



Bridging Research and Communities: Advancing Mental Health Policy Through Epidemiological Studies

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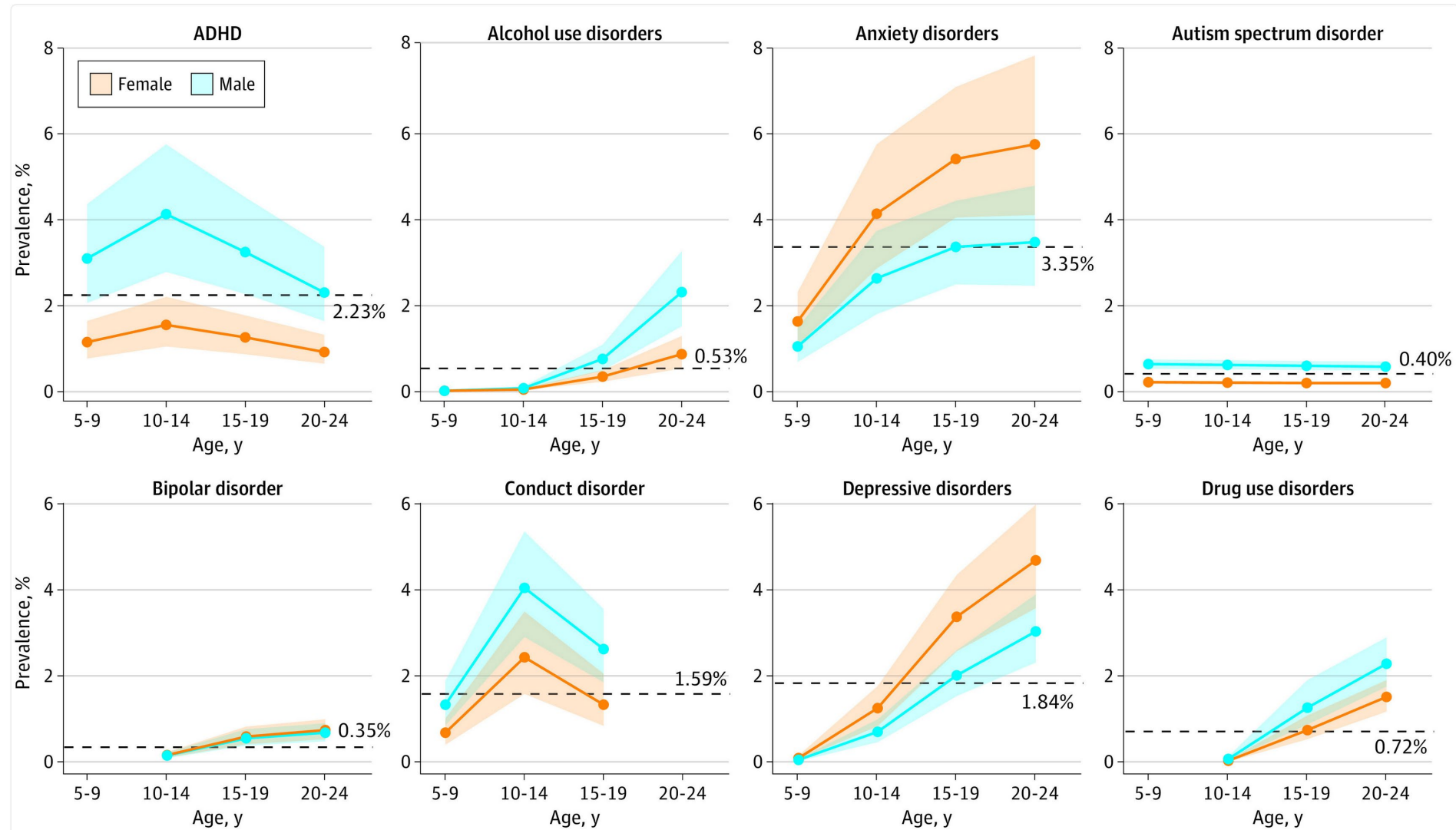
Mental Health Epidemiology

Epidemiology is the study (*scientific, systematic, and data-driven*) of the distribution (*frequency, pattern*) and determinants (*causes, risk factors*) of mental health-related states and events (*not just diseases*) in specified populations (*neighborhood, school, city, state, country, global*). It is also the application of this study to the control of mental health problems

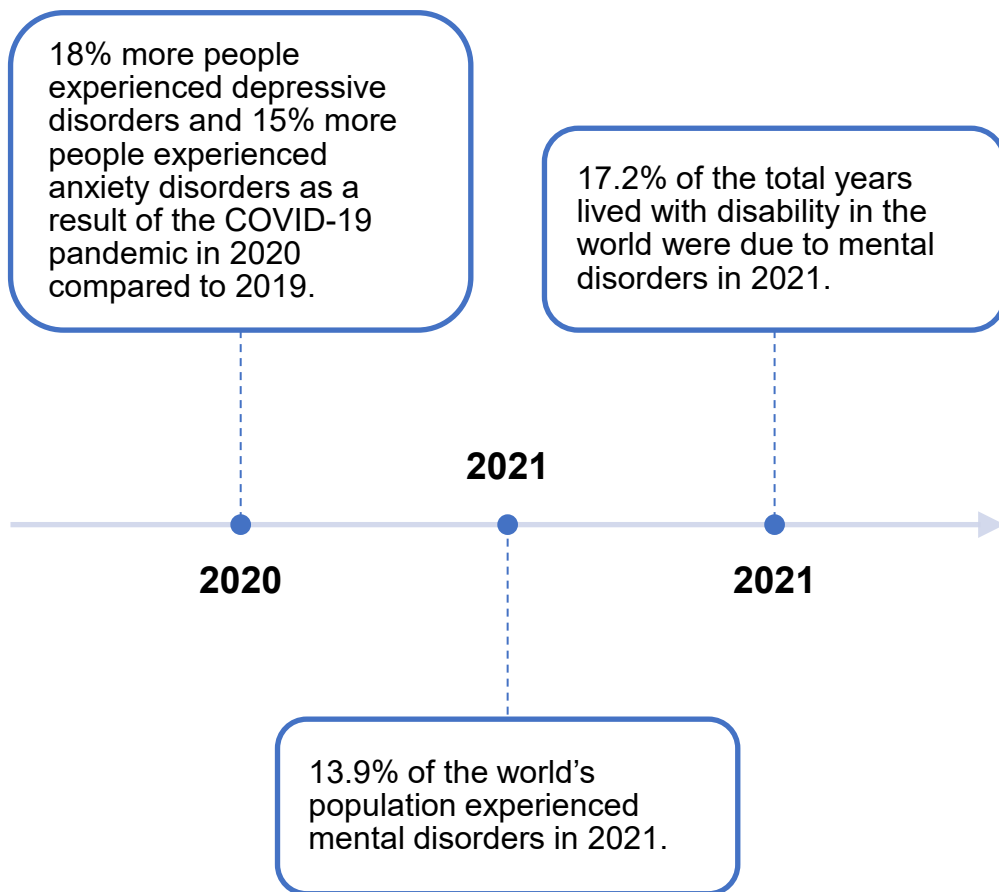
- (*Principles of Epidemiology, 3rd Edition*).



Global Prevalence of Mental Disorders by Sex and Age Group From Age 5 to 24 Years - 2019 Global Burden of Disease study

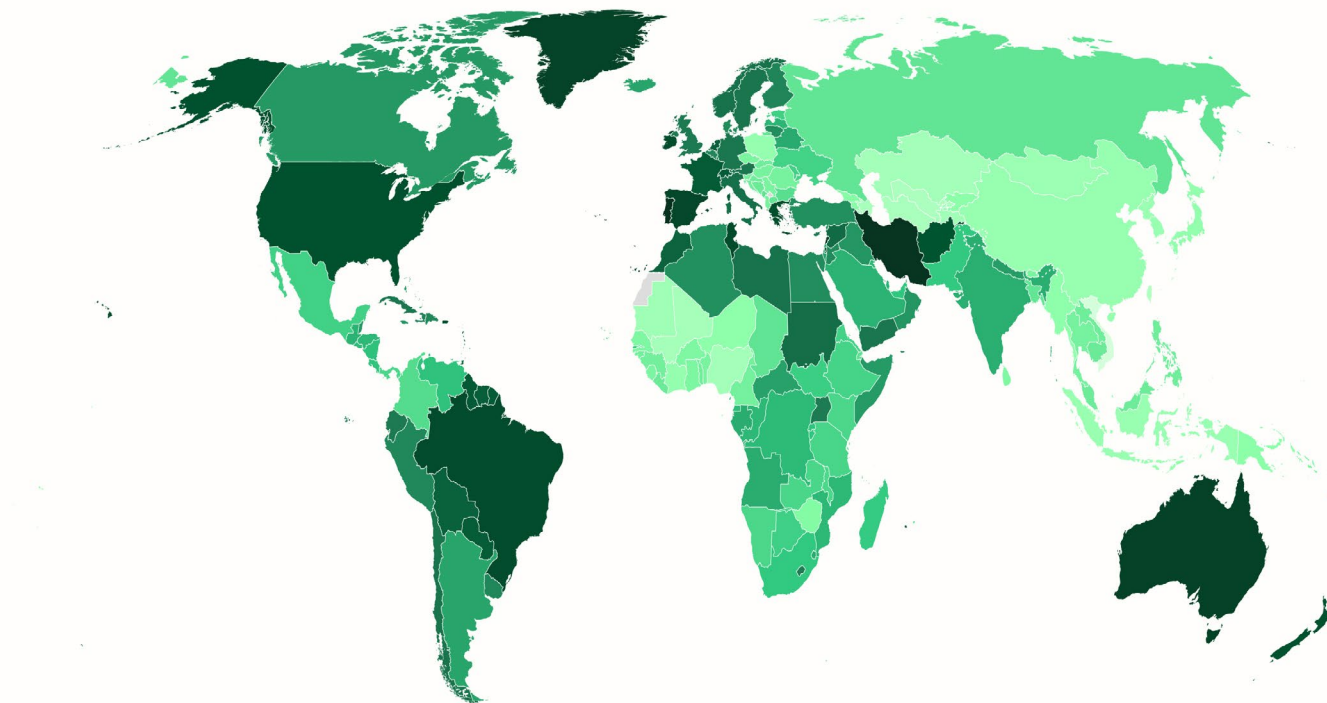


Institution for Mental Health Metrics – Overview of mental disorders



Prevalence of mental disorders worldwide, 2021

Rate per 100,000 people
9,705 19,936



Note: Rates are age-standardized.

WHAT IS POLICY

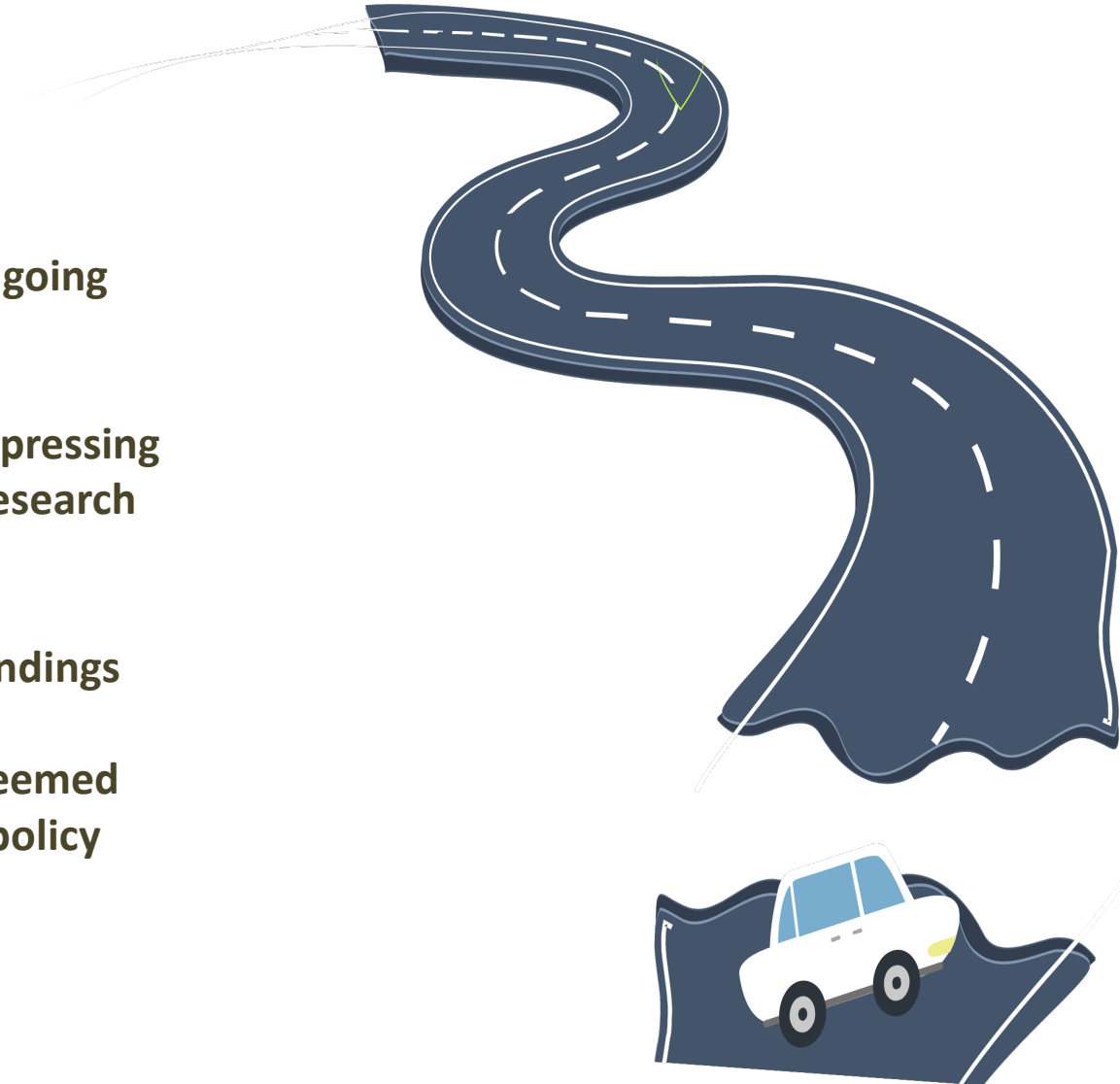
A course of action that will create a desired objective in the interest of the masses or the people in a given country.

Public policy is anything that a government chooses to do or not to do (Thomas Dye).



So, Why Doesn't Research (Insight) Lead to Real-World (Policy) Change

- Small scale studies
- Some studies are not policy relevant
- Policy makers are not informed about ongoing research
- Researchers lack knowledge of the most pressing policy questions in order to make their research more relevant
- Ineffective communication of research findings
- Researchers often feel that research is deemed unimportant, censored or controlled by policy makers



The Singapore Story



1928

'The Mental Hospital'
with 1,030 patients,
145 hectares.



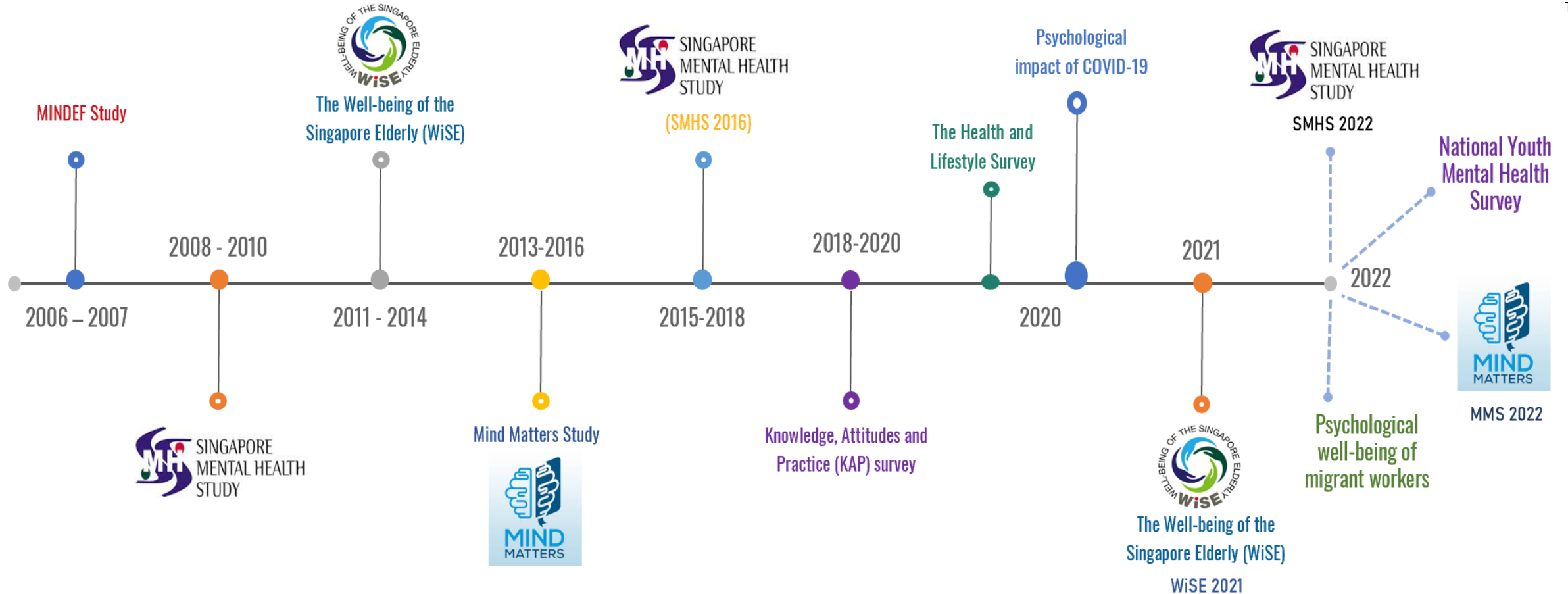
1993

WH shifted to its current
premise in Buangkok
and renamed as the
Institute of Mental
Health/
Woodbridge Hospital.



Focus on Research National Epidemiological Surveys

Funding support:
Ministry of Health
National Medical Research Council
National Council of Social Service
National Centre for Infectious Diseases
Ministry of Home Affairs
Agency for Integrated Care
Temasek Foundation
Tote Board



Main Aims of the SMHS (2010-2016)

- To carry out a population-based study aimed at determining the lifetime and 12-month prevalence* of specific mental disorders within the adult population of Singapore.
- To monitor the mental health status of Singaporeans and evaluate the changes that have occurred since the initial study (SMHS 2010) conducted years prior.
- To outline the current utilization of mental health services (including both Western and traditional medicine), assess the levels and types of unmet needs, and identify the facilitators and obstacles to accessing mental health treatment, alongside the financial, social, and personal costs related to mental health disorders.

**Lifetime prevalence was estimated from the proportion of respondents who had ever had a given disorder up to their age at interview, while the 12-month prevalence rate was estimated as those who experienced the disorder at some point during the year prior to the interview.*

Singapore Mental Health Study

LIFETIME PREVALENCE



1 in 8 had experienced a mental health condition in their lifetime

2010



1 in 7 had experienced a mental health condition in their lifetime

2016



VULNERABLE GROUP

Youths aged 18-34

Subramaniam M et al 2020

COMMON DISORDERS

Mental Disorder	SMHS 2010 (%)	SMHS 2016 (%)
Major Depressive Disorder	5.8	6.3
Bipolar Disorder	1.2	1.6
Generalised Anxiety Disorder*	0.9	1.6
Obsessive Compulsive Disorder	3.0	3.6
Alcohol Abuse	3.1	4.1
Alcohol Dependence	0.5	0.5
Any of the above disorders	12	13.9
Comorbidity*	2.5	3.5



Singapore Mental Health Study



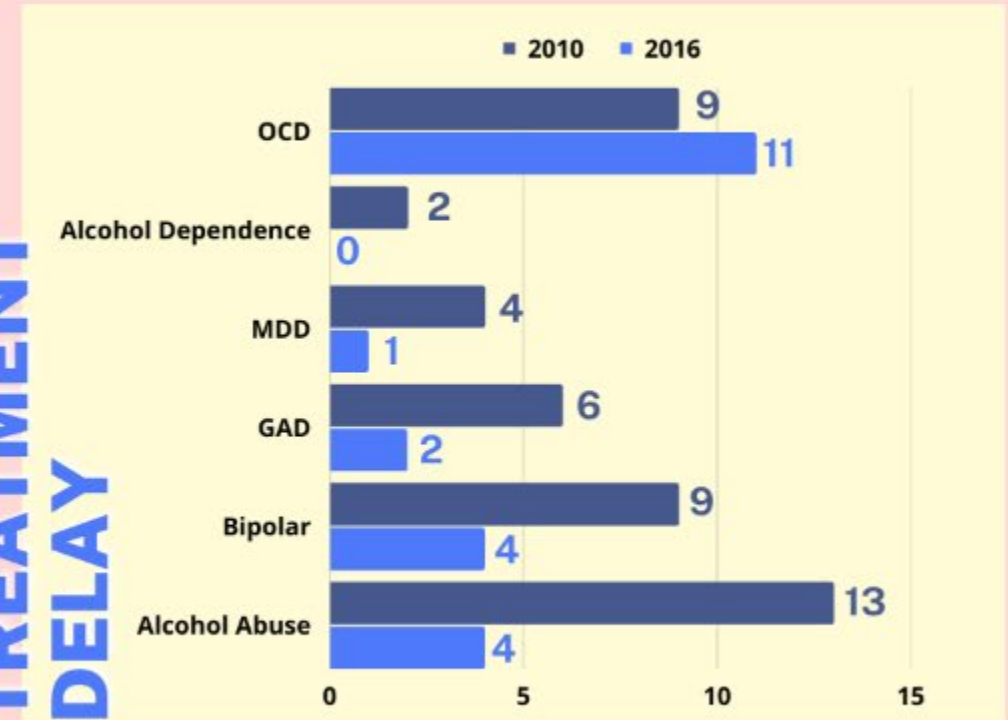
>75%
DID NOT seek help

TREATMENT GAP



Subramaniam M et al 2020

TREATMENT DELAY

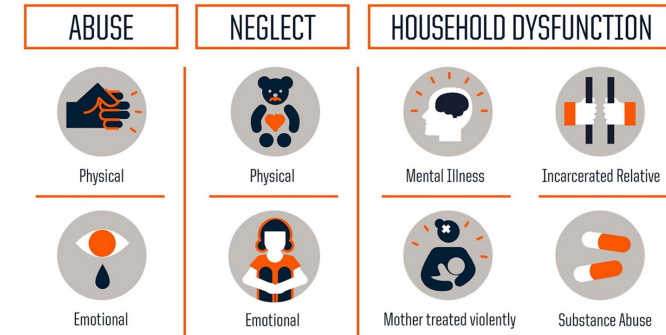


Tan et al 2024



Adverse Childhood Experiences

	N	weighted %
Emotional neglect	2013	46.45
Physical neglect	259	5.90
Living with household members who were substance abusers	248	5.33
Living with household members who were mentally ill or suicidal	225	6.02
Battered mother/ female guardian	382	8.17
Living with household members who were imprisoned	221	4.47
Parental separation, divorce or death of a parent	1090	21.84
Emotional abuse	331	7.98
Physical abuse	232	5.02
Sexual abuse	144	3.73
Bullying	90	1.97
Any ACE[#]	2842	63.90
Number of adverse childhood experiences		
- 1	1575	35.62
- 2	677	15.21
- 3 and above	590	13.07



Child Abuse & Neglect 103 (2020) 104447



Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Child Abuse & Neglect

journal homepage: www.elsevier.com/locate/chiabuneg



Research article

Prevalence, socio-demographic correlates and associations of adverse childhood experiences with mental illnesses: Results from the Singapore Mental Health Study

Mythily Subramaniam^{a,b,*}, Edimansyah Abidin^a, Esmond Seow^a, Janhavi Ajit Vaingankar^a, Saleha Shafie^a, Shazana Shahwan^a, Mathew Lim^c, Daniel Fung^d, Lyn James^e, Swapna Verma^f, Siow Ann Chong^a



Adverse Childhood Experiences

Adverse childhood experiences could cost Singapore about \$1.18 billion a year: Study



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Psychological Trauma:
Theory, Research, Practice, and Policy

2025, Vol. 17, No. 1, 1–9
<https://doi.org/10.1037/tra0001691>

Health Care Utilization, Productivity Losses, and Burden of Adverse Childhood Experiences in Singapore: Findings From a National Survey

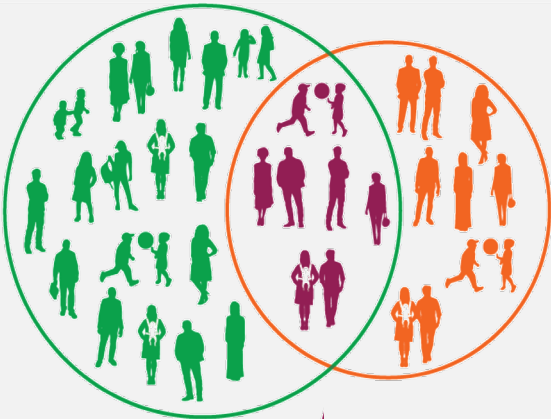
Jianlin Liu¹, Bernard Chin Wee Tan¹, Edimansyah Abdin¹, Yeleswarapu Sita Padmini²,
Jean Yin Oh², Siow Ann Chong¹, and Mythily Subramaniam¹

¹ Research Division, Institute of Mental Health, Singapore

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Changes in the prevalence of comorbidity of mental and physical disorders

Factor	%		p-value*
	SMHS-2010	SMHS-2016	
Age group (yr)			
18–34	7.0	9.0	0.003
35–49	5.8	7.9	0.026
Gender			
Female	5.0	6.1	0.022
Ethnicity			
Chinese	5.5	6.2	0.046
Malay	5.3	8.0	< 0.001
Indian	7.8	9.0	0.032
Others	13.4	7.6	0.015
Marital status			
Never married	6.5	6.7	0.015
Married	4.9	6.4	0.004
Education			
Vocational/ITE	6.7	10.2	0.043
University	5.5	7.0	0.034
Employment			
Employed	6.0	7.4	0.002



Original Article

Singapore Med J 2022; 63(4): 196-202
<https://doi.org/10.11622/smedj.2020124>

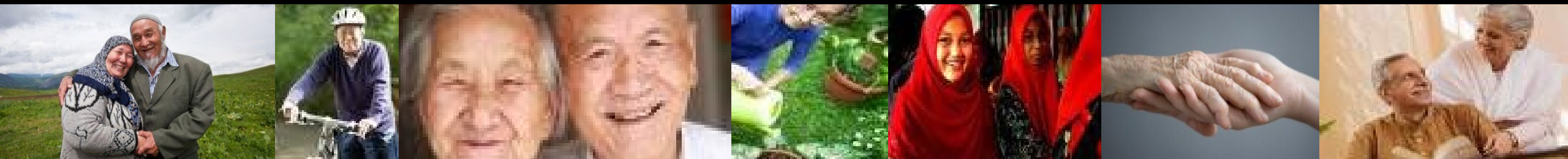
Changes in the prevalence of comorbidity of mental and physical disorders in Singapore between 2010 and 2016

Edimansyah *Abdin*¹, PhD, Siow Ann *Chong*¹, MBBS, MMed, Janhavi *Ajit Vaingankar*¹, MSc, Saleha *Shafie*¹, BSocSci, Darren *Seah*², MBBS, MMed, Chun Ting *Chan*², MBBS, Stefan *Ma*³, PhD, Lyn *James*⁴, MBBS, MMed, Derrick *Heng*⁴, MBBS, MPhil, Mythily *Subramaniam*⁴, MBBS, PhD

SUICIDALITY IN THE SINGAPORE MENTAL HEALTH STUDY

Disorder	Lifetime Prevalence %	12-Month Prevalence %
Suicidality	7.8	13
Ideation	7.8	13
Plan	16	0.3
Attempt	16	0.2

- 01 Of the adult population in Singapore, 7.8% i.e., 1 in 13 had thought about suicide, i.e. had suicidal ideation, at some point in their lives
- 02 Younger age and divorced/separated status significantly associated with lifetime suicidal ideation, plan and attempt.
- 03 48.7% of people who have experienced suicidal ideation, or plan or attempt had at least one mental disorder



Well-being of the Singapore Elderly Survey (2013 & 2023)



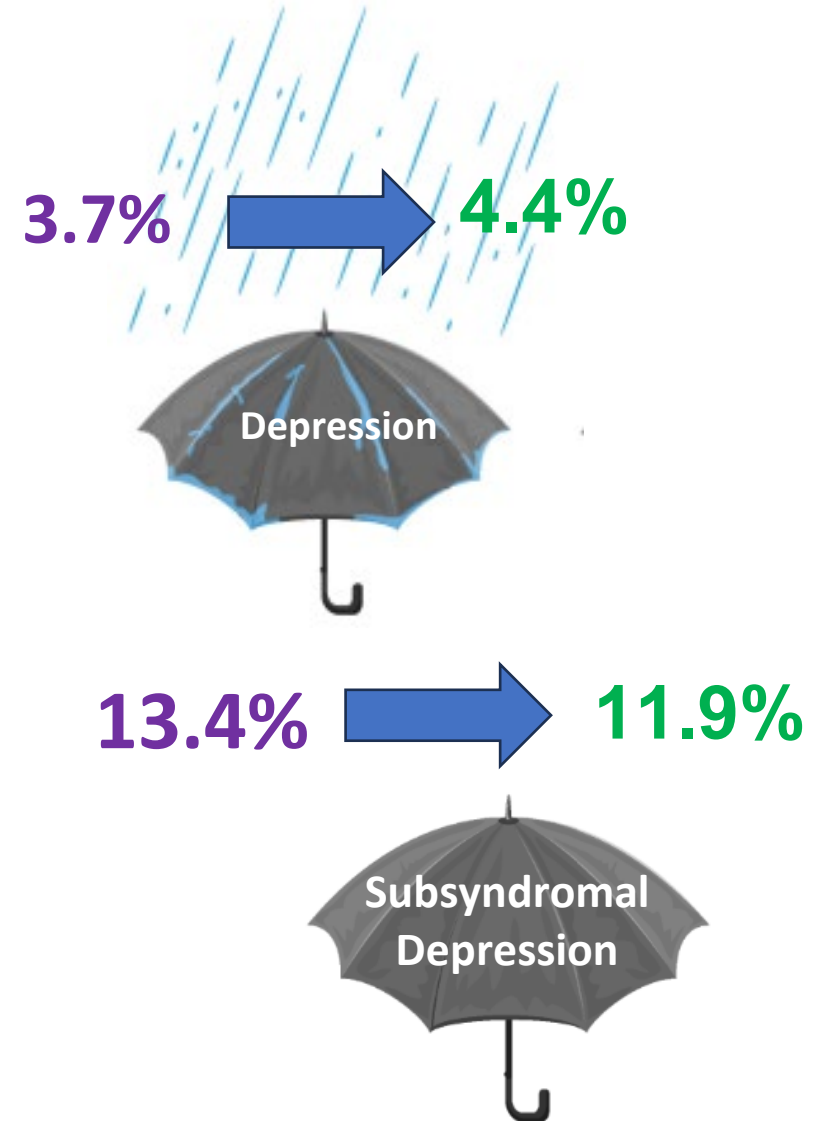
Well-being of the Singapore Elderly (WiSE) Study

WiSE 2013 and WiSE 2023

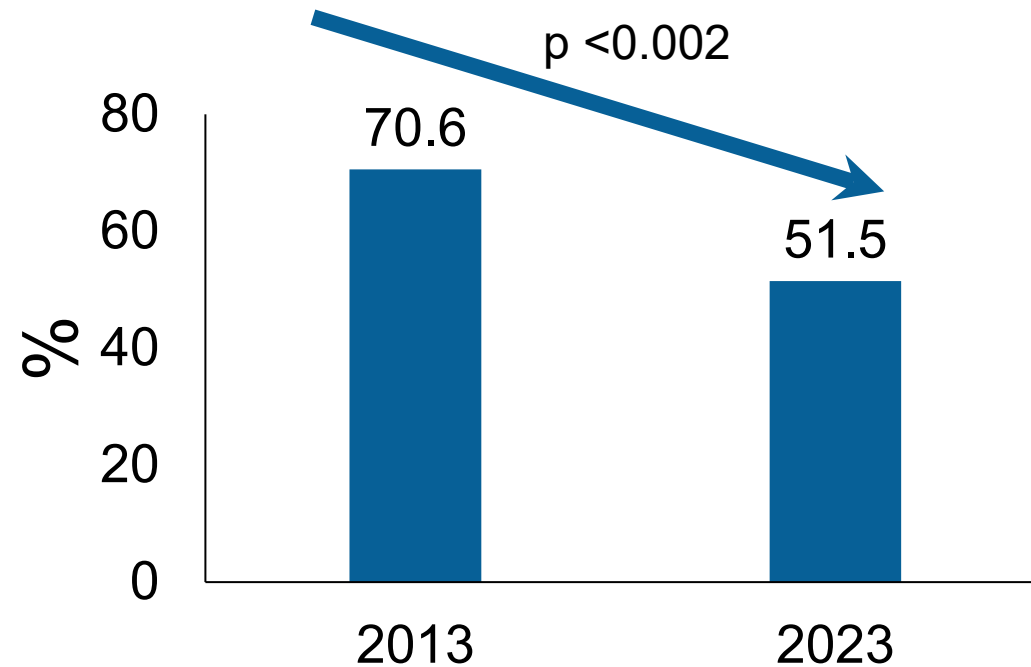
**1 in 10 (10%)
aged 60 years and above
had dementia in 2013**



**1 in 11 (8.8%)
aged 60 years and above
had dementia in 2023**



Treatment Gap of Dementia across WiSE2013 and WiSE2023 (Prevalence of undiagnosed dementia)



- ✓ Prevalence of undiagnosed dementia has **decreased significantly** by 19% from 70.6% in 2013 to 51.5% in 2023



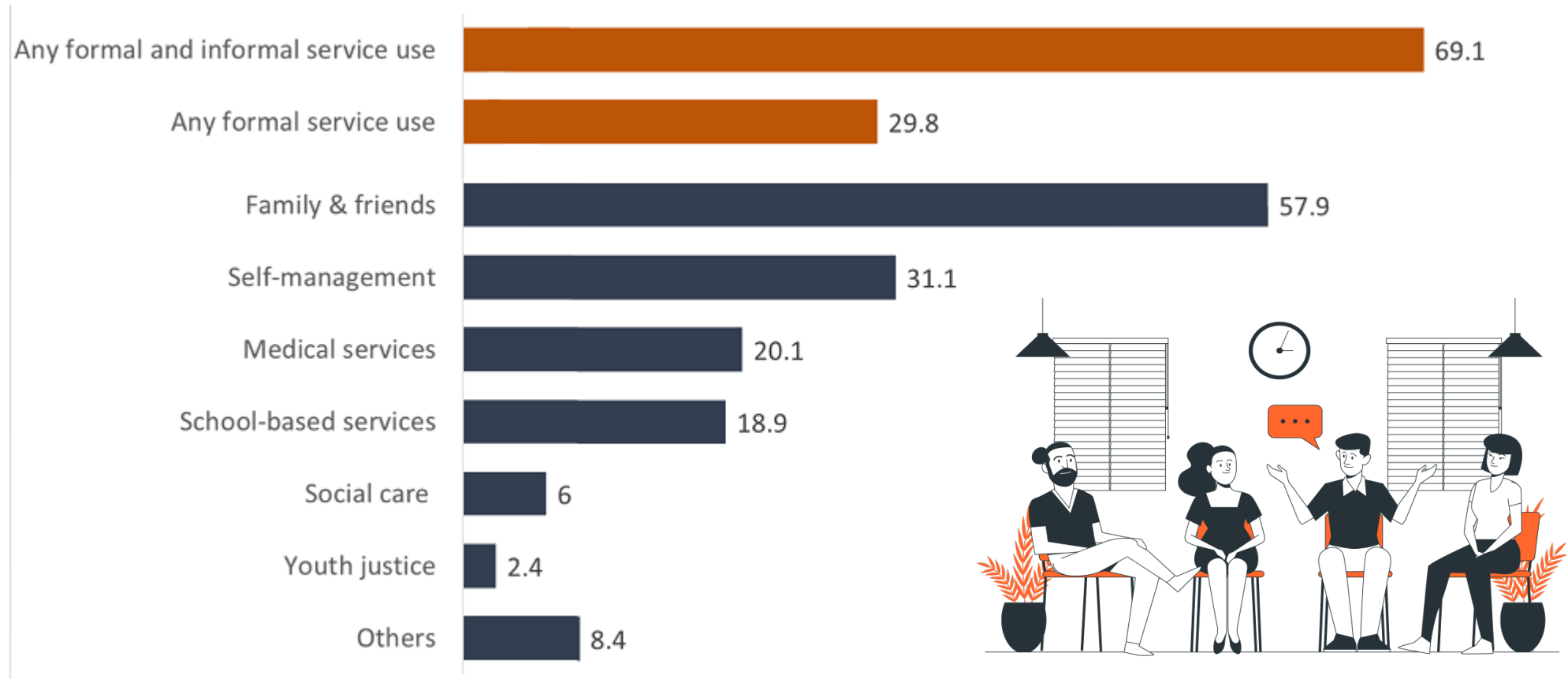
National Youth Mental Health Study

Prevalence of severe and very severe depression, anxiety or stress symptoms

Youths (15-35 y)	
Depression	14.9
Anxiety	27.0
Stress	12.9
Any one	30.6
All 3 conditions	8.1

Sources of Help-Seeking among Youth

- Among youths with severe and extremely severe mental health symptoms, about **2 in 3 (69.1%)** sought some form of formal or informal help.



DISSEMINATION OF RESEARCH Publications

Asian Journal of Psychiatry 105 (2025) 104405

Contents lists available at ScienceDirect

Asian Journal of Psychiatry

journal homepage: www.elsevier.com/locate/ajp

Examining psychological distress among youth in Singapore: Insights from the National Youth Mental Health Study

M. Subramaniam^{a,b,c,*}, JA Vaingankar^a, B. Tan^a, E. Abdin^a, S. Chang^a, YWB Tan^a, E. Samari^a, S. Archana^a, YC Chua^d, JK Lee^b, C. Tang^d, YP Lee^d, SA Chong^a, SK Verma^d

^a Research Division, Institute of Mental Health, 539747, Singapore
^b Saw Swee Hock School of Public Health, National University of Singapore, 117549, Singapore
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Chang et al. *Child and Adolescent Psychiatry and Mental Health* (2025) 19:27
<https://doi.org/10.1186/s13034-025-00885-6>

Child and Adolescent Psychiatry and Mental Health

RESEARCH

Open Access

Prevalence and correlates of nonsuicidal self-injury among youths in Singapore: findings from the National Youth Mental Health Study

Sherilyn Chang^{1*}, Janhavi Ajit Vaingankar¹, Bernard Tan¹, Yeow Wee Brian Tan¹, Ellaisha Samari¹, S. Archana¹, Yi Chian Chua², Yi Ping Lee², Charmaine Tang², Swapna Verma^{2,3†} and Mythily Subramaniam^{1,4,5†}

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DOI: 10.1002/alz.14485

ARTICLE INFO

Keywords:
Youth
Mental Health
Multi-ethnic
Asian
Depression, Anxiety

1. Introduction

Youth is defined as 'a period of transition from childhood to adulthood independence'. The 'youth' as persons aged between 15 and 24 years (15.5 % of the global population (United Nations Economic and Social Affairs (UNESA), 2019), immense biological, physical, cognitive, social milestones during this period include increased need for independence, enhanced risk-taking and experimenting, and the development of identity. Given these developmental changes, it is not

Epidemiology and Psychiatric Sciences

cambridge.org/eps

Original Article

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Accepted: 4 March 2019

Key words:
Composite International Diagnostic Interview; multi-ethnic; prevalence; Singapore; survey

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Tracking the mental health of a nation: prevalence and correlates of mental disorders in the second Singapore mental health study

M. Subramaniam^{1,2}, E. Abdin¹, J. A. Vaingankar¹, S. Shafie¹, B. Y. Chua¹, R. Sambasivam¹, Y. J. Zhang¹, S. Shahwan¹, S. Chang¹, H. C. Chua³, S. Verma^{4,5}, L. James⁶, K. W. Kwok⁷, D. Heng⁶ and S. A. Chong¹

¹Research Division, Institute of Mental Health, Singapore; ²Lee Kong Chian Medical School, Singapore; ³Department of General Psychiatry, Institute of Mental Health, Singapore; ⁴Clinical Education, Office of Education, Duke-NUS Medical School, Singapore; ⁵Department of Psychosis and East Region, Institute of Mental Health, Singapore; ⁶Epidemiology & Disease Control Division, Ministry of Health, Singapore and ⁷President's Office, Nanyang Technological University, Singapore

Abstract

Aims. The second Singapore Mental Health Study (SMHS) – a nationwide, cross-sectional, epidemiological survey – was initiated in 2016 with the intent of tracking the state of mental health of the general population in Singapore. The study employed the same methodology as the first survey initiated in 2010. The SMHS 2016 aimed to (i) establish the 12-month and lifetime prevalence and correlates of major depressive disorder (MDD), dysthymia, bipolar disorder, generalised anxiety disorder (GAD), obsessive compulsive disorder (OCD) and alcohol use disorder (AUD) (which included alcohol abuse and dependence) and (ii) compare the prevalence of these disorders with reference to data from the SMHS 2010.

Methods. Door-to-door household surveys were conducted with adult Singapore residents aged 18 years and above from 2016 to 2018 ($n = 6126$) which yielded a response rate of 69.0%. The subjects were randomly selected using a disproportionate stratified sampling method and assessed using World Health Organization Composite International Diagnostic Interview version 3.0 (WHO-CIDI 3.0). The diagnoses of lifetime and 12-month selected mental disorders including MDD, dysthymia, bipolar disorder, GAD, OCD, and AUD (alcohol abuse and alcohol dependence), were based on the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) criteria.

Results. The lifetime prevalence of at least one mood, anxiety or alcohol use disorder was 13.9% in the adult population. MDD had the highest lifetime prevalence (6.3%) followed

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Alzheimer's & Dementia
THE JOURNAL OF THE ALZHEIMER'S ASSOCIATION

RESEARCH ARTICLE

Prevalence of dementia in Singapore: Changes across a decade

Mythily Subramaniam^{1,2,3} | Edimansyah Abdin¹ | PV Asharani¹ | Kumarasan Roystonn¹ | Fiona Devi¹ | Wang Peizhi¹ | Saleha Shafie¹ | Vathsala Sagayadevan¹ | Anitha Jeyagurunathan¹ | Boon Yiang Chua¹ | Bernard Tan¹ | Janhavi Ajit Vaingankar¹ | Fengyuan Yao⁴ | Harish Magadi⁴ | Stefan Ma⁵ | Wai Leng Chow⁵ | Paul McCrone⁶ | Derrick Heng⁵ | Rathi Mahendran⁷ | Martin Prince⁸ | Li Ling Ng⁹ | Siow Ann Chong¹

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⁴Department of Geriatric Psychiatry, Institute of Mental Health, Singapore, Singapore
⁵Ministry of Health, Singapore, Singapore
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⁷Department of Psychological Medicine, National University of Singapore, Singapore, Singapore
⁸Kings College London, Strand, London, UK
⁹Changi General Hospital, Singapore, Singapore

Abstract

INTRODUCTION: The study aimed to assess changes in the prevalence of dementia in Singapore over the past decade.

METHODS: The Well-being of the Singapore Elderly (WISE) 2023 and the WISE 2013 studies were comprehensive, single-phase, cross-sectional surveys conducted among older adults aged ≥ 60 years in Singapore. WISE 2023 included 2010 older adults and 1798 informants, whereas WISE 2013 comprised 2565 older adults and 2421 informants.

RESULTS: The weighted prevalence of dementia based on the 10/66 Diagnostic Research Group (DRG) criteria was 8.8% (95% confidence interval [CI]: 7.3–10.7) in the WISE 2023 study compared to 10% in the WISE 2013 study (95% CI: 8.7–11.5). The proportion of those with undiagnosed dementia decreased significantly from 70.6% in WISE 2013 to 51.5% in WISE 2023 (p -value = 0.002).

DISCUSSION: A non-significant 12% reduction (95% CI: 1.1–3.5) in dementia prevalence

**Each one of us can make
a difference. Together
we make change.**

BARBARA MIKULSKI

ADDRESSING THE TREATMENT GAP

Community Mental Health Master Plan 2012

01

Early detection systems implemented in community and general hospitals

03

Extending coverage of both Medisave and MediShield to include mental illness

02

Training care providers in various social sectors and grass roots organizations

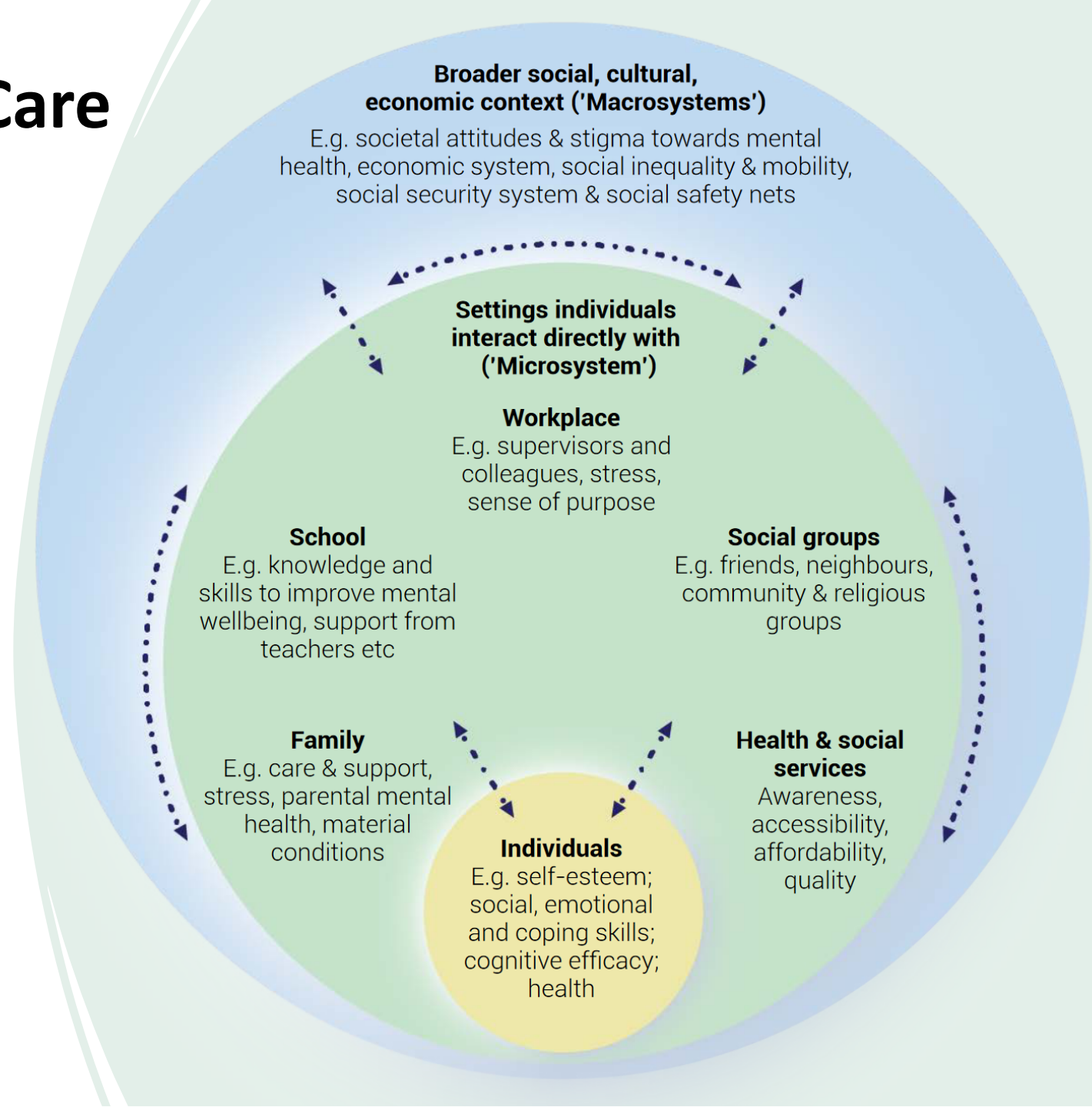
04

Public awareness campaigns

Prevention and Access to Care

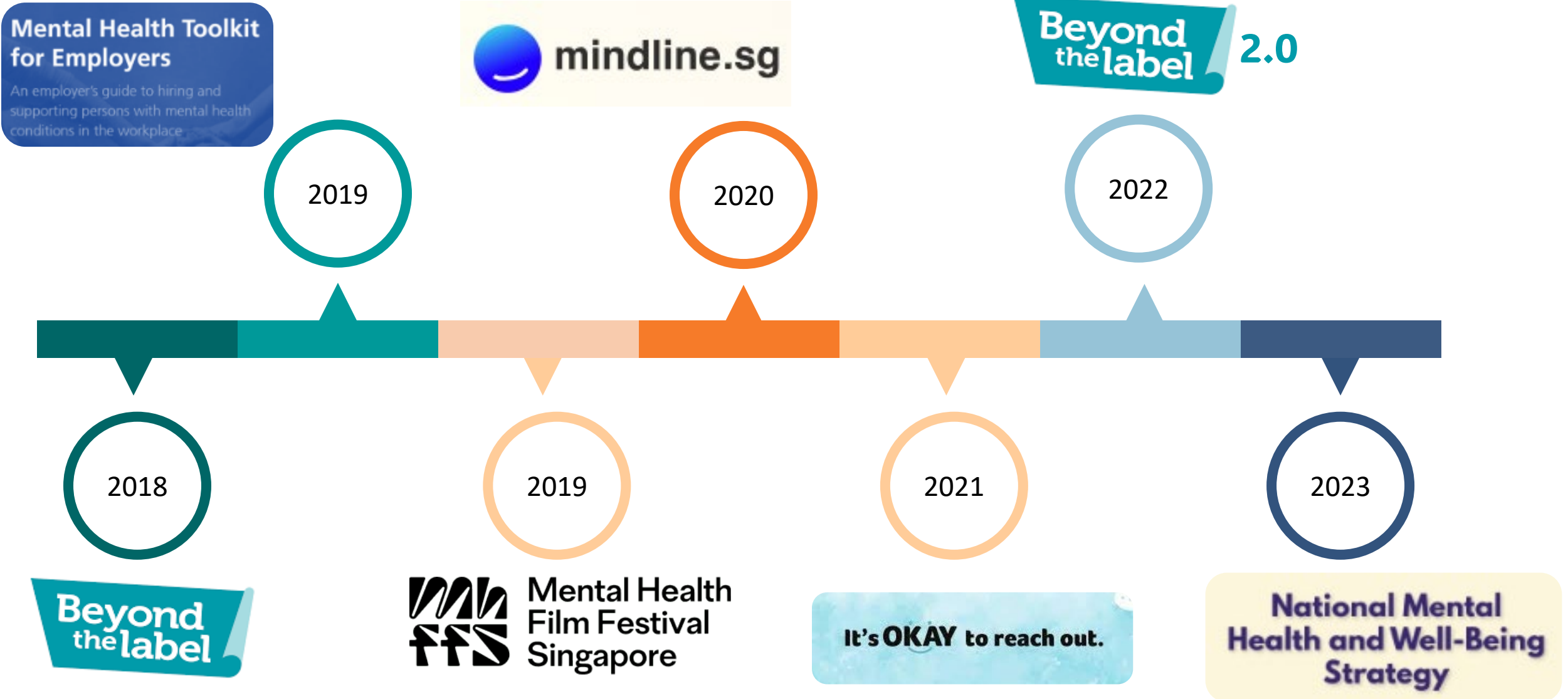
National Mental Health and Well-being Policy 2023

Factors Affecting an Individual's Mental Health and Well-Being



TACKLING STIGMA – A BARRIER TO CARE

Mental Health Campaigns



Dementia Care and Management

TTSH and NHGP Provide Better Dementia Care in the Community

Hospital's Dementia Care Network with NHG Partners within Region
will Enhance Support for Patients and Caregivers

In Singapore, there are more than 22,000 people over the age of 65 with dementia. As the population ages, the number is set to increase to about 70,000 within the next 15 years¹. To address this growing need, the Ministry of Health (MOH) has invested in building medical capability for assessment and management of dementia, as well as greater community support for care of persons with dementia.

Dementia Care (Singapore): "Forget Us Not"

- ABOUT "FORGET US NOT" — THE DEMENTIA CARE INITIATIVE
- FACTS ABOUT DEMENTIA IN SINGAPORE: CONDITION AND PREVALENCE
- COMMON PROBLEMS FACED BY PERSONS WITH DEMENTIA

In Singapore, one in 10 people aged 60 and above have dementia. Here's how the "Forget Us Not" initiative provides dementia care.



A Perfect Storm... Acknowledgements

01

Policy makers who were interested!

02

Senior policy makers with good understanding of psychiatric epidemiology

03

Clinician researchers who are opinion leaders pushed the agenda relentlessly

04

A team that worked above and beyond what was expected of them!



PREDICT

PREventing Depression: Investigation in
Cohorts of its etiology and Trajectory

A longitudinal study that aims to comprehensively understand depression