

UNIVERSITI TEKNOLOGI MARA

**THE UNDERSTANDING, ATTITUDE, PRACTICE,
AND HEALTH LITERACY QUESTIONNAIRE ON
COVID-19 IN MALAY LANGUAGE (MUAPHQ C-
19): DEVELOPMENT, VALIDATION AND
APPLICATION**

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ABSTRACT

COVID-19 has remained a global human health threat since its existence. Inadequate knowledge, attitude, practice, and health literacy (KAPH) greatly influenced the public's attitude and adoption of protective and preventive behaviours. Unfortunately, most of the existing tools to assess the KAP on COVID-19 were developed by foreign country researchers, scarce Malay language tools, and needed more validation reporting. This study aimed to develop and validate a KAPH questionnaire in the Malay language that measures the understanding, attitude, practice and health literacy towards COVID-19 among the public in Malaysia; and to determine the associated factors. The study was conducted in three phases: Phase 1 - A methodological study for questionnaire development; Phase 2 - Two cross-sectional studies for questionnaire validation. Phase 3 – A cross-sectional study questionnaire application. Malaysian adults who literate in the Malay language were included. Microsoft Excel, IBM SPSS Ver. 27, and IBM AMOS Ver. 26 were used for data analysis. Six expert panels and 655 Malaysian public participated in the validation and application phase of the study. A 54-item MUAPHQ C-19 (Ver. 1.0) containing four domains, i.e., understanding, attitude, practice, and health literacy, was developed based on the literature review result and focus group discussion. Content validity analysis based on six expert panel's judgements on the item relevancy and essentiality (S-CVI/Ave: 0.97 to 1; CVR: 0.3 to 1) made the 52-item MUAPHQ C-19 (Ver. 2.0). Face validity analysis yielded a 50-item MUAPHQ C-19 (Ver. 3.0) with better clarity and comprehensiveness (S-FVI/Ave: 0.87 to 0.98). The EFA has generated a 42-item MUAPHQ C-19 (Ver. 4.0). The internal and test-retest reliability was acceptable. The CFA generated six models before achieving best-fit indices with an RMSEA of 0.072, CFI was 0.883, TLI was 0.867, and χ^2/df of 2.218. The multicollinearity issue was managed; thus, only three domains except the understanding domain remained and yielded a 25-item MAPHQ C-19 (Ver. 5.0). The Composite Reliability, Convergent Validity and Discriminant Validity for all three domains were achieved. In phase 3, the mean scores of public attitudes, health literacy and practice towards COVID-19 were 7.64 (SD=1.26), 8.26 (SD=1.28) and 7.24 (SD=1.20), respectively. The predictor for good attitude was COVID-19 health literacy ($p<0.001$) and self-employed worker ($p=0.028$). Indian race was a predictor for a poor attitude ($p=0.013$). The predictor for sufficient COVID-19 health literacy was non-smoker ($p=0.022$), while non-health sector worker and Indian race was the predictor for inadequate COVID-19 health literacy ($p=0.005$ and $p=0.049$, respectively). The predictors for good practice towards COVID-19 were age ($p<0.001$), female gender ($p<0.001$), ex-smoker ($p=0.028$), attitude ($p=0.001$) and COVID-19 health literacy ($p<0.001$); while the T20 group was the predictor for poor practice towards COVID-19 ($p=0.017$). In conclusion, the study produced a valid and reliable new 25-item MAPHQ C-19 that can be used to measure the attitude, practice, and health literacy on COVID-19 among the general public in Malaysia. The attitude and practice of the public towards COVID-19 are generally moderate, while COVID-19 health literacy is sufficient. Consistent health education on COVID-19 prevention and control with more focus on minority races group of the public as well as smokers is needed to ensure good attitude and practice related to COVID-19 is optimised. Future studies with a broader population using MAPHQ C-19 should be conducted from time to time. Questionnaire revalidation with the acquisition of understanding domain is welcomed in future studies.

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CHAPTER ONE: INTRODUCTION

1.1 Background of Study

1.1.1 Overview of COVID-19 Infection

The coronavirus disease 2019 (COVID-19) is an emerging respiratory disease caused by a novel coronavirus named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (World Health Organization, 2020b). Since then, it has spread very fast to more than 200 countries and has been declared as a public health emergency of international concern (PHEIC) by the World Health Organisation (WHO) on 30th January 2020 (Eurosurveillance Editorial, 2020). International travel has facilitated the rapid worldwide spread of COVID-19. World Health Organisation has officially characterized the global COVID-19 outbreak as a pandemic (World Health Organization, 2020a). About one year after discovering the disease (as of 24th January 2021), COVID-19 has reported 99,363,402 total cases globally, with 2,131,261 deaths (Worldometers.info, 2021). Out of the total cases reported, about 25.8 million cases are still in the infective stage, in which 99.6% are in mild condition and 0.4% in severe or critical condition (Worldometers.info, 2021). Malaysia has up ranked to the 58th globally with 180,455 total cases reported, 42,769 active cases, and a 0.37% case fatality rate (Abdullah, 2021). This ongoing pandemic has posed a very significant public health threat and burden to all countries in this globe.

A literature has summarized the clinical history of COVID-19 as well as the nature of its transmission. However, further research and investigations are still ongoing worldwide to further study this disease due to the uncertainties, such as host and reservoirs, mode of transmission, and many others. Besides, the evolution and mutation of the virus itself happen between the time that challenged the scientist and researchers to conclude the disease's characteristic, the clinical outcome, the best treatment, etc. (Ben Hu, 2020). To date, it is reported that COVID-19 is susceptible to all ages of the population (Ben Hu, 2020). Generally, older men (>60 years old) with co-morbidities