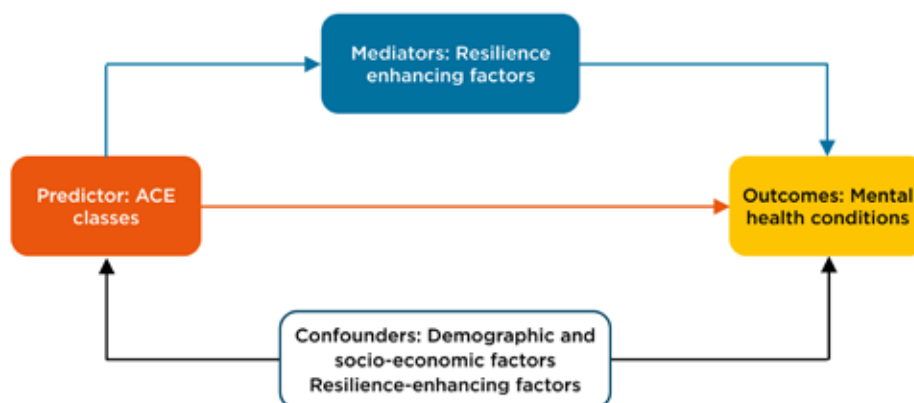
These models were adjusted for demographic and socio-economic factors. We tested whether psychosocial and behavioural factors (social support, social connectedness and substance use, and alcohol risk or a combination) mediated the relationship between ACE exposure and mental-health outcomes. Mediation models were adjusted for demographic and socio-economic covariates. We also tested whether priority population groups moderated the relationship between ACE exposure and mental-health outcomes. For service-access outcomes, we used modified Poisson regression to estimate the likelihood of ever accessing a Medicare-recorded mental-health service from age 18 onwards (see Table S3 for more details).

**Table S3: Summary of analysis techniques by research question**

Research question	Analytic sample	Predictor, mediator, effect modifier	Primary outcome	Primary analysis approach	Notes
<b>RQ1: Prevalence of individual ACE items and distinct patterns</b>					
a. What is the prevalence of ACE in adult men	Adult men aged ≥18 years participating in Wave 5		Frequency and prevalence of each ACE item and ACE cooccurrence	Weighted proportions. Used chi-square test to determine difference between groups in each wave.	Population-representative prevalence estimates overall and stratified by priority population groups
b. What distinct patterns (latent classes) of childhood adversity can be identified among men based on responses to 10 ACE items	Same as above		Distinct ACE profiles/latent classes	Pattern analysis: latent class analysis (LCA)	Model selection informed by Akaike information criterion (AIC), BIC and entropy; participants assigned to most likely class
<b>RQ2: The association of ACEs with mental health</b>					
a. Which distinct patterns/clusters of the 10 ACEs are most strongly associated with adult mental health outcomes?	Same as above	Predictor: ACE latent classes	Symptom-based outcomes (Wave 5): any mental health symptoms; moderate-severe depression (PHQ9); moderate-severe anxiety (GAD7); moderate-extremely severe male-type depression (MDRS7)  Diagnosis-based outcomes (age 18+): depression; anxiety; other mental health condition; any mental health condition	Modified Poisson regression (symptoms); Cox proportional hazards models (diagnoses)	Identify high-risk ACE profiles for screening and prevention; all models adjusted for demographic and socio-economic covariates
b. Mediation effect of psychosocial factor: What proportion of the association between ACE patterns and mental health can be explained by resilience-enhancing/enabling factors?	Same as above	Predictor: ACE latent classes Mediators: resilience-enhancing factors (social support, social connectedness, no substance use, low-risk alcohol use)	Symptom-based mental health outcomes	Mediation analysis	Identify modifiable mediators and compare relative mediation strength
c. Which of the resilience-enhancing factors are most strongly linked to mental health resilience among men with high ACE exposure?	Adult men aged ≥18 years participating in Wave 5 identified as having high ACE exposure (based on LCA)	Predictors: Resilience-enhancing factors	Symptom-based and diagnosis-based mental health outcomes	Same as above	Prioritise intervention targets within the high-risk ACE group

Research question	Analytic sample	Predictor, mediator, effect modifier	Primary outcome	Primary analysis approach	Notes
<b>RQ3: Moderation effect of priority population groups</b>					
a. Do the effects of ACEs on mental health vary by resilience-enhancing factors and priority population groups?	Adult men aged ≥18 years participating in Wave 5	Predictor: ACE latent classes Effect modifier: priority population groups	Same as RQ2	Interaction models (modified Poisson regression and Proportional Hazard Ratio, with interaction terms)	Identify compounded or attenuated risk profiles for policy focus
b. How does intersectionality shape the impact of ACEs on mental health and resilience in men?		Predictor: ACE latent classes Effect modifier: intersectionality groupings	Same as above	Interaction models	Explore groups where ACE effects are weaker or stronger; inform equity-focused prevention
<b>RQ4: Barriers and facilitators to mental-health service access</b>					
a. What are the barriers and facilitators to mental health service access for men with high ACE exposure, and how do these relate to mental health resilience?	Adult men aged ≥18 years participating in Wave 5 identified as having high ACE exposure	Predictor: psychosocial factors and financial stress	Ever use of Medicare-recorded mental health services or prescriptions (from age 18 onwards)	Modified Poisson regression	Identify protective traits (e.g. strong social ties, low substance use, no financial stress); inform resilience-building strategies

**Latent class analysis:** Latent class models were estimated in Stata. Model selection was based on AIC/BIC, class size, interpretability and classification certainty. Entropy and average posterior probabilities were calculated from predicted class probabilities to assess model quality, with values above 0.80 indicating good separation. To minimise the risk of local maxima, models were re-estimated using different random seeds and results were compared for consistency. Covariate and outcome analyses used assigned class membership, acknowledging that this approach may underestimate uncertainty due to software limitations.

**Figure S1:** The effect of resilience-enhancing factors on the relationship between ACEs and adult mental health

Causal mediation analyses were conducted using parametric regression models with a logit link for both the outcome and mediator models, allowing for treatment–mediator interaction. Natural indirect, natural direct and total effects were estimated on the risk ratio scale using post-estimation transformed treatment effects.

The percentage mediated represents the proportion of the total association between ACE class and each mental health outcome that operates indirectly via each resilience-enhancing factor, and was calculated on the log-risk-ratio scale as:

$$\% \text{ mediated} = 100 \times \frac{\ln(\text{RR}_{\text{NIE}})}{\ln(\text{RR}_{\text{TE}})}$$

## Strengths and limitations

This study has several key strengths that enhance its relevance for policy and practice.

First, it draws on *Ten to Men*, a large, nationally representative longitudinal study of Australian men, providing rare population-level evidence on ACEs and adult mental health. Second, the study moves beyond simple ACE counts by using latent class analysis to identify distinct profiles of childhood adversity, capturing differences in the type, combination and severity of exposure. Third, the analysis examines a broad range of mental health outcomes, including current symptoms and self-reported diagnoses, strengthening confidence that findings are robust across different indicators of mental-health need. Fourth, the study explicitly investigates resilience-enhancing factors, providing practical insight on which protective factors matter most, while also demonstrating their limits. Finally, linkage to MBS and PBS data strengthens the evidence base on mental-health service use, enabling the examination of service contact beyond self-report and identifying gaps in access among men with high adversity exposure.

The study also has some limitations. ACEs were measured using adult retrospective self-report, which may be subject to recall bias. Some participants may under-report or misremember childhood experiences, particularly those early in life. Mental health diagnoses were based on self-report rather than clinical records, which may result in misclassification due to recall bias. Not all participants consented to MBS and PBS data linkage, which may introduce selection bias if consent was related to health status or service use. In addition, linked MBS/PBS data capture Medicare-subsidised services and prescriptions only, and do not include privately funded care, employer-provided services, informal supports or community-based services not billed through Medicare. Some priority population groups had small numbers, which limited disaggregation (especially for gender identity and sexual orientation categories). Where required, categories were combined to support stable estimates. Analyses examining intersecting priority population characteristics were also constrained by smaller sample sizes in some groups.

# Findings

## Socio-demographic profile of participants

**Table S4: Study variables (weighted)**

	% [95% CI]	Obs.
<b>Age group (Adults)</b>		
18-29 years	24.6 [23.3, 25.9]	2,680
30-39 years	23.5 [22.4, 24.7]	3,122
40-49 years	20.9 [19.9, 22.0]	3,124
50+ years	31.0 [29.4, 32.6]	3,977
<b>Education - Highest qualification</b>		
Less than year 12	12.3 [11.2, 13.4]	1,082
Up to some qualification	51.7 [50.2, 53.3]	4,924
Undergraduate or more	36.0 [34.3, 37.7]	6,394
<b>Employment type</b>		
Unemployed/not looking for work	13.4 [12.4, 14.4]	1,274
Employed, self/casual/fixed	26.3 [25.2, 27.5]	3,237
Permanent or ongoing	60.3 [59.0, 61.6]	7,462
<b>Current occupation</b>		
Technicians to others	55.1 [53.5, 56.7]	4,576
Professionals or managers	44.9 [43.3, 46.5]	5,343
<b>Combined household income</b>		
<\$80,000	44.3 [42.9, 45.6]	4,862
\$80,000-\$124,999	20.9 [19.8, 22.0]	2,433
\$125,000+	34.9 [33.6, 36.1]	4,384
<b>Living arrangements - alone</b>		
No	87.9 [87.0, 88.8]	10,970
Yes	12.1 [11.2, 13.0]	1,459
<b>Remoteness</b>		
Major cities	72.5 [69.4, 75.5]	9,086
Inner regional	17.7 [15.1, 20.6]	2,293
Outer regional/remote	9.7 [8.1, 11.7]	1,537
<b>Disability (cut point = some difficulty)</b>		
No	54.9 [53.6, 56.3]	7,485
Yes	45.1 [43.7, 46.4]	5,396
<b>Country of birth</b>		
Australian-born	66.3 [64.5, 68.0]	8,417
Immigrant, MESC	8.8 [8.0, 9.6]	983
Immigrant, non-MESC	24.9 [23.2, 26.7]	3,414
<b>Language spoken at home</b>		
English	81.3 [79.7, 82.8]	10,133
Other than English	18.7 [17.2, 20.3]	2,655
<b>Aboriginal and/or Torres Strait Islander</b>		
No	97.6 [97.0, 98.0]	12,383
Yes	2.4 [2.0, 3.0]	368

	% [95% CI]	Obs.
<b>Gender identity</b>		
Man or male	98.7 [98.3, 99.0]	12,006
Woman/female, non-binary or different term	1.3 [1.0, 1.7]	128
<b>Sexual orientation</b>		
Straight (heterosexual)	88.8 [87.9, 89.7]	10,794
Bisexual	4.8 [4.3, 5.4]	537
Gay or lesbian	5.0 [4.4, 5.8]	642
Asexual, pansexual, queer, d/t term	1.3 [1.0, 1.6]	117
<b>Sexuality and/or gender</b>		
Heterosexual male	88.4 [87.5, 89.3]	10,629
LGBTQA+	11.6 [10.7, 12.5]	1,333
<b>Ever served in Australian Defence Force</b>		
Never	95.0 [94.3,95.6]	11,490
Currently serving	1.0 [0.7,1.3]	128
Previously served	4.0 [3.5,4.6]	491
<b>Ever served in Australian Defence Force</b>		
No	95.0 [94.3, 95.6]	11,490
Yes	5.0 [4.4, 5.7]	619
<b>Experienced financial stress</b>		
No	72.1 [71.0, 73.2]	9,260
Yes	27.9 [26.8, 29.0]	3,180
<b>MOS Emotional/Information subscale score</b>		
None of the time	15.1 [14.1, 16.1]	1,676
A little of the time	18.6 [17.6, 19.6]	2,333
Some of the time	23.0 [21.9, 24.0]	2,914
Most of the time	26.2 [25.1, 27.2]	3,363
All of the time	17.2 [16.3, 18.1]	2,221
<b>Not lonely (social connectedness)</b>		
No	41.5 [40.3, 42.7]	4,977
Yes	58.5 [57.3, 59.7]	7,543
<b>Drug/substance use 12 months</b>		
No	72.9 [71.6, 74.2]	9,534
Yes - drug use	27.1 [25.8, 28.4]	3,159
<b>Alcohol - AUDIT Score (WHO category)</b>		
Low risk	76.0 [74.7, 77.1]	9,186
Medium	17.4 [16.4, 18.4]	2,163
High	6.6 [6.0, 7.3]	736
<b>Total</b>		<b>12,916</b>

Notes: Observations (Obs.) represent the number of participants responding to the item (unweighted). MESC = main English-speaking countries.

Source: *Ten to Men* Wave 5

## Prevalence of individual adverse childhood experiences (ACEs) and distinct profiles

**Table S5:** ACE (any and multi-type) by key variables (weighted)

	Any ACE <sup>a</sup>	Obs.	p value	Any ACE	Obs.	p value	Two or more ACEs (Multi-type)*	Obs.	p value	Multi-type ACEs	Obs.	p value
	% [95% CI]			% [95% CI]			% [95% CI]			% [95% CI]		
<b>Age group (Adults)</b>												
18–29 years	59.6 [56.5, 62.6]	2,160	0.119	64.1 [61.2, 66.9]	2,403	0.564	45.2 [42.0, 48.5]	2,160	0.311	48.3 [45.3, 51.3]	2,403	0.155
30–39 years	61.3 [58.8, 63.8]	2,615		65.4 [63.1, 67.7]	2,848		45.7 [43.1, 48.3]	2,615		48.4 [45.9, 51.0]	2,848	
40–49 years	60.8 [58.1, 63.4]	2,670		64.1 [61.6, 66.5]	2,889		42.6 [40.0, 45.4]	2,670		46.0 [43.5, 48.6]	2,889	
50+ years	63.7 [61.4, 66.0]	3,548		66.0 [63.8, 68.2]	3,754		43.1 [40.8, 45.5]	3,548		45.1 [42.9, 47.4]	3,754	
<b>Education - Highest qualification</b>												
Less than year 12	71.2 [67.1, 75.1]	908	<0.001	74.9 [71.2, 78.3]	1,031	<0.001	54.9 [50.4, 59.3]	908	<0.001	57.1 [53.0, 61.2]	1,031	<0.001
Up to some qualification	65.2 [63.2, 67.1]	4,250		68.8 [66.9, 70.6]	4,691		47.6 [45.5, 49.6]	4,250		50.4 [48.4, 52.3]	4,691	
Undergraduate or more	54.0 [52.1, 55.9]	5,775		56.4 [54.5, 58.3]	6,094		36.2 [34.4, 38.1]	5,775		38.4 [36.6, 40.2]	6,094	
<b>Employment type</b>												
Unemployed/not looking for work	75.4 [71.9, 78.7]	1,023	<0.001	79.3 [76.3, 82.0]	1,190	<0.001	61.4 [57.3, 65.4]	1,023	<0.001	64.0 [60.1, 67.7]	1,190	<0.001
Employed, self/casual/fixed	59.7 [57.1, 62.3]	2,667		63.5 [61.0, 65.9]	2,880		43.8 [41.1, 46.4]	2,667		46.4 [43.7, 49.0]	2,880	
Permanent or ongoing	59.5 [57.6, 61.3]	6,850		62.5 [60.7, 64.3]	7,327		40.8 [39.0, 42.7]	6,850		43.3 [41.5, 45.2]	7,327	
<b>Current occupation</b>												
Technicians to others	63.9 [61.6, 66.0]	4,006	<0.001	67.2 [65.1, 69.3]	4,373	<0.001	45.6 [43.4, 47.8]	4,006	<0.001	48.2 [46.2, 50.3]	4,373	<0.001
Professionals or managers	57.1 [55.1, 59.1]	4,907		59.3 [57.4, 61.3]	5,144		39.2 [37.1, 41.3]	4,907		41.1 [39.1, 43.2]	5,144	
<b>Combined household income</b>												
<\$80,000	62.5 [60.3, 64.6]	4,203	0.042	66.1 [64.1, 68.1]	4,601	0.002	46.3 [44.2, 48.4]	4,203	0.001	49.3 [47.3, 51.3]	4,601	<0.001
\$80,000–\$124,999	63.9 [61.0, 66.8]	2,141		67.2 [64.4, 69.9]	2,318		46.2 [43.2, 49.2]	2,141		48.4 [45.5, 51.3]	2,318	
\$125,000+	59.6 [57.3, 61.8]	4,011		61.8 [59.5, 64.0]	4,221		40.7 [38.4, 43.1]	4,011		43.1 [40.8, 45.5]	4,221	

