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Psychiatric illness and the risk of reoffending

Recurrent event analysis for an Australian birth cohort

Queensland Australia

Make it matter

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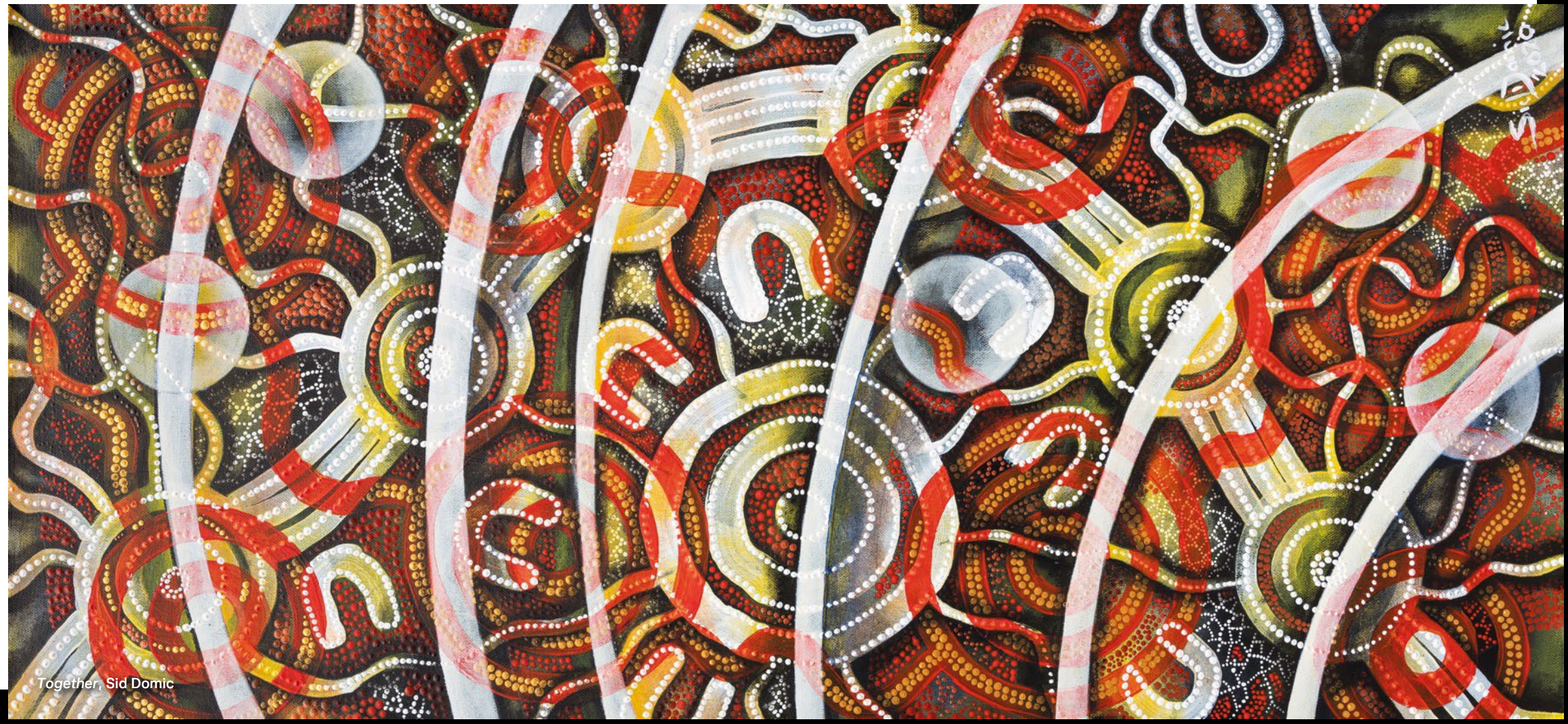
ACKNOWLEDGEMENT OF COUNTRY

Griffith University acknowledges the people who are the Traditional Custodians of the land. We pay respect to the Elders, past and present, and extend that respect to all Aboriginal and Torres Strait Islander peoples.



Together, Sid Domic

Disclaimer & Acknowledgements

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No disclosures.

Co-authors

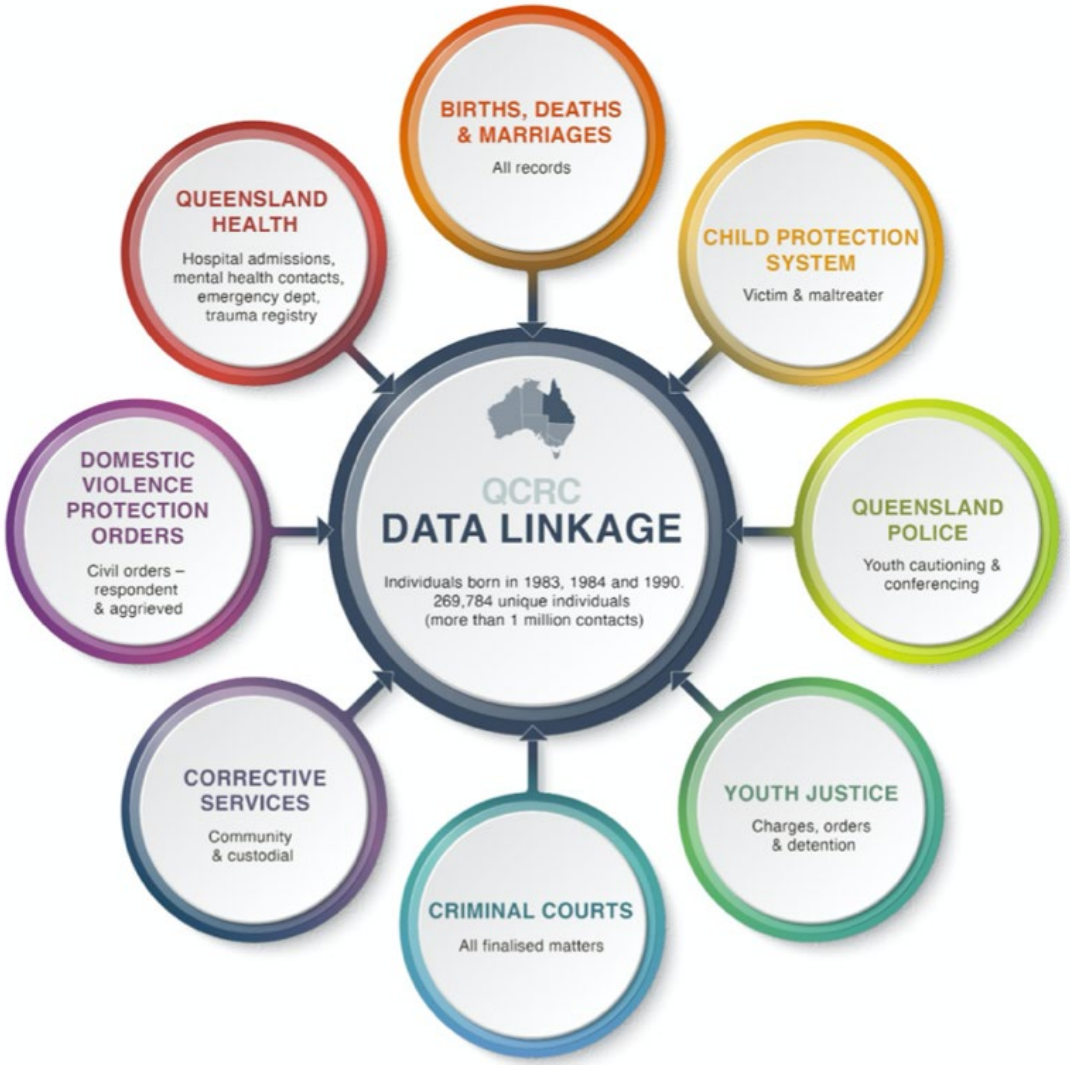
Stacy Tzoumakis, Carleen Thompson, Troy Allard, Susan Dennison, Steve Kisely and Anna Stewart

