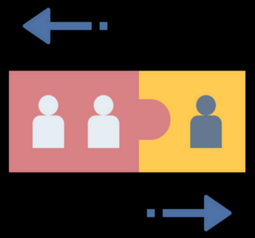
COMMUNITY HEALTH SURVEY

GENERAL POPULATION'S WORRY & PERCEPTION OF STIGMA TOWARDS COVID-19 INFECTION IN MALAYSIA



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THE TEAM

Who are we?

PRESENTER

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BACKGROUND OF COVID-19

DECEMBER 2019

Emergence of COVID-19 in Wuhan, China

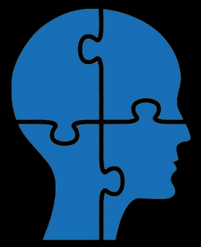
11 MARCH 2020

World Health Organization (WHO) officially declared COVID-19 as a global pandemic (1)

25 JANUARY 2020

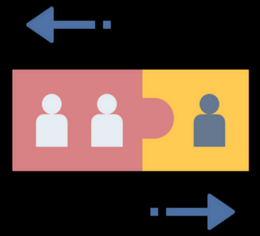
1st positive case of COVID-19 in Malaysia

IMPACT



PSYCHOLOGICAL

Psychological distress in vulnerable groups[2,3]



STIGMA

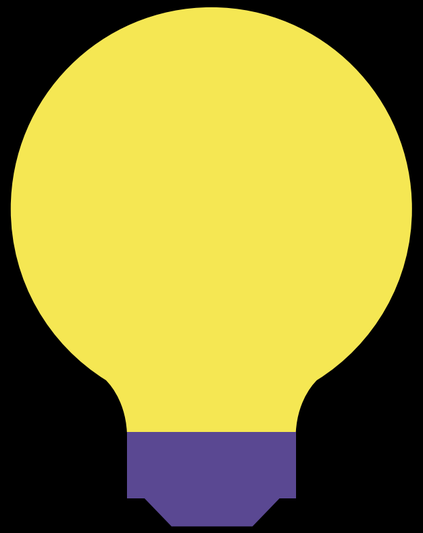
WHO: Negative association between an individual or a group of people with certain characteristics or specific disease[4]

STIGMA and HEALTH

Infected individuals hide their symptoms

Delay or avoidance in receiving proper care[5]

PROBLEM STATEMENT



- What do we already know?
- What do we need to know?
- Why do we need to know it?

GENERAL OBJECTIVE

To determine the level of stigmatisation and worry towards COVID-19 infections among the general population in Malaysia.

SPECIFIC OBJECTIVES

- To identify the level of stigmatisation and worry towards COVID-19 patients and frontline workers.
- To determine factors associated with the level of stigmatisation (gender, age, ethnicity, religion, level of education)
- To determine the relationship between worry and COVID-19 stigmatisation

RESEARCH QUESTIONS

01 What is the level of stigma and worry towards COVID-19 patients and frontline workers?

02 What is the relationship between level of stigmatisation and sociodemographic variables?

03 What is the relationship between worry and COVID-19 stigmatisation?

HYPOTHESES

01 The general population in Malaysia has low level of stigmatisation towards COVID-19 infection.

02 Educational attainment and ethnicity are associated with lower stigmatisation.

03 There is a moderate to large correlation between worry and level of stigmatisation.

LITERATURE REVIEW

INFODEMIC

- Bombardment of information on COVID-19
- WHO: “Main source of driving anxiety amongst the Public”[6]
- Contributes to social avoidance and isolation from stigmatisation[7]
- Factors: [8,9]

01 Knowledge gap in population

02 Misuse of social media

03 Political leaders shifting blame

STIGMA & ETIOLOGICAL FACTORS

GENDER

Females receive less stigma for psychiatric disorders but receive more when in terms of geriatric cares. (10,12)

CULTURE & RELIGION

African Americans were found to receive more stigma in mental illness studies.(11)

HIV patients in Mali are “Punished by god"(13)

Higher prevalence of stigma in treating HIV patients amongst Christian Nurses.(14)

EDUCATION LEVEL

More years = Less endorsement of stigma(12)

METHODOLOGY

Study design: Cross-sectional

TARGET POPULATION

- General population in Malaysia
- Voluntary participation
- Participants recruited regardless of gender, state of origin, highest level of education, ethnicity, religion, living status and marital status could participate.
- Individuals below the age group of 18 years old and non-English speakers were excluded.

SAMPLE SIZE

$$n = \frac{(z_\alpha + z_\beta)^2 (\sigma_1^2 + \sigma_2^2)}{\delta^2}$$

Z = 1.96
β = 0.84
Standard deviation = 7
Mean difference = 2

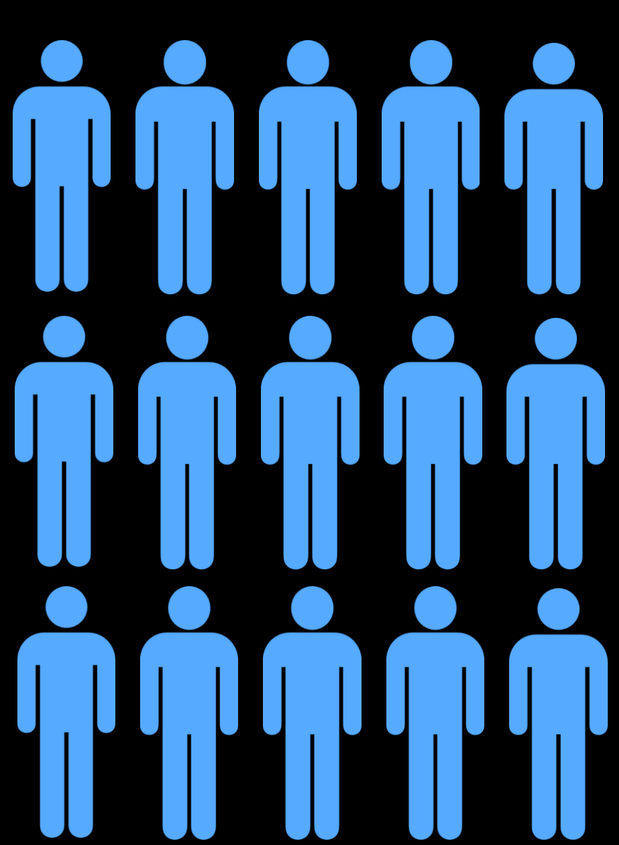
Initial sample size = 384.

Considering a 10% non-response rate,

Final sample size = **422**

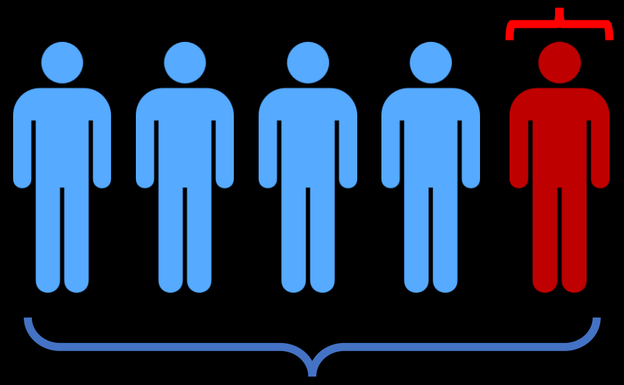
SAMPLING METHOD

Snowball sampling



General population

6 Non-response



451 responded

= 445

Response rate: 98.7%

DATA COLLECTION TECHNIQUES

- Online survey
- Voluntary response
- Consent was taken before the start of the survey

