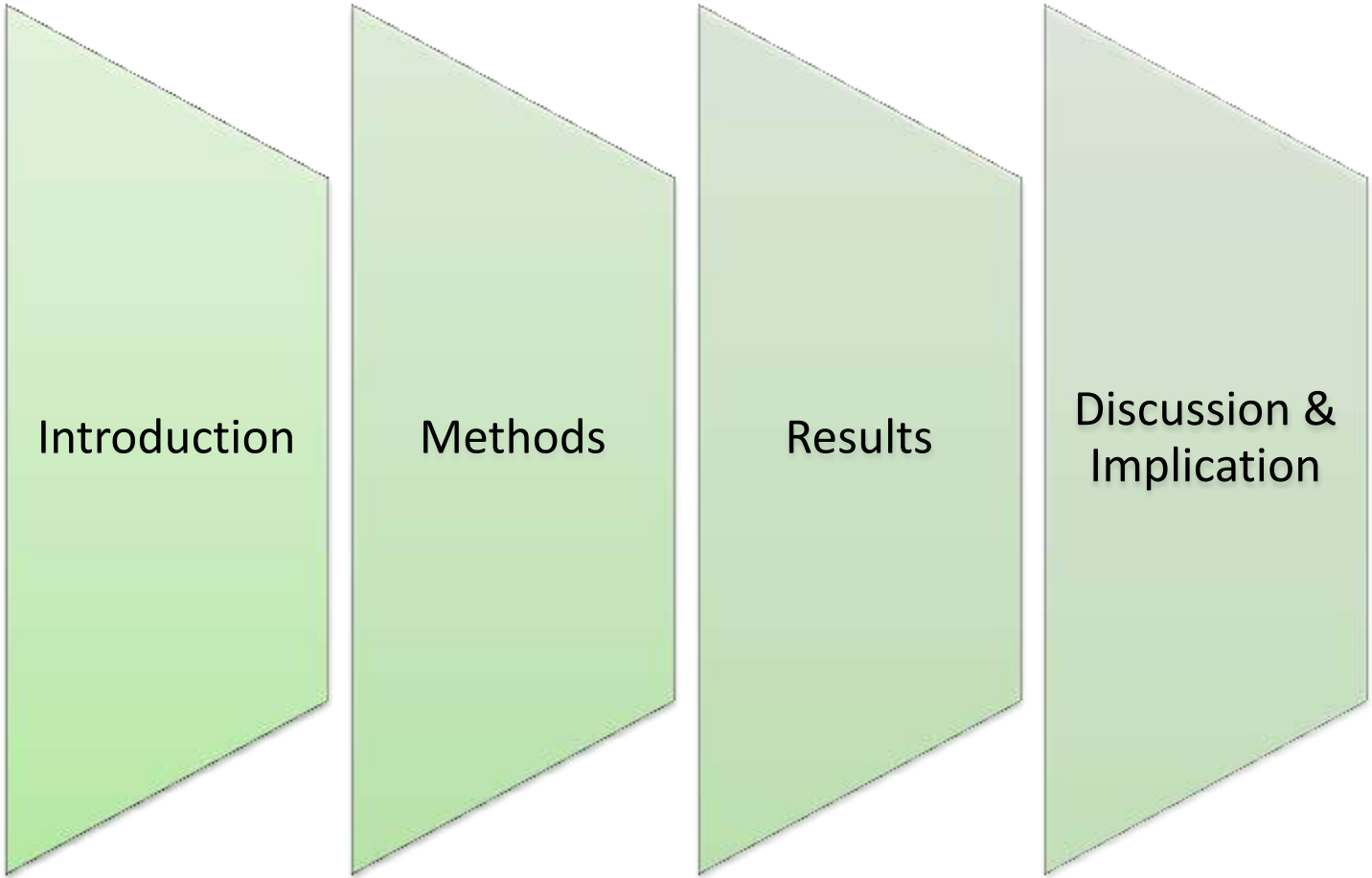




Attitudes to Mental Illness among Mental Health Professionals Working in Singapore - Evidence from a Cross-sectional Study