Background

- High prevalence of psychiatric illness among individuals who encounter the criminal justice system (CJS)
- For the entire population, psychiatric illness is a risk factor for CJS contact
- Inconsistent findings linking psychiatric illness to **reoffending** among offenders
- Result of methodological variation (e.g., samples, cross-sectional designs, measurement, follow-up)
- Longitudinal findings with incarcerated samples:
    - Psychiatric disorders linked to violent reoffending among individuals released from prison
    - Multimorbidity and substance use disorders linked to higher rates of violent reoffending

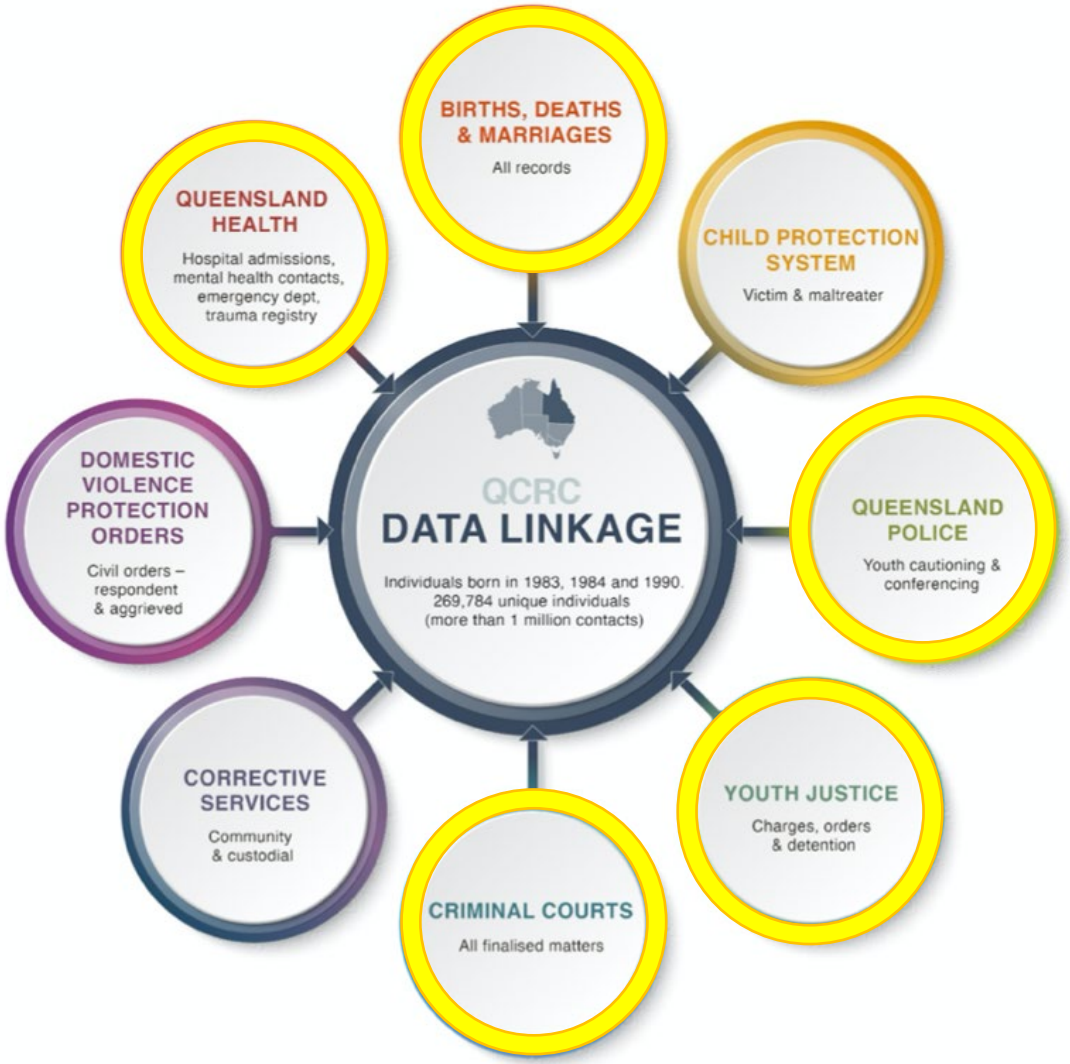
Knowledge gaps and study research questions

- Longitudinal and birth cohort studies rare
- Wider population of people who have CJS contact beyond prison
- Beyond severe psychiatric illnesses and violent offending
- Use of time-to-first-event survival methods – incomplete picture of reoffending
- **Research Question:** Does psychiatric illness increase the risk of reoffending?
    - Is it disorder specific?
    - Does offence type matter?



Queensland Cross-sector Research Collaboration

- Longitudinal data – 31 years old (1983), 30 years old (1984) and 25 years old (1990)
- 269,784 unique individuals (more than 1 million contacts)
- Data stored in the Social Analytics Lab at Griffith University
- Combined 1983/84 birth cohorts containing 83,362 individuals
    - 5.8% Aboriginal and Torres Strait Islander
    - 48.5% female



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Datasets for current study

- **Offending**
    - Courts (Childrens and Adult) – proven offences (10 to 31 years)
    - Police diversions – cautions and conferences (10~16 years)
    - Violent, nonviolent and other minor offences
- **Psychiatric diagnoses**
    - Queensland Hospital Admitted Patient Data Collection (QHAPDC) – diagnosed psychiatric disorder from hospital admission (14 to 31 years)
    - Seven broad categories: serious mental illness; mood and anxiety; personality; alcohol use; other substance use; adolescent/adult-onset; child onset.

Cohort and sample for current study

- 27,679 individuals (33.3%) at least one proven offence
- 6,902 individuals (8.3%) at least one psychiatric diagnosis from hospital admission
- 4,608 (5.5%) experienced both an offence and psychiatric diagnosis
- Exclude 1,028 individuals with offence + disorder where offending only occurred before onset of disorder
- **Final sample = 26,651**

Analytic approach

- Prevalence
- Age of onset for first CJS contact
- Proportion to reoffend (further diversion or court appearance)
- Mean cumulative function (MCF) estimates
- Recurrent event survival analysis – Prentice, Williams and Peterson gap time model (PWP-GT)

Offending subsample

- 26,651 individuals with at least one proven offence in court or police diversion
    - 71.1% male; 28.9% female
    - 13.6% Aboriginal and Torres Strait Islander (5.8% of cohort)
- 13.4% with a psychiatric diagnosis from a hospital admission
    - 15.7% female; 12.5% male
    - 28.4% Aboriginal and Torres Strait Islander; 11.1% non-Indigenous

Prevalence of psychiatric disorders among people with an offence

Disorder category	Total *n* (%)	Male χ^2 (φ_c)	Indigenous χ^2 (φ_c)
Severe	933 (3.5%)	▲ 9.87** (.02)	▲ 198.46*** (.09)
Mood and anxiety	1,054 (4.0%)	▼ 100.69*** (.06)	▲ 73.39*** (.05)
Personality	459 (1.7%)	▼ 41.17*** (.04)	▲ 63.92*** (.05)
Alcohol use	1,889 (7.1%)	▲ 5.29* (.01)	▲ 836.13*** (.18)
Other drug use	1,439 (5.4%)	▼ 25.47*** (.03)	▲ 319.99*** (.11)
Adult and adolescent onset	1,228 (4.6%)	▼ 83.08*** (.06)	▲ 222.13*** (.09)
Child onset	353 (1.3%)	▬ 0.08 (>.01)	▲ 46.43*** (.04)

*p <.05; **p <.01; ***p <.001

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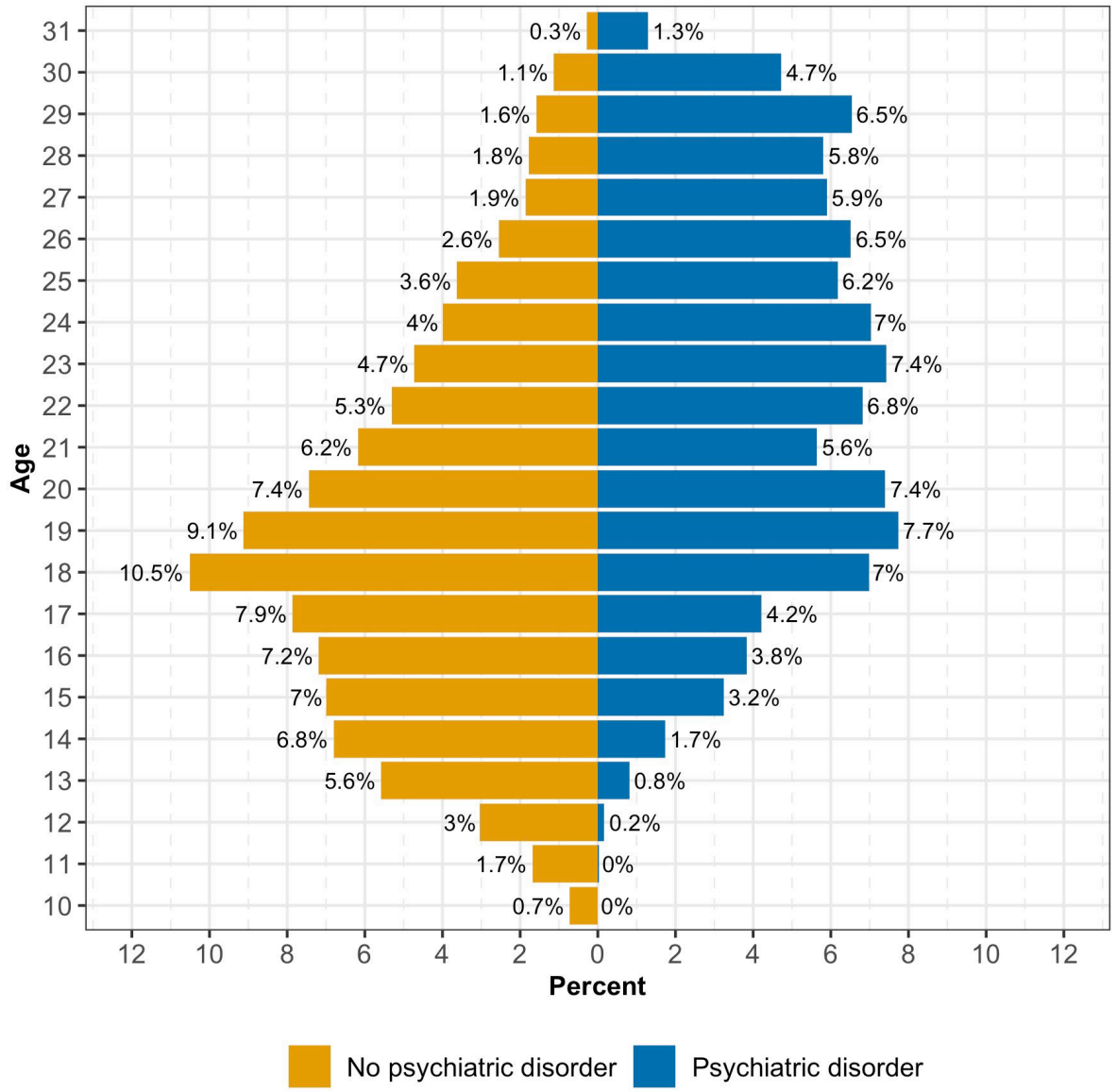
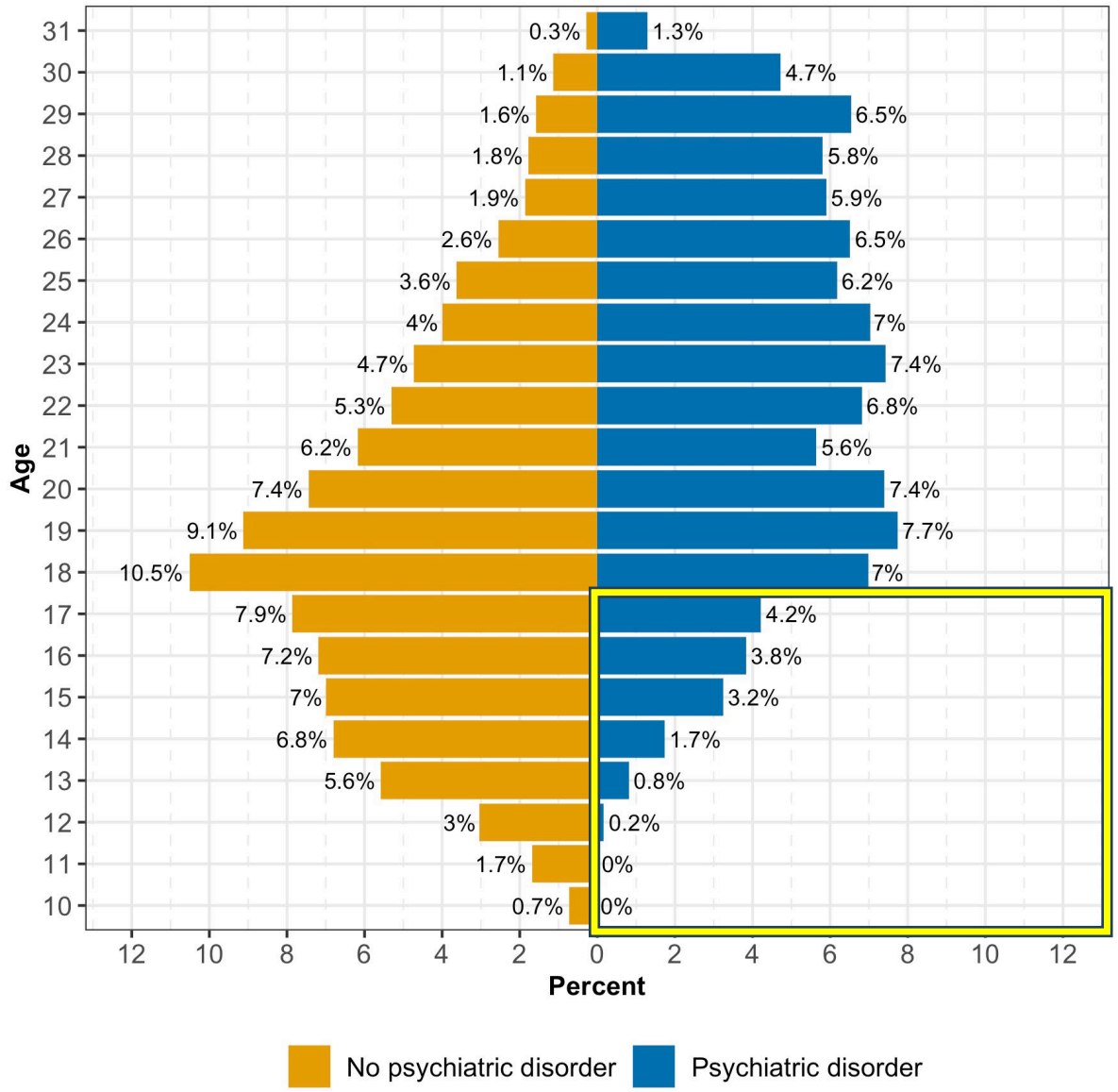


Age at first proven offence

- Age of onset does not follow typical age-crime curve for individuals with a disorder
- Later age of onset for psychiatric disorder
  - Disorder = 23.15 years (SD = 4.52)
  - No disorder = 19.42 years (SD = 4.48)
  - Cohen's *d* = .83 [95%CI = .79-.87]



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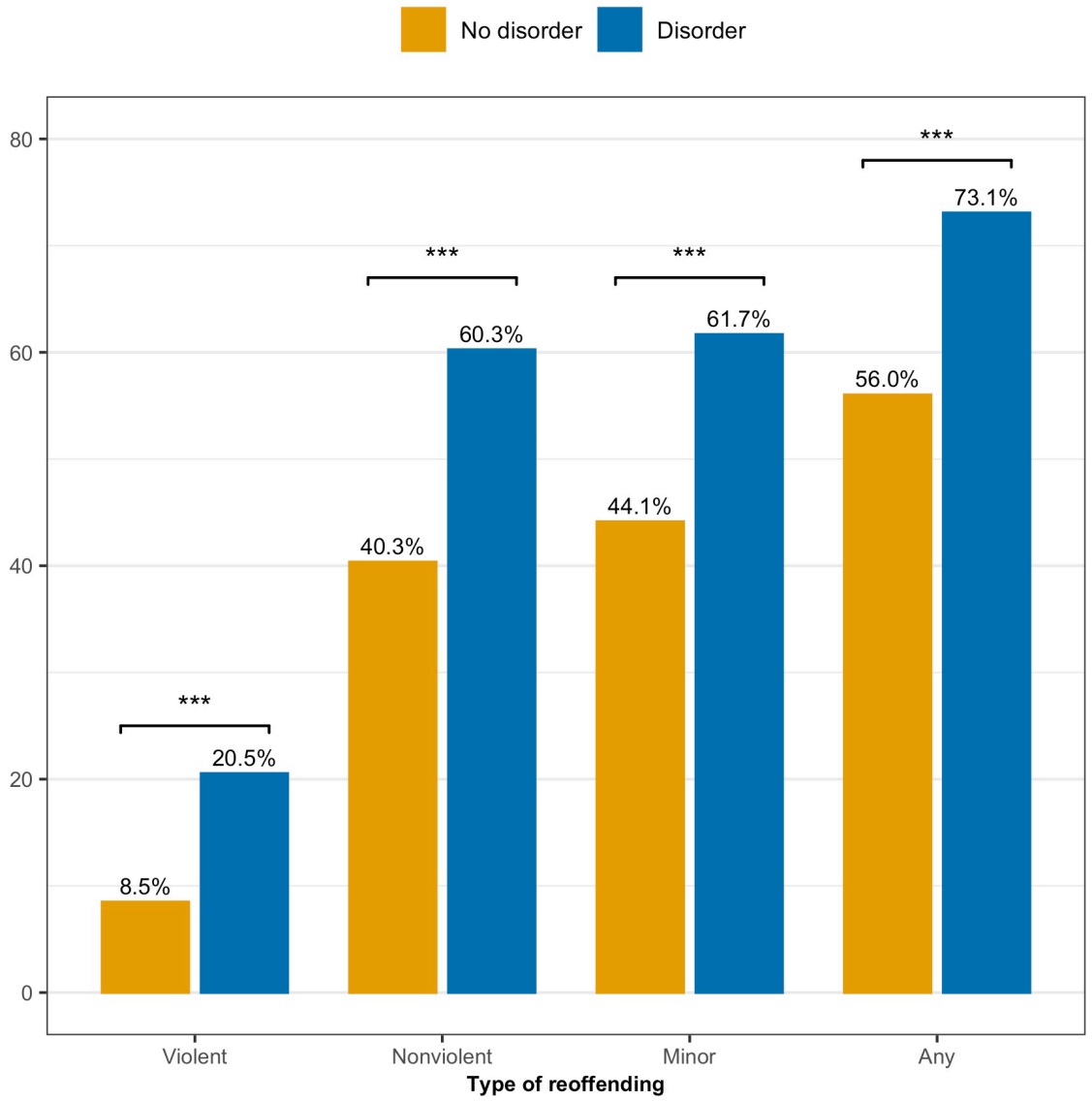
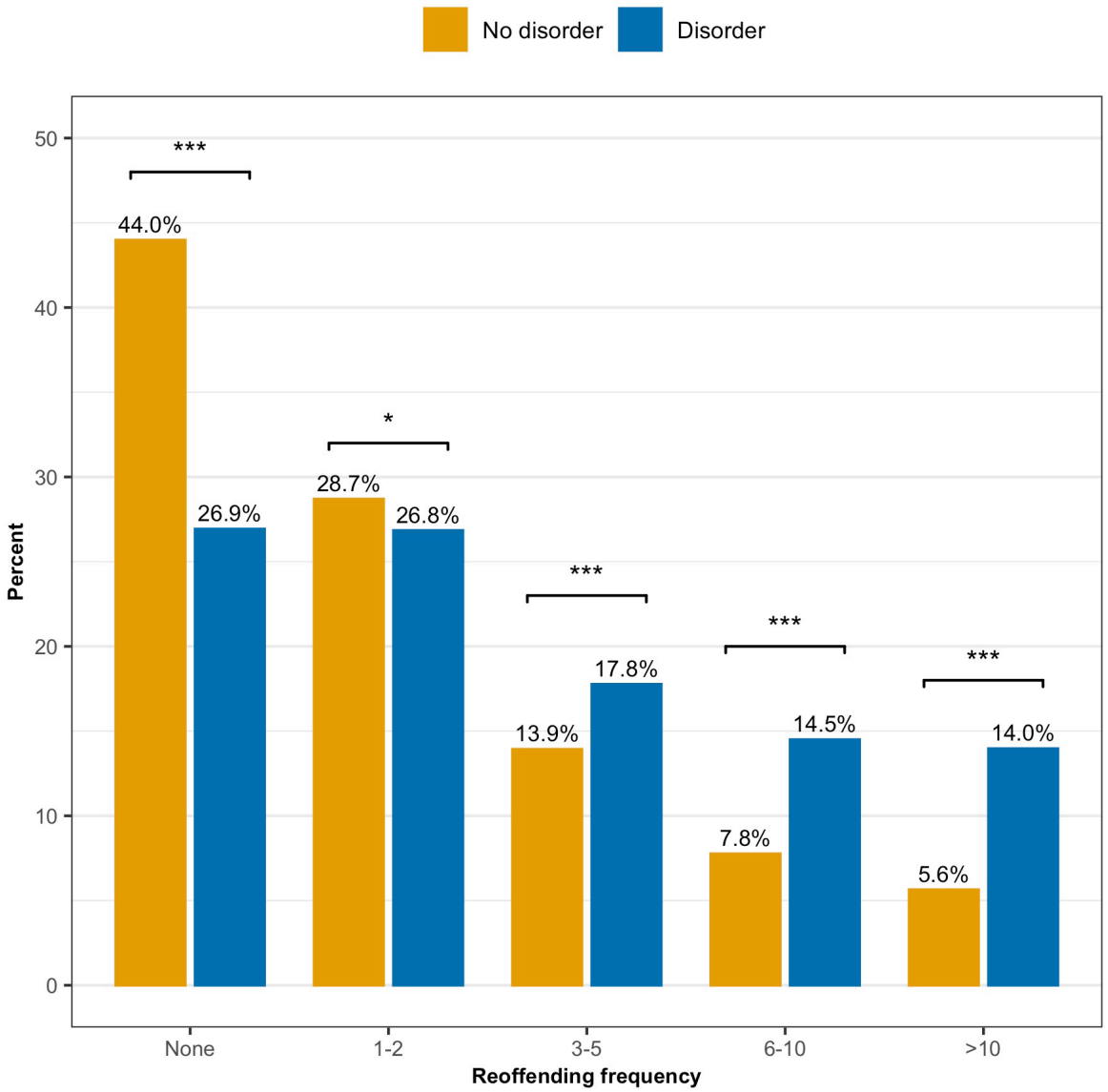


Type of reoffending

- 58.3% at least one reoffence
  - 56.0% no disorder
  - 73.1% disorder
- Individuals with disorder more likely to reoffend across all offence types



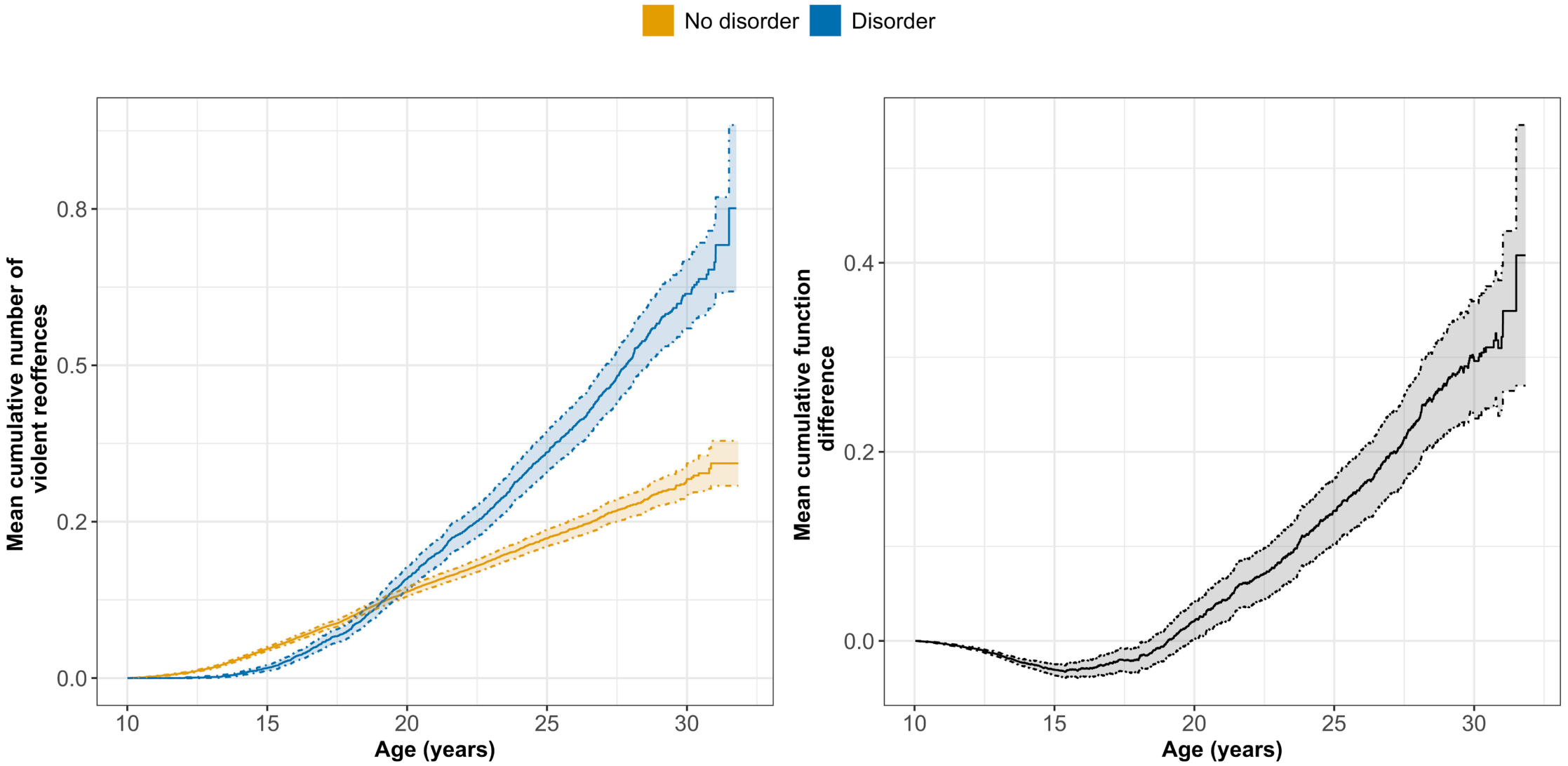
Reoffending frequency

- Most individuals (48.8%) will reoffend 1-2 times
- Individuals with a disorder overrepresented in having higher frequencies of reoffending

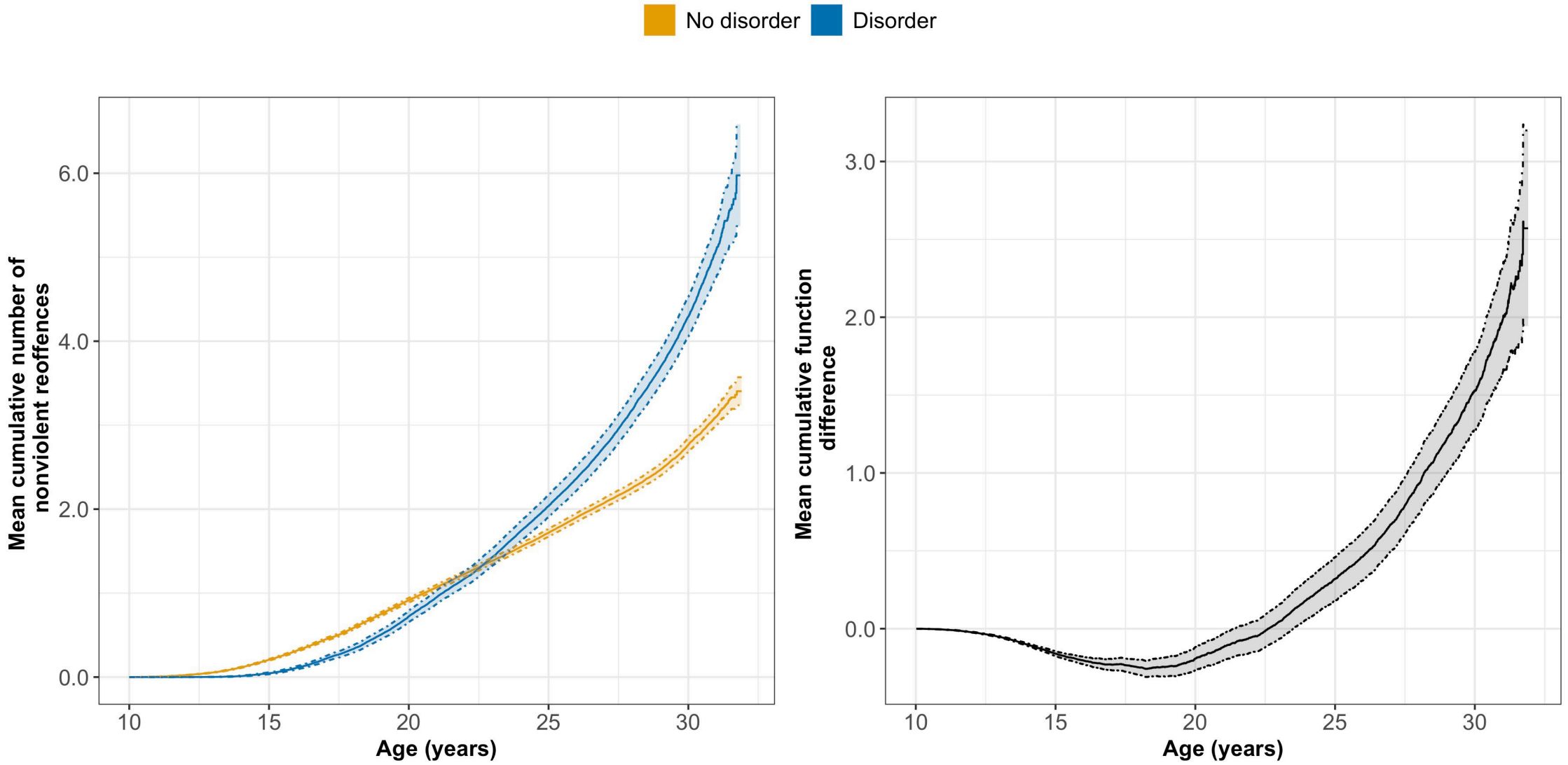
Mean cumulative function

Accumulated reoffending rates

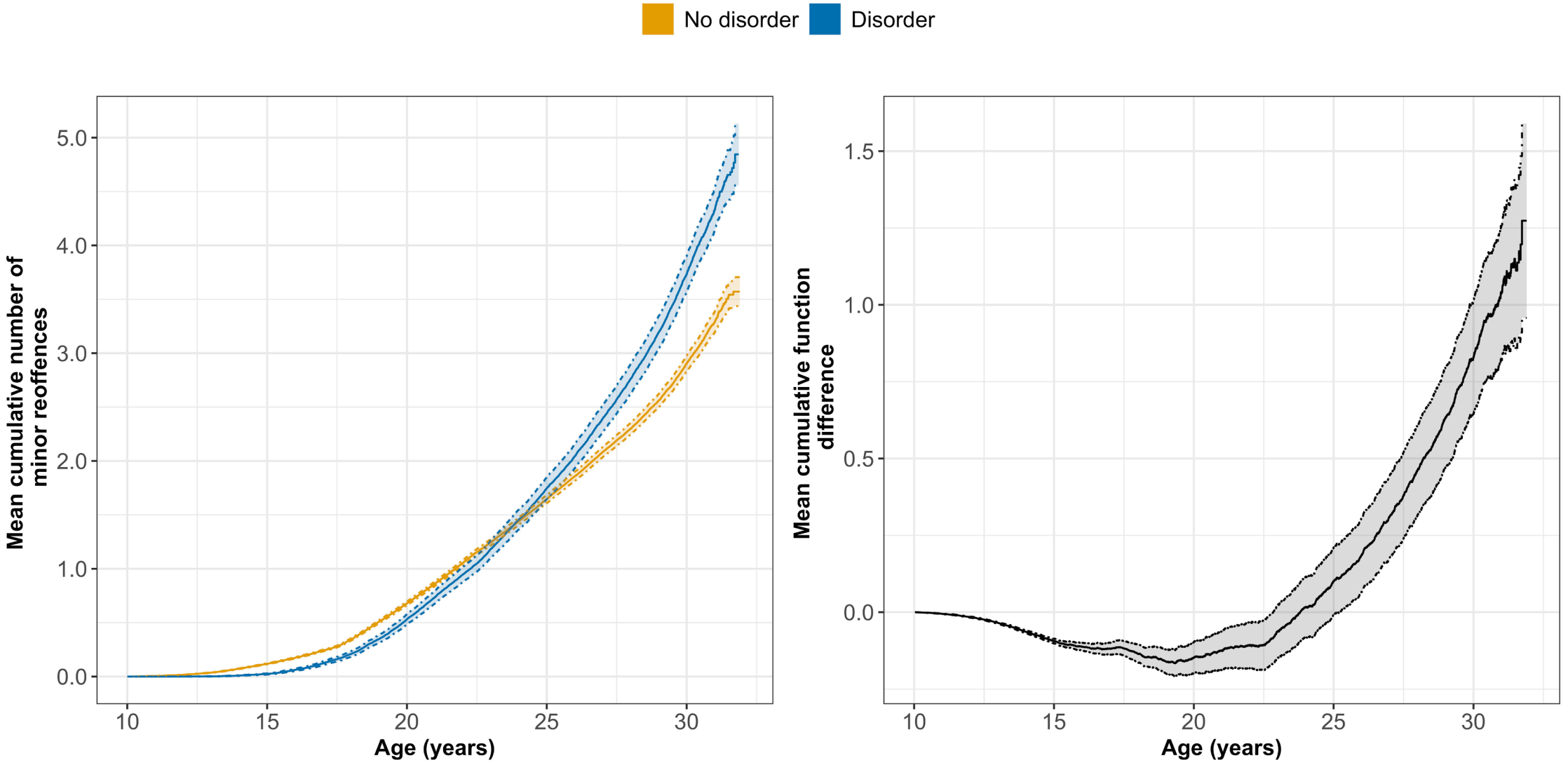
MCF: Violent reoffending



MCF: Non-violent reoffending

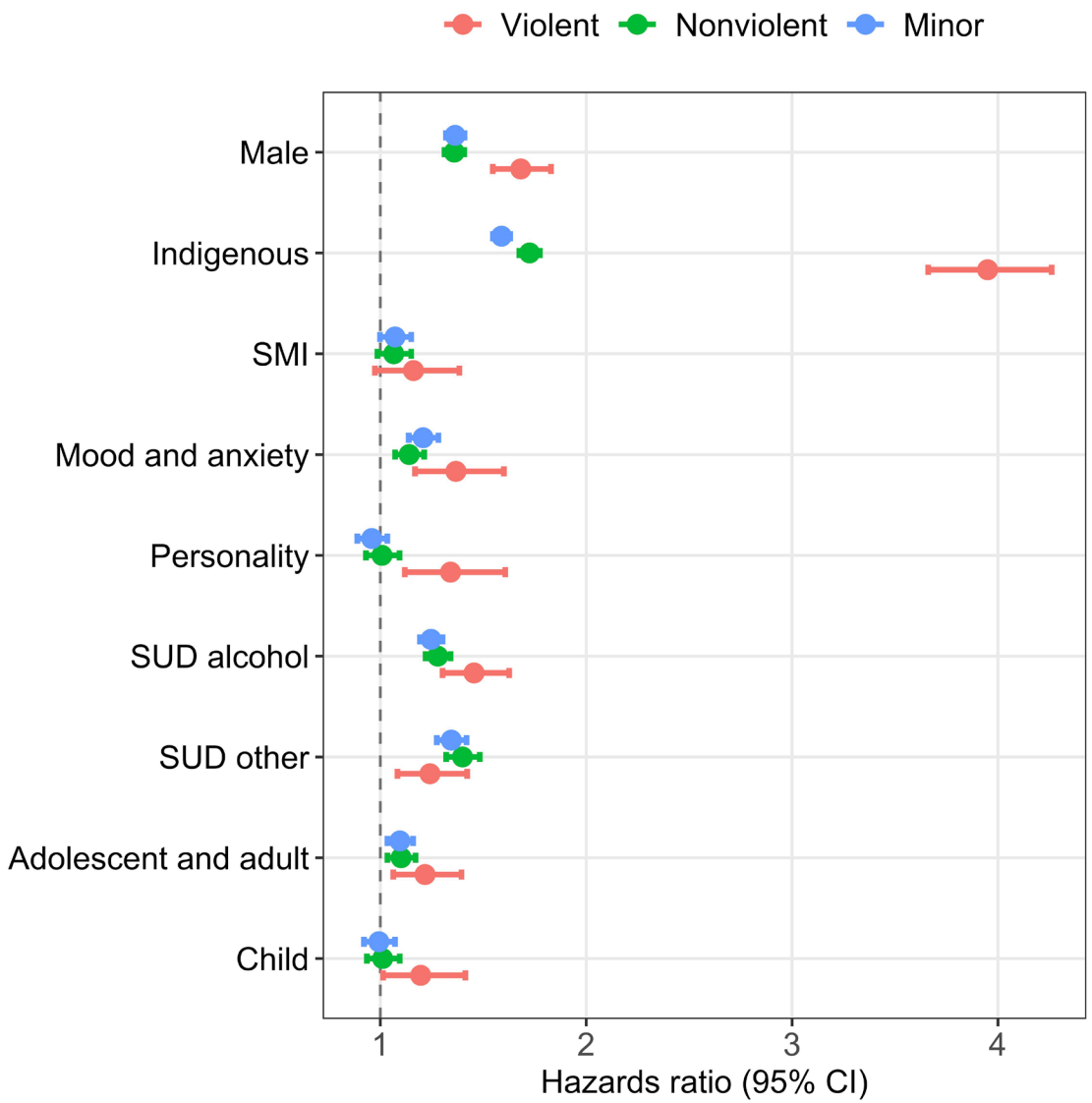


MCF: Minor reoffending



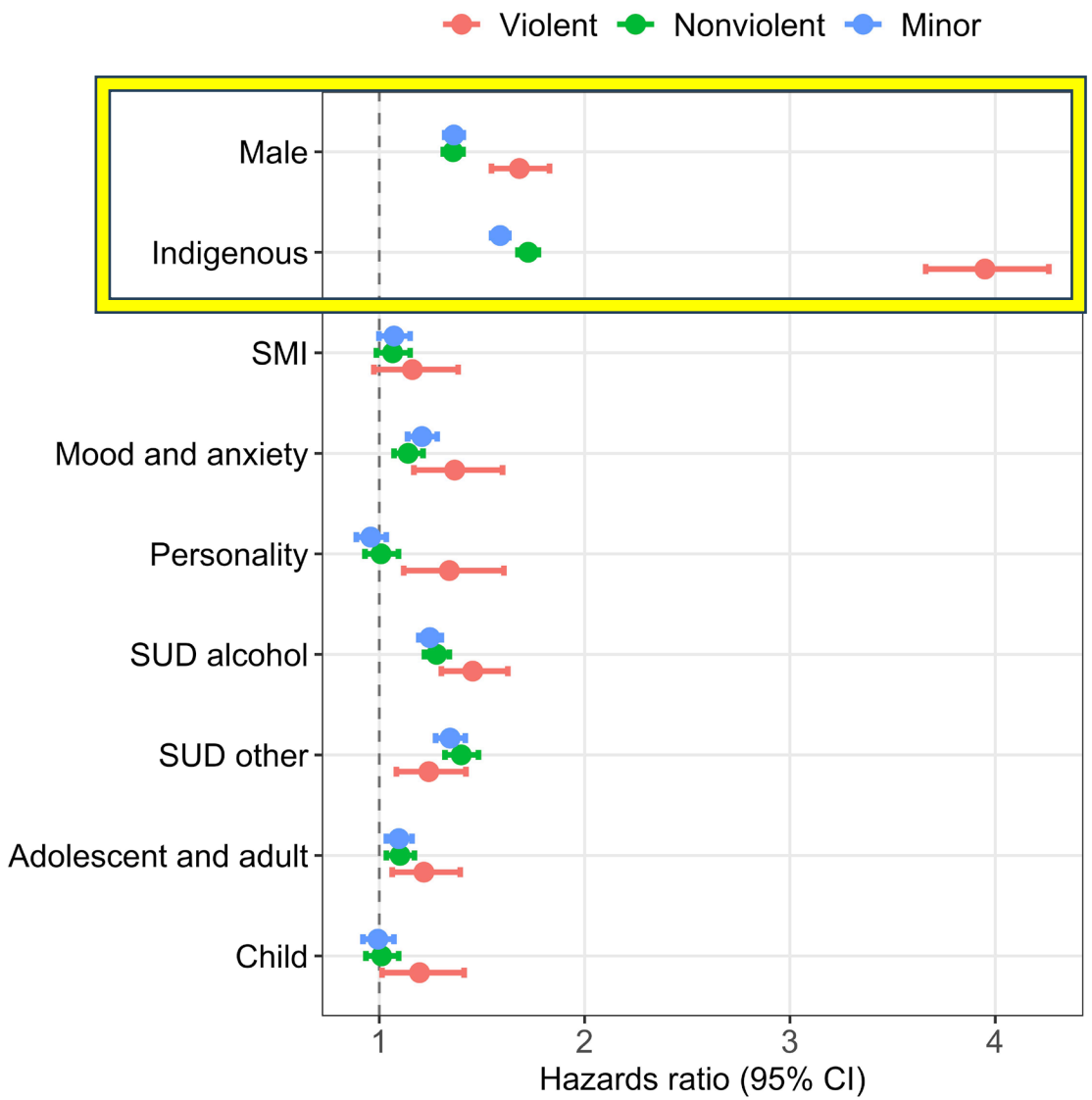
Recurrent event survival analysis

Impact of specific disorders and covariates on reoffending



Recurrent event survival analysis

- Males and First Nations individuals highest hazard of reoffending at greater rate
- These effects are mostly stronger than disorders



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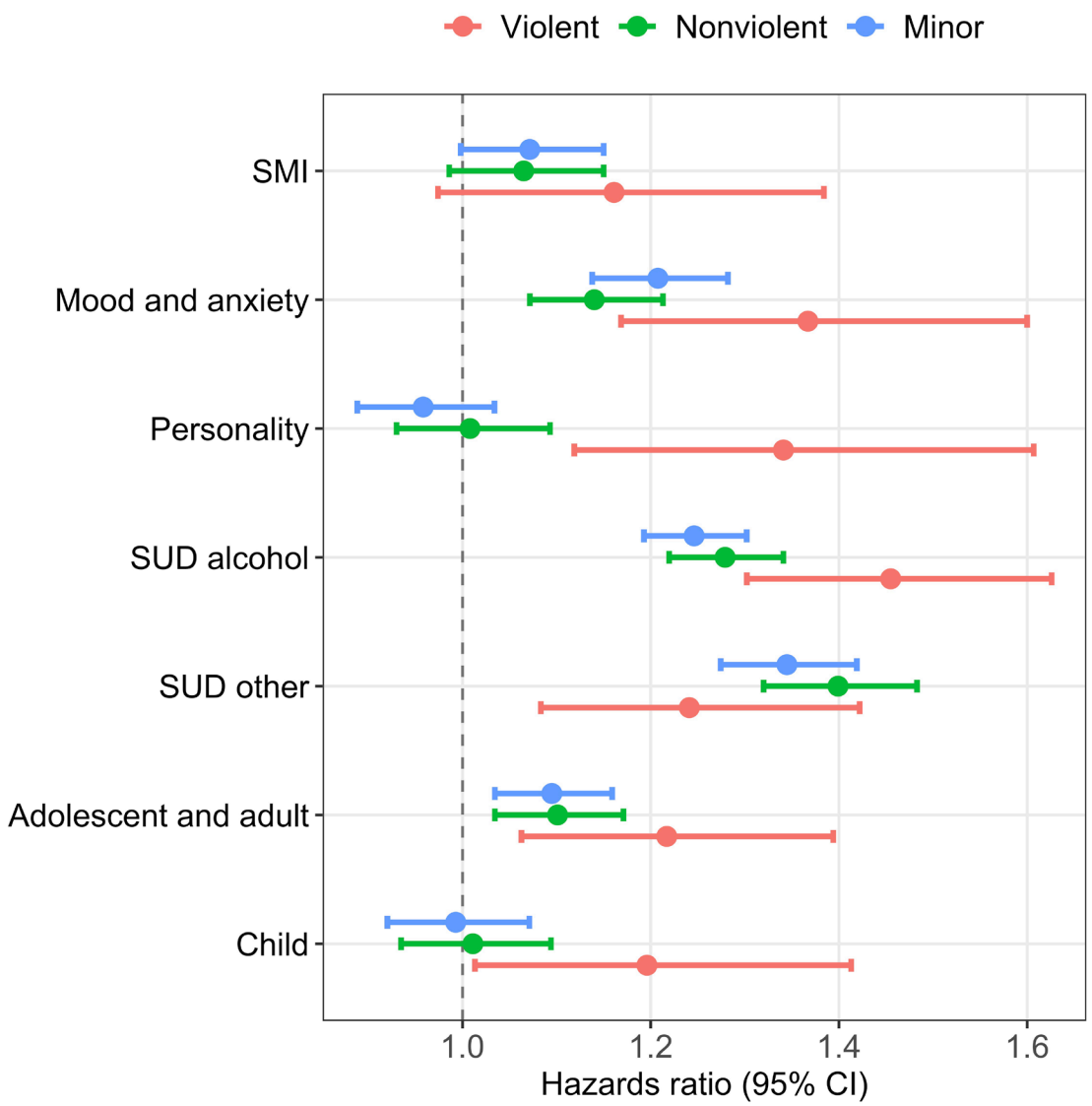

Focusing on disorders

- Substance use disorders strongest link to reoffending
- Alcohol use disorders and violence
- Severe mental illness not linked to reoffending
- Personality and child disorders only linked to violence

Summary of findings

- Psychiatric illness is linked to a higher frequency of reoffending – association changes over time
- Accelerating reoffending reflects accumulating vulnerabilities
- Substance use disorders have strongest effect
- Individuals with psychiatric disorder on average start offending at a later age
- Specificity in the links between reoffending and disorders

Implications

- With a later age of offending onset, there are more opportunities for preventative intervention
- Effective identification, management and treatment of specific psychiatric illness likely to result in reduced reoffending
- Early diversion key
- Importance of communication between health and justice systems
- Critical to address substance use problems that co-occur with other psychiatric illnesses

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Link to paper

Contacts

James Ogilvie

j.ogilvie@griffith.edu.au

QCRC project leaders

Carleen Thompson

c.thompson@griffith.edu.au

Troy Allard

t.allard@griffith.edu.au

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