	Any ACE <sup>a</sup>	Obs.	p value	Any ACE	Obs.	p value	Two or more ACEs (Multi-type)*	Obs.	p value	Multi-type ACEs	Obs.	p value
	% [95% CI]			% [95% CI]			% [95% CI]			% [95% CI]		
<b>Living arrangements - alone</b>												
No	60.6 [59.1, 62.0]	9,686	<0.001	64.0 [62.6, 65.4]	10,449	<0.001	43.0 [41.4, 44.5]	9,686	<0.001	45.7 [44.2, 47.2]	10,449	<0.001
Yes	70.0 [66.4, 73.4]	1,243		72.9 [69.6, 76.1]	1,356		52.7 [48.8, 56.6]	1,243		55.3 [51.6, 59.0]	1,356	
<b>Remoteness</b>												
Major cities	60.1 [58.3, 61.7]	7,732	<0.001	63.5 [61.8, 65.1]	8,360	<0.001	42.7 [41.0, 44.5]	7,732	0.006	45.4 [43.8, 47.1]	8,360	0.003
Inner regional	65.5 [62.6, 68.3]	1,952		69.0 [66.3, 71.6]	2,115		47.0 [43.9, 50.1]	1,952		49.7 [46.6, 52.9]	2,115	
Outer regional/ remote	66.2 [62.2, 69.9]	1,320		69.5 [65.6, 73.0]	1,430		49.0 [44.3, 53.6]	1,320		52.0 [47.5, 56.4]	1,430	
<b>SEIFA IRSD</b>												
High disadvantage	65.1 [62.6, 67.6]	2,719	<0.001	68.7 [66.2, 71.0]	3,007	<0.001	49.5 [47.1, 52.0]	2,719	<0.001	48.1 [45.7, 50.4]	3,296	<0.001
Middle disadvantage	60.9 [59.0, 62.8]	5,562		64.5 [62.7, 66.3]	6,015		43.4 [41.5, 45.4]	5,562		42.4 [40.6, 44.2]	6,511	
Low disadvantage	57.7 [54.9, 60.5]	2,688		60.5 [57.8, 63.3]	2,846		37.1 [34.3, 40.1]	2,688		36.9 [34.3, 39.7]	3,066	
<b>Disability (cut point = some difficulty)</b>												
No	53.6 [51.8, 55.4]	6,615	<0.001	56.4 [54.6, 58.1]	6,952	<0.001	35.6 [33.9, 37.4]	6,615	<0.001	37.5 [35.8, 39.2]	6,952	<0.001
Yes	72.1 [70.2, 73.8]	4,389		75.6 [73.9, 77.2]	4,953		55.2 [53.1, 57.2]	4,389		58.3 [56.3, 60.1]	4,953	
<b>Country of birth</b>												
Australian-born	63.8 [62.1, 65.4]	7,195	<0.001	67.2 [65.6, 68.7]	7,815	<0.001	45.7 [44.0, 47.5]	7,195	<0.001	48.7 [47.0, 50.4]	7,815	<0.001
Immigrant, MESC	69.0 [64.7, 73.1]	864		71.3 [67.2, 75.1]	913		49.3 [44.7, 53.8]	864		51.0 [46.6, 55.3]	913	
Immigrant, non-MESC	53.6 [51.1, 56.1]	2,872		57.2 [54.8, 59.7]	3,096		38.3 [35.9, 40.9]	2,872		40.8 [38.3, 43.3]	3,096	
<b>Language spoken at home</b>												
English	63.9 [62.4, 65.4]	8,704	<0.001	67.2 [65.7, 68.6]	9,423	<0.001	45.6 [44.0, 47.2]	8,704	<0.001	48.3 [46.8, 49.9]	9,423	<0.001
Other than English	52.0 [49.3, 54.8]	2,209		55.8 [53.1, 58.5]	2,383		37.9 [35.2, 40.7]	2,209		40.8 [38.1, 43.5]	2,383	
<b>Aboriginal and/or Torres Strait Islander</b>												
No	61.1 [59.7, 62.5]	10,617	0.007	64.5 [63.2, 65.9]	11,457	0.004	43.6 [42.1, 45.1]	10,617	<0.001	46.3 [44.9, 47.7]	11,457	<0.001
Yes	76.6 [65.5, 85.0]	270		79.9 [69.8, 87.2]	313		64.5 [53.7, 74.0]	270		66.3 [56.5, 74.8]	313	

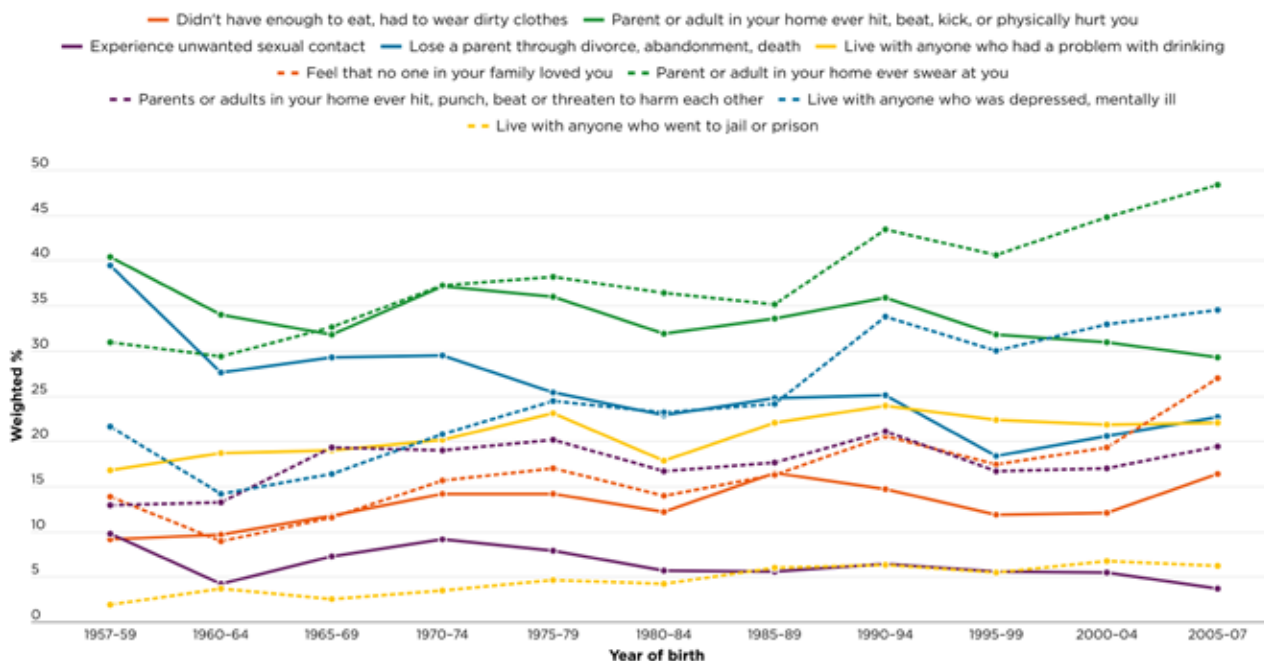
	Any ACE <sup>a</sup>	Obs.	p value	Any ACE	Obs.	p value	Two or more ACEs (Multi-type)*	Obs.	p value	Multi-type ACEs	Obs.	p value
	% [95% CI]			% [95% CI]			% [95% CI]			% [95% CI]		
<b>Gender identity</b>												
Man or male	61.4 [60.0, 62.8]	10,864	0.001	64.8 [63.4, 66.1]	11,731	<0.001	43.8 [42.3, 45.3]	10,864	<0.001	46.5 [45.1, 47.9]	11,731	<0.001
Woman/female, non-binary or something different	81.0 [70.6, 88.3]	102		85.4 [76.8, 91.2]	122		73.0 [60.9, 82.5]	102		74.0 [61.3, 83.7]	122	
<b>Sexual orientation</b>												
Straight (heterosexual)	60.1 [58.6, 61.6]	9,721	<0.001	63.3 [61.9, 64.8]	10,447	<0.001	42.1 [40.6, 43.7]	9,721	<0.001	44.8 [43.3, 46.3]	10,447	<0.001
Bisexual	77.2 [71.6, 81.9]	459		80.1 [75.2, 84.3]	526		62.9 [56.8, 68.7]	459		65.5 [59.9, 70.6]	526	
Gay or lesbian	72.0 [67.1, 76.5]	579		75.1 [70.6, 79.2]	633		56.0 [50.2, 61.7]	579		57.2 [51.4, 62.7]	633	
Asexual, pansexual, queer, d/t term	85.2 [70.9, 93.1]	97		88.1 [76.1, 94.5]	115		72.9 [58.5, 83.6]	97		78.2 [65.8, 87.1]	115	
<b>Sexual orientation or gender identity</b>												
Heterosexual male	60.1 [58.6, 61.6]	9,677	<0.001	63.4 [61.9, 64.8]	10,396	<0.001	42.1 [40.6, 43.7]	9,677	<0.001	44.8 [43.3, 46.3]	10,396	<0.001
LGBTQA+	75.6 [72.2, 78.7]	1,164		78.7 [75.7, 81.5]	1,306		60.9 [56.9, 64.7]	1,164		63.3 [59.6, 66.9]	1,306	
<b>Ever served in Australian Defence Force</b>												
Never	61.3 [59.9, 62.7]	10,408	0.066	64.6 [63.2, 66.0]	11,227	0.034	43.7 [42.2, 45.2]	10,408	0.053	46.3 [44.9, 47.8]	11,227	0.007
Currently serving	63.9 [50.4, 75.4]	109		68.0 [55.7, 78.2]	123		43.5 [30.7, 57.2]	109		49.9 [38.0, 61.9]	123	
Previously served	69.2 [62.5, 75.2]	435		72.7 [66.5, 78.1]	479		52.3 [45.4, 59.1]	435		56.6 [50.0, 62.9]	479	
<b>Ever served in Australian Defence Force</b>												
No	61.3 [59.9, 62.7]	10,408	0.030	64.6 [63.2, 66.0]	11,227	0.015	43.7 [42.2, 45.2]	10,408	0.033	46.3 [44.9, 47.8]	11,227	0.003
Yes	68.2 [62.2, 73.6]	544		71.8 [66.3, 76.7]	602		50.6 [44.5, 56.7]	544		55.3 [49.6, 60.9]	602	
<b>Experienced financial stress</b>												
No	56.2 [54.6, 57.8]	8,383	<0.001	59.0 [57.5, 60.6]	8,858	<0.001	37.8 [36.2, 39.3]	8,383	<0.001	39.8 [38.3, 41.4]	8,858	<0.001
Yes	77.2 [74.8, 79.4]	2,591		80.6 [78.6, 82.5]	3,007		62.3 [59.6, 65.0]	2,591		65.2 [62.7, 67.6]	3,007	

	Any ACE <sup>a</sup>	Obs.	p value	Any ACE	Obs.	p value	Two or more ACEs (Multi-type)*	Obs.	p value	Multi-type ACEs	Obs.	p value
	% [95% CI]			% [95% CI]			% [95% CI]			% [95% CI]		
<b>MOS Emotional/Information subscale score</b>												
None of the time	69.5 [65.8, 72.9]	1,352	<0.001	74.0 [70.7, 77.0]	1,550	<0.001	57.7 [53.9, 61.5]	1,352	<0.001	61.0 [57.5, 64.4]	1,550	<0.001
A little of the time	66.6 [63.5, 69.6]	1,949		70.7 [67.9, 73.4]	2,194		49.9 [46.8, 53.0]	1,949		53.6 [50.7, 56.6]	2,194	
Some of the time	63.4 [60.6, 66.1]	2,542		66.7 [64.1, 69.3]	2,769		44.3 [41.4, 47.1]	2,542		46.5 [43.7, 49.3]	2,769	
Most of the time	57.5 [54.9, 60.0]	3,079		59.9 [57.4, 62.4]	3,236		38.4 [35.9, 41.0]	3,079		40.3 [37.8, 42.9]	3,236	
All of the time	54.7 [51.7, 57.7]	2,066		57.0 [54.0, 59.9]	2,137		36.7 [33.7, 39.8]	2,066		38.3 [35.3, 41.4]	2,137	
<b>Not lonely (social connectedness)</b>												
No	54.6 [52.8, 56.4]	6,869	<0.001	57.3 [55.6, 59.1]	7,207	<0.001	36.3 [34.6, 38.1]	6,869	<0.001	38.5 [36.8, 40.2]	7,207	<0.001
Yes	72.6 [70.6, 74.6]	4,102		76.1 [74.3, 77.8]	4,656		56.2 [54.1, 58.4]	4,102		59.0 [57.0, 61.0]	4,656	
<b>Drug/substance use 12 months</b>												
No	57.3 [55.7, 58.8]	8,325	<0.001	60.7 [59.1, 62.1]	8,914	<0.001	39.0 [37.5, 40.6]	8,325	<0.001	41.7 [40.2, 43.2]	8,914	<0.001
Yes - drug use	73.6 [71.2, 75.9]	2,650		76.6 [74.4, 78.7]	2,953		58.2 [55.5, 60.9]	2,650		60.5 [58.0, 63.0]	2,953	
<b>Alcohol - AUDIT Score (WHO category)</b>												
Low risk	59.0 [57.4, 60.6]	8,169	<0.001	62.4 [60.9, 63.9]	8,791	<0.001	41.7 [40.1, 43.4]	8,169	<0.001	44.2 [42.7, 45.9]	8,791	<0.001
Medium	66.7 [63.7, 69.5]	1,932		69.7 [66.9, 72.3]	2,085		46.6 [43.3, 50.0]	1,932		49.6 [46.4, 52.8]	2,085	
High	77.1 [72.2, 81.4]	627		80.2 [75.9, 84.0]	711		63.8 [58.5, 68.8]	627		66.2 [61.3, 70.7]	711	
<b>Total</b>	<b>61.6 [60.2, 63.0]</b>	<b>11,004</b>		<b>65.0 [63.7, 66.3]</b>	<b>11,905</b>		<b>44.1 [42.6, 45.5]</b>	<b>11,004</b>		<b>46.8 [45.4, 48.2]</b>	<b>11,905</b>	

Notes: <sup>a</sup> Among those who responded to all 10 ACEs items. Observations (Obs.) represent the number of participants responding to the item (unweighted). MESC = main English-speaking countries.

Source: Ten to Men Wave 5

Figure S2: Weighted % of ACE items (each item)



Source: Ten to Men Wave 5

Table S6: Clusters of ACEs (unweighted)

Domain	Broad domain	Question	Class 1	Class 2	Class 3	Total
Physical neglect	Neglect	Did you feel that you didn't have enough to eat, had to wear dirty clothes, or had no one to protect or take care of you?	0.030	0.137	<b>0.684</b>	0.117
Emotional neglect	Neglect	Did you feel that no one in your family loved you or thought you were special?	0.018	0.254	<b>0.697</b>	0.143
Physical abuse	Abuse	Did a parent or adult in your home ever hit, beat, kick or physically hurt you in any way?	0.072	<b>0.688</b>	<b>0.868</b>	0.324
Emotional abuse	Abuse	Did a parent or adult in your home ever swear at you, insult you or put you down?	0.044	<b>0.818</b>	<b>0.964</b>	0.355
Sexual abuse	Abuse	Did you experience unwanted sexual contact (such as fondling or oral/anal/vaginal/intercourse/penetration)?	0.020	0.070	0.353	0.063
Domestic violence	Household dysfunction	Did your parents or adults in your home ever hit, punch, beat or threaten to harm each other?	0.006	<b>0.319</b>	<b>0.840</b>	0.168
Parental separation or loss	Household dysfunction	Lost a parent through divorce, abandonment, death or other reason	0.127	0.277	<b>0.719</b>	0.222
Mental illness	Household dysfunction	Lived with anyone who was depressed, mentally ill or attempted suicide	0.091	<b>0.346</b>	<b>0.824</b>	0.228
Substance use	Household dysfunction	Lived with anyone who had a problem with drinking or using drugs, including prescription drugs	0.058	0.286	<b>0.775</b>	0.187
Parental incarceration	Household dysfunction	Lived with anyone who went to jail or prison	0.004	0.044	<b>0.313</b>	0.042

Note: Values represent the proportion of men within each latent class who reported each ACE. **Bolding** indicates a higher likelihood or probability of experiencing specific adversity items.