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Singapore - the Garden City



Facts about Singapore

- A highly urbanized country in Southeast Asia
- Population of 5.61 million: 3.93 million residents & 1.67 million non-residents
- Multi-ethnic: 76.1% Chinese, 15% Malay, 7.4% Indian, and 1.5% others
- English is one of the official languages (Chinese, Malay, Tamil)

- Department of Statistics Singapore, 2016

Institute of Mental Health (IMH)



- The only tertiary psychiatric institution in Singapore
- Inpatient care - 50 wards and 2,000 beds
- Outpatient care - 7 specialist clinics, serves more than 35,000 patients
- Offers a comprehensive range of psychiatric, rehabilitative and counseling services for all age groups

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Attitudes to Mental Illness (AMI)

- Refer to ‘individual beliefs about what people with mental illness are like and how they should be treated (Nunnally Jr 1961, L'Abate 2011)’
- Vary from acceptance, tolerance, to stigmatizing attitude, and even fear
- Studies suggested that negative and stigmatizing AMI is highly prevalent among the general population (Angermeyer et al. 2005, Angermeyer&Dietrich 2006, Högberg et al. 2012)

How AMI Affects Individuals?

- Individuals with mental illness
 - How they experience and express their own psychological problems and their willingness to disclose their symptoms and seek help
- General public
 - Positive AMI → supportive and inclusive behavior
 - Negative AMI → avoidance, exclusion, and discrimination
- Health-care professionals
 - Negative AMI → lower quality of physical care received by patients with mental illness

Negative Impacts of AMI among Mental Health Professionals

- Mental health professionals' behavior towards the patients
 - 'Restrictiveness attitude' of the professionals → more controlling and restrictive behavior (reported by the patients) (Ellsworth 1965)
- Therapeutic alliance
 - Mental health service users with more stigma experiences → less trust & less satisfaction towards the services (Verhaeghe and Bracke 2011)
- Return-to-work
 - Overprotectiveness → Under-referral to vocational services (Marwaha, Balachandra et al. 2009)

What could affect AMI among
mental health professionals?

Potential Correlates of AMI among Professionals

- Socio-demographics
 - ✓ Age – younger age → less social distance (Hengartner, Loch et al. 2012)
 - ✓ Gender – female > male (Li, Li et al. 2014)
- Culture differences – different country origins (Chambers, Guise et al. 2010)
- Close friend with mental illness (Mårtensson, Jacobsson et al. 2014)
- Work setting – in-patient < out-patient (Hansson, Jormfeldt et al. 2013)

A Previous Study in Singapore

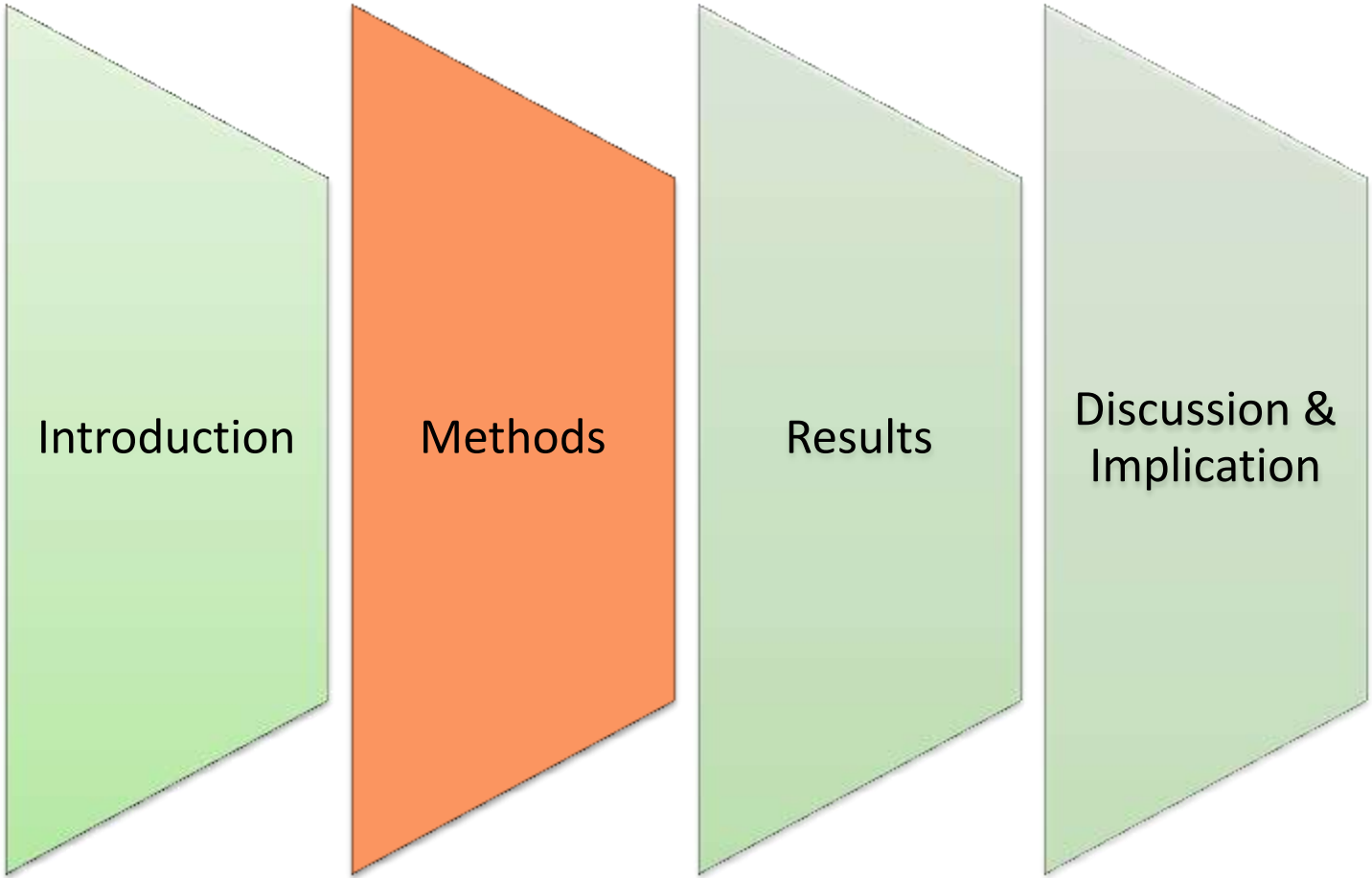
- A 2004 study conducted among nurses working in IMH
- More positive attitude
 - Aged 31-50 Years old
 - More than 10 years of psychiatric nursing experience
 - Nurses in short-stay wards (vs. long-stay wards)
- Limitations
 - The study was conducted more than 10 years ago
 - Only among nurses
 - Bivariate analysis

- Tay, S., et al., *Nurses' attitudes toward people with mental illnesses in a psychiatric hospital in Singapore*. Journal of psychosocial nursing and mental health services, 2004. **42**(10): p. 40-47.

Study Aims

- To explore AMI among mental health professionals working in Singapore
- To identify the significant correlates

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Study Design

- Cross-sectional study
- Convenience sampling - to recruit participants from IMH from Feb-Apr 2016
- Online survey tool 'Questionpro'
- Funded by Centre Grant, National Medical Research Council, Ministry of Health, Singapore
- Approved by the National Healthcare Group Domain Specific Review Board in Singapore

Inclusion & Exclusion Criteria

- Doctors, nurses, or allied health staff working in IMH during the recruitment period
- Singapore citizens, permanent residents or non-residents
- Aged 21 years and above
- Able to complete the online survey in English

Data Collected

- Socio-demographics (i.e. age, gender, ethnicity, marital status, education, residency status)
- Employment related information (i.e. position and years worked in IMH)
- Whether any family member and/or close friend diagnosed with mental illness

Attitudes to Mental Illness Questionnaire

- A 27-item tool developed by the UK Department of Health
- 5-point Likert rating from '1= strongly agree' to '5=strongly disagree'
- Previously used among general population in Singapore
- Item 'most women who were once patients in a mental hospital can be trusted as babysitters' was removed due to cultural irrelevance
- Four-factor structure with 20 items derived from general population in Singapore (Yuan, Abdin et al. 2016)

