

COVID-19 vaccine hesitancy in Malaysia: Exploring factors and identifying highly vulnerable groups

ABSTRACT

Vaccine hesitancy is a global health challenge in controlling the virulence of pandemics. The prevalence of vaccine hesitancy will put highly vulnerable groups, such as the elderly or groups with pre-existing health conditions, at a higher risk, as seen with the outbreak of the pandemic Covid-19. Based on the trends of vaccine hesitancy in the state of Sabah, located in East Malaysia, this study seeks to identify several variables that contribute to vaccine hesitancy. In addition to this, this study also determines which groups are affected by vaccine hesitancy based on their demographics. This study is based on a sampling of 1,024 Sabahan population aged 18 and above through an online and face-to-face questionnaire. The raw data was analysed using the K-Means Clustering Analysis, Principal Component Analysis (PCA), Mann-Whitney U Test, Kruskal-Wallis Test, and frequency. The K-Means Clustering found that more than half of the total number of respondents (Cluster 2 = 51.9%) tend to demonstrate vaccine hesitancy. Based on the PCA analysis, six main factors were found to cause vaccine hesitancy in Sabah: confidence ($\text{var}(X) = 21.6\%$), the influence of local authority ($\text{var}(X) = 12.1\%$), ineffectiveness of mainstream media ($\text{var}(X) = 8.4\%$), complacency ($\text{var}(X) = 7.4\%$), social media ($\text{var}(X) = 6.4\%$), and convenience issues ($\text{var}(X) = 5.8\%$). Findings from both Mann-Whitney U and Kruskal-Wallis tests demonstrate that several factors of group demographics, such as employment status, level of education, religion, gender, and marital status, may explain the indicator of vaccine hesitancy. In particular, specific groups tend to become vaccine hesitancy such as, unemployed, self-employed, students, male, single, level of education, and Muslim. Findings from this empirical study are crucial to inform the relevant local authorities on the level of vulnerability among certain groups in facing the hazards of COVID-19. The main contribution of this study is that it seeks to analyse the factors behind vaccine hesitancy and identifies which groups more likely hesitant toward vaccines based on their demographics.