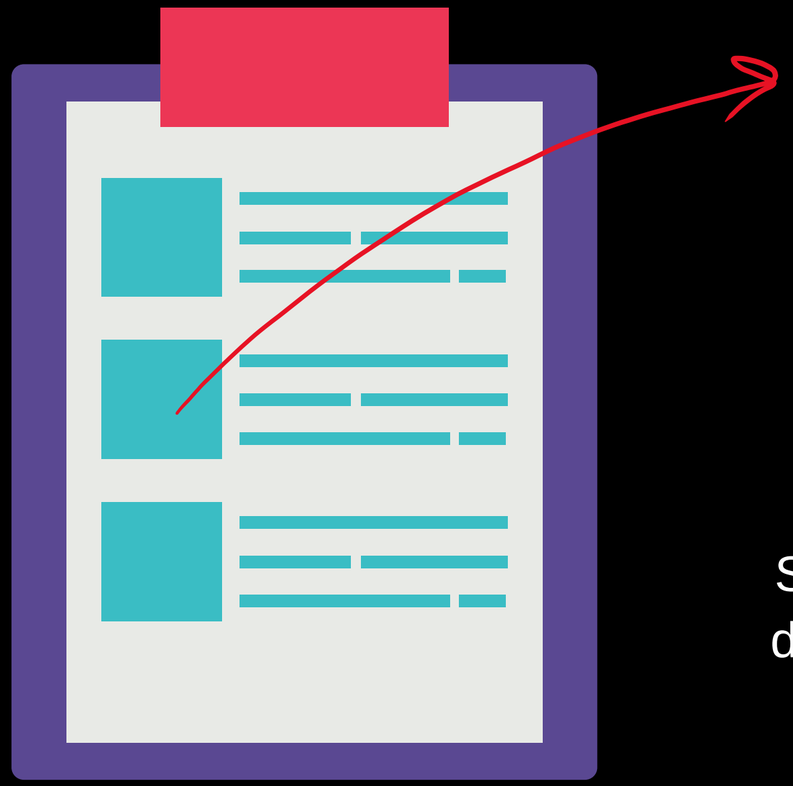
DATA COLLECTION TOOL

PART 1

Basic information:

- Age
- Gender
- Level of education
- Ethnicity
- Religion
- Marital status
- State of residency
- Profession
- Living status
- Family members / friends infected by COVID-19?

DATA COLLECTION TOOL

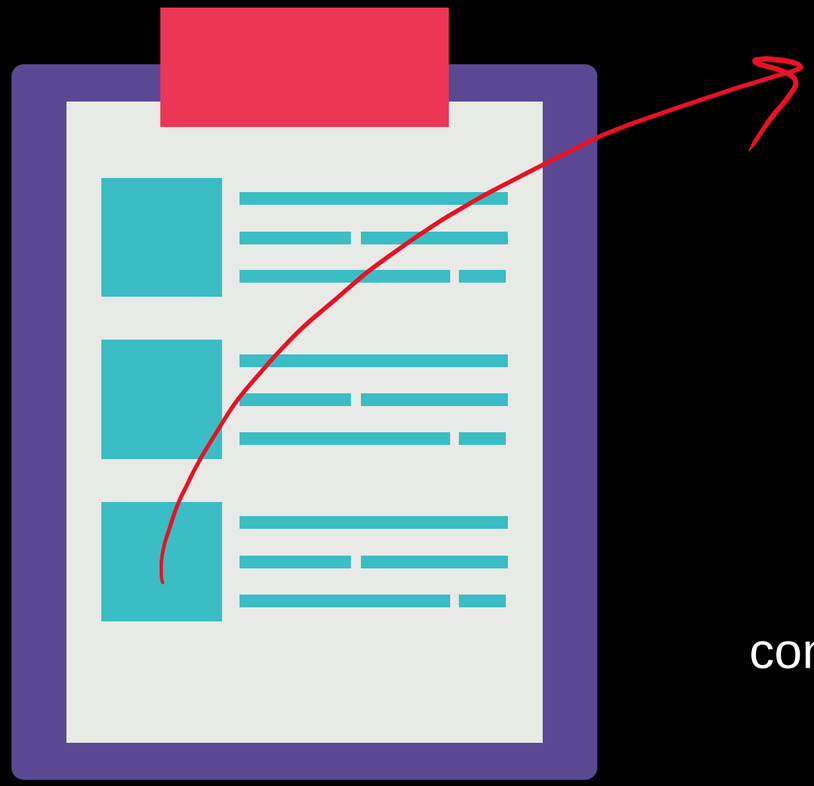


PART 2

Participants' level of stigma towards the COVID-19 infection [9 QUESTIONS]

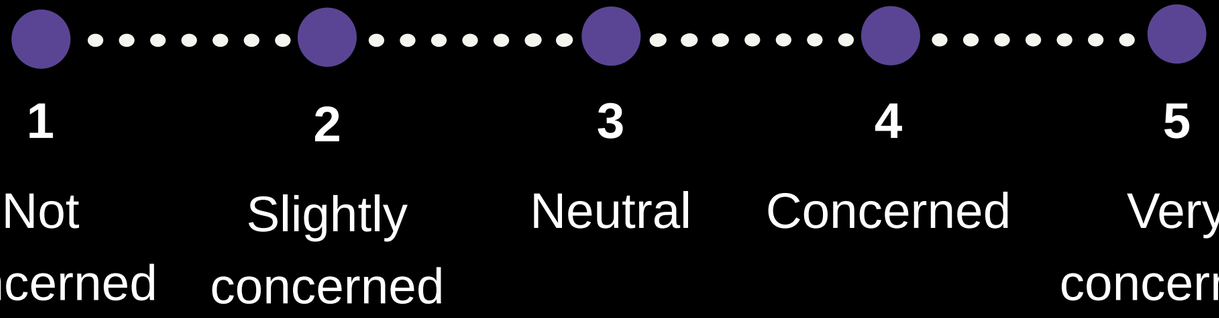
1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

