

Knowledge, Attitude and Perception regarding COVID-19-Related Prevention Practice among Residents in Viet Nam: A cross-sectional Study.

Short title: Knowledge, Attitude, Perception and Practice in Vietnam

Thoa Le^{1†,*}, Trang T B Le^{1,†}, Le Van Truong², Mai Ngoc Luu³, Nguyen Tran Minh Duc⁴, Abdelrahman M Makram⁵, Truong Van Dat¹, Nguyen Tien Huy⁶.

Affiliations

¹University of Medicine and Pharmacy at Ho Chi Minh City, Ho Chi Minh City, Viet Nam.

²Traditional Medicine Hospital of Ministry of Public Security, Hanoi, Vietnam.

³Department of Internal Medicine, University of Medicine and Pharmacy at Ho Chi Minh City, Ho Chi Minh City, Vietnam.

⁴Faculty of Medicine, University of Medicine and Pharmacy at Ho Chi Minh City, Ho Chi Minh City, Vietnam.

⁵School of Public Health, Imperial College London, London, United Kingdom.

⁶School of Tropical Medicine and Global Health, Nagasaki University, Nagasaki, Japan.

† These authors contributed equally to this work and share first authorship.

*Corresponding author: Thoa Le, University of Medicine and Pharmacy at Ho Chi Minh City, Ho Chi Minh City, Viet Nam (E-Mail: thoale@ump.edu.vn).

Abstract

Background: Vietnam was one of the countries pursuing the goal of "Zero - COVID" and had effectively achieved it in the first three waves of the pandemic. However, the spread of the Delta variant was outbreak first in Vietnam in late April 2021, in which Ho Chi Minh City was the worst affected. This study surveyed the public's knowledge, attitude, perception and practice (KAPP) toward COVID-19 during the rapid rise course of the outbreak at Ho Chi Minh City.

Method: This cross-sectional survey was conducted from September 30th to November 16th, 2021, involving 963 residents across the city; we asked residents a series of 21 questions. The response rate was 76.6%. We set a priori level of significance at $\alpha = 0.05$ for all statistical tests.

Results: The residents' KAPP scores were $68.67\% \pm 17.16$, $77.33\% \pm 18.71$, $74.7\% \pm 26.25$, and $72.31\% \pm 31$, respectively. The KAPP scores of the medical staff were higher than the non-medical group. Our study showed the positive, medium – strong Pearson correlations between knowledge and practice ($r = 0.337$), attitude and practice ($r = 0.405$), perception and practice ($r = 0.671$) ($p < 0.05$). We found 16 rules to estimate the conditional probabilities among KAPP score via the association rule mining method. Mainly, 94% confident probability of participants had {Knowledge=Good, Attitude=Good, Perception=Good}, they would have {Practice=Good} as well (in rule 9 with a support of 17.6%). In opposition to around 86% to 90% of the times, participants had levels of {Perception=Fair, Practice=Poor} given with either {Attitude=Fair} or {Knowledge=Fair} (according to rules 1, 2, and rules 15, 16 with a support of 7-8%).

Conclusion: Besides government's directives and policies, citizen's knowledge, attitude, perception and practice are considered one of the critical preventive measures during the COVID-19 pandemic. The results affirmed the good internal relationship among K, A, P, P scores created a hierarchy of healthcare educational goals and health behavior among residents.