

Supplementary material: Author Reflexivity Statement

When do persuasive messages on vaccine safety steer COVID-19 vaccine acceptance and recommendations? Behavioural insights from a randomised controlled experiment in Malaysia.

1. How does this study address local research and policy priorities?

This study addresses the need to investigate what message frames are effective at influencing Malaysians to take up the COVID-19 vaccine, as well as recommending it to others in society. At the time of the study, Malaysia was just only rolling out the COVID-19 vaccination programme and there was an urgent need to determine what message frames would be effective to bolster vaccination registration and uptake rates.

2. How were local researchers involved in study design?

The first group of local researchers who initiated the research question and idea were NYLH and YLW. Both researchers were based at the Institute for Clinical Research at the Malaysian National Institute of Health and were well connected and capable of conducting, leading, and organising local and international research collaborations. The second group of researchers who were invited by the core team to plan and discuss the conduct of the research project were local researchers based in local academic, research and government policy institutions (YKL, NML, KP, NHAS and AI). These researchers were from a diverse background and had intermediate to advanced research skills that helped solidify the study design. The third group of local researchers consisted were from a non-governmental organisation (JKH and EW) and had specific experience in risk communication, which

is a vital part of this study. JCF was the only research member who was based abroad in a high-income country. JCF was invited to join the study to provide his expertise related to behavioural economics. Therefore, almost the entire research team who are based in a middle-income country were actively involved with the study design. Our researcher that is based in a high income country was mainly responsible for providing guidance and support in terms of ensuring study design and interventions used were valid and scientifically sound.

3. How has funding been used to support the local research team?

Funding was mainly used to engage the services of an international market research company (i.e. Dynata) to conduct the study's online survey through their survey panel in Malaysia.

4. How are research staff who conducted data collection acknowledged?

All members of the research team were included into the authorship of this paper as a form of acknowledgement for their contributions offered.

5. Do all members of the research partnership have access to study data?

All members of the partnership have access to the data except JCF. This exception is due to data confidentiality and security restrictions imposed by the Malaysian government for government owned data. Data cannot be transferred abroad unless a formal application is applied by the foreign party.

6. How was data used to develop analytical skills within the partnership?

JCF was consulted by members of the Malaysian research team who were tasked with data analysis. Knowledge transfer obtained from consultations provided sufficient analytical skills needed to analyse data.

7. How have research partners collaborated in interpreting study data?

Two online meetings were held among all study team members during the process of study data interpretations. Meetings involved presenting summary of data collected, discussion of analysis plans, presentation of draft and finalized results, and data interpretations. Three other separate online meetings were held between NYLH, CTL and JCF to discuss further queries and data interpretation during manuscript write up.

8. How were research partners supported to develop writing skills?

NYLH, who is the main author of the current manuscript, was guided and supported by JCF who is a senior academic at the London School of Economics and Political Science. Guidance and support entailed writing style, techniques to formulate critical discussions, and assistance in editing the final manuscript.

9. How will research products be shared to address local needs?

Research outputs were shared to local and international stakeholders who were involved with risk communication activities to improve COVID-19 vaccination uptake among Malaysians. These

included the Health Education Division at the Malaysian Ministry of Health, the World Health Organisation (Western Pacific Region) and UNICEF, Malaysia.

10. How is the leadership, contribution and ownership of this work by LMIC researchers recognised within the authorship?

Authors NYLH and JCF worked as part of the authorship team in developing this manuscript. Their contribution has been recognised as joint first and joint last authors respectively. Hence both middle income and high income country authors share main authorships for this paper, amidst an authorship team that is predominantly based in a middle-income country.

11. How have early career researchers across the partnership been included within the authorship team?

We have included an early career researcher (NML) within the authorship team. She attended all project meetings, contributed to the literature review, and assisted with both the development and validation of the survey questionnaire and experimental messages. We acknowledge that she is based in a middle-income country.

12. How has gender balance been addressed within the authorship?

Seven authors are male (NYLH, YLW, CTL, YKL, JKH, AI and JCF) and four authors are female (NML, EW, KP and NHAS). We admit that gender balance was slightly skewed towards

males in this study's authorship list. We hope to ensure a more gender balanced group of authors in the future.

13. How has the project contributed to training of LMIC researchers?

The project has exposed and taught Malaysian researchers in the team on how to conduct behavioural insights research work, along with data analysis techniques arising from such projects.

14. How has the project contributed to improvements in local infrastructure?

This project has not directly contributed to improvements in local infrastructure.

15. What safeguarding procedures were used to protect local study participants and researchers?

Local study participants were safeguarded by not collecting their personal identifiers throughout the online survey. Dynata does not share personal information of participants who responded to the survey, in accordance to data privacy policies. This question is not directly applicable to researchers as the study conduct only requires recruited participants to answer an online survey.