DATA COLLECTION TOOL



PART 3

Participants' level of worry towards the COVID-19 infection [7 QUESTIONS]



DATA ANALYSIS

Software

SPSS V.24

Descriptive statistics

Synthesised to find:

- Frequency and percentage
- Mean
- Median
- Interquartile range

Measures of normality

- Distribution of stigma score
- Distribution of worry score
- Distribution of age

Independent T-test & ANOVA

Comparison of mean:

- Stigma score by sociodemographic characteristics

Correlation method

- Non-parametric
- Stigma score // worry score
- Stigma score // age

RESULTS

Table 1: Characteristics of respondents

Variable		n	%
Gender	**Female**	**241**	**48.9**
	Male	209	41.9
Ethnicity	Malay	51	8.7
	Chinese	**329**	**69.5**
	Indian	45	7.6
	Others	21	3
Religion	**Buddhist**	**225**	**46.1**
	Islam	59	10.4
	Christian	98	18.4
	Hindu	29	4.5
	Others	32	5.1
Marital status	**Single**	**295**	**61.4**
	Separated/Widow	14	1.8
	Married	139	26.9
Living status	Alone	30	4.7
	With family	**399**	**85.9**
	With friends	19	2.7

RESULTS

Table 1: Characteristics of respondents (contd.)

Variable		n	%
State	Selangor	260	53.2
	Federal territory	94	17.3
	Penang	23	3.4
	Kedah	15	2
	Negeri Sembilan	11	1.3
	Johor	12	1.5
	Perak	11	1.3
	Terengganu	5	0.4
	Pahang	6	0.6
	Melaka	1	0
	Sabah	6	0.6
	Sarawak	6	0.6
Education	Secondary Level (SPM or equivalent) and below	42	7
	College and Above	405	87.6
Are you a medical professional?	No	396	84.5
	Yes	55	9.4
COVID-19 infection of a relative/friend	No	345	72.4
	Yes	106	19.8
Age Median (interquartile range)	**23 (8)**		
Stigma score Mean (Standard deviation)	26.55 (6.74)		
Worry score Median (Interquartile range)	30 (8)		

Median age = 23 years old

RESULTS

Table 2: Responses to questions about Stigma

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	n	%	n	%	n	%	n	%	n	%
All Foreign workers are at high risk of transmitting COVID-19	20	2.8	63	11.1	77	13.9	193	**38.6**	95	**17.6**
People should fear those who are sick with COVID-19	33	5.2	86	15.8	92	17.0	135	26.0	102	19.1
People who are sick with COVID-19 should be isolated from society	28	4.3	40	6.6	50	8.5	148	**28.9**	181	**36.0**
People who work in Health services and are in contact with COVID-19 patients should be isolated from society	47	7.9	114	**21.6**	95	**17.6**	134	25.8	58	10.1
I would not want to be neighbours with families of COVID-19 patients	99	18.5	152	29.7	106	19.9	54	9.3	36	5.8
I am afraid of being infected by healthcare workers I meet in public	62	10.9	145	**28.2**	102	**19.1**	92	17.0	46	7.7
Getting infected by COVID-19 is embarrassing	221	**44.6**	140	**27.0**	64	11.3	15	2.0	9	1.0
I am afraid of people that are sick with/recovered from COVID-19	110	**20.7**	145	**28.2**	109	20.5	61	10.7	23	3.4
People get infected with COVID-19 because of irresponsible behavior	76	13.6	97	17.9	130	24.8	79	14.3	68	12.0

>64%

~65%

80.4%

~50%

RESULTS

Table 3: Response to questions on the worries on Covid-19

	Not Concerned		Slightly concerned		Neutral		Concerned		Very concerned	
	n	%	n	%	n	%	n	%	n	%
How concerned are you about yourself being affected by COVID-19?	13	1.6	53	9.1	36	5.8	181	**35.9**	165	**32.5**
How concerned are you about your family members being affected by COVID-19?	12	1.5	37	6.0	21	3.0	125	**23.8**	254	**52.0**
How concerned are you about your close relatives being affected by COVID-19?	14	1.8	38	6.2	34	5.4	166	**32.9**	193	**38.8**
How concerned are you about your friends being affected by COVID-19?	10	1.2	30	4.7	41	6.8	190	**38.0**	176	**34.9**
How concerned are you about getting hospitalised due to COVID-19?	11	1.3	38	6.2	43	7.1	135	**26.1**	220	**44.6**
How concerned are you about dying from COVID-19?	30	4.7	45	7.5	73	13.1	99	**18.5**	200	**40.2**
How concerned are you about death of close others from COVID-09?	12	1.5	35	5.6	52	9.0	128	**24.8**	217	**44.2**

