



METHODOLOGICAL APPROACH IN DETERMINING MENTAL HEALTH STATUS AMONG STABLE HOSPITALIZED COVID-19 PATIENTS



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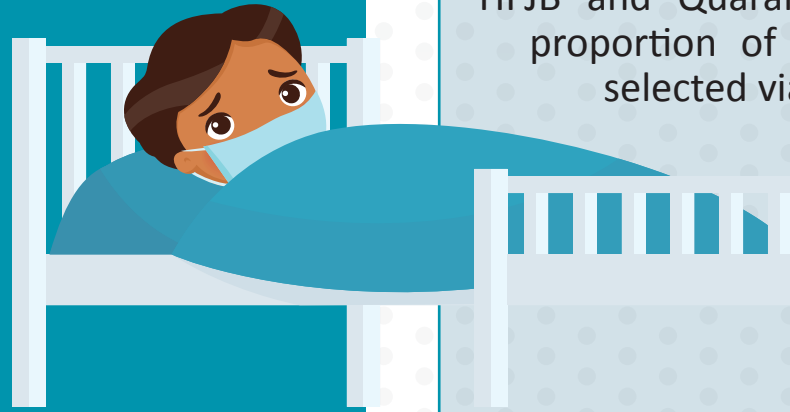
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Introduction

In any disaster or emergency, mental health has been an important marker for survival. In the case of disaster of pandemic diseases, the prevalence was even higher among vulnerable population i.e. patients who has been infected by pandemic diseases. For instance, the prevalence of depression among MERS-CoV patients during the outbreak was 40.7% [1].

In Malaysia, the first COVID-19 case was reported on the 24th of January 2020. Since then, over 8000++ cases have been detected [2]. All of the patients admitted to hospital had to undergo the course of 14 days of treatment and isolation. Due to long hospitalization, COVID-19 patients should be monitored in terms of mental health surveillance and provided with psychotherapy services.

It is a critical time to understand the effect of COVID-19 on the mental health of each patient contracted with COVID-19.



Objective

This study aims to determine the prevalence of depression and general anxiety disorders (GAD) of stable hospitalized COVID-19 patients at the main COVID-19 hospitals in Malaysia.



Results

A total of 401 stable COVID-19 patients participated in the survey, with overall response rates of 93.5% based on consents. According to the suicidal ideation, PHQ-9 and GAD-7 scoring, 10.7% of respondents were referred within 24 hours to the psychiatrist in-charged for further assessment. See Table 1. The sociodemographic profile of respondents is presented in Table 2.

Table 1: Survey description and performance (N=401)

Hospital	Hospital	No. of response		% Response	Referral	% Referral
		Agree	Disagree			
Hospital Sungai Buloh	293	272	21	92.8%	33	12.1%
Hospital Permai JB	51	44	7	86.3%	5	11.4%
Hospital Kuala Lumpur	23	23	0	100.0%	3	13.0%
Pusat Kuarantin MAEPS	62	62	0	100.0%	2	3.2%
Overall	429	401	28	93.5%	43	10.7%

Table 2: Respondents' characteristics (N= 401)

Socio-demographic factors		Count, n	%
Gender	Male	274	68.3%
	Female	127	31.7%
Age	18-34	258	64.3%
	35-49	106	26.4%
	50-64	37	9.2%
Ethnicity	Malay	274	68.3%
	Chinese	27	6.7%
	Indian	20	5.0%
	Others	73	18.2%
	Other Bumiputera	7	1.7%
Marital Status	Married	197	49.1%
	Single/ widow/er	204	50.9%
Level of Education	Primary education	64	16.0%
	Secondary education	102	25.4%
	Tertiary education	202	50.4%
	No Formal Education	33	8.2%
Occupation	Civil servant	34	8.5%
	Private sector employee	138	34.4%
	Self-employed	50	12.5%
	Health members	19	4.7%
	Not working/ Pension/ Student	151	37.7%
	Housewife	9	2.2%
Household Income	B40	288	71.8%
	M40	68	17.0%
	T20	45	11.2%
Citizenship	Malaysian	328	81.80%
	Non-Malaysian	73	18.20%

DISCUSSION & CONCLUSION

In a recent study in China, the prevalence of moderate to severe depression was 16.5% and the prevalence of anxiety was 28.8% [5]. Some of them required a psychiatric evaluation and were prescribed medication during their hospital stay.

The current study also addresses the factors contributing to mental health issues in COVID-19 patient. Systematic review of 24 studies reported negative psychological effects such as post-traumatic stress symptoms, confusion, and anger [6]. This was due to stressors included longer quarantine duration, infection fears, frustration, boredom, inadequate supplies, inadequate information, financial loss, and stigma.