Source: Ten to Men Wave 5

**Table S7: Distinct profiles of ACEs by priority population groups (weighted)**

	Class 1	Class 2	Class 3	Obs.	p value
<b>Age group (Adults)</b>					
18–29 years	56.5 [53.6, 59.3]	31.6 [28.9, 34.3]	11.9 [10.0, 14.2]	2,472	<0.001
30–39 years	56.5 [53.9, 59.1]	31.0 [28.7, 33.5]	12.5 [10.8, 14.4]	2,904	
40–49 years	59.2 [56.7, 61.7]	31.5 [29.3, 33.8]	9.3 [7.9, 10.9]	2,936	
50+ years	61.8 [59.6, 63.9]	30.6 [28.6, 32.6]	7.7 [6.6, 8.9]	3,791	
<b>SEIFA IRSD</b>					
High disadvantage	53.3 [50.9, 55.7]	32.9 [30.8, 35.0]	13.8 [12.2, 15.7]	3,063	<0.001
Middle disadvantage	59.6 [57.8, 61.4]	31.4 [29.8, 33.0]	9.0 [8.0, 10.2]	6,127	
Low disadvantage	65.5 [63.0, 68.0]	27.4 [25.1, 29.9]	7.0 [5.8, 8.5]	2,887	
<b>Education – Highest qualification</b>					
Less than year 12	49.3 [45.4, 53.3]	33.3 [29.7, 37.1]	17.4 [14.4, 20.8]	1,053	<0.001
Up to some qualification	55.2 [53.3, 57.2]	33.2 [31.4, 34.9]	11.6 [10.4, 12.9]	4,775	
Undergraduate or more	66.8 [65.0, 68.6]	27.6 [26.0, 29.3]	5.6 [4.9, 6.3]	6,185	
<b>Employment type</b>					
Unemployed/not looking for work	40.4 [36.8, 44.1]	36.1 [32.5, 39.8]	23.5 [20.3, 27.0]	1,216	<0.001
Employed, self/casual/fixed	59.0 [56.5, 61.5]	32.3 [29.9, 34.7]	8.7 [7.4, 10.2]	2,942	
Permanent or ongoing	62.4 [60.6, 64.1]	29.6 [28.1, 31.1]	8.0 [7.1, 9.0]	7,430	
<b>Current occupation</b>					
Technicians to others	57.7 [55.6, 59.8]	32.2 [30.3, 34.1]	10.1 [8.9, 11.4]	4,450	<0.001
Professionals or managers	64.3 [62.3, 66.3]	29.7 [27.9, 31.6]	6.0 [5.1, 7.0]	5,193	
<b>Combined household income</b>					
<\$80,000	55.9 [53.9, 57.9]	30.5 [28.9, 32.3]	13.6 [12.2, 15.1]	4,678	<0.001
\$80,000–\$124,999	57.7 [54.9, 60.5]	33.3 [30.6, 36.2]	9.0 [7.4, 10.9]	2,359	
\$125,000+	63.1 [60.9, 65.2]	30.1 [28.2, 32.1]	6.8 [5.8, 7.9]	4,268	
<b>Living arrangements – alone</b>					
No	59.6 [58.2, 61.0]	30.8 [29.5, 32.0]	9.6 [8.8, 10.6]	10,615	<0.001
Yes	52.7 [49.1, 56.4]	34.1 [30.8, 37.5]	13.2 [10.9, 15.9]	1,387	
<b>Remoteness</b>					
Major cities	60.3 [58.8, 61.9]	30.5 [29.1, 31.9]	9.2 [8.3, 10.1]	8,511	<0.001
Inner regional	55.4 [52.3, 58.3]	33.1 [30.5, 35.8]	11.5 [9.7, 13.7]	2,160	
Outer regional/remote	53.3 [48.8, 57.8]	31.8 [28.5, 35.3]	14.9 [11.5, 19.1]	1,444	
<b>Disability (cut point = some difficulty)</b>					
No	68.4 [66.8, 70.0]	26.5 [25.1, 28.0]	5.1 [4.4, 5.9]	7,061	<0.001
Yes	47.0 [45.2, 48.9]	36.6 [35.0, 38.4]	16.3 [14.9, 17.9]	5,054	
<b>Country of birth</b>					
Australian-born	57.3 [55.7, 59.0]	31.4 [30.0, 32.9]	11.3 [10.2, 12.4]	7,943	<0.001
Immigrant, MESC	56.7 [52.5, 60.8]	32.1 [28.2, 36.3]	11.2 [8.5, 14.5]	922	
Immigrant, non-MESC	62.9 [60.5, 65.4]	30.1 [27.9, 32.4]	7.0 [5.8, 8.4]	3,165	
<b>Language spoken at home</b>					
English	57.4 [55.9, 58.9]	31.4 [30.1, 32.7]	11.2 [10.3, 12.3]	9,565	<0.001
Other than English	64.1 [61.4, 66.7]	30.0 [27.6, 32.5]	6.0 [4.9, 7.3]	2,447	
<b>Aboriginal and/or Torres Strait Islander</b>					
No	59.3 [58.0, 60.7]	31.1 [30.0, 32.3]	9.6 [8.8, 10.4]	11,651	<0.001
Yes	38.5 [28.8, 49.3]	29.6 [21.0, 39.9]	31.9 [24.0, 40.9]	324	

	Class 1	Class 2	Class 3	Obs.	p value
<b>Gender identity</b>					
Man or male	59.1 [57.8, 60.5]	31.1 [30.0, 32.3]	9.8 [9.0, 10.6]	11,931	<0.001
Woman/female, non-binary or something different	31.5 [21.4, 43.7]	34.5 [24.5, 46.0]	34.0 [22.3, 48.2]	126	
<b>Sexual orientation</b>					
Straight (heterosexual)	60.9 [59.4, 62.3]	30.6 [29.4, 31.9]	8.5 [7.7, 9.3]	10,631	<0.001
Bisexual	40.3 [35.0, 45.8]	35.0 [29.7, 40.7]	24.8 [19.9, 30.4]	531	
Gay or lesbian	47.8 [42.3, 53.4]	35.6 [30.5, 41.0]	16.6 [12.6, 21.6]	637	
Asexual, pansexual, queer, d/t term	28.2 [18.0, 41.1]	30.7 [21.4, 41.8]	41.1 [29.4, 54.0]	117	
<b>Sexual orientation or gender identity</b>					
Heterosexual male	60.9 [59.4, 62.3]	30.7 [29.5, 32.0]	8.4 [7.6, 9.2]	10,576	<0.001
LGBTQA+	42.2 [38.7, 45.9]	34.4 [30.9, 38.1]	23.4 [20.1, 27.0]	1,320	
<b>Ever served in Australian Defence Force</b>					
Never	59.4 [58.0, 60.8]	30.8 [29.6, 32.0]	9.8 [9.0, 10.7]	11,416	0.006
Currently serving	54.3 [42.1, 66.0]	29.9 [20.8, 41.1]	15.8 [7.3, 30.6]	127	
Previously served	47.8 [41.1, 54.5]	38.2 [32.3, 44.5]	14.0 [10.3, 18.7]	486	
<b>Ever served in Australian Defence Force</b>					
No	59.4 [58.0, 60.8]	30.8 [29.6, 32.0]	9.8 [9.0, 10.7]	11,416	0.001
Yes	49.0 [43.2, 54.9]	36.6 [31.5, 42.1]	14.3 [10.8, 18.8]	613	
<b>Experienced financial stress</b>					
No	65.8 [64.3, 67.2]	28.5 [27.2, 29.8]	5.8 [5.1, 6.6]	9,003	<0.001
Yes	40.5 [38.1, 43.1]	38.1 [35.7, 40.5]	21.4 [19.3, 23.6]	3,064	
<b>MOS Emotional/Information subscale score</b>					
None of the time	44.7 [41.3, 48.1]	35.4 [32.1, 38.8]	19.9 [17.1, 23.0]	1,590	<0.001
A little of the time	52.5 [49.6, 55.4]	34.9 [32.1, 37.8]	12.6 [10.8, 14.7]	2,247	
Some of the time	58.6 [55.9, 61.3]	31.9 [29.3, 34.5]	9.6 [8.1, 11.2]	2,820	
Most of the time	65.2 [62.8, 67.4]	28.9 [26.7, 31.2]	5.9 [4.9, 7.2]	3,283	
All of the time	67.8 [64.8, 70.7]	25.7 [23.0, 28.6]	6.5 [4.9, 8.5]	2,153	
<b>Not lonely (social connectedness)</b>					
No	67.2 [65.5, 68.8]	26.5 [25.1, 28.1]	6.3 [5.5, 7.3]	7,304	<0.001
Yes	46.8 [44.8, 48.9]	37.6 [35.8, 39.5]	15.5 [14.1, 17.1]	4,762	
<b>Drug/substance use 12 months</b>					
No	63.5 [62.1, 64.9]	29.2 [27.9, 30.5]	7.3 [6.6, 8.2]	9,074	<0.001
Yes - drug use	46.4 [43.9, 49.0]	36.2 [33.8, 38.6]	17.4 [15.5, 19.5]	3,002	
<b>Alcohol - AUDIT Score (WHO category)</b>					
Low risk	61.3 [59.8, 62.8]	29.6 [28.2, 30.9]	9.1 [8.3, 10.1]	8,952	<0.001
Medium	56.7 [53.6, 59.8]	33.1 [30.2, 36.2]	10.2 [8.3, 12.3]	2,109	
High	39.2 [34.3, 44.2]	40.9 [35.9, 46.2]	19.9 [16.2, 24.2]	725	
<b>Total</b>	<b>59.0 [57.7, 60.4]</b>	<b>30.9 [29.8, 32.1]</b>	<b>10.0 [9.2, 10.9]</b>	<b>11,786</b>	

Notes: Observations (Obs.) represent the number of participants responding to the item (unweighted). MESC = main English-speaking countries.

Source: *Ten to Men* Wave 5

## The association of ACEs with mental health

**Table S8: Mental health conditions by priority population groups (weighted)**

	Mental health symptoms in the 2 weeks prior to Wave 5 (2024/25) survey completion date					Diagnosed mental health conditions from age 18+		
	Depression	Anxiety	MDRS	Anxiety or depression	Any mental health	Depression	Anxiety	Any mental health
	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]
<b>Age group (Adults)</b>								
18-29 years	28.0 [25.6, 30.5]	17.8 [15.8, 19.9]	37.3 [34.6, 40.0]	47.1 [44.3, 49.8]	54.8 [52.1, 57.4]	10.1 [8.5, 12.0]	11.1 [9.4, 13.0]	15.7 [13.8, 17.8]
30-39 years	23.7 [21.5, 26.0]	16.5 [14.7, 18.4]	36.8 [34.3, 39.3]	42.6 [40.1, 45.2]	52.0 [49.5, 54.5]	16.6 [14.7, 18.8]	14.6 [12.7, 16.7]	22.6 [20.4, 24.9]
40-49 years	20.2 [18.3, 22.2]	12.8 [11.3, 14.6]	34.7 [32.4, 37.1]	38.9 [36.5, 41.3]	48.7 [46.3, 51.2]	17.5 [15.7, 19.4]	16.6 [14.8, 18.6]	24.4 [22.3, 26.5]
50+ years	15.4 [13.7, 17.2]	10.3 [8.9, 12.0]	25.7 [23.8, 27.8]	28.8 [26.9, 30.8]	36.9 [34.8, 39.1]	17.6 [16.0, 19.3]	13.3 [11.8, 15.0]	23.7 [21.8, 25.7]
<b>SEIFA IRSD-2016 - 3 groups W5</b>								
High disadvantage	26.2 [24.0, 28.5]	18.1 [16.2, 20.1]	38.2 [36.0, 40.4]	42.3 [39.9, 44.8]	51.4 [49.0, 53.8]	17.4 [15.6, 19.4]	15.3 [13.3, 17.5]	23.4 [21.2, 25.7]
Middle disadvantage	20.8 [19.4, 22.2]	13.4 [12.3, 14.6]	32.2 [30.5, 34.0]	38.8 [37.1, 40.5]	47.6 [45.9, 49.3]	15.1 [13.9, 16.5]	13.4 [12.2, 14.8]	21.0 [19.6, 22.6]
Low disadvantage	15.5 [13.6, 17.5]	9.5 [8.2, 11.1]	26.5 [24.3, 28.8]	32.1 [29.8, 34.5]	39.9 [37.4, 42.5]	13.9 [12.1, 15.8]	12.3 [10.9, 13.9]	20.2 [18.3, 22.2]
<b>Education - Highest qualification</b>								
Less than year 12	30.4 [26.7, 34.4]	20.7 [17.5, 24.3]	42.2 [38.2, 46.3]	44.6 [40.2, 49.1]	52.9 [48.5, 57.4]	17.2 [14.2, 20.8]	17.3 [14.0, 21.1]	23.4 [20.0, 27.1]
Up to some qualification	24.7 [23.1, 26.4]	15.7 [14.4, 17.1]	36.2 [34.5, 38.0]	41.6 [39.7, 43.5]	50.9 [49.0, 52.8]	18.6 [17.1, 20.1]	16.2 [14.7, 17.7]	24.7 [23.1, 26.4]
Undergraduate or more	13.8 [12.9, 14.9]	9.7 [8.8, 10.6]	25.1 [23.6, 26.6]	32.0 [30.6, 33.5]	39.9 [38.3, 41.4]	11.4 [10.4, 12.4]	10.3 [9.3, 11.3]	17.1 [15.9, 18.4]
<b>Employment type</b>								
Unemployed/not looking for work	45.8 [42.0, 49.6]	29.7 [26.4, 33.2]	49.5 [45.5, 53.5]	59.8 [56.0, 63.5]	67.3 [63.4, 70.9]	29.8 [26.2, 33.8]	27.7 [24.2, 31.6]	35.1 [31.6, 38.8]
Employed, self/casual/ fixed	19.8 [17.9, 21.8]	13.5 [11.9, 15.4]	30.8 [28.5, 33.3]	37.3 [35.0, 39.7]	46.5 [44.0, 48.9]	13.0 [11.4, 14.9]	11.5 [9.8, 13.5]	18.7 [16.7, 20.8]
Permanent or ongoing	17.5 [16.2, 18.9]	11.4 [10.4, 12.6]	31.1 [29.6, 32.6]	35.5 [33.9, 37.2]	44.4 [42.7, 46.0]	13.9 [12.8, 15.0]	12.3 [11.2, 13.4]	19.8 [18.5, 21.1]
<b>Current occupation</b>								
Technicians to others	21.2 [19.5, 22.9]	13.5 [12.2, 15.0]	34.8 [32.9, 36.7]	38.9 [37.0, 40.9]	48.2 [46.2, 50.2]	15.1 [13.8, 16.6]	13.1 [11.7, 14.6]	21.1 [19.5, 22.8]
Professionals or managers	14.1 [12.8, 15.6]	10.0 [8.8, 11.2]	25.1 [23.5, 26.8]	31.6 [29.7, 33.4]	39.5 [37.7, 41.4]	12.7 [11.4, 14.0]	11.4 [10.2, 12.7]	18.8 [17.4, 20.3]
<b>Combined household income</b>								
<\$80,000	26.9 [25.1, 28.8]	18.3 [16.8, 19.9]	37.7 [35.7, 39.8]	42.8 [40.9, 44.8]	51.7 [49.7, 53.7]	17.7 [16.0, 19.5]	16.2 [14.6, 17.9]	23.8 [22.0, 25.8]
\$80,000-\$124,999	20.3 [18.0, 22.8]	12.3 [10.6, 14.1]	32.2 [29.6, 34.8]	37.9 [34.9, 41.0]	47.1 [44.0, 50.2]	15.0 [13.0, 17.1]	14.4 [12.4, 16.7]	20.5 [18.2, 22.8]
\$125,000+	15.1 [13.7, 16.7]	9.4 [8.4, 10.6]	27.4 [25.5, 29.4]	33.3 [31.2, 35.3]	41.3 [39.2, 43.4]	15.0 [13.5, 16.6]	11.8 [10.5, 13.2]	21.2 [19.5, 23.0]