Factor Structure & Item Examples

- Social distancing (3 items)
 - I would not want to live next door to someone who has been mentally ill.
- Tolerance/Support for community care (9 items)
 - We need to adopt a more tolerant attitude toward people with mental illness in our society
- Social Restrictiveness (3 items)
 - People with mental illness should not be given any responsibility
- Prejudice and Misconception (5 items)
 - One of the main causes of mental illness is a lack of self-discipline and will-power

Item Description

Factor 1- Social Distancing

AMI-1 Having mental health facilities in a residential area downgrades the neighbourhood

AMI-2 It is frightening to think of people with mental problems living in our neighbourhoods

AMI-3 I would not want to live next door to someone who has been mentally ill

Factor 2 – Tolerance/Support for community care

AMI-9 We have a responsibility to provide the best possible care for people with mental illness

AMI-10 Anyone can become mentally ill

AMI-11 Increased spending on mental health services is a waste of money

AMI-13 We need to adopt a more tolerant attitude toward people with mental illness in our society

AMI-15 As far as possible, mental health services should be provided through community based facilities such as polyclinics, GPs and family counselling services.'

AMI-16 'People with mental illness are not as dangerous as most people think they are'

AMI-18 The best therapy for many people with mental illness is to be part of a community

AMI-19 Residents should not be afraid of visiting mental health services in their neighbourhood

AMI-22 No-one has the right to exclude people with mental illness from their neighbourhood

Factor 3 – Social Restrictiveness

AMI-5 Anyone with a history of mental problems should be excluded from the public/civil service

AMI-6 People with mental illness should not be given any responsibility

AMI-7 People with mental illness are a burden on society

Factor 4 - Prejudice and Misconception

AMI-8 As soon as a person shows signs of mental disturbance, they should be hospitalized

AMI-23 Mental hospitals are the only means of treating people with mental illnesses

AMI-24 There are sufficient existing services for people with mental illness

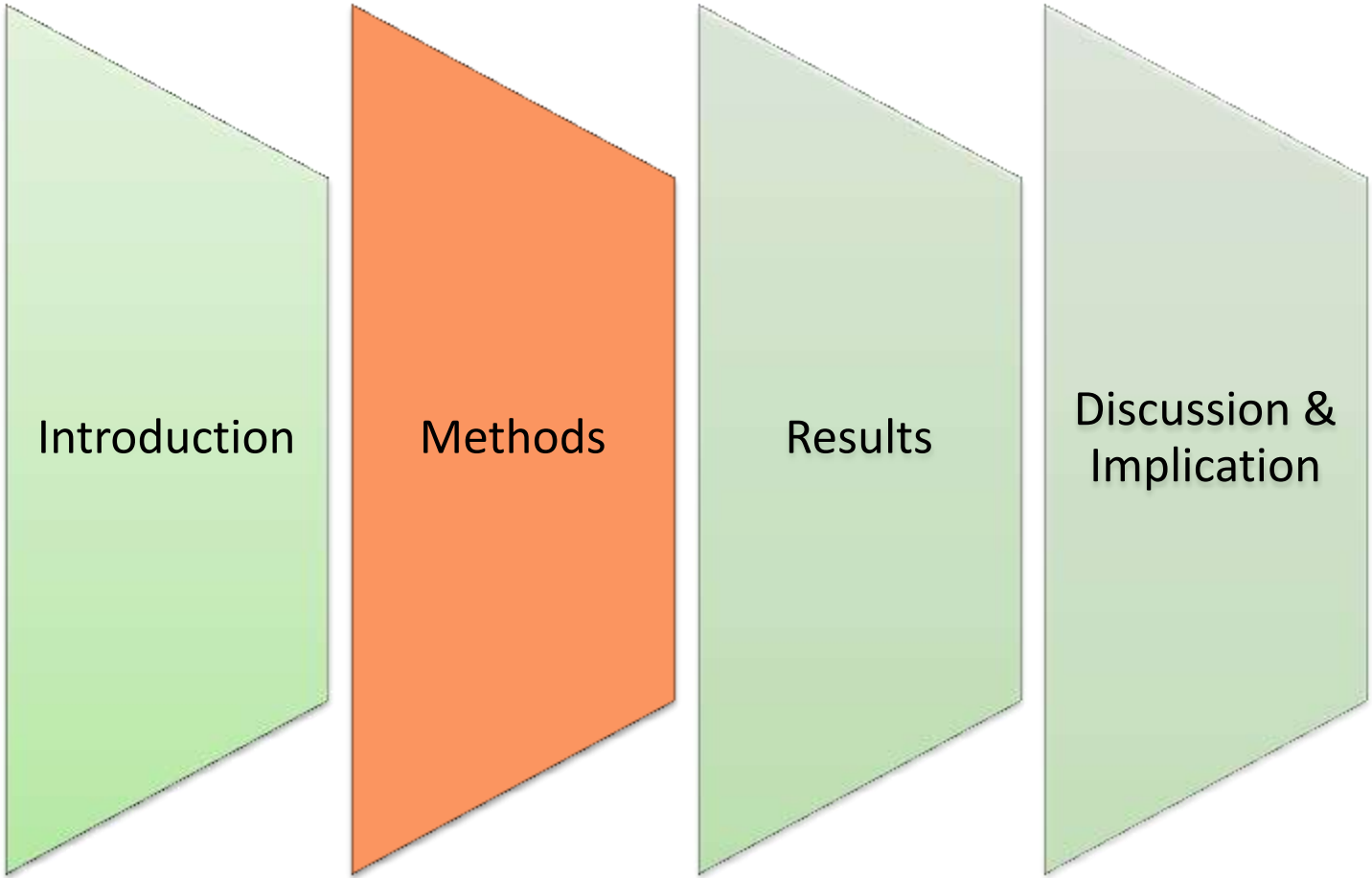
AMI-25 One of the main causes of mental illness is a lack of self-discipline and will-power