An assessment of the burden of mental health such as depression and anxiety, their risk factors among vulnerable patients are required especially for early intervention psychiatric care during hospital quarantine [6].

Methodology

Study design

Cross-sectional study design with one point, single-source data collection, with the aid of computer assisted self-interview (CASI) that was conducted among COVID-19 patients hospitalized in Hospital Kuala Lumpur (HKL), Hospital Sungai Buloh (HSgB), Hospital Permai (HPJB) and Quarantine Centre MAEPS from 15th April until 30th June 2020.

Sampling design and sample size

1. Target population

The target population was all COVID-19 patients hospitalized in HKL, HSgB, HPJB and Quarantine Centre MAEPS. The sampled population was the proportion of stable COVID-19 patients at these hospitals who were selected via quota sampling technique.

2. Sampling frame

The sampling frame for the study was the list of all the COVID-19 patients admitted to the general ward (non-intensive) in HKL, HSgB, HPJB Quarantine Centre MAEPS who were in a stable condition.

3. Sample size determination

The sample size was calculated using the Sample Size Calculation Formula for prevalence with finite population correction study as per the primary objective [3]. The sample size calculation was based on the reported prevalence in previous study[1]. The calculation is done with margin of error

of 0.05 and Type 1 error determined at 5% with a finite population of 500 [2]. The largest sample size obtained was 400 respondents. Multiplying for invalid numbers, nonresponse and those who refuse to participate by 30%, the final sample size was determined to be 400 respondents.

$$n' = \frac{NZ^2 P(1 - P)}{d^2 (N - 1) + Z^2 P(1 - P)}$$

where
 n' = sample size with finite population correction.
 N = Population size
 Z = Z statistic for a level of confidence.
 P = Expected proportion (in proportion of one, and
 d = Precision (in proportion of one).

Sampling Frame & Selection of respondents

All patients who have been diagnosed as COVID-19 were listed in the sampling frame. Eligible criterias:

- 18 years and above
- diagnosed as COVID-19 but in a stable condition
- admitted in ward for more than 24 hours
- able to read and understand Bahasa Melayu or English.
- Quota sampling technique was utilized in this study whereby the first 400 eligible patients who responded to the screening were recruited in this study.

Study Instruments

Structured questionnaires were used to collect data on the scopes of the survey. The questionnaires are in Bahasa Melayu and English, programmed into the google form for data collection. All psychometric measurements (PHQ-9, GAD-7 & Brief COPE) were locally validated beforehand. The estimated duration taken to complete the questionnaire were about 15 minutes.

- 1st part, Patient Information Sheet and Consent Form.
- 2nd part, Socio-demographic profile of respondents and factors contributing to mental health.
- 3rd part, Patient Health Questionnaire (PHQ-9) to assess for probable depression with cut-off score of 10 and above
- 4th part, Generalised Anxiety Disorder questionnaire (GAD-7) to assess for probable anxiety with cut-off score of 8 and above.
- 5th part, Brief COPE to assess 14 different type of coping strategies.

Field implementation

A total of 8 Research Assistant (RA) were hired for this survey.

Two RA were in-charged for central team in Institute for Public Health (IPH) and the others were stationed in the psychiatric department with two RA per hospital. See Figure 1.

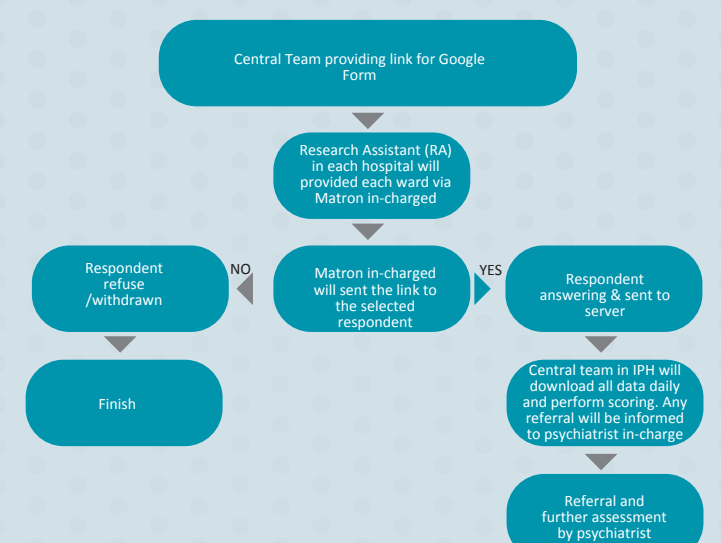


Figure 1: Field implementation

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