	Mental health symptoms in the 2 weeks prior to Wave 5 (2024/25) survey completion date					Diagnosed mental health conditions from age 18+		
	Depression	Anxiety	MDRS	Anxiety or depression	Any mental health	Depression	Anxiety	Any mental health
	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]
<b>Living arrangements - alone</b>								
No	20.2 [19.1, 21.4]	13.3 [12.4, 14.3]	31.7 [30.5, 33.0]	37.4 [36.1, 38.7]	46.1 [44.7, 47.4]	14.3 [13.4, 15.2]	13.1 [12.1, 14.1]	20.4 [19.3, 21.5]
Yes	31.1 [27.7, 34.7]	20.1 [17.3, 23.3]	40.6 [37.1, 44.3]	47.5 [43.9, 51.1]	55.6 [51.9, 59.3]	26.0 [22.6, 29.6]	21.2 [18.1, 24.7]	31.5 [28.2, 35.0]
<b>Remoteness</b>								
Major cities	20.2 [19.0, 21.5]	13.5 [12.5, 14.6]	31.3 [29.9, 32.7]	37.7 [36.3, 39.2]	46.1 [44.6, 47.6]	14.5 [13.4, 15.6]	12.9 [11.9, 14.0]	20.4 [19.2, 21.7]
Inner regional	22.4 [20.0, 25.1]	14.6 [12.3, 17.1]	35.1 [32.5, 37.8]	39.0 [36.1, 42.0]	48.7 [45.9, 51.5]	18.1 [16.0, 20.4]	15.7 [13.5, 18.3]	23.9 [21.5, 26.4]
Outer regional/remote	28.6 [24.6, 32.9]	17.5 [14.7, 20.7]	41.5 [37.7, 45.4]	44.2 [40.3, 48.3]	53.4 [49.7, 57.1]	19.5 [16.6, 22.8]	16.9 [13.8, 20.4]	26.1 [22.6, 30.0]
<b>Disability (cut point = some difficulty)</b>								
No	9.3 [8.3, 10.3]	6.2 [5.4, 7.1]	20.8 [19.5, 22.1]	24.1 [22.7, 25.5]	32.5 [31.1, 34.0]	9.5 [8.6, 10.6]	8.5 [7.6, 9.5]	14.1 [13.0, 15.3]
Yes	36.2 [34.5, 37.9]	23.7 [22.1, 25.3]	47.9 [46.1, 49.8]	56.3 [54.5, 58.2]	65.1 [63.3, 66.9]	23.9 [22.2, 25.8]	20.8 [19.1, 22.7]	31.0 [29.2, 32.9]
<b>Country of birth</b>								
Australian-born	23.7 [22.3, 25.1]	15.4 [14.3, 16.6]	35.2 [33.6, 36.7]	40.2 [38.6, 41.8]	49.4 [47.8, 51.0]	18.4 [17.2, 19.7]	16.1 [15.0, 17.4]	24.8 [23.5, 26.2]
Immigrant, MESC	18.8 [15.4, 22.8]	11.0 [8.3, 14.4]	30.8 [26.8, 35.1]	37.8 [33.4, 42.5]	46.3 [41.7, 50.9]	18.1 [14.9, 21.8]	17.6 [14.1, 21.7]	27.0 [23.1, 31.3]
Immigrant, non-MESC	16.5 [15.0, 18.2]	11.8 [10.4, 13.4]	28.2 [26.1, 30.4]	34.8 [32.6, 37.0]	42.3 [40.0, 44.5]	7.8 [6.5, 9.3]	6.6 [5.4, 8.0]	11.4 [9.8, 13.1]
<b>Language spoken at home</b>								
English	22.5 [21.3, 23.8]	14.5 [13.5, 15.6]	34.3 [32.9, 35.7]	39.3 [37.9, 40.7]	48.3 [46.8, 49.7]	18.0 [16.9, 19.1]	15.8 [14.7, 16.9]	24.4 [23.2, 25.7]
Other than English	17.0 [15.3, 19.0]	12.6 [10.9, 14.5]	28.0 [25.8, 30.3]	35.8 [33.3, 38.3]	43.3 [40.8, 45.9]	6.2 [5.0, 7.6]	5.9 [4.6, 7.3]	10.0 [8.5, 11.8]
<b>Aboriginal and/or Torres Strait Islander</b>								
No	20.9 [19.8, 22.0]	12.5 [11.6, 13.4]	32.5 [31.3, 33.7]	38.1 [36.8, 39.3]	46.8 [45.5, 48.1]	15.1 [14.2, 16.1]	13.4 [12.5, 14.3]	21.0 [20.0, 22.1]
Yes	36.7 [28.8, 45.4]	25.3 [22.1, 28.8]	43.4 [34.0, 53.4]	53.2 [43.6, 62.6]	58.6 [48.8, 67.8]	35.8 [26.5, 46.3]	26.4 [19.1, 35.3]	40.7 [32.2, 49.9]
<b>Gender identity</b>								
Man or male	20.9 [19.8, 22.0]	25.3 [22.1, 28.8]	32.5 [31.4, 33.8]	38.0 [36.7, 39.2]	46.3 [45.1, 47.6]	15.4 [14.5, 16.4]	13.7 [12.8, 14.7]	21.3 [20.3, 22.5]
Woman/female, non-binary or something different	58.3 [45.8, 69.9]	12.5 [11.6, 13.4]	61.8 [49.2, 72.9]	73.4 [60.6, 83.1]	76.4 [63.7, 85.6]	47.2 [32.9, 61.9]	51.2 [36.8, 65.3]	59.1 [46.7, 70.6]
<b>Sexual orientation</b>								
Straight (heterosexual)	19.2 [18.1, 20.4]	12.5 [11.6, 13.4]	31.1 [29.9, 32.4]	36.1 [34.7, 37.4]	44.4 [43.0, 45.7]	14.5 [13.5, 15.5]	12.9 [11.9, 14.0]	20.4 [19.2, 21.6]
Bisexual	39.6 [33.8, 45.7]	25.3 [22.1, 28.8]	51.5 [45.2, 57.7]	59.2 [53.5, 64.7]	68.8 [63.5, 73.6]	29.3 [23.3, 36.0]	23.9 [19.1, 29.5]	34.0 [28.5, 40.1]

	Mental health symptoms in the 2 weeks prior to Wave 5 (2024/25) survey completion date					Diagnosed mental health conditions from age 18+		
	Depression	Anxiety	MDRS	Anxiety or depression	Any mental health	Depression	Anxiety	Any mental health
	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]
Gay or lesbian	27.3 [22.4, 32.7]	12.5 [11.6, 13.4]	38.8 [33.6, 44.3]	46.7 [41.2, 52.3]	57.2 [51.5, 62.8]	23.4 [18.2, 29.4]	24.3 [19.4,30.1]	29.9 [24.6,35.8]
Asexual, pansexual, queer, d/t term	53.4 [41.1, 65.2]	25.3 [22.1, 28.8]	55.4 [42.9, 67.2]	72.8 [60.5, 82.4]	74.0 [61.6, 83.4]	27.9 [18.0, 40.5]	26.9 [16.8,40.0]	46.4 [34.0,59.3]
<b>Sexual orientation or gender identity</b>								
Heterosexual male	19.2 [18.1, 20.3]	12.5 [11.6, 13.4]	31.1 [29.8, 32.4]	44.9 [42.8, 47.0]	44.3 [42.9, 45.6]	14.6 [13.6, 15.6]	12.9 [11.9,14.0]	20.4 [19.3,21.6]
LGBTQA+	36.0 [32.4, 39.8]	25.3 [22.1, 28.8]	46.3 [42.3, 50.2]	35.5 [33.9, 37.2]	64.1 [60.5, 67.7]	26.4 [22.7, 30.4]	24.7 [21.3,28.4]	33.8 [30.1,37.7]
<b>Ever served in Australian Defence Force</b>								
Never	21.2 [20.1, 22.4]	14.1 [13.2, 15.1]	32.7 [31.4, 33.9]	38.7 [37.4,3 9.9]	46.8 [45.5, 48.0]	15.3 [14.3, 16.3]	13.9 [12.9,14.9]	21.4 [20.3,22.6]
Currently serving	19.3 [11.3, 31.0]	10.0 [5.5, 17.5]	35.4 [25.5, 46.8]	33.7 [22.9, 46.5]	48.1 [36.3, 60.2]	8.7 [4.1, 17.6]	6.4 [2.7,14.4]	9.9 [5.1,18.4]
Previously served	19.7 [15.6, 24.6]	11.9 [8.8, 15.9]	35.0 [29.2, 41.1]	33.5 [27.7, 39.7]	43.8 [37.5, 50.2]	27.2 [22.1, 32.9]	21.6 [16.7,27.6]	34.7 [28.9,41.0]
<b>Ever served in Australian Defence Force</b>								
No	21.5 [20.4, 22.7]	14.1 [13.2, 15.1]	32.7 [31.4, 33.9]	38.8 [37.5, 40.0]	46.8 [45.5, 48.1]	15.3 [14.3, 16.3]	13.9 [12.9,14.9]	21.4 [20.3,22.6]
Yes	20.1 [16.2, 24.7]	11.5 [8.7, 15.0]	35.0 [29.9, 40.5]	33.8 [28.5, 39.6]	44.7 [38.9, 50.5]	23.4 [19.2, 28.3]	18.7 [14.4,23.9]	29.8 [24.8,35.3]
<b>Experienced financial stress</b>								
No	14.0 [13.0, 15.1]	8.5 [7.7, 9.4]	24.1 [22.9, 25.3]	30.0 [28.7, 31.4]	38.0 [36.7, 39.4]	12.3 [11.3, 13.3]	10.7 [9.8,11.6]	17.9 [16.8,19.0]
Yes	40.8 [38.5, 43.2]	28.5 [26.5, 30.6]	56.0 [53.6, 58.4]	61.0 [58.6, 63.3]	70.9 [68.7, 73.0]	25.5 [23.2, 27.9]	23.6 [21.4,26.0]	32.1 [29.7,34.6]
<b>MOS Emotional/Information subscale score</b>								
None of the time	38.9 [35.5, 42.4]	25.9 [23.1, 28.9]	51.0 [47.4, 54.6]	56.4 [53.0, 59.7]	65.0 [61.6, 68.4]	16.2 [13.7, 19.0]	13.7 [11.4,16.5]	21.4 [18.7,24.4]
A little of the time	33.6 [30.9, 36.4]	22.1 [19.7, 24.6]	47.0 [44.2, 49.8]	54.4 [51.4, 57.2]	63.4 [60.6, 66.1]	20.3 [18.0, 22.8]	17.5 [15.4,19.9]	26.0 [23.5,28.6]
Some of the time	22.4 [20.1, 24.7]	13.5 [11.8, 15.4]	34.8 [32.3, 37.3]	41.5 [38.9, 44.2]	51.4 [48.7, 54.1]	17.8 [15.7, 20.1]	16.9 [14.8,19.3]	24.2 [21.9,26.6]
Most of the time	11.6 [10.0, 13.4]	8.0 [6.8, 9.4]	23.1 [21.1, 25.1]	27.4 [25.3, 29.6]	35.8 [33.5, 38.2]	12.4 [11.0, 14.0]	11.5 [10.1,13.0]	18.8 [17.1,20.7]
All of the time	7.3 [5.8, 9.3]	5.7 [4.4, 7.3]	14.9 [12.8, 17.2]	19.3 [17.0, 21.9]	25.6 [22.9, 28.4]	12.5 [10.6, 14.6]	10.7 [9.0,12.8]	18.2 [16.1,20.7]
<b>Not lonely (social connectedness)</b>								
No	8.2 [7.3, 9.1]	5.4 [4.7, 6.2]	19.2 [17.9, 20.5]	22.8 [21.4, 24.1]	31.3 [29.8, 32.8]	10.8 [9.8, 11.8]	9.6 [8.7,10.6]	16.0 [14.9,17.3]
Yes	40.2 [38.3, 42.1]	26.3 [24.6, 28.1]	52.6 [50.5, 54.7]	61.2 [59.3, 63.1]	69.6 [67.7, 71.3]	23.3 [21.6, 25.1]	20.9 [19.1,22.7]	30.0 [28.1,32.0]
<b>Drug/substance use 12 months</b>								
No	18.8 [17.7, 20.0]	12.5 [11.5, 13.5]	27.5 [26.2, 28.8]	35.2 [33.8, 36.6]	42.7 [41.2, 44.1]	14.1 [13.1, 15.2]	12.0 [11.1,13.1]	19.5 [18.4,20.8]
Yes - drug use	28.5 [26.3, 30.9]	18.5 [16.7, 20.5]	47.6 [45.1, 50.1]	47.7 [45.2, 50.2]	59.6 [57.1, 62.0]	20.3 [18.4, 22.4]	19.2 [17.2,21.3]	27.6 [25.5,29.8]

	Mental health symptoms in the 2 weeks prior to Wave 5 (2024/25) survey completion date					Diagnosed mental health conditions from age 18+		
	Depression	Anxiety	MDRS	Anxiety or depression	Any mental health	Depression	Anxiety	Any mental health
	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]	% [95% CI]
<b>Alcohol – AUDIT Score (WHO category)</b>								
Low risk	19.6 [18.4, 20.8]	12.9 [12.0, 14.0]	26.9 [25.6, 28.2]	36.0 [34.6, 37.4]	42.1 [40.7, 43.6]	14.6 [13.5, 15.7]	12.6 [11.6,13.8]	20.4 [19.2,21.7]
Medium	20.6 [18.2, 23.2]	12.5 [10.6, 14.7]	39.9 [37.1, 42.8]	40.0 [37.1, 43.0]	51.3 [48.3, 54.2]	16.7 [14.4, 19.3]	15.1 [12.9,17.6]	22.9 [20.2,25.7]
High	41.0 [36.4 ,45.8]	27.8 [23.5, 32.6]	77.1 [72.9, 80.8]	60.0 [55.1, 64.7]	80.8 [76.8, 84.3]	28.2 [23.7, 33.1]	25.7 [21.3,30.6]	34.5 [29.7,39.7]
<b>ACE class</b>								
Class 1	12.5 [11.4,13.6]	7.8 [7.0,8.6]	22.3 [21.0,23.7]	27.2 [25.8,28.8]	34.7 [33.2,36.3]	10.7 [9.8,11.8]	9.8 [8.8,10.9]	15.4 [14.2,16.7]
Class 2	28.9 [26.9,30.9]	18.7 [16.9,20.6]	42.6 [40.4,44.8]	49.7 [47.5,51.9]	58.9 [56.7,61.0]	20.4 [18.5,22.4]	17.2 [15.5,19.1]	27.5 [25.5,29.7]
Class 3	49.6 [45.3,53.9]	35.7 [31.7,40.0]	64.1 [59.7,68.3]	68.5 [64.4,72.3]	78.3 [74.6,81.5]	34.8 [30.5,39.4]	32.6 [28.6,36.8]	42.2 [38.3,46.3]
<b>Total</b>	<b>21.4 [20.3, 22.5]</b>	<b>14.1 [13.2, 15.0]</b>	<b>33.0 [31.8, 34.2]</b>	<b>38.6 [37.3, 39.8]</b>	<b>47.3 [46.1, 48.5]</b>	<b>15.6 [14.7, 16.6]</b>	<b>13.8 [12.9,14.8]</b>	<b>21.6 [20.5,22.7]</b>

Note: MESG = main English-speaking countries.

Source: *Ten to Men* Wave 5

**Table S9:** Associations between individual and clustered ACEs and (a) recent mental health symptoms and (b) diagnosed mental health conditions from age 18+ years

	Mental health symptoms in the 2 weeks prior to Wave 5 (2024–25) survey completion date				Diagnosed mental health conditions from age 18+		
	Any mental health	Depression (PHQ9)	Anxiety	MDRS	Any mental health	Depression	Anxiety
	aRR [95% CI]	aRR [95% CI]	aRR [95% CI]	aRR [95% CI]	aHR [95% CI]	aHR [95% CI]	aHR [95% CI]
<b>ACE items (ref = 0)</b>							
Physical neglect	1.33 [1.27, 1.4]	1.61 [1.48, 1.75]	1.81 [1.63, 2.02]	1.39 [1.31, 1.49]	1.55 [1.39, 1.73]	1.53 [1.35, 1.75]	1.57 [1.37, 1.81]
Loss of parent	1.53 [1.47, 1.6]	2.05 [1.9, 2.23]	2.16 [1.95, 2.4]	1.69 [1.6, 1.79]	2.04 [1.85, 2.25]	2.06 [1.83, 2.32]	2.07 [1.82, 2.34]
Household mental illness	1.34 [1.28, 1.39]	1.5 [1.39, 1.62]	1.51 [1.37, 1.66]	1.47 [1.39, 1.55]	1.56 [1.44, 1.7]	1.57 [1.41, 1.73]	1.47 [1.32, 1.64]
Household substance abuse	1.53 [1.46, 1.59]	1.84 [1.7, 2]	1.85 [1.68, 2.05]	1.71 [1.61, 1.81]	1.88 [1.73, 2.05]	1.81 [1.64, 2.01]	1.87 [1.68, 2.09]
Parental (domestic) violence	1.28 [1.21, 1.36]	1.58 [1.43, 1.75]	1.69 [1.49, 1.92]	1.39 [1.29, 1.5]	1.78 [1.56, 2.03]	1.77 [1.51, 2.07]	1.86 [1.59, 2.19]
Household incarceration	1.31 [1.26, 1.37]	1.5 [1.39, 1.63]	1.56 [1.4, 1.73]	1.42 [1.34, 1.51]	1.59 [1.45, 1.76]	1.5 [1.33, 1.69]	1.59 [1.41, 1.8]
Verbal abuse	1.17 [1.12, 1.22]	1.32 [1.22, 1.43]	1.45 [1.31, 1.6]	1.2 [1.13, 1.27]	1.32 [1.21, 1.45]	1.38 [1.24, 1.54]	1.31 [1.17, 1.48]
Physical abuse	1.39 [1.33, 1.45]	1.68 [1.56, 1.82]	1.78 [1.61, 1.97]	1.45 [1.37, 1.54]	2.4 [2.2, 2.62]	2.37 [2.14, 2.63]	2.35 [2.11, 2.63]
Emotional neglect	1.36 [1.3, 1.42]	1.58 [1.46, 1.71]	1.56 [1.41, 1.73]	1.49 [1.41, 1.58]	1.81 [1.65, 1.98]	1.74 [1.56, 1.95]	1.84 [1.64, 2.06]
Sexual abuse	1.26 [1.18, 1.34]	1.34 [1.19, 1.51]	1.38 [1.18, 1.61]	1.38 [1.27, 1.5]	1.45 [1.23, 1.71]	1.38 [1.13, 1.68]	1.63 [1.34, 1.98]
At least one ACE (ref = no)	1.52 [1.44, 1.61]	2.04 [1.83, 2.28]	2.01 [1.75, 2.3]	1.68 [1.56, 1.81]	2.15 [1.94, 2.38]	2.14 [1.89, 2.43]	2 [1.75, 2.29]
Multi-type (2+) ACE (ref = no/one ACE)	1.53 [1.47, 1.6]	1.15 [1.13, 1.16]	2.05 [1.85, 2.28]	1.71 [1.61, 1.81]	2.00 [1.84, 2.18]	2.03 [1.82, 2.24]	1.92 [1.72, 2.15]
<b>Number of ACEs (ref = 0)</b>							
One	1.27 [1.19, 1.37]	1.54 [1.33, 1.77]	1.43 [1.2, 1.72]	1.35 [1.22, 1.48]	1.63 [1.43, 1.86]	1.59 [1.35, 1.87]	1.48 [1.24, 1.76]
Two	1.49 [1.39, 1.59]	1.88 [1.63, 2.16]	1.76 [1.47, 2.1]	1.57 [1.42, 1.73]	1.9 [1.66, 2.19]	1.96 [1.66, 2.32]	1.71 [1.42, 2.05]
Three	1.67 [1.55, 1.79]	2.36 [2.06, 2.71]	2.31 [1.94, 2.74]	1.9 [1.73, 2.1]	2.13 [1.84, 2.47]	2.23 [1.87, 2.66]	1.92 [1.58, 2.33]
Four or more	1.88 [1.78, 1.99]	2.83 [2.51, 3.18]	2.95 [2.55, 3.41]	2.22 [2.05, 2.41]	3.1 [2.75, 3.49]	3.01 [2.6, 3.47]	2.97 [2.55, 3.45]
Number of ACEs (linear)	1.1 [1.09, 1.1]	1.15 [1.13, 1.16]	1.16 [1.14, 1.18]	1.12 [1.11, 1.13]	1.19 [1.17, 1.21]	1.18 [1.16, 1.2]	1.18 [1.16, 1.21]
<b>ACE class (ref = Class 1)</b>							
Class 2	1.5 [1.44, 1.57]	1.8 [1.65, 1.96]	1.82 [1.63, 2.03]	1.66 [1.56, 1.76]	1.75 [1.6, 1.91]	1.7 [1.52, 1.9]	1.69 [1.5, 1.9]
Class 3	1.74 [1.65, 1.84]	2.4 [2.16, 2.65]	2.55 [2.24, 2.91]	2.03 [1.89, 2.18]	2.82 [2.5, 3.19]	2.67 [2.31, 3.1]	2.85 [2.45, 3.32]

Notes: aRR = adjusted risk ratio. Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. Percent (%) mediated is detailed in the measures section.

Source: *Ten to Men* Wave 5

## Proportion of the association between ACE profiles and mental ill-health explained by resilience-enhancing/enabling factors

**Table S10:** The effect of social connectedness (not lonely) on the relationship between ACEs and adult mental health

Outcome	Comparison	Natural indirect effect: RR [95% CI]	Natural direct effect: RR [95% CI]	Total effect: RR [95% CI]	Obs.	% mediated
Any mental health symptoms	Class 2 vs 1	1.08 [1.06, 1.09]	1.37 [1.31, 1.44]	1.48 [1.42, 1.55]	10,849	19.09
	Class 3 vs 1	1.11 [1.07, 1.14]	1.68 [1.57, 1.79]	1.85 [1.75, 1.96]	10,849	16.22
GAD-7 moderate/severe anxiety	Class 2 vs 1	1.14 [1.11, 1.17]	1.54 [1.38, 1.71]	1.75 [1.57, 1.95]	10,979	23.65
	Class 3 vs 1	1.20 [1.13, 1.27]	2.22 [1.92, 2.57]	2.66 [2.32, 3.04]	10,979	18.45
MDRS-7 moderate/severe	Class 2 vs 1	1.10 [1.08, 1.12]	1.47 [1.39, 1.57]	1.63 [1.53, 1.73]	10,982	21.19
	Class 3 vs 1	1.15 [1.10, 1.19]	1.87 [1.71, 2.04]	2.14 [1.98, 2.31]	10,982	17.88
PHQ-9 moderate/severe depression	Class 2 vs 1	1.15 [1.12, 1.18]	1.51 [1.39, 1.64]	1.74 [1.60, 1.89]	10,893	25.52
	Class 3 vs 1	1.17 [1.11, 1.22]	2.19 [1.95, 2.46]	2.55 [2.30, 2.84]	10,893	16.29
PHQ-9 or GAD-7 moderate/severe	Class 2 vs 1	1.10 [1.08, 1.12]	1.38 [1.31, 1.46]	1.51 [1.43, 1.59]	10,657	22.29
	Class 3 vs 1	1.13 [1.09, 1.17]	1.76 [1.63, 1.90]	1.98 [1.85, 2.12]	10,657	17.48

**Notes:** Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. Percent (%) mediated is detailed in the measures section. Observations (Obs.) represent the number of participants responding to the item (unweighted).

**Source:** *Ten to Men* Wave 5

**Table S11: The effect of social support (composite) on the relationship between ACEs and adult mental health**

Outcome	Comparison	Natural indirect effect: RR [95% CI]	Natural direct effect: RR [95% CI]	Total effect: RR [95% CI]	Obs.	% mediated
Any mental health symptoms	Class 2 vs 1	1.03 [1.02, 1.04]	1.43 [1.37, 1.50]	1.48 [1.42, 1.55]	10,859	8.54
	Class 3 vs 1	1.07 [1.05, 1.09]	1.73 [1.63, 1.85]	1.86 [1.75, 1.96]	10,859	10.96
GAD-7 moderate/severe anxiety	Class 2 vs 1	1.04 [1.03, 1.06]	1.72 [1.54, 1.92]	1.79 [1.61, 2.00]	10,991	7.13
	Class 3 vs 1	1.11 [1.06, 1.15]	2.38 [2.08, 2.74]	2.64 [2.31, 3.02]	10,991	10.59
MDRS-7 moderate/severe	Class 2 vs 1	1.04 [1.03, 1.05]	1.57 [1.48, 1.67]	1.64 [1.54, 1.74]	10,994	8.00
	Class 3 vs 1	1.08 [1.05, 1.12]	1.97 [1.81, 2.14]	2.14 [1.98, 2.31]	10,994	10.69
PHQ-9 moderate/severe depression	Class 2 vs 1	1.05 [1.04, 1.07]	1.67 [1.54, 1.82]	1.76 [1.62, 1.92]	10,903	9.09
	Class 3 vs 1	1.11 [1.07, 1.15]	2.28 [2.04, 2.55]	2.54 [2.28, 2.82]	10,903	11.41
PHQ-9 or GAD-7 moderate/severe	Class 2 vs 1	1.04 [1.03, 1.05]	1.46 [1.38, 1.53]	1.52 [1.44, 1.60]	10,667	9.70
	Class 3 vs 1	1.08 [1.05, 1.10]	1.84 [1.71, 1.99]	1.98 [1.85, 2.13]	10,667	10.64

**Notes:** Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. Percent (%) mediated is detailed in the measures section. Observations (Obs.) represent the number of participants responding to the item (unweighted).

**Source:** *Ten to Men* Wave 5

**Table S12: The effect of each social support item on the relationship between ACEs and adult depression**

Mediator (brief label)	Natural indirect effect: RR [95% CI] 2 vs 1	Natural direct effect: RR [95% CI] 2 vs 1	Total effect: RR [95% CI] 2 vs 1	Natural indirect effect: RR [95% CI] 3 vs 1	Natural direct effect: RR [95% CI] 3 vs 1	Total effect: RR [95% CI] 3 vs 1	Obs.	% mediated 2 vs 1	% mediated 3 vs 1
Someone to talk to	1.05 [1.04, 1.07]	1.68 [1.54, 1.83]	1.77 [1.62, 1.92]	1.10 [1.08, 1.13]	2.31 [2.07, 2.57]	2.54 [2.29, 2.83]	10,903	8.8	10.3
Advice in a crisis	1.06 [1.04, 1.07]	1.66 [1.53, 1.81]	1.76 [1.62, 1.92]	1.12 [1.09, 1.15]	2.27 [2.04, 2.53]	2.54 [2.29, 2.83]	10,903	10.1	12.1
Info to understand	1.06 [1.04, 1.07]	1.67 [1.54, 1.82]	1.77 [1.62, 1.92]	1.12 [1.09, 1.14]	2.28 [2.05, 2.54]	2.55 [2.29, 2.83]	10,902	9.7	11.9
Someone to confide in	1.05 [1.03, 1.06]	1.69 [1.55, 1.84]	1.77 [1.62, 1.92]	1.09 [1.07, 1.12]	2.33 [2.09, 2.59]	2.54 [2.29, 2.83]	10,903	7.8	9.5
Advice you value	1.06 [1.04, 1.07]	1.67 [1.53, 1.82]	1.76 [1.62, 1.92]	1.08 [1.06, 1.11]	2.34 [2.10, 2.61]	2.54 [2.28, 2.83]	10,899	9.6	8.7
Share worries/fears	1.05 [1.04, 1.07]	1.68 [1.55, 1.83]	1.77 [1.63, 1.93]	1.09 [1.07, 1.11]	2.34 [2.10, 2.60]	2.55 [2.29, 2.83]	10,902	9.0	9.2
Help with a problem	1.05 [1.03, 1.06]	1.69 [1.55, 1.84]	1.76 [1.62, 1.92]	1.10 [1.07, 1.12]	2.32 [2.08, 2.58]	2.55 [2.29, 2.83]	10,901	7.8	9.9
Someone who understands	1.06 [1.04, 1.07]	1.67 [1.53, 1.81]	1.76 [1.62, 1.92]	1.11 [1.08, 1.13]	2.30 [2.06, 2.55]	2.54 [2.28, 2.83]	10,902	9.8	10.9

**Notes:** Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. Percent (%) mediated is detailed in the measures section. Observations (Obs.) represent the number of participants responding to the item (unweighted).

**Source:** *Ten to Men* Wave 5

**Table S13:** The effect of each social support item on the relationship between ACEs and adult anxiety

Mediator (brief label)	Natural indirect effect: RR [95% CI] 2 vs 1	Natural direct effect: RR [95% CI] 2 vs 1	Total effect RR: [95% CI] 2 vs 1	Natural indirect effect: RR [95% CI] 3 vs 1	Natural direct effect: RR [95% CI] 3 vs 1	Total effect: RR [95% CI] 3 vs 1	Obs.	% mediated 2 vs 1	% mediated 3 vs 1
Someone to talk to	1.05 [1.04, 1.07]	1.71 [1.53, 1.91]	1.80 [1.61, 2.01]	1.11 [1.08, 1.13]	2.40 [2.09, 2.75]	2.65 [2.32, 3.04]	10,991	8.6	10.4
Advice in a crisis	1.05 [1.04, 1.07]	1.70 [1.53, 1.90]	1.80 [1.61, 2.00]	1.11 [1.08, 1.14]	2.39 [2.08, 2.74]	2.65 [2.32, 3.04]	10,991	9.1	10.9
Info to understand	1.06 [1.04, 1.07]	1.70 [1.53, 1.90]	1.80 [1.61, 2.01]	1.12 [1.09, 1.15]	2.38 [2.07, 2.72]	2.65 [2.32, 3.04]	10,990	9.2	11.3
Someone to confide in	1.05 [1.03, 1.06]	1.73 [1.55, 1.92]	1.80 [1.62, 2.01]	1.09 [1.07, 1.12]	2.42 [2.12, 2.77]	2.65 [2.32, 3.04]	10,990	7.5	9.3
Advice you value	1.05 [1.03, 1.06]	1.71 [1.53, 1.91]	1.80 [1.61, 2.00]	1.08 [1.05, 1.10]	2.46 [2.15, 2.82]	2.65 [2.32, 3.03]	10,987	8.2	7.6
Share worries/fears	1.05 [1.03, 1.06]	1.72 [1.55, 1.92]	1.80 [1.62, 2.01]	1.08 [1.06, 1.10]	2.46 [2.15, 2.82]	2.66 [2.32, 3.04]	10,990	7.5	7.7
Help with a problem	1.04 [1.03, 1.06]	1.72 [1.55, 1.92]	1.80 [1.61, 2.00]	1.09 [1.07, 1.12]	2.43 [2.12, 2.78]	2.66 [2.32, 3.04]	10,989	7.1	9.2
Someone who understands	1.05 [1.04, 1.07]	1.70 [1.53, 1.90]	1.79 [1.61, 2.00]	1.10 [1.07, 1.12]	2.42 [2.11, 2.77]	2.65 [2.32, 3.04]	10,989	8.7	9.6

**Notes:** Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. Percent (%) mediated is detailed in the measures section. Observations (Obs.) represent the number of participants responding to the item (unweighted).

**Source:** *Ten to Men* Wave 5

**Table S14:** The effect of each social support item on the relationship between ACEs and adult MDRS

Mediator (brief label)	Natural indirect effect: RR [95% CI] 2 vs 1	Natural direct effect: RR [95% CI] 2 vs 1	Total effect: RR [95% CI] 2 vs 1	Natural indirect effect: RR [95% CI] 3 vs 1	Natural direct effect: RR [95% CI] 3 vs 1	Total effect: RR [95% CI] 3 vs 1	Obs.	% mediated 2 vs 1	% mediated 3 vs 1
Someone to talk to	1.04 [1.02, 1.05]	1.58 [1.49, 1.68]	1.64 [1.54, 1.74]	1.07 [1.05, 1.08]	2.00 [1.85, 2.17]	2.14 [1.98, 2.31]	10,994	7.1	8.4
Advice in a crisis	1.04 [1.03, 1.05]	1.57 [1.48, 1.67]	1.64 [1.54, 1.74]	1.08 [1.06, 1.10]	1.98 [1.83, 2.15]	2.14 [1.98, 2.31]	10,994	8.3	10.0
Info to understand	1.04 [1.03, 1.05]	1.58 [1.48, 1.67]	1.64 [1.54, 1.74]	1.07 [1.06, 1.09]	1.99 [1.84, 2.15]	2.14 [1.98, 2.31]	10,993	7.6	9.5
Someone to confide in	1.03 [1.02, 1.04]	1.59 [1.49, 1.68]	1.64 [1.54, 1.74]	1.06 [1.05, 1.08]	2.01 [1.86, 2.18]	2.14 [1.98, 2.31]	10,993	6.5	7.9
Advice you value	1.04 [1.03, 1.05]	1.57 [1.48, 1.67]	1.64 [1.54, 1.74]	1.06 [1.04, 1.08]	2.02 [1.86, 2.18]	2.14 [1.98, 2.31]	10,990	8.3	7.6
Share worries/fears	1.04 [1.03, 1.05]	1.58 [1.49, 1.68]	1.64 [1.54, 1.74]	1.06 [1.04, 1.07]	2.02 [1.87, 2.19]	2.14 [1.98, 2.31]	10,993	7.2	7.3
Help with a problem	1.03 [1.02, 1.04]	1.58 [1.49, 1.68]	1.64 [1.54, 1.74]	1.07 [1.05, 1.08]	2.01 [1.85, 2.17]	2.14 [1.98, 2.31]	10,992	6.6	8.5
Someone who understands	1.04 [1.03, 1.05]	1.57 [1.48, 1.67]	1.64 [1.54, 1.74]	1.07 [1.05, 1.09]	2.00 [1.85, 2.16]	2.14 [1.98, 2.31]	10,992	8.0	8.8

**Notes:** Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. Percent (%) mediated is detailed in the measures section. Observations (Obs.) represent the number of participants responding to the item (unweighted).

**Source:** *Ten to Men* Wave 5

**Table S15: The effect of each social support item on the relationship between ACEs and any mental health**

Mediator (brief label)	Natural indirect effect: RR [95% CI] 2 vs 1	Natural direct effect: RR [95% CI] 2 vs 1	Total effect: RR [95% CI] 2 vs 1	Natural indirect effect: RR [95% CI] 3 vs 1	Natural direct effect: RR [95% CI] 3 vs 1	Total effect: RR [95% CI] 3 vs 1	Obs.	% mediated 2 vs 1	% mediated 3 vs 1
Someone to talk to	1.03 [1.02, 1.03]	1.44 [1.38, 1.51]	1.48 [1.42, 1.55]	1.04 [1.03, 1.05]	1.78 [1.68, 1.89]	1.86 [1.75, 1.96]	10,859	6.4	6.5
Advice in a crisis	1.03 [1.02, 1.04]	1.44 [1.38, 1.50]	1.48 [1.42, 1.55]	1.05 [1.04, 1.06]	1.77 [1.67, 1.88]	1.86 [1.76, 1.96]	10,859	7.5	7.8
Info to understand	1.03 [1.02, 1.04]	1.44 [1.38, 1.50]	1.48 [1.42, 1.55]	1.05 [1.04, 1.06]	1.77 [1.67, 1.88]	1.86 [1.76, 1.97]	10,858	7.2	7.8
Someone to confide in	1.02 [1.02, 1.03]	1.45 [1.38, 1.51]	1.48 [1.42, 1.55]	1.04 [1.03, 1.05]	1.79 [1.68, 1.89]	1.86 [1.76, 1.97]	10,858	6.0	6.5
Advice you value	1.03 [1.02, 1.04]	1.44 [1.38, 1.50]	1.48 [1.42, 1.55]	1.04 [1.03, 1.05]	1.79 [1.69, 1.90]	1.86 [1.75, 1.96]	10,855	7.5	5.9
Share worries/fears	1.03 [1.02, 1.04]	1.44 [1.38, 1.51]	1.48 [1.42, 1.55]	1.04 [1.03, 1.05]	1.79 [1.69, 1.90]	1.86 [1.76, 1.97]	10,858	6.9	6.1
Help with a problem	1.02 [1.02, 1.03]	1.45 [1.39, 1.51]	1.48 [1.42, 1.55]	1.04 [1.03, 1.05]	1.79 [1.68, 1.89]	1.86 [1.76, 1.97]	10,857	5.9	6.7
Someone who understands	1.03 [1.02, 1.04]	1.44 [1.38, 1.50]	1.48 [1.42, 1.55]	1.05 [1.03, 1.06]	1.78 [1.67, 1.88]	1.86 [1.76, 1.97]	10,857	7.5	7.3

**Notes:** Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. Percent (%) mediated is detailed in the measures section. Observations (Obs.) represent the number of participants responding to the item (unweighted).

Source: *Ten to Men* Wave 5

**Table S16: The effect of drug use on the relationship between ACEs and adult mental health**

Outcome	Comparison	Natural indirect effect: RR [95% CI]	Natural direct effect: RR [95% CI]	Total effect: RR [95% CI]	Obs.	% mediated
Any mental health symptoms	Class 2 vs 1	1.01 [1.00, 1.02]	1.47 [1.40, 1.53]	1.48 [1.42, 1.55]	10,850	1.75
	Class 3 vs 1	1.01 [1.00, 1.03]	1.83 [1.72, 1.95]	1.86 [1.75, 1.97]	10,850	2.2
GAD-7 moderate/severe anxiety	Class 2 vs 1	1.01 [1.00, 1.02]	1.78 [1.59, 1.99]	1.80 [1.61, 2.00]	10,983	1.53
	Class 3 vs 1	1.03 [0.99, 1.07]	2.57 [2.23, 2.97]	2.65 [2.32, 3.04]	10,983	3.14
MDRS-7 moderate/severe	Class 2 vs 1	1.02 [1.02, 1.03]	1.60 [1.50, 1.70]	1.64 [1.54, 1.74]	10,985	5.2
	Class 3 vs 1	1.05 [1.03, 1.08]	2.03 [1.87, 2.21]	2.14 [1.98, 2.31]	10,985	6.68
PHQ-9 moderate/severe depression	Class 2 vs 1	1.01 [1.00, 1.02]	1.74 [1.60, 1.90]	1.76 [1.62, 1.92]	10,895	0.71
	Class 3 vs 1	1.00 [0.97, 1.03]	2.53 [2.26, 2.83]	2.54 [2.28, 2.83]	10,895	0.29
PHQ-9 or GAD-7 moderate/severe	Class 2 vs 1	1.01 [1.00, 1.01]	1.51 [1.43, 1.59]	1.52 [1.44, 1.60]	10,658	1.49
	Class 3 vs 1	1.00 [0.98, 1.02]	1.98 [1.84, 2.13]	1.99 [1.85, 2.13]	10,658	0.51

**Notes:** Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. Percent (%) mediated is detailed in the measures section. Observations (Obs.) represent the number of participants responding to the item (unweighted).

Source: *Ten to Men* Wave 5

**Table S17: The effect of Alcohol risk (AUDIT on the relationship between ACEs and adult mental health**

Outcome	Comparison	Natural indirect effect: RR [95% CI]	Natural direct effect: RR [95% CI]	Total effect: RR [95% CI]	Obs.	% mediated
Any mental health symptoms	Class 2 vs 1	1.01 [1.01, 1.02]	1.47 [1.40, 1.53]	1.49 [1.42, 1.56]	10,563	3.39
	Class 3 vs 1	1.02 [1.01, 1.03]	1.84 [1.73, 1.95]	1.88 [1.77, 1.99]	10,563	3.45
GAD-7 moderate/severe anxiety	Class 2 vs 1	1.00 [0.99, 1.01]	1.79 [1.60, 2.00]	1.79 [1.60, 2.00]	10,692	0.26
	Class 3 vs 1	1.02 [0.99, 1.04]	2.62 [2.28, 3.01]	2.66 [2.32, 3.06]	10,692	1.58
MDRS-7 moderate/severe	Class 2 vs 1	1.03 [1.02, 1.04]	1.59 [1.50, 1.69]	1.64 [1.54, 1.74]	10,695	5.82
	Class 3 vs 1	1.05 [1.03, 1.07]	2.08 [1.92, 2.25]	2.17 [2.01, 2.35]	10,695	5.82
PHQ-9 moderate/severe depression	Class 2 vs 1	1.01 [1.00, 1.01]	1.74 [1.60, 1.90]	1.76 [1.61, 1.92]	10,607	1.22
	Class 3 vs 1	1.01 [0.99, 1.03]	2.52 [2.26, 2.81]	2.54 [2.28, 2.83]	10,607	0.98
PHQ-9 or GAD-7 moderate/severe	Class 2 vs 1	1.01 [1.00, 1.01]	1.51 [1.43, 1.60]	1.53 [1.45, 1.61]	10,376	0.87
	Class 3 vs 1	1.01 [1.00, 1.03]	1.97 [1.83, 2.12]	2.00 [1.86, 2.14]	10,376	2.05

Notes: Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. Percent (%) mediated is detailed in the measures section. Observations (Obs.) represent the number of participants responding to the item (unweighted).

Source: *Ten to Men* Wave 5

**Table S18: The effect of social support + social connectedness on the relationship between ACEs and adult mental health**

Outcome	Comparison	Natural indirect effect: RR (95% CI)	Natural direct effect: RR (95% CI)	Total effect: RR [95% CI]	Obs.	% mediated
Any mental health symptoms	Class 2 vs 1	1.13 [1.10, 1.16]	1.33 [1.26, 1.41]	1.50 [1.43, 1.59]	7,149	29.61
	Class 3 vs 1	1.19 [1.14, 1.25]	1.60 [1.46, 1.74]	1.90 [1.78, 2.04]	7,149	27.38
GAD-7 moderate/severe anxiety	Class 2 vs 1	1.18 [1.14, 1.23]	1.52 [1.34, 1.72]	1.79 [1.58, 2.04]	7,229	27.32
	Class 3 vs 1	1.30 [1.19, 1.41]	2.08 [1.75, 2.47]	2.70 [2.31, 3.15]	7,229	26.28
MDRS-7 moderate/severe	Class 2 vs 1	1.16 [1.13, 1.19]	1.44 [1.34, 1.55]	1.67 [1.56, 1.80]	7,229	29.9
	Class 3 vs 1	1.25 [1.18, 1.33]	1.75 [1.57, 1.95]	2.19 [2.00, 2.40]	7,229	28.77
PHQ-9 moderate/severe depression	Class 2 vs 1	1.22 [1.18, 1.27]	1.41 [1.29, 1.56]	1.73 [1.56, 1.90]	7,176	30.09
	Class 3 vs 1	1.31 [1.22, 1.41]	1.89 [1.65, 2.17]	2.47 [2.18, 2.79]	7,176	29.67
PHQ-9 or GAD-7 moderate/severe	Class 2 vs 1	1.16 [1.13, 1.19]	1.32 [1.24, 1.41]	1.53 [1.43, 1.63]	7,023	23.26
	Class 3 vs 1	1.22 [1.15, 1.29]	1.66 [1.50, 1.84]	2.03 [1.87, 2.20]	7,023	28.07

Notes: Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. Percent (%) mediated is detailed in the measures section. Observations (Obs.) represent the number of participants responding to the item (unweighted).

Source: *Ten to Men* Wave 5

**Table S19: The effect of social support + no drug use on the relationship between ACEs and adult mental health**

Outcome	Comparison	Natural indirect effect: RR [95% CI]	Natural direct effect: RR [95% CI]	Total effect: RR [95% CI]	Obs.	% mediated
Any mental health symptoms	Class 2 vs 1	1.09 [1.07, 1.12]	1.50 [1.40, 1.61]	1.64 [1.53, 1.76]	5,311	16.15
	Class 3 vs 1	1.18 [1.10, 1.26]	1.74 [1.54, 1.96]	2.05 [1.87, 2.24]	5,311	22.8
GAD-7 moderate/severe anxiety	Class 2 vs 1	1.10 [1.06, 1.15]	2.15 [1.80, 2.56]	2.37 [2.00, 2.81]	5,372	11.37
	Class 3 vs 1	1.32 [1.15, 1.51]	2.55 [1.98, 3.29]	3.36 [2.73, 4.13]	5,372	22.84
MDRS-7 moderate/severe	Class 2 vs 1	1.14 [1.10, 1.18]	1.62 [1.47, 1.78]	1.85 [1.68, 2.03]	5,374	23.65
	Class 3 vs 1	1.30 [1.19, 1.43]	1.93 [1.65, 2.25]	2.51 [2.23, 2.82]	5,374	28.84
PHQ-9 moderate/severe depression	Class 2 vs 1	1.15 [1.10, 1.19]	1.75 [1.52, 2.01]	2.01 [1.75, 2.30]	5,324	19.86
	Class 3 vs 1	1.23 [1.10, 1.37]	2.56 [2.08, 3.15]	3.15 [2.67, 3.71]	5,324	17.94
PHQ-9 or GAD-7 moderate/severe	Class 2 vs 1	1.10 [1.07, 1.13]	1.54 [1.41, 1.68]	1.69 [1.55, 1.83]	5,212	11.16
	Class 3 vs 1	1.16 [1.08, 1.25]	1.94 [1.68, 2.24]	2.25 [2.02, 2.51]	5,212	18.39

Notes: Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. Percent (%) mediated is detailed in the measures section. Observations (Obs.) represent the number of participants responding to the item (unweighted).

Source: *Ten to Men* Wave 5

**Table S20: The effect of social connectedness + no drug use on the relationship between ACEs and adult mental health**

Outcome	Comparison	Natural indirect effect: RR [95% CI]	Natural direct effect: RR [95% CI]	Total effect: RR [95% CI]	Obs.	% mediated
Any mental health symptoms	Class 2 vs 1	1.11 [1.09, 1.14]	1.46 [1.36, 1.57]	1.63 [1.52, 1.74]	6,362	17.83
	Class 3 vs 1	1.18 [1.11, 1.26]	1.80 [1.60, 2.03]	2.13 [1.95, 2.33]	6,362	22.21
GAD-7 moderate/severe anxiety	Class 2 vs 1	1.22 [1.15, 1.29]	1.89 [1.58, 2.27]	2.31 [1.94, 2.74]	6,434	23.58
	Class 3 vs 1	1.48 [1.26, 1.72]	2.49 [1.90, 3.27]	3.68 [2.98, 4.53]	6,434	29.94
MDRS-7 moderate/severe	Class 2 vs 1	1.19 [1.15, 1.23]	1.56 [1.42, 1.72]	1.85 [1.69, 2.03]	6,437	28.01
	Class 3 vs 1	1.38 [1.25, 1.52]	1.84 [1.55, 2.17]	2.53 [2.24, 2.86]	6,437	34.61
PHQ-9 moderate/severe depression	Class 2 vs 1	1.24 [1.18, 1.30]	1.71 [1.49, 1.96]	2.11 [1.85, 2.41]	6,379	28.35
	Class 3 vs 1	1.27 [1.14, 1.42]	2.66 [2.15, 3.28]	3.38 [2.86, 3.99]	6,379	19.67
PHQ-9 or GAD-7 moderate/severe	Class 2 vs 1	1.13 [1.10, 1.16]	1.49 [1.37, 1.62]	1.68 [1.55, 1.82]	6,261	23.32
	Class 3 vs 1	1.19 [1.11, 1.28]	1.99 [1.73, 2.29]	2.37 [2.13, 2.64]	6,261	20.08

Notes: Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. Percent (%) mediated is detailed in the measures section. Observations (Obs.) represent the number of participants responding to the item (unweighted).

Source: *Ten to Men* Wave 5

## Moderation effects of priority population groups

**Table S21:** ACE class × priority population groups (PHQ9 depression)

Priority group (modifier)	Reference (baseline)	Interaction term	aRR [95% CI]	p value
Country of birth ( <i>n</i> = 10,865)	Class 1 × Australian-born	Class 2 × Immigrant, MESC	0.98 [0.70, 1.36]	0.900
		Class 2 × Immigrant, non-MESC	1.09 [0.89, 1.34]	0.405
		Class 3 × Immigrant, MESC	0.82 [0.56, 1.19]	0.294
		Class 3 × Immigrant, non-MESC	1.28 [1.00, 1.63]	0.047
Language spoken at home ( <i>n</i> = 10,847)	Class 1 × English at home	Class 2 × Other than English	1.02 [0.82, 1.27]	0.832
		Class 3 × Other than English	1.12 [0.85, 1.48]	0.413
Remoteness ( <i>n</i> = 10,708)	Class 1 × Major cities	Class 2 × Inner regional	0.98 [0.78, 1.24]	0.876
		Class 2 × Outer regional/remote	0.72 [0.56, 0.94]	0.015
		Class 3 × Inner regional	1.10 [0.86, 1.41]	0.451
		Class 3 × Outer regional/remote	0.94 [0.73, 1.21]	0.632
Defence service ( <i>n</i> = 10,905)	Class 1 × Never served	Class 2 × Ever served in Australian Defence Force	1.01 [0.69, 1.48]	0.969
		Class 3 × Ever served in Australian Defence Force	0.96 [0.63, 1.45]	0.837
Sexuality ( <i>n</i> = 10,786)	Class 1 × Heterosexual male	Class 2 × LGBTQA+	0.90 [0.73, 1.13]	0.368
		Class 3 × LGBTQA+	0.59 [0.47, 0.74]	<0.001
Aboriginal and/or Torres Strait Islander status ( <i>n</i> = 10,851)	Class 1 × Not Aboriginal and/or Torres Strait Islander	Class 2 × Aboriginal and/or Torres Strait Islander status	0.93 [0.64, 1.37]	0.732
		Class 3 × Aboriginal and/or Torres Strait Islander status	0.70 [0.49, 1.01]	0.056
Disability ( <i>n</i> = 10,921)	Class 1 × No disability	Class 2 × Disability	0.81 [0.67, 0.99]	0.040
		Class 3 × Disability	0.51 [0.40, 0.66]	<0.001
Area-level disadvantage (IRSD) ( <i>n</i> = 10,674)	Class 1 × Low disadvantage	Class 2 × High disadvantage	0.86 [0.67, 1.10]	0.231
		Class 2 × Middle disadvantage	0.84 [0.67, 1.05]	0.129
		Class 3 × High disadvantage	0.76 [0.57, 1.01]	0.062
		Class 3 × Middle disadvantage	0.76 [0.58, 1.01]	0.058

**Notes:** Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. MESC = main English-speaking countries.

**Source:** *Ten to Men* Wave 5

**Table S22: ACE class × priority population groups (Anxiety (GAD7))**

Priority group (modifier)	Reference (baseline)	Interaction term	aRR [95% CI]	p value
Country of birth ( <i>n</i> = 10,952)	Class 1 × Australian-born	Class 2 × Immigrant, MESC	1.16 [0.73, 1.86]	0.534
		Class 2 × Immigrant, non-MESC	1.00 [0.78, 1.28]	0.997
		Class 3 × Immigrant, MESC	1.06 [0.63, 1.77]	0.831
		Class 3 × Immigrant, non-MESC	0.98 [0.72, 1.34]	0.887
Language spoken at home ( <i>n</i> = 10,933)	Class 1 × English at home	Class 2 × Other than English	0.88 [0.68, 1.15]	0.349
		Class 3 × Other than English	0.82 [0.58, 1.17]	0.279
Remoteness ( <i>n</i> = 10,791)	Class 1 × Major cities	Class 2 × Inner regional	0.90 [0.67, 1.22]	0.502
		Class 2 × Outer regional/remote	0.98 [0.69, 1.38]	0.893
		Class 3 × Inner regional	1.05 [0.76, 1.44]	0.784
		Class 3 × Outer regional/remote	0.97 [0.68, 1.38]	0.863
Defence service ( <i>n</i> = 10,992)	Class 1 × Never served	Class 2 × Ever served in Australian Defence Force	1.00 [0.61, 1.63]	0.992
		Class 3 × Ever served in Australian Defence Force	0.81 [0.46, 1.42]	0.455
Sexuality ( <i>n</i> = 10,871)	Class 1 × Heterosexual male	Class 2 × LGBTQA+	0.98 [0.74, 1.30]	0.872
		Class 3 × LGBTQA+	0.70 [0.52, 0.94]	0.018
Aboriginal and/or Torres Strait Islander status ( <i>n</i> = 10,890)	Class 1 × Not Aboriginal and/or Torres Strait Islander	Class 2 × Aboriginal and/or Torres Strait Islander status	1.20 [0.62, 2.35]	0.587
		Class 3 × Aboriginal and/or Torres Strait Islander status	1.25 [0.68, 2.32]	0.469
Disability ( <i>n</i> = 11,009)	Class 1 × No disability	Class 2 × Disability	0.77 [0.61, 0.98]	0.035
		Class 3 × Disability	0.66 [0.48, 0.92]	0.013
Area-level disadvantage (IRSD) ( <i>n</i> = 10,755)	Class 1 × Low disadvantage	Class 2 × High disadvantage	0.73 [0.53, 1.00]	0.052
		Class 2 × Middle disadvantage	0.72 [0.54, 0.97]	0.031
		Class 3 × High disadvantage	0.79 [0.53, 1.18]	0.249
		Class 3 × Middle disadvantage	0.94 [0.64, 1.37]	0.738

**Notes:** Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. MESC = main English-speaking countries.

**Source:** *Ten to Men* Wave 5

**Table S23: Male Depression Risk Scale – symptoms: ACE class × Priority population groups**

Priority group (modifier)	Reference (baseline)	Interaction term	aRR [95% CI]	p value
Country of birth ( <i>n</i> = 10,954)	Class 1 × Australian-born	Class 2 × Immigrant, MESC	1.10 [0.87, 1.40]	0.429
		Class 2 × Immigrant, non-MESC	1.06 [0.92, 1.23]	0.402
		Class 3 × Immigrant, MESC	1.04 [0.80, 1.36]	0.770
		Class 3 × Immigrant, non-MESC	1.17 [0.98, 1.40]	0.076
Language spoken at home ( <i>n</i> = 10,954)	Class 1 × English at home	Class 2 × Other than English	1.08 [0.92, 1.26]	0.367
		Class 3 × Other than English	1.23 [1.01, 1.50]	0.037
Remoteness ( <i>n</i> = 10,793)	Class 1 × Major cities	Class 2 × Inner regional	1.00 [0.85, 1.17]	0.995
		Class 2 × Outer regional/remote	0.94 [0.78, 1.14]	0.551
		Class 3 × Inner regional	0.98 [0.82, 1.17]	0.842
		Class 3 × Outer regional/remote	1.01 [0.84, 1.22]	0.925
Defence service ( <i>n</i> = 10,994)	Class 1 × Never served	Class 2 × Ever served in Australian Defence Force	1.05 [0.79, 1.40]	0.752
		Class 3 × Ever served in Australian Defence Force	1.05 [0.76, 1.44]	0.781
Sexuality ( <i>n</i> = 10,872)	Class 1 × Heterosexual male	Class 2 × LGBTQA+	0.81 [0.68, 0.96]	0.014
		Class 3 × LGBTQA+	0.72 [0.61, 0.85]	<0.001
Aboriginal and/or Torres Strait Islander status ( <i>n</i> = 10,892)	Class 1 × Not Aboriginal and/or Torres Strait Islander	Class 2 × Aboriginal and/or Torres Strait Islander status	1.10 [0.77, 1.57]	0.603
		Class 3 × Aboriginal and/or Torres Strait Islander status	0.99 [0.70, 1.38]	0.935
Disability ( <i>n</i> = 11,011)	Class 1 × No disability	Class 2 × Disability	0.83 [0.73, 0.94]	0.003
		Class 3 × Disability	0.68 [0.57, 0.80]	<0.001
Area level disadvantage (IRSD) ( <i>n</i> = 10,757)	Class 1 × Low disadvantage	Class 2 × High disadvantage	0.92 [0.77, 1.09]	0.344
		Class 2 × Middle disadvantage	0.92 [0.78, 1.08]	0.301
		Class 3 × High disadvantage	0.83 [0.68, 1.02]	0.072
		Class 3 × Middle disadvantage	0.83 [0.68, 1.02]	0.072

**Notes:** Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. MESC = main English-speaking countries.

**Source:** *Ten to Men* Wave 5

**Table S24: Anxiety or depression symptoms (PHQ9 or GAD7): ACE class × Priority population groups**

Priority group (modifier)	Reference (baseline)	Interaction term	aRR [95% CI]	p value
Country of birth (n = 10,630)	Class 1 × Australian-born	Class 2 × Immigrant, MESC	0.96 [0.78, 1.17]	0.668
		Class 2 × Immigrant, non-MESC	1.06 [0.94, 1.20]	0.319
		Class 3 × Immigrant, MESC	0.83 [0.65, 1.05]	0.125
		Class 3 × Immigrant, non-MESC	1.23 [1.07, 1.43]	0.004
Language spoken at home (n = 10,612)	Class 1 × English at home	Class 2 × Other than English	1.04 [0.91, 1.18]	0.566
		Class 3 × Other than English	1.17 [1.00, 1.36]	0.053
Remoteness (n = 10,476)	Class 1 × Major cities	Class 2 × Inner regional	1.02 [0.88, 1.17]	0.805
		Class 2 × Outer regional/remote	1.01 [0.85, 1.21]	0.872
		Class 3 × Inner regional	0.97 [0.83, 1.14]	0.694
		Class 3 × Outer regional/remote	1.03 [0.86, 1.22]	0.777
Defence service (n = 10,669)	Class 1 × Never served	Class 2 × Ever served in Australian Defence Force	1.08 [0.83, 1.42]	0.553
		Class 3 × Ever served in Australian Defence Force	1.09 [0.81, 1.46]	0.58
Sexuality (n = 10,552)	Class 1 × Heterosexual male	Class 2 × LGBTQA+	0.79 [0.69, 0.91]	0.001
		Class 3 × LGBTQA+	0.70 [0.61, 0.80]	<0.001
Aboriginal and/or Torres Strait Islander status (n = 10,606)	Class 1 × Not Aboriginal and/or Torres Strait Islander	Class 2 × Aboriginal and/or Torres Strait Islander status	1.04 [0.78, 1.38]	0.792
		Class 3 × Aboriginal and/or Torres Strait Islander status	0.91 [0.69, 1.19]	0.482
Disability (n = 10,684)	Class 1 × No disability	Class 2 × Disability	0.82 [0.74, 0.92]	0.001
		Class 3 × Disability	0.63 [0.54, 0.73]	<0.001
Arealevel disadvantage (IRSD) (n = 10,444)	Class 1 × Low disadvantage	Class 2 × High disadvantage	1.04 [0.89, 1.22]	0.600
		Class 2 × Middle disadvantage	0.98 [0.86, 1.13]	0.819
		Class 3 × High disadvantage	0.82 [0.69, 0.97]	0.021
		Class 3 × Middle disadvantage	0.79 [0.68, 0.93]	0.005

**Notes:** Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. MESC = main English-speaking countries.

**Source:** Ten to Men Wave 5

**Table S25: Any mental health symptoms: ACE class × Priority population groups**

Priority group (modifier)	Reference (baseline)	Interaction term	aRR [95% CI]	p value
Country of birth ( <i>n</i> = 10,820)	Class 1 × Australian-born	Class 2 × Immigrant, MESC	0.97 [0.82, 1.16]	0.756
		Class 2 × Immigrant, non-MESC	1.02 [0.92, 1.13]	0.739
		Class 3 × Immigrant, MESC	0.89 [0.73, 1.08]	0.238
Language spoken at home ( <i>n</i> = 10,803)	Class 1 × English at home	Class 3 × Immigrant, non-MESC	1.16 [1.03, 1.30]	0.017
		Class 2 × Other than English	1.04 [0.93, 1.16]	0.509
Remoteness ( <i>n</i> = 10,667)	Class 1 × Major cities	Class 3 × Other than English	1.15 [1.01, 1.31]	0.033
		Class 2 × Inner regional	1.03 [0.92, 1.16]	0.572
		Class 2 × Outer regional/remote	1.00 [0.87, 1.15]	0.973
Defence service ( <i>n</i> = 10,859)	Class 1 × Never served	Class 3 × Inner regional	0.98 [0.87, 1.11]	0.778
		Class 3 × Outer regional/remote	1.03 [0.90, 1.19]	0.644
		Class 2 × Ever served in Australian Defence Force	1.02 [0.82, 1.27]	0.864
Sexuality ( <i>n</i> = 10,739)	Class 1 × Heterosexual male	Class 3 × Ever served in Australian Defence Force	1.07 [0.85, 1.34]	0.586
		Class 2 × LGBTQA+	0.83 [0.74, 0.94]	0.002
Aboriginal and/or Torres Strait Islander status ( <i>n</i> = 10,774)	Class 1 × Not Aboriginal and/or Torres Strait Islander	Class 3 × LGBTQA+	0.73 [0.65, 0.82]	<0.001
		Class 2 × Aboriginal and/or Torres Strait Islander	1.11 [0.85, 1.44]	0.442
Disability ( <i>n</i> = 10,876)	Class 1 × No disability	Class 3 × Aboriginal and/or Torres Strait Islander	1.00 [0.78, 1.28]	0.976
		Class 2 × Disability	0.80 [0.73, 0.87]	<0.001
Area-level disadvantage (IRSD) ( <i>n</i> = 10,633)	Class 1 × Low disadvantage	Class 3 × Disability	0.63 [0.57, 0.71]	<0.001
		Class 2 × High disadvantage	0.96 [0.85, 1.09]	0.562
		Class 2 × Middle disadvantage	0.95 [0.85, 1.07]	0.433
		Class 3 × High disadvantage	0.83 [0.72, 0.95]	0.008
		Class 3 × Middle disadvantage	0.84 [0.73, 0.96]	0.009

**Notes:** Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. MESC = main English-speaking countries.

**Source:** *Ten to Men* Wave 5

**Table S26: Diagnosed depression (18+): ACE class × priority population groups (Cox aHR)**

Priority group (modifier)	Reference (baseline)	Interaction term	aHR [95% CI]	p value
Country of birth ( <i>n</i> = 10,234)	Class 1 × Australian-born	Class 2 × Immigrant, MESC	1.35 [0.92, 1.99]	0.121
		Class 2 × Immigrant, non-MESC	1.53 [1.12, 2.09]	0.008
		Class 3 × Immigrant, MESC	0.76 [0.44, 1.31]	0.323
		Class 3 × Immigrant, non-MESC	1.61 [1.05, 2.46]	0.029
Language spoken at home ( <i>n</i> = 10,216)	Class 1 × English at home	Class 2 × Other than English	1.38 [0.95, 2.02]	0.091
		Class 3 × Other than English	1.63 [0.96, 2.78]	0.071
Remoteness ( <i>n</i> = 10,073)	Class 1 × Major cities	Class 2 × Inner regional	0.91 [0.69, 1.21]	0.53
		Class 2 × Outer regional/remote	0.68 [0.49, 0.95]	0.023
		Class 3 × Inner regional	1.16 [0.82, 1.65]	0.389
		Class 3 × Outer regional/remote	0.85 [0.58, 1.26]	0.419
Defence service ( <i>n</i> = 10,272)	Class 1 × Never served	Class 2 × Ever served in Australian Defence Force	0.61 [0.41, 0.92]	0.019
		Class 3 × Ever served in Australian Defence Force	0.52 [0.31, 0.85]	0.009
Sexuality ( <i>n</i> = 10,163)	Class 1 × Heterosexual male	Class 2 × LGBTQA+	0.90 [0.66, 1.23]	0.512
		Class 3 × LGBTQA+	0.67 [0.46, 0.96]	0.028
Aboriginal and/or Torres Strait Islander status ( <i>n</i> = 10,174)	Class 1 × Not Aboriginal and/or Torres Strait Islander	Class 2 × Aboriginal and/or Torres Strait Islander	0.75 [0.41, 1.37]	0.353
		Class 3 × Aboriginal and/or Torres Strait Islander	0.81 [0.47, 1.40]	0.459
Disability ( <i>n</i> = 10,284)	Class 1 × No disability	Class 2 × Disability	0.86 [0.69, 1.08]	0.188
		Class 3 × Disability	0.67 [0.49, 0.92]	0.014
Area-level disadvantage (IRSD) ( <i>n</i> = 10,040)	Class 1 × Low disadvantage	Class 2 × High disadvantage	0.84 [0.61, 1.14]	0.265
		Class 2 × Middle disadvantage	0.91 [0.69, 1.20]	0.516
		Class 3 × High disadvantage	1.13 [0.74, 1.72]	0.572
		Class 3 × Middle disadvantage	1.04 [0.69, 1.57]	0.838

**Notes:** Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. MESC = main English-speaking countries.

**Source:** *Ten to Men* Wave 5

**Table S27: Diagnosed anxiety (18+): ACE class × priority population groups (Cox aHR)**

Priority group (modifier)	Reference (baseline)	Interaction term	aHR [95% CI]	p value
Country of birth (n = 10,394)	Class 1 × Australian-born	Class 2 × Immigrant, MESC	0.85 [0.58, 1.25]	0.423
		Class 2 × Immigrant, non-MESC	1.45 [1.02, 2.07]	0.040
		Class 3 × Immigrant, MESC	0.48 [0.28, 0.84]	0.010
		Class 3 × Immigrant, non-MESC	2.08 [1.34, 3.21]	0.001
Language spoken at home (n = 10,373)	Class 1 × English at home	Class 2 × Other than English	1.60 [1.06, 2.43]	0.026
		Class 3 × Other than English	2.45 [1.45, 4.13]	0.001
Remoteness (n = 10,229)	Class 1 × Major cities	Class 2 × Inner regional	0.99 [0.73, 1.34]	0.943
		Class 2 × Outer regional/remote	0.84 [0.59, 1.21]	0.355
		Class 3 × Inner regional	0.84 [0.59, 1.22]	0.365
		Class 3 × Outer regional/remote	0.82 [0.54, 1.23]	0.332
Defence service (n = 10,430)	Class 1 × Never served	Class 2 × Ever served in in Australian Defence Force	0.64 [0.40, 1.01]	0.057
		Class 3 × Ever served in in Australian Defence Force	0.48 [0.28, 0.83]	0.009
Sexuality (n = 10,322)	Class 1 × Heterosexual male	Class 2 × LGBTQA+	1.05 [0.76, 1.44]	0.780
		Class 3 × LGBTQA+	0.99 [0.70, 1.42]	0.977
Aboriginal and/or Torres Strait Islander status (n = 10,331)	Class 1 × Not Aboriginal and/or Torres Strait Islander	Class 2 × Aboriginal and/or Torres Strait Islander	0.74 [0.39, 1.40]	0.350
		Class 3 × Aboriginal and/or Torres Strait Islander	0.88 [0.50, 1.54]	0.648
Disability (n = 10,444)	Class 1 × No disability	Class 2 × Disability	0.87 [0.69, 1.11]	0.267
		Class 3 × Disability	0.67 [0.48, 0.93]	0.015
Area-level disadvantage (IRSD) (n = 10,196)	Class 1 × Low disadvantage	Class 2 × High disadvantage	0.85 [0.61, 1.18]	0.326
		Class 2 × Middle disadvantage	0.84 [0.63, 1.12]	0.242
		Class 3 × High disadvantage	0.99 [0.65, 1.52]	0.971
		Class 3 × Middle disadvantage	0.87 [0.58, 1.31]	0.503

Notes: Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. MESC = main English-speaking countries.

Source: Ten to Men Wave 5

**Table S28:** Any diagnosed mental health condition (18+): ACE class × priority population groups (Cox aHR)

Priority group (modifier)	Reference (baseline)	Interaction term	aHR [95% CI]	p value
Country of birth (n = 10,188)	Class 1 × Australian-born	Class 2 × Immigrant, MESC	1.10 [0.81, 1.50]	0.535
		Class 2 × Immigrant, non-MESC	1.35 [1.05, 1.75]	0.021
		Class 3 × Immigrant, MESC	0.60 [0.38, 0.95]	0.028
		Class 3 × Immigrant, non-MESC	1.65 [1.18, 2.32]	0.004
Language spoken at home (n = 10,167)	Class 1 × English at home	Class 2 × Other than English	1.28 [0.94, 1.73]	0.116
		Class 3 × Other than English	1.91 [1.27, 2.86]	0.002
Remoteness (n = 10,026)	Class 1 × Major cities	Class 2 × Inner regional	0.95 [0.75, 1.19]	0.649
		Class 2 × Outer regional/remote	0.87 [0.66, 1.14]	0.307
		Class 3 × Inner regional	0.92 [0.68, 1.23]	0.562
		Class 3 × Outer regional/remote	0.84 [0.60, 1.17]	0.301
Defence service (n = 10,224)	Class 1 × Never served	Class 2 × Ever served in Australian Defence Force	0.71 [0.50, 1.00]	0.052
		Class 3 × Ever served in Australian Defence Force	0.51 [0.33, 0.80]	0.003
Sexuality (n = 10,120)	Class 1 × Heterosexual male	Class 2 × LGBTQA+	0.94 [0.73, 1.22]	0.663
		Class 3 × LGBTQA+	0.86 [0.64, 1.16]	0.331
Aboriginal and/or Torres Strait Islander status (n = 10,127)	Class 1 × Not Aboriginal and/or Torres Strait Islander	Class 2 × Aboriginal and/or Torres Strait Islander	0.72 [0.42, 1.23]	0.232
		Class 3 × Aboriginal and/or Torres Strait Islander	0.88 [0.55, 1.42]	0.605
Disability (n = 10,237)	Class 1 × No disability	Class 2 × Disability	0.86 [0.72, 1.04]	0.116
		Class 3 × Disability	0.74 [0.57, 0.96]	0.025
Area-level disadvantage (IRSD) (n = 9,994)	Class 1 × Low disadvantage	Class 2 × High disadvantage	0.98 [0.76, 1.27]	0.879
		Class 2 × Middle disadvantage	0.99 [0.79, 1.24]	0.914
		Class 3 × High disadvantage	1.11 [0.79, 1.57]	0.537
		Class 3 × Middle disadvantage	1.07 [0.77, 1.48]	0.702

Notes: Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. MESC = main English-speaking countries.

Source: Ten to Men Wave 5

## Moderation effects of combined priority population groups (Intersecting factors)

**Table S29: PHQ9 depression: ACE class × combined priority population groups**

Intersecting factors	Reference group (baseline)	Interaction term	aRR [95% CI]	p value
Disability × Regional/remote (n = 5,992)	Class 1 × No disability & Major cities	Class 2 × Yes	0.76 [0.58, 1.00]	0.048
		Class 3 × Yes	0.56 [0.40, 0.78]	0.001
Disability × Born non-MESC (n = 5,507)	Class 1 × No disability & Australian-born (MESC)	Class 2 × Yes	0.82 [0.62, 1.08]	0.152
		Class 3 × Yes	0.61 [0.43, 0.86]	0.004
Immigrant, non-MESC × Regional/remote (n = 5,411)	Class 1 × Australian-born (MESC) & Major cities	Class 2 × Yes	0.88 [0.49, 1.59]	0.672
		Class 3 × Yes	1.74 [0.99, 3.05]	0.052

Notes: Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. MESC = main English-speaking countries.

Source: *Ten to Men* Wave 5

**Table S30: Anxiety (GAD7): ACE class × combined priority population groups**

Intersecting factors	Reference (baseline)	Interaction term	aRR [95% CI]	p value
Disability × Regional/remote (n = 6,028)	Class 1 × No disability & Major cities	Class 2 × Yes	0.74 [0.53, 1.04]	0.08
		Class 3 × Yes	0.66 [0.43, 1.02]	0.06
Disability × Immigrant, non-MESC (n = 5,545)	Class 1 × No disability & Australian-born	Class 2 × Yes	0.71 [0.50, 1.00]	0.051
		Class 3 × Yes	0.61 [0.39, 0.95]	0.028
Immigrant, non-MESC × Regional/remote (n = 5,454)	Class 1 × Australian-born & Major cities	Class 2 × Yes	1.21 [0.52, 2.79]	0.656
		Class 3 × Yes	1.70 [0.73, 3.98]	0.221

Notes: Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. MESC = main English-speaking countries.

Source: *Ten to Men* Wave 5

**Table S31: Male depression risk scale (MDRS-7 moderate to severe): ACE class × combined priority population groups**

Intersecting factors	Reference (baseline)	Interaction term	aRR [95% CI]	p value
Disability × Regional/remote (n = 6,028)	Class 1 × No disability & Major cities	Class 2 × Yes	0.84 [0.70, 1.00]	0.052
		Class 3 × Yes	0.70 [0.55, 0.87]	0.002
Disability × Immigrant, non-MESC (n = 5,549)	Class 1 × No disability & Australian-born	Class 2 × Yes	0.87 [0.72, 1.06]	0.167
		Class 3 × Yes	0.78 [0.60, 1.00]	0.047
Born non-MESC × Regional/remote (n = 5,456)	Class 1 × Australian-born & Major cities	Class 2 × Yes	0.99 [0.64, 1.51]	0.946
		Class 3 × Yes	1.43 [0.94, 2.19]	0.096

Notes: Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. MESC = main English-speaking countries.

Source: *Ten to Men* Wave 5

**Table S32: Anxiety or depression symptoms (PHQ9 or GAD7): ACE class × combined priority population groups**

Intersecting factors	Reference (baseline)	Interaction term	aRR [95% CI]	p value
Disability × Regional/remote (n = 5,873)	Class 1 × No disability & Major cities	Class 2 × Yes	0.86 [0.74, 1.01]	0.067
		Class 3 × Yes	0.64 [0.52, 0.79]	<0.001
Disability × Immigrant, non-MESC (n = 5,399)	Class 1 × No disability & Australian-born	Class 2 × Yes	0.83 [0.71, 0.98]	0.024
		Class 3 × Yes	0.74 [0.60, 0.92]	0.007
Immigrant, non-MESC × Regional/remote (n = 5,294)	Class 1 × Australian-born & Major cities	Class 2 × Yes	1.02 [0.72, 1.44]	0.905
		Class 3 × Yes	1.44 [1.03, 2.01]	0.031

Notes: Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. MESC = main English-speaking countries.

Source: *Ten to Men* Wave 5

**Table S33: Any mental health symptoms (Wave 5): ACE class × combined priority population groups**

Intersecting factors	Reference (baseline)	Interaction term	aRR [95% CI]	p value
Disability × Regional/remote (n = 5,971)	Class 1 × No disability & Major cities	Class 2 × Yes	0.83 [0.73, 0.94]	0.004
		Class 3 × Yes	0.65 [0.56, 0.76]	<0.001
Disability × Immigrant, non-MESC (n = 5,482)	Class 1 × No disability & Australian-born	Class 2 × Yes	0.79 [0.69, 0.90]	0.001
		Class 3 × Yes	0.71 [0.60, 0.85]	<0.001
Immigrant, non-MESC × Regional/remote (n = 5,388)	Class 1 × Australian-born & Major cities	Class 2 × Yes	0.93 [0.69, 1.26]	0.647
		Class 3 × Yes	1.35 [1.02, 1.79]	0.037

Notes: Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. MESC = main English-speaking countries.

Source: Ten to Men Wave 5

**Table S34: Any diagnosed mental health condition (18+): ACE class × combined priority population groups (Cox aHR)**

Intersecting factors	Reference (baseline)	Interaction term	aRR [95% CI]	p value
Disability × Regional/remote (n = 5,692)	Class 1 × No disability & Major cities	Class 2 × Yes	0.82 [0.63, 1.08]	0.157
		Class 3 × Yes	0.75 [0.52, 1.10]	0.139
Disability × Immigrant, non-MESC (n = 5,234)	Class 1 × No disability & Australian-born	Class 2 × Yes	1.15 [0.80, 1.66]	0.437
		Class 3 × Yes	1.21 [0.76, 1.93]	0.411
Immigrant, non-MESC × Regional/remote (n = 5,029)	Class 1 × Australian-born & Major cities	Class 2 × Yes	1.07 [0.54, 2.15]	0.84
		Class 3 × Yes	1.18 [0.48, 2.91]	0.725

Notes: Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. MESC = main English-speaking countries.

Source: Ten to Men Wave 5

**Table S35: Diagnosed depression (18+): ACE class × combined priority population groups (Cox aHR)**

Intersecting factors	Reference (baseline)	Interaction term	aRR [95% CI]	p value
Disability × Regional/remote (n = 5,734)	Class 1 × No disability & Major cities	Class 2 × Yes	0.74 [0.54, 1.02]	0.065
		Class 3 × Yes	0.79 [0.50, 1.24]	0.300
Disability × Immigrant, non-MESC (n = 5,269)	Class 1 × No disability & Australian-born	Class 2 × Yes	1.17 [0.77, 1.79]	0.466
		Class 3 × Yes	1.00 [0.58, 1.72]	0.990
Immigrant, non-MESC × Regional/remote (n = 5,064)	Class 1 × Australian-born & Major cities	Class 2 × Yes	1.62 [0.62, 4.22]	0.327
		Class 3 × Yes	2.07 [0.64, 6.65]	0.222

Notes: Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. MESC = main English-speaking countries.

Source: *Ten to Men* Wave 5

**Table S36: Diagnosed anxiety (18+): ACE class × ACE class × combined priority population groups (Cox aHR)**

Intersecting factors	Reference (baseline)	Interaction term	aRR [95% CI]	p value	n
Disability × Regional/remote (n = 5,778)	Class 1 × No disability & Major cities	Class 2 × Yes	0.88 [0.62, 1.25]	0.469	5,778
		Class 3 × Yes	0.65 [0.41, 1.03]	0.065	5,778
Disability × Immigrant, non-MESC (n = 5,324)	Class 1 × No disability & Australian-born	Class 2 × Yes	1.22 [0.75, 1.98]	0.427	5,324
		Class 3 × Yes	1.29 [0.71, 2.33]	0.404	5,324
Immigrant, non-MESC × Regional/remote (n = 5,140)	Class 1 × Australian-born & Major cities	Class 2 × Yes	1.23 [0.47, 3.23]	0.675	5,140
		Class 3 × Yes	1.52 [0.49, 4.75]	0.467	5,140

Notes: Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement. MESC = main English-speaking countries.

Source: *Ten to Men* Wave 5

## Barriers and facilitators to mental health service access

**Table S37:** Factors associated with service use among men high ACEs class ever diagnosed with mental health

Variable	aRR [95% CI]	p value
<b>Financial stress (ref = No)</b>		
Yes	0.86 [0.78, 0.96]	0.008
<b>Age group (ref = 18–29)</b>		
30–39 years	1.09 [0.91, 1.31]	0.329
40–49 years	1.09 [0.90, 1.32]	0.371
50+ years	1.14 [0.96, 1.37]	0.139
<b>Employment type (ref = Not in labour force/unemployed)</b>		
Fixed term to permanent/ongoing	1.09 [0.93, 1.28]	0.285
<b>Occupation</b>		
Professionals or managers	0.96 [0.83, 1.11]	0.602
<b>Household income</b>		
\$80,000–\$124,999	1.05 [0.92, 1.21]	0.469
\$125,000+	0.91 [0.78, 1.06]	0.217

Note: Adjusted for age, employment status, occupation, financial stress, educational status, income, living arrangement.

Source: *Ten to Men* Wave 5, MBS and PBS

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