60% - 70%

75.8%

RESULTS

Table 4: Mean stigma score

Variables		N	Mean	Std. Deviation	p
Gender	Female	229	26.4367	6.57758	0.66
	Male	208	26.7212	6.91698	
Education level	**Secondary Level (SPM or equivalent) and below**	40	**28.6500**	7.98251	**0.039**
	College and Above	394	26.3350	6.59705	
Medical professional	No	386	26.6684	6.82082	0.327
	Yes	52	25.6923	6.09577	
Close relatives/friends infected by COVID-19	**No**	333	27.0180	6.66765	**0.01**
	Yes	105	**25.0762**	6.78615	

RESULTS

Table 5: Stigma Scale Quartiles

Stigma quartiles	Frequency	%
Q1: <18	34	7.8
Q2: 18-26	178	40.6
Q3: 27-35	**180**	**41.1**
Q4: 36+	**46**	**10.5**
Total	438	100.0

Mean stigma score

- 26.55
- Medium level of stigma (between Q3 and Q4).
- 244 (51%) had stigma score > 27 or 50% of the total stigma score.

RESULTS

Table 6: Worry Scale Quartiles

		Frequency	Percent
Worry score	Q1 < 14	25	5.6
	Q2: 14-20	23	5.1
	Q3: 21-27	95	21.2
	Q4: > 28	306	68.2
	Total	449	100.0
Missing	System	2	
Total		451	

10.7%

Mean worry score

- 30
- High worry level

RESULTS

ANOVA Test

Table 7: Stigma to Ethnicity, Religion, Marital status, Living status.

ANOVA				
Stigma score				
Variable	N	Mean	Std. Deviation	p
Ethnicity				
Malay	48	26.0625	7.17385	**0.009**
Chinese	322	**27.1522**	6.64112	
Indian	42	24.4524	5.73480	
Others	21	23.4286	7.00408	
Total	433	26.5889	6.70524	
Religion				
Buddhist	220	**27.7500**	6.70080	**<0.001**
Islam	56	25.2679	7.46018	
Christian	95	26.1474	6.01942	
Hindu	27	22.8889	5.81334	
Others	32	25.0000	6.84859	
Total	430	26.5628	6.74127	

Chinese respondents

- Significantly higher mean stigma scores (p=0.009)
- Post-hoc test (Chinese vs Others/Indian p=0.001)

Buddhist respondents

- Significantly higher mean stigma scores (p=0.001)
- Post-hoc test (Buddhist vs Others/Hindu p=0.001)

RESULTS

Table 8: Correlation between Stigma score towards Worry score and Age

	Stigma score - Worry Score
Spearman's rho Correlation	314**
p	< 0.001
n	449
	Stigma score - Age
Spearman's rho Correlation	-0.19
p	0.699
n	438

Mean stigma score - Mean worry score

Statistically significant medium positive correlation (p=0.000)

Mean stigma score - Age

No statistically significant correlation (p=0.699)

DISCUSSION

Most participants are of the Chinese ethnicity.

Due to snowball sampling method (non-random sampling)

>50% of participants agreed “Foreign workers are at a high risk of transmitting COVID-19”.

Due to social media, news[16]

A large proportion of participants (75.8%) worry about the “Death of close others from COVID-19”.

Elderly have a higher mortality rate[17]

DISCUSSION

Close relatives infected by COVID–19 = lower stigma score.

They have a better understanding of COVID-19[18]

Chinese participants = significantly higher mean stigma scores.

Exposing personal weakness brings chaos to harmony[19,20]

Be responsible for outcomes of personal choices[19]

Increasing COVID-19 cases = increased the distress of the population

Focus more on protecting the masses against the spread of the virus[21]

LIMITATIONS

01 Sampling method

02 Language

03 Online survey

CONCLUSION

General population

- Medium level of stigma
- High level of worry

Culture &
Religion

- Chinese and Buddhist participants: Higher stigma scores

More worried

- High stigma scores

Higher education level

- Lower stigma scores

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