



Factors associated with incorrect facemask use among individuals visiting high-risk locations during COVID-19 pandemic

Abstract ID : P-08 NMRR-20-741-54679 NMRR-20-832-54819



Authors : Sera Selvanthansundram Gunasekaran¹, Gobi Hariyanayagam², Shargunan Selvanthan³, NurSyafina Insyirah Zaimi², Nor Amirah Abdul Halim²

Institution : 1. Medical Officer, Orthopedic Department ,Hospital Seri Manjung, Perak.
2. Oncology Pharmacy, Hospital Seri Manjung, Perak.
3. Dental Officer, Manjung District Dental Clinic, Perak.

Introduction

Background

- The establishment of the COVID-19 (SARS-CoV-2) epidemic is believed to be sustained by human-to-human transmission mainly through respiratory droplets similar to respiratory infections such as flu and rhinovirus.
- Health care authorities have had to rely on public health management to mitigate the burden on healthcare system.
- Health care authorities have advocated use of personal protective equipment such as facemask .

Research Question

- How much of the population are using facemask when visiting high-risk location during COVID-19 outbreak ?
- Are general population using the facemask correctly ?

Aim

- This study aimed to investigate the prevalence, types, and correct use of facemask by individuals visiting high risk public locations during the COVID-19 pandemic

Methodology

Design

- Cross-sectional observational study
- Location : Wet markets and district specialist hospital in Sitiawan, Perak, Malaysia.
- Duration : March 30th to April 12th, 2020

Variables

- Demographic data
- The type of facemask (Medical Grade or Non-Medical Grade)
- The correct use of facemask
 - correct use : colored side out. Cover nose and mouth
 - Incorrect use: colored side in .Exposure of nose or mouth

Statistical

- All demographic and categorical variables were presented as number (n) and percentage (%).
- A binary logistic regression analysis was applied to determine the contributing factors to incorrect facemask use.
- For all tests, a two-tailed p-value < 0.05 was considered as statistically significant.
- All statistical analyses were performed using SPSS for Windows version 22.0 (SPSS Inc., Chicago, Illinois, USA).

Result



Who are more likely to have incorrect facemask use ?

Elderly were **1.92 times** (AOR=1.92; 95% CI: 1.43–2.58; p < 0.001)

Malay ethnicity were **1.90 times** (AOR=1.90; 95% CI: 1.42–2.55; p = 0.004)

Male individuals were **1.51 times** (AOR=1.51; 95% CI: 1.14–2.00; p = 0.004)

Use of **medical grade facemasks** were **1.46 times** (AOR=1.46; 95% CI: 1.04–2.05; p = 0.027)

Likely to contribute to incorrect facemask use

Discussion & Conclusion

- High prevalence of individuals (98.2%) using medical grade facemask (77.4%) indicate accessibility of facemasks for community and good social adaptability in response to local disease outbreak.
- The significantly higher incorrect facemask use among those wearing medical grade facemasks is worrying as incorrect facemask use may not form a tight seal against the face skin which is required to provide effective prevention.
- Facing a worldwide health emergency with limited effective clinical treatment, public health management is of paramount important for mitigating the stress on the healthcare system.
- In spite of contradicting opinions on the potential value of facemasks for general population use, the widespread availability and lack of obvious harm, the use of a facemask together with other environmental hygiene measures is a vital epidemiological strategy that may help to alleviate the COVID-19 epidemic impact.