

## CUTTING EDGE ASSESSMENT AND PREVENTION STRATEGIES FOR MENTAL HEALTH AND SUBSTANCE USE

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#### Aim of Abstract:

The aim of this symposium is to discuss cutting edge assessment and prevention research in relation to mental health and substance use. Initial presentations will focus on the use of international screening scales of alcohol and other drugs, mental health and psychopathology to help understand key risk factors. Nationally representative data on the substance use and mental health of young Australian's will be compared to a large current

sample of adolescents to look at current trends in Australian young people. Finally, the study protocol for a large-scale randomised controlled trial combining mental health and substance use prevention, which is currently being delivered to over 6000 Australian adolescents, will be presented. The findings from this symposium will provide important insights into the epidemiology and assessment of mental and substance use disorders in Australia.

This symposium brings together leading experts and young researchers in the epidemiology, assessment and prevention field. It will be of particular interest those interested in an integrative approach to substance use and mental health problems.

## **PRESENTATION 1 – ADAPTIVE TESTS FOR INTERNALISING AND EXTERNALISING: EFFICIENTLY MEASURING BROAD LEVELS OF PSYCHOPATHOLOGY**

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**Introduction and Aims:** Studies have indicated that the measurement of psychopathology might be improved by assessing a smaller number of dimensional factors that represent common or shared variance across multiple disorders. To facilitate screening and the measurement of these broad factors, highly efficient yet precise instruments are required. The current study aimed to develop, simulate, and validate two instruments that measure broad internalising and externalising using item response theory and computerised adaptive testing.

**Design and Methods:** The internalising test utilised data from 3,175 Australian adults. The externalising test utilised data from 1,878 undergraduate students and incarcerated adults from the United States. Several simulations were conducted to examine whether tailoring the administration of each test to each individual could reduce the number of items administered without a substantial loss in precision.

**Results:** The adaptive test for broad internalising generated scores using an average of 28 items (out of 133) and displayed excellent agreement with the full item bank ( $r > 0.9$ ). Likewise, the adaptive test for externalising estimated scores using an average of 17 items (out of 57) and demonstrated good agreement with the full item bank ( $r > 0.9$ ).

**Discussion and Conclusions:** The current study successfully demonstrates that adapting the administration of tests for internalising and externalising to each individual can generate scores using a reduced number of items without a substantial drop in accuracy. The immediate implication of this study includes the ability to screen and monitor psychopathology in the population without the level of respondent burden associated with such a comprehensive assessment.

## PRESENTATION 2 – THE PSYCHOMETRIC PROPERTIES OF THE KESSLER PSYCHOLOGICAL DISTRESS SCALE (K6) IN A GENERAL POPULATION SAMPLE OF ADOLESCENTS

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**Introduction and Aims:** The 6-item Kessler Psychological Distress Scale (K6) is a screener for psychological distress that has robust psychometric properties among adults. Given that a significant proportion of adolescents experience mental illness, there is a need for measures that accurately and reliably screen for mental disorders in this age group. This study examined the psychometric properties of the K6 in a large general population sample of adolescents (n = 4,434; mean age = 13.5 years; 44.6% male).

**Design and Method:** Data came from 4,434 adolescents participating in the CLIMATE Schools Combined study. Factor analyses were conducted to examine the dimensionality of the K6 in adolescents, and to investigate sex-based measurement invariance. This study also evaluated the K6 as a predictor of scores on the Strengths and Difficulties Questionnaire (SDQ). The K6 demonstrated high levels of internal consistency, with the six items loading primarily on one factor.

**Results:** Consistent with previous research, females reported higher mean levels of psychological distress when compared with males. The identification of sex-based measurement non-invariance in the item thresholds indicated that these mean differences most likely represented reporting bias in the K6 items, rather than true differences in the underlying psychological distress construct. The K6 was a fair to good predictor of abnormal scores on the SDQ, but predictive utility was relatively low amongst males.

**Discussions and Conclusions:** Future research needs to focus on refining and augmenting the K6 scale to maximize its utility in adolescents.

### **PRESENTATION 3 – DRUG AND ALCOHOL USE AND MENTAL HEALTH PROBLEMS AMONG YOUNG AUSTRALIANS: A COMPARISON OF THE CLIMATE SCHOOLS COMBINED STUDY AND NATIONALLY REPRESENTATIVE STUDIES**

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**Introduction and Aims:** To present a contemporary snapshot of the prevalence of alcohol and other drug use and mental health problems among Australian adolescents using data from a large cohort (n = 6273) of 12-14 year olds. This presentation will compare the uptake of alcohol and other drugs, and mental health symptomology with nationally representative studies of adolescents.

**Design and Methods:** Baseline data were analysed from the Climate Schools Combined (CSC) study, a large cluster RCT of universal prevention among students in 71 Australian schools. Adolescent alcohol and drug use prevalence and mental health outcomes were compared to data from the most recent nationally representative survey of Australia's youth (Young Minds Matter survey, 2014). Descriptive analyses will be presented, with percentages used for categorical variables and means and standard deviations used for continuous variables.

**Results:** 6,273 participants (55% female, mean age: 13.5 years) completed the baseline survey for the CSC study. Of these participants, 9% had a full standard drink. The data obtained from the CSC study is comparable with nationally representative surveys. For example, 13% of participants in the Young Minds Matter survey have had a drink of alcohol.

**Discussion and Conclusions:** The baseline data of the CSC study provides a nationally representative picture of young Australians' risky behaviours and mental health symptomology. This enables us to discuss similarities and disparities in adolescent risky behaviours from past and current national and international surveys at an age preceding typical onset of substance use, anxiety and depressive disorders.

## **PRESENTATION 4 – INNOVATIVE ONLINE PREVENTION MATERIALS FOR SUBSTANCE USE, ANXIETY AND DEPRESSION: AN INSIDE LOOK INTO THE CLIMATE SCHOOLS COMBINED STUDY**

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**Introduction and Aims:** This presentation will take an in-depth look at an online substance use and mental health prevention program and present the study protocol for the Climate Schools Combined (CSC) study.

**Design and Methods:** The CSC intervention is delivered as part of the high-school curriculum and utilises cognitive behavioural theory and social learning theory in story boards and classroom activities. Practical examples and implementation guidelines will be discussed and demonstrated. The study protocol outlines a cluster randomised controlled trial that is being conducted in 71 Australian schools across NSW, QLD and WA to determine the efficacy of the CSC intervention. Participating schools were randomised to one of the following conditions; 1) 'Control' condition, 2) 'Climate Schools - Substance Use' condition, 3) 'Climate Schools – Mental Health' condition, or 3) 'Climate Schools Combined' condition. Students are assessed via self-report questionnaires over 3 years.

**Results:** 6,409 participants (55% female, mean age: 13.5 years) completed the baseline survey. The prevention course materials and resources for teachers and students will also be presented.

**Discussion and Conclusions:** The prevention materials and study design will be informative to researchers, teachers and clinicians. Determining the effectiveness of the CSC intervention will highlight the importance of an integrative approach to the prevention of substance use and mental health disorders. The wider implication is the potential for a paradigm shift in the approach to the development of preventive programs for other comorbid health concerns.

**Discussion Section:** Those attending will learn about and discuss new innovations in the assessment and prevention of mental health and substance use conditions. The symposium will inform the audience about international screening scales and novel prevention programs which have contributed to the successful knowledge transfer in adolescence and the barriers facing prevention programs.

The desired outcomes are to:

1. Discuss new screening scales for mental health in the general population
2. Understand the prevalence and impact of co-occurring mental health and substance problems, especially amongst adolescents and young adults
3. Discuss the protocol and procedures from cutting edge research trials targeting co-occurring mental health and substance use problems

**Disclosure of Interest Statement:** There are no potential conflicts of interest to disclose.