“To wear or not to wear” – mask-wearing works in a real-life situation

In many countries in Asia, Africa, and Latin America, mask-wearing is a first attempt to control the spread of Covid-19, while vaccines still are not sufficiently available. A large community intervention project in Bangladesh proved that mask-wearing is helpful.

At the beginning of the SARS-CoV-2 crisis, a medical historian published a far-sighted article in the New England Journal of Medicine. He remarked that the pressure of epidemics on the societies lay open matters people truly value (1). This seems to happen now. In western countries, ordering wearing a mask faces strong resistance since, for many people, the regulation grossly interferes with personal freedom. Wear a mask or refuse it became a firm stance like Shakespeare’s often cited expression in Hamlet ‘to be or not to be’.

To wear a mask in Thailand is commonly accepted, but some tourists had to learn that

Even before Covid-19, wearing a mask when caching a cold was never an issue for many Thais. A year ago, some unfortunate western foreign tourists were harshly reminded to wear a mask, not very conscious about the necessity. Nevertheless, the attempt to enforce wearing masks is practical. Mask wearing reduces transmission in the laboratory and the clinic. Within the public, the mask is effective given high compliance (2). In real-life situations, to propagate and stimulate mask use, protection against Covid-19 can be achieved’. This was assured recently through a large randomized controlled study conducted in communities all over Bangladesh. The paper is not yet published in a peer-reviewed journal but can be downloaded as a pdf file.

A large field study in Bangladesh

The NGO conducting the study thought Bangladesh to be a suitable place because of the country’s limited resources to purchase vaccines. Other means to control the spread of the virus should be strengthened, such as wearing masks. From November 2020 to April 2021, six hundred villages all over Bangladesh participated. Half of the villages with around 178.000 villagers were encouraged to wear masks by community leaders and informed about proper mask-wearing, physical distancing, and symptoms of Covid-19 infections. Mask-wearing and physical distancing were assessed weekly through direct observation within mosques, markets, main roads in the community, and tea stalls. The other half of the villages, with around 164.000 individuals, served as controls and were not exposed to the intervention measures. At 5 to 9 weeks follow up, “all reachable participants were surveyed about Covid-19 related symptoms”. In the intervention villages, masks wearing increased to 42.3% but less so in the control area with an increase of 13.3%. After five months, the influence of the intervention weakened, but with 10% was still higher in the intervention villages than the controls.

The proportion of symptomatic persons in the treatment area with 7.62% (N=13.273) was slightly less than the controls with 8.62% (N=13.893). Almost eleven thousand symptomatic individuals agreed to provide blood samples for the determination of SARS-CoV-2 IgG antibodies. Controlling for covariates, symptomatic seroprevalence was reduced by 9.3%, associated with a nearly 30% increase in mask-wearing.

The difficulty to come up with an eye-opening result in extensive population studies

Opponents for mask-wearing might make a plea to name names instead of fiddling around with impressive percentages, like 30% increases in mask-wearing being successful in reducing infection by almