

MEDIA RELEASE

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IMH embarks on nationwide study to gain deeper understanding of mental health and neuro-development in children and adolescents

Catalysed by Temasek Foundation, study focuses on screening, establishing the prevalence of four common conditions, and identifying the risk and protective factors

1. The National Healthcare Group's Institute of Mental Health (IMH) is embarking on a nationwide study to provide mental health screening and establish the prevalence of mental health and neuro-developmental conditions in children and adolescents born between 2007 and 2016. This two-year study is catalysed by a \$1.5 million grant from Temasek Foundation.
2. Known as the **Building Resilience And interVention (BRAVE) study**, it will investigate mental health issues affecting young people, but with a focus on the four most common conditions seen at the IMH Child Guidance Clinics – autism spectrum disorder (ASD), attention-deficit hyperactivity disorder (ADHD), anxiety, and depression. Participants will be screened for these mental health issues, and if required, they will be invited to undergo a comprehensive assessment to establish the diagnosis.

Tracking the Development of Youth Mental Health

3. The BRAVE study is part of a 10-year project designed to support and track the development of youth mental health through a phased approach.
4. This is a cohort and longitudinal research project that will be carried out in three phases: Phase 1 (BRAVE study) focuses on screening and diagnosis, establishing the prevalence of four common conditions, and identifying the risk and protective factors associated with these conditions. Phase 2 involves developing and implementing an intervention programme for at-risk youths to improve their well-being and resiliency. Phase 3 tracks participants' mental health trajectories and examine any possible causal links between the development of these conditions and events that the participants may experience over time. Monitoring patterns of change in mental health over time, as participants grow up, helps the research team identify trends, predict outcomes, and develop preventative strategies. Phase 3 may also include recommendations such as additional assessments or support resources to mitigate the impact of the conditions that participants may have developed during the study period. Planning for Phases 2 and 3 is underway and will commence as appropriate.
5. "To help us understand what young people need for good mental health, we need to study risks and strengths in the children and their environment and understand these in the context of a growing child. This study provides us with these insights from the unique Singapore environment for us to use in the prevention of mental illness and the promotion of mental health and well-being," says A/Prof Daniel Fung, Chief Executive Officer of IMH and Co-Investigator of the BRAVE study.

About BRAVE Study (First Phase)

6. According to the Singapore Mental Health Study 2016 conducted by IMH, 1 in 5 youths in Singapore have experienced at least one mental health condition. Young people aged 18 to 34 years represented the highest proportion of individuals with mental health disorders, and were more likely to have mood and anxiety disorders. As many mental health disorders occur during teenage to early adulthood years, through data and qualitative information collected from the BRAVE study, IMH researchers hope to identify the risk and protective factors. These factors could influence the likelihood of young persons developing mental health conditions during the critical life stages of childhood and adolescence. They also aim to identify at-risk groups so that referrals to appropriate support or early intervention can be made.
7. “During childhood and adolescence, the brain undergoes significant development, making these stages particularly vulnerable to the onset of mental health conditions. Many disorders, such as anxiety, depression, and developmental issues, can co-occur during this time. Screening and early detection are crucial to identifying issues before they escalate, providing an opportunity for timely intervention that can significantly improve long-term outcomes. A data-driven approach to understanding the prevalence and risks of these issues plays a foundational role in service planning and shaping literacy efforts. Currently, most support services respond to problems rather than proactively prevent them. This, alongside the stress placed on parents and caregivers, highlights the urgent need for improved, preventive approaches to help our young,” says Dr Lim Choon Guan, Chief of the Department of Developmental Psychiatry at IMH and Principal Investigator of the BRAVE study.

Two Stages – Mental Health Screening and Clinical Assessment

8. The study comprises two stages and will run from November 2024 to November 2026. In Stage 1, participants will have to complete an online questionnaire that examines their mental health. The questionnaire will also enable the study team to screen the participants for the four common conditions by:
 - a) assessing social communication skills related to autism spectrum disorder (ASD) by finding out how well the participants communicate and interact with others.
 - b) evaluating attention and activity levels related to attention-deficit hyperactivity disorder (ADHD) by measuring how focused and active the participants are.
 - c) understanding their emotional well-being using a Children’s Anxiety and Depression Scale, which asks about any signs of anxiety or depression.
9. Additionally, IMH researchers will collect demographic information, including age, gender, socioeconomic status, and family background. This data will enable the team to identify both risk and protective factors, such as family history and potential challenges faced by the family, including conflicts, divorce, and financial issues.
10. Participants whose survey results suggest signs of mental health issues in Stage 1 will be invited to proceed to Stage 2. Here, they will undergo a comprehensive assessment at IMH’s Child Guidance Clinic to better evaluate if they have any mental health conditions. If needed,

early intervention measures will be recommended. Participants who could benefit from community support will also be referred to appropriate resources such as social service agencies, school counsellors, or General Practitioners. One year later, a follow-up mental health screening will be conducted for all participants, regardless of their initial mental health status, to monitor their well-being.

Eligibility for BRAVE Study Participation

11. Over the next few months, invitation letters will be sent in batches to 40,000 randomly identified households with at least one young Singapore citizen or Permanent Resident born between 2007 and 2016. The letters will provide an overview of the study and a registration link. Parents who do not receive a letter for their child born within the targeted years but are interested in getting the child to participate can also register at www.brave.sg.

Study Partnerships

12. “Mental health is a key area of focus for Temasek Foundation. We are pleased to support the BRAVE study, which aims to provide key insights into youth mental health in Singapore. For the first time, we will be able to understand how common and widespread each disorder is among youths, as well as how social, economic and cultural factors put youths at risk or provides protection. This will enable us to provide them with better support and build greater mental health resilience,” says Mr Kee Kirk Chuen, Head, Health & Well-being, Temasek Foundation.
13. The BRAVE study is led by IMH, in collaboration with partners such as the National University Hospital, Tan Tock Seng Hospital, and the National Council of Social Service.

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For more info on BRAVE Study, visit www.brave.sg.

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About the Institute of Mental Health (IMH)

The Institute of Mental Health (IMH), a member of the National Healthcare Group, is the only tertiary psychiatric care institution in Singapore. Located on the sprawling 23-hectare campus of Buangkok Green Medical Park in the north-eastern part of Singapore, IMH offers a multidisciplinary and comprehensive range of psychiatric, rehabilitative and therapy services in hospital-based and community-based settings. The 2,000-bedded hospital aims to meet the needs of three groups of patients – children and adolescents (aged below 19 years), adults and the elderly. Besides providing clinical services, IMH dedicates resources to carry out mental health promotion and raise mental health literacy. IMH also leads in mental health research and training the next generation of mental health professionals in Singapore. For more information, please visit www.imh.com.sg.

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Annex A

Researchers involved in the BRAVE Study

Principal Investigator:

- Dr Lim Choon Guan, Institute of Mental Health

Co-Investigators:

- A/Prof Daniel Fung, Institute of Mental Health
- Dr Sung Min, Institute of Mental Health
- Dr Goh Tze Jui, Institute of Mental Health
- Mr Nicholas Goh Kun Lie, Institute of Mental Health

Collaborators:

The following collaborators provided advisory support to the team in designing the BRAVE Study, including guidance on epidemiological study design, appropriate methodologies, sample sizes, and key considerations.

- Dr Wong Chia Siong, Tan Tock Seng Hospital
- Prof Lee Yung Seng, National University Hospital
- Dr Chu Chi Meng, National Council of Social Service
- Dr Chan Yiong Huak, National University of Singapore
- Ms Wong Hung Chew, National University of Singapore

ENGLISH-CHINESE GLOSSARY

Institute of Mental Health	心理卫生学院
National Healthcare Group	国立健保集团
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BRAVE Study Building Resilience And interVENTion (BRAVE) Study	少年心理韧性建设与干预研究计划