AMI-26 There is something about people with mental illness that makes it easy to identify them from normal people

Data Analysis

- Descriptive analysis
- Confirmatory factor analysis - ‘Lavaan’ package in R
- Multivariate linear regression - SAS 9.3

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Sample Characteristics

	Variable	Mean/Frequency	SD/Percentage (%)
Age		36.4	10.6
Gender	Male	171	37.0
	Female	291	63.0
Ethnicity	Chinese	277	60.0
	Malay	36	7.8
	Indian	63	13.6
	Others	86	18.6
Marital Status	Never married	205	44.4
	Ever married	257	55.6
Education level	Secondary/ITE/'O' level	18	3.9
	A' level/Diploma	49	10.6
	Bachelor	241	52.2
	Master or above	154	33.3
Nationality	Singapore Citizen	320	69.3
	Permanent Resident	59	12.8
	Non-resident	83	18.0
Position in IMH	Doctor	58	12.6
	Nurse	201	43.5
	Allied Health Staff	203	43.9
Working years in IMH	Less than 1 year	52	11.3
	1-5 years	195	42.2
	6-10 years	103	22.3
	More than 10 years	112	24.2
Close friend with mental illness	Yes	130	28.1
	No	332	71.9

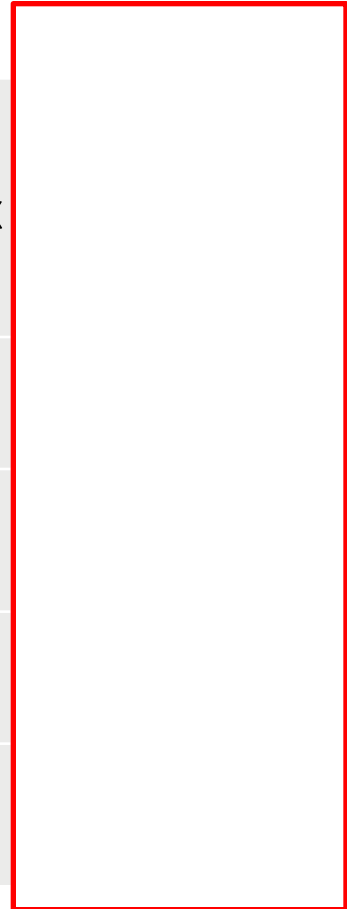
Fitness of Factor Structure



- ‘Lavaan’ package in R
- Estimator = the mean- and variance-adjusted weighted least squares (WLSMV)
- Fitness index (after allowing correlated errors between two items under Tolerance/Support for community care)
 - Chi-sq(163)=619.582, CFI=0.920, TLI=0.907, RMSEA=0.078

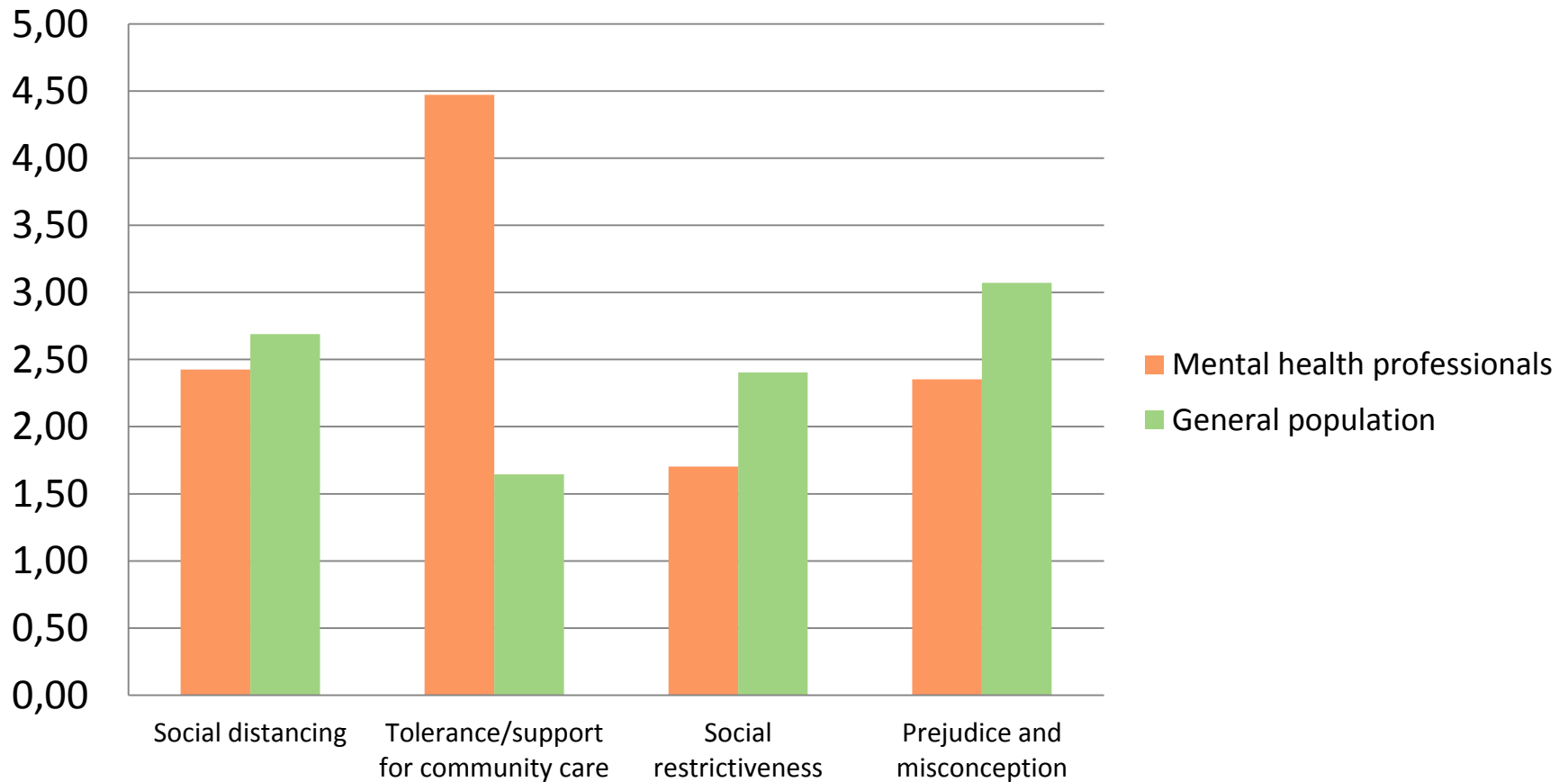
Mean AMI Factor Score

	Mean	SD	Min	Max
Social distancing (3 items)	7.28	2.95	3	15
Tolerance/support for community care (9 items)	40.25	5.04	13	45
Social restrictiveness (3 items)	5.11	2.10	3	12
Prejudice and misconception (5 items)	11.76	4.23	5	24



Standardized Mean of AMI Factors

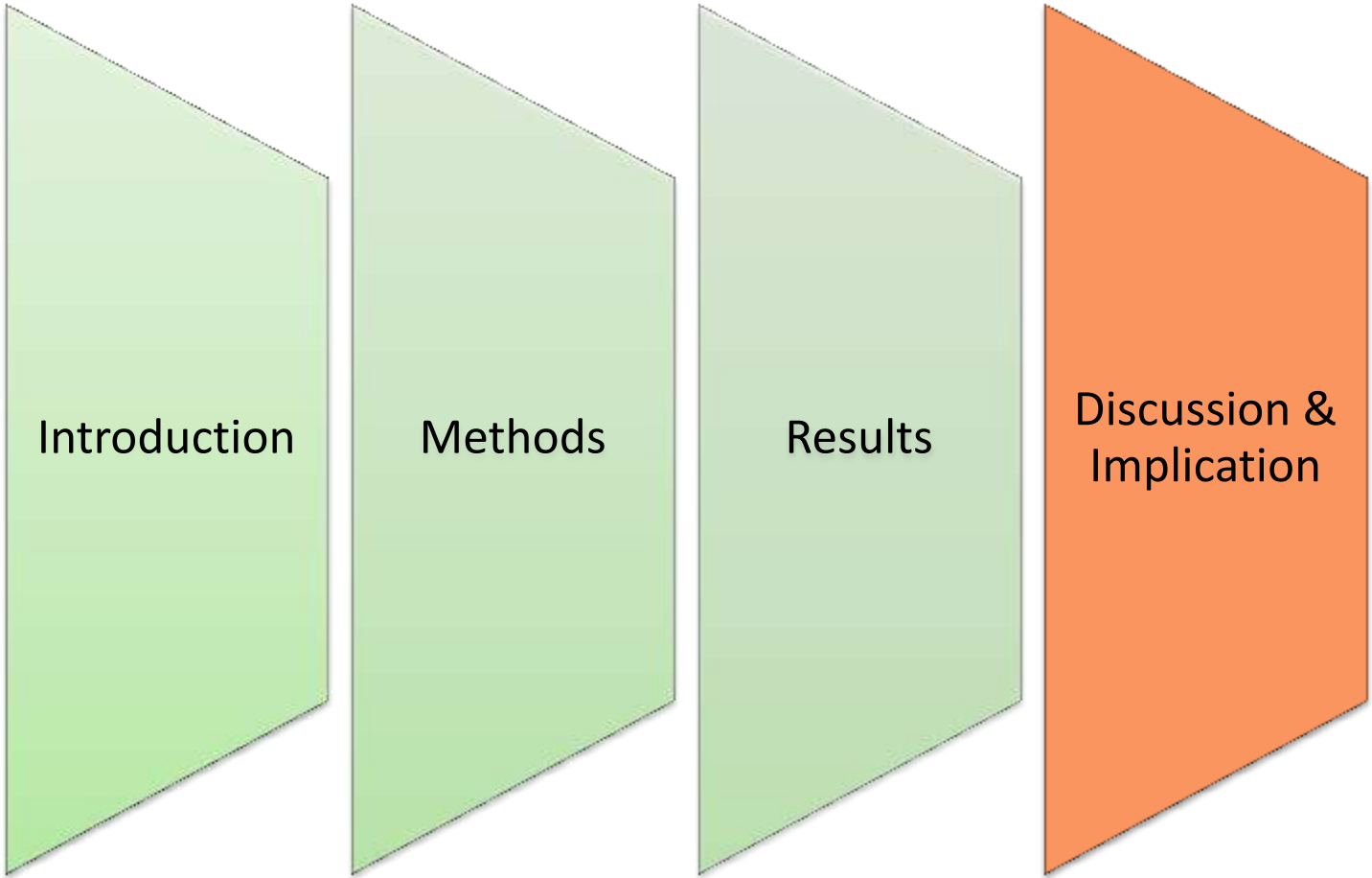
Standardized Mean of AMI Factors



Variable	Social Distancing		Tolerance/Support for Community Care		Social Restrictiveness		Prejudice & Misconception	
	β	p	β	p	β	p	β	p
Age	-0.01	0.407	0.01	0.804	0.00	0.948	0.00	0.988
Gender								
Female	-0.59	0.044	0.33	0.527	-0.38	0.076	-0.03	0.919
Male	Ref		Ref		Ref		Ref	
Ethnicity								
Others	-1.12	0.046	-0.79	0.431	-0.57	0.159	0.33	0.615
Indian	-1.35	0.003	-0.24	0.768	-0.78	0.017	0.13	0.806
Malay	-0.75	0.205	1.07	0.312	-0.50	0.246	0.39	0.575
Chinese	Ref		Ref		Ref		Ref	
Marital Status								
Ever married	0.92	0.003	-0.32	0.564	0.18	0.421	0.20	0.576
Never married	Ref		Ref		Ref		Ref	
Education level								
Secondary/ITE/ 'O' level	0.22	0.777	-4.37	0.002	0.10	0.857	4.59	<.0001
A' level/diploma	-0.05	0.927	-1.51	0.147	0.59	0.169	3.19	<.0001
Bachelor	0.06	0.856	-0.99	0.116	0.25	0.322	1.45	0.001
Master or above	Ref		Ref		Ref		Ref	

Variable	Social Distancing		Tolerance/Support for Community Care		Social Restrictiveness		Prejudice & Misconception		
	β	p	β	p	β	p	β	p	
Nationality									
Non-resident	-0.91	0.099	-0.39	0.694	-0.24	0.553	1.49	0.021	
Permanent Resident	0.09	0.842	0.74	0.370	0.16	0.649	1.44	0.010	
Singapore Citizen	Ref		Ref		Ref		Ref		
Position in IMH									
Doctor	-0.25	0.649	0.55	0.576	-1.51	0.000	-3.42	<.0001	
Allied Health Staff	-0.56	0.178	0.25	0.736	-0.53	0.072	-2.57	<.0001	
Nurse	Ref		Ref		Ref		Ref		
Working years in IMH									
Less than 1 year	-0.66	0.298	1.32	0.235	-0.30	0.505	1.75	0.019	
1-5 years	-0.31	0.508	0.29	0.726	-0.48	0.155	-0.18	0.740	
6-10 years	0.15	0.741	-0.39	0.624	-0.12	0.706	-0.31	0.561	
More than 10 years	Ref		Ref		Ref		Ref		
Close friend with mental illness									
Yes	-0.73	0.022	1.08	0.054	-0.23	0.301	-0.40	0.270	
No	Ref		Ref		Ref		Ref		

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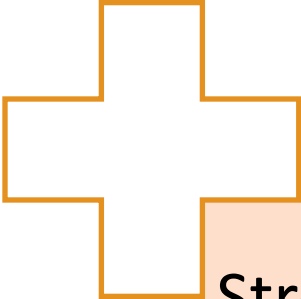
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Key Points

- Socio-demographics
 - Female → less social distancing
 - Ever married → more social distancing
 - Higher education → less prejudice & misconception
- Culture difference on AMI
 - Professionals with Indian ethnicity → less social distance & less social restrictiveness
 - Singapore citizen → less prejudice & misconception
- Differences caused by different groups of mental health professionals
 - Doctors & allied health staff > nurses
- Professional contact ≠ close contact
 - Having a close friend with mental illness → less social distance

Strengths vs. Limitations



Strengths

- CFA confirmed the construct validity of the assessment tool
- Online survey administration reduces social desirability bias & avoids data entry errors

Limitations

- Convenience sampling might affect the generalizability
- Cross-sectional design – not suitable for establishing casual relationships

Future Directions

- Use more representative sample
- Extend the study findings to other contexts
- Explore the underlying mechanism of cultural differences
- Test the assumptions on AMI difference due to different groups of mental health workers

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Thank you!

Welcome Q&A