

Prenatal exposure to substances impacts long-term physical and mental health

Jocelynn L. Cook^{1,2}, PhD., MBA, Kathy Unsworth², MPH, MBA, Nicole Roberts³, MSc.

¹The Society of Obstetricians and Gynaecologists of Canada, ²The Canada FASD Research Network, ³BORN Ontario

BACKGROUND

- Substance use during pregnancy continues to increase globally, and data continue to emerge about the impacts of in utero exposure on physical and mental health.
- In utero substance exposures are becoming understood as important determinants of lifelong physical/mental health, including effects on developmental trajectories.
- Fetal Alcohol Spectrum Disorder (FASD) is the constellation of effects from prenatal alcohol exposure (PAE) that are lifelong, and PAE is often associated with other prenatal exposures.
- Existing literature provides important preliminary data on the potentially sexually dimorphic impacts of PAE, but nothing is known about the impacts of other substances.

OBJECTIVE

- This study was designed to determine implications of PAE and other substances on physical and mental health.

METHODS

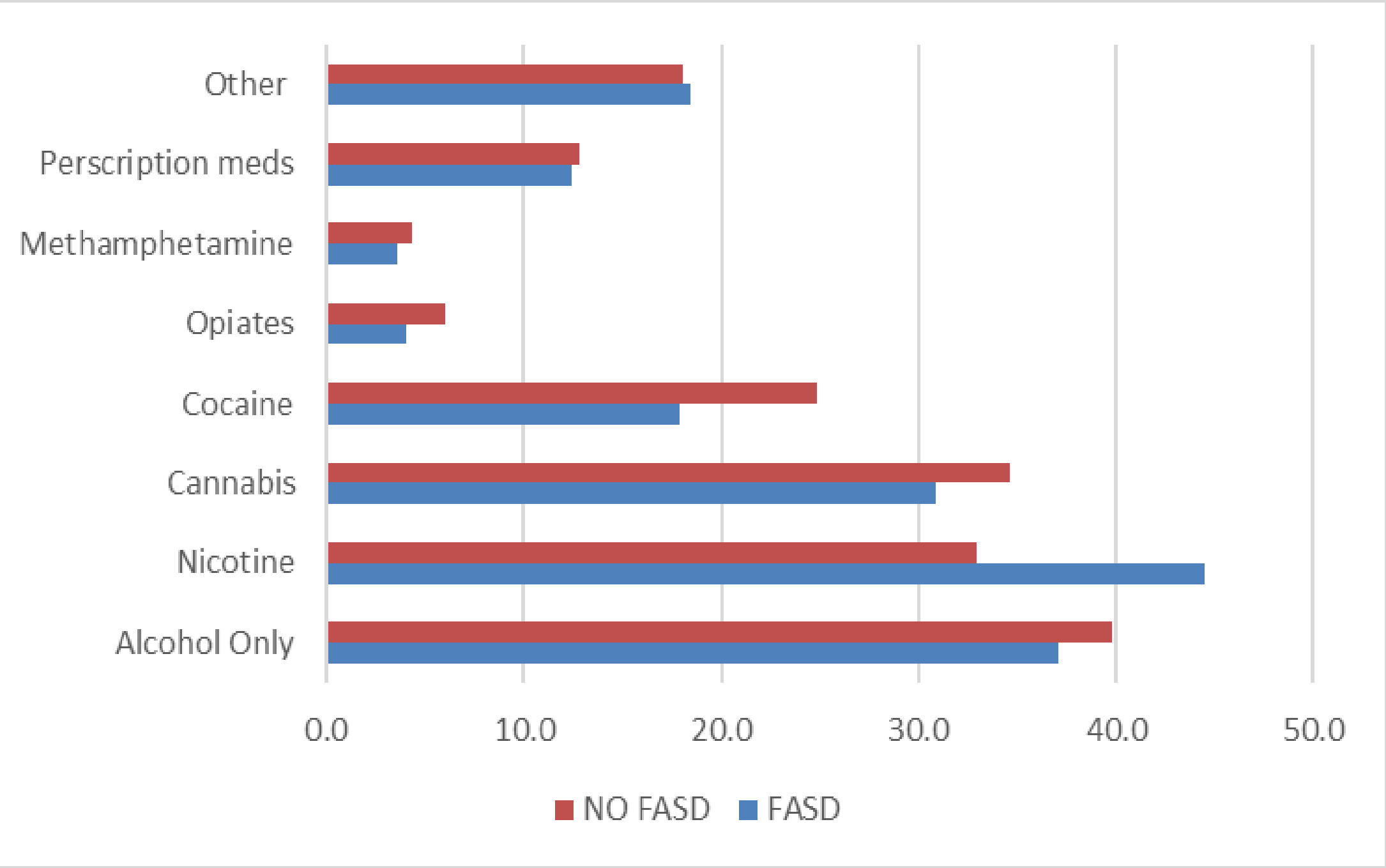
- The Canadian National FASD Database contains data on individuals (N=3,900) with prenatal alcohol exposure. Descriptive statistics, chi-square tests and logistic regression compared patterns between groups, examined predictive factors, and explored strengths of association.
- Diagnostic clinics complete an online questionnaire for each patient, including neurobehavioural, functional and physical assessments as well as management recommendations.
- Based on 3,586 records from 29 clinics.
- Describes individuals prenatally exposed to alcohol and other substances, as well as the frequency of substance use and mental health concerns.
- Descriptive statistics, pearson chi-square tests and logistic regression analyses were used to compare groups, examine predictive factors, and explore strengths of association.

CONCLUSIONS

- Data confirm that individuals with FASD in Canada are complex. Understanding how in utero exposures affect long term physical and mental health will help to identify permissive and protective factors to optimize developmental outcomes, from preconception through to adulthood. Results will help to anticipate early interventions and supports that can have protective effects, mitigate difficulties in daily living, and provide a foundation for healthier trajectories.
- Emerging data suggest that other prenatal exposures may exacerbate the effects of alcohol on mental health issues, further impacting the age-related trajectory of onset and severity; future studies will investigate the same relationships for physical health .
- Supporting women to have pregnancies free of substance exposures is important for long term health and developmental outcomes of children.

RESULTS

OTHER PRENATAL EXPOSURES IN ADDITION TO ALCOHOL

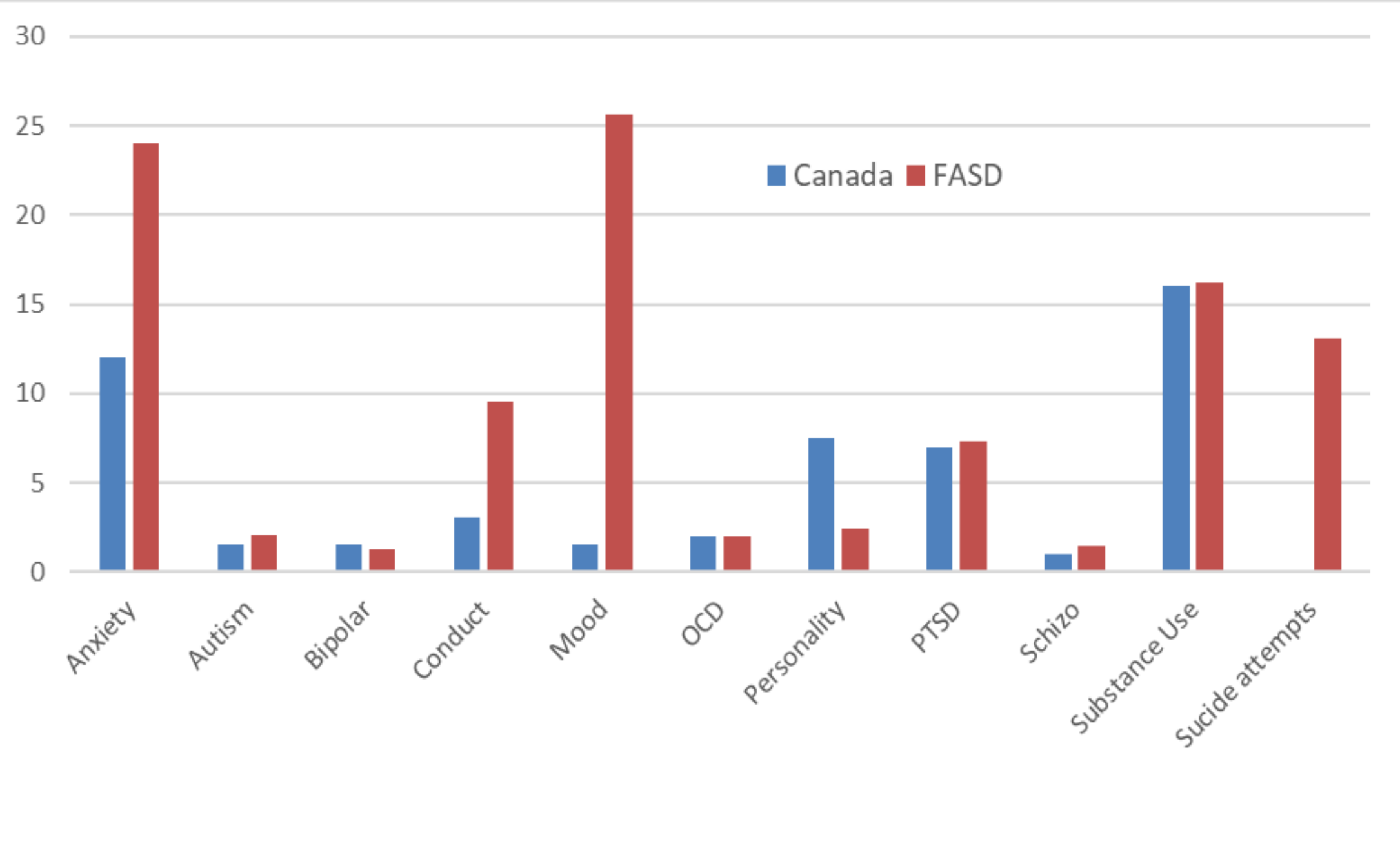


% OF GROUP

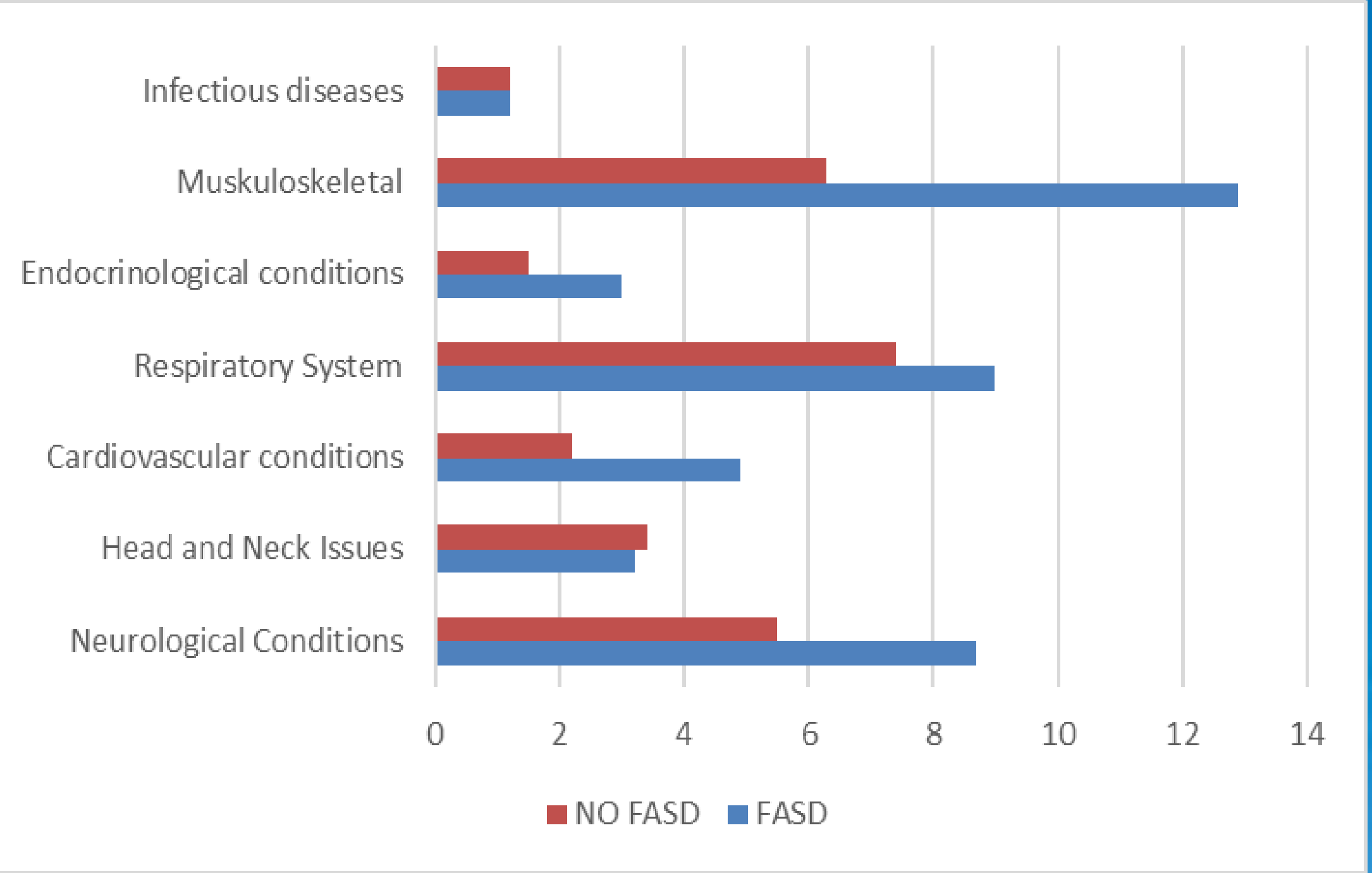
Prenatal exposure to substances was confirmed as follows:

alcohol (92%); nicotine (41%), cannabis (31%); cocaine (20%); prescription medications (13%); opiates (5%); methamphetamines (5%). 36% of all cases had confirmed PAE plus at least two other substances.

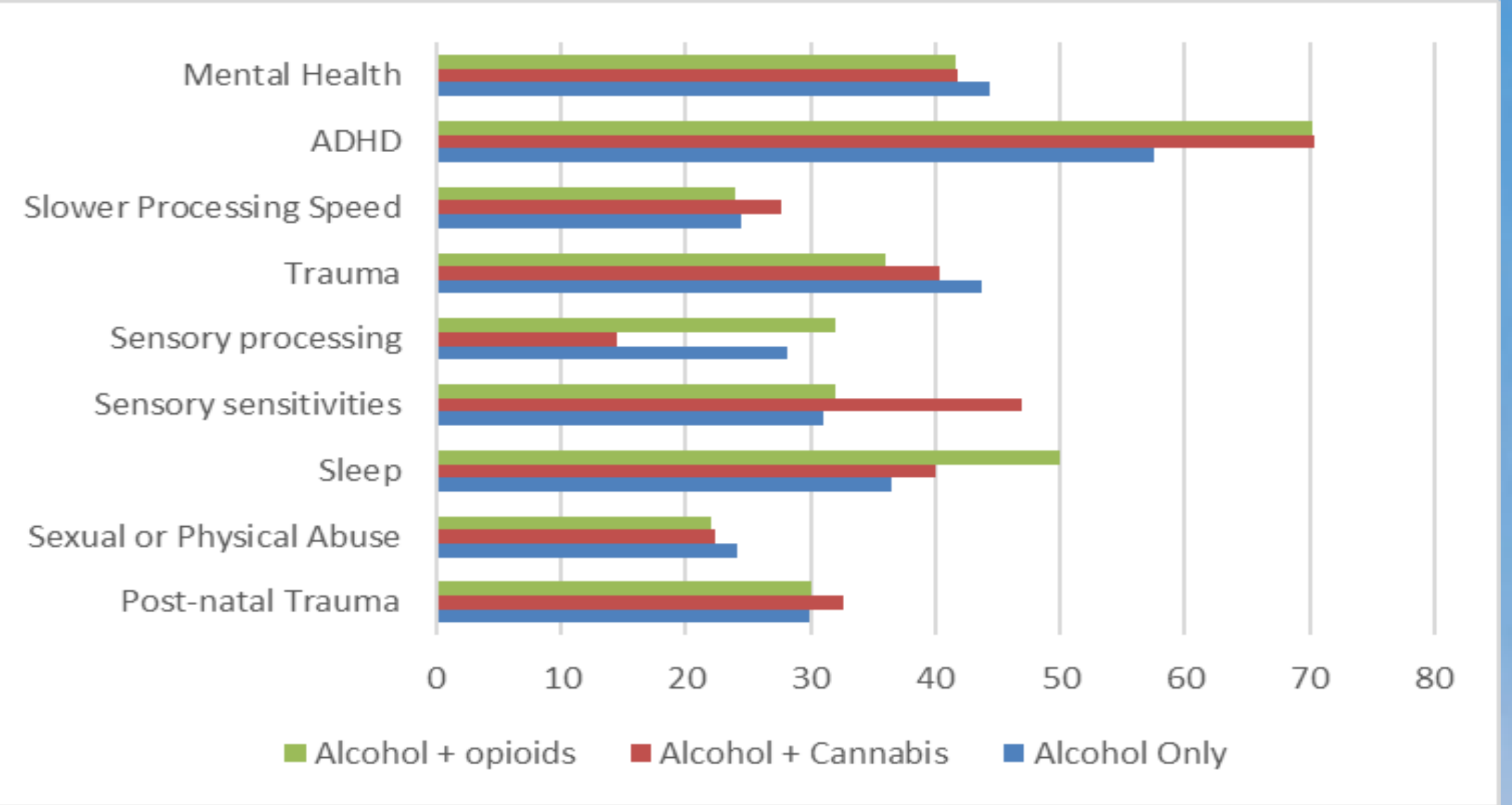
PREVALENCE OF MENTAL HEALTH DISORDERS AND FASD



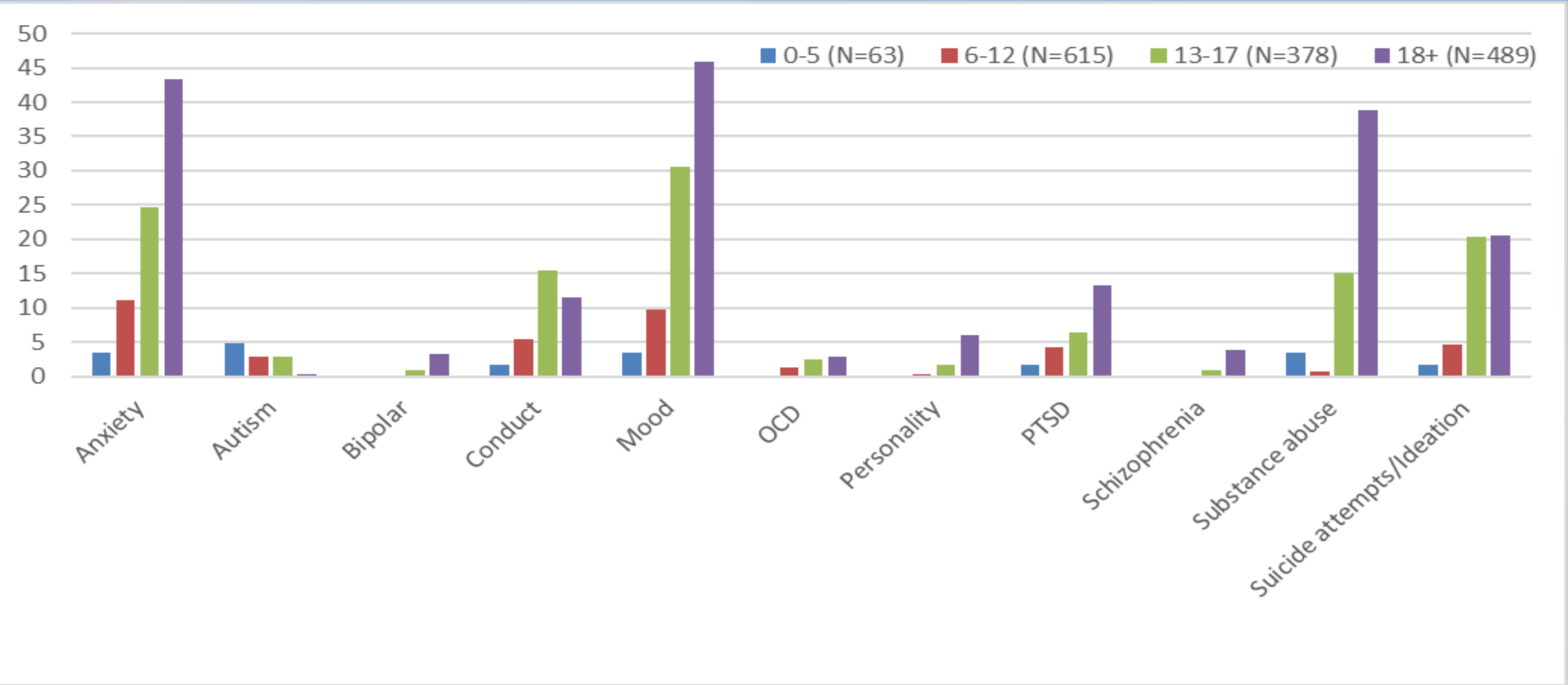
PHYSICAL HEALTH ISSUES AND FASD



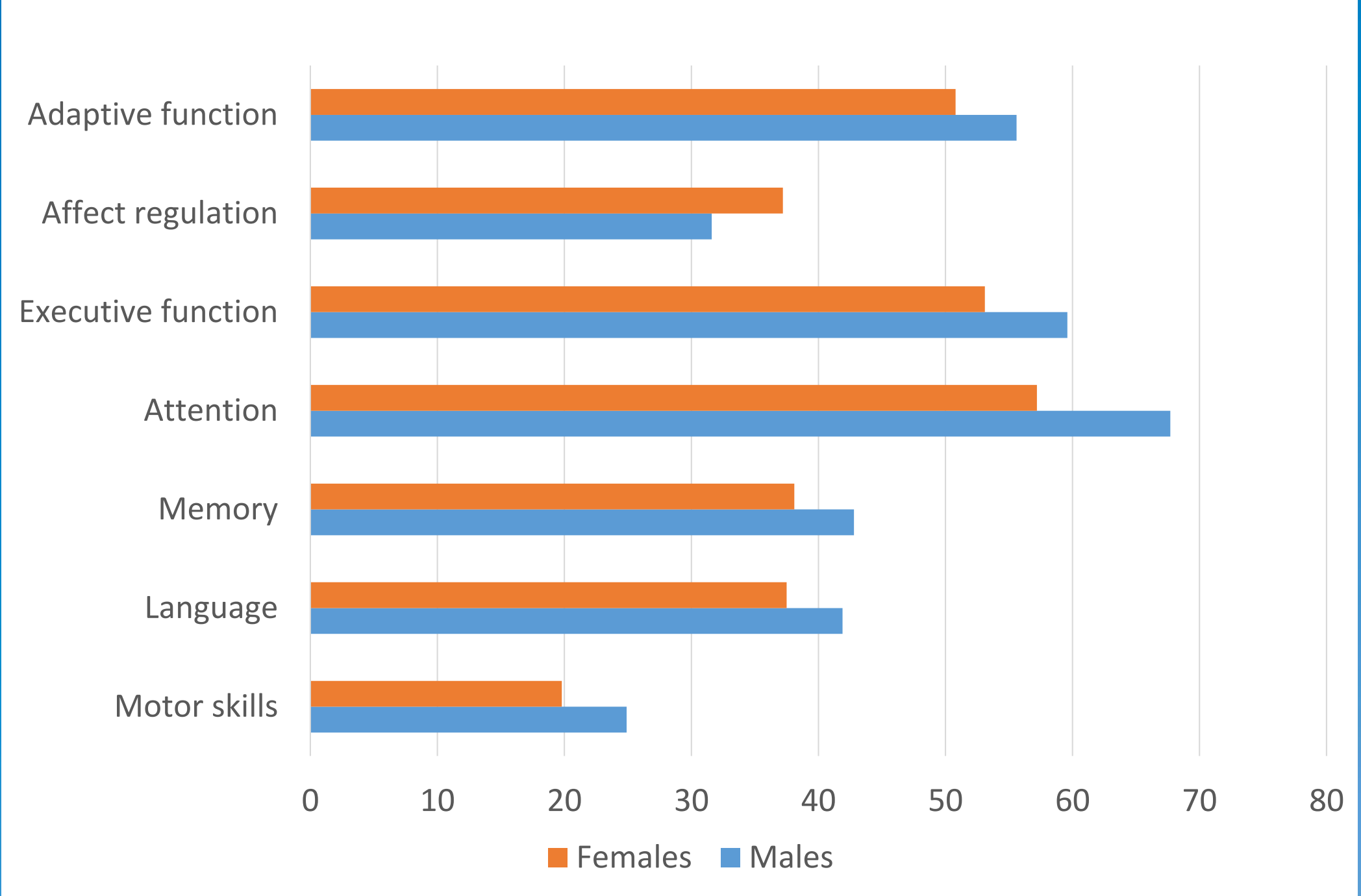
MENTAL HEALTH IN FASD WITH CANNABIS/OPIOIDS



MENTAL HEALTH DISORDERS ACROSS AGES WITH FASD



SEX DIFFERENCES IN BRAIN DOMAINS IMPAIRMENT IN FASD



SEX DIFFERENCES IN MENTAL HEALTH DISORDERS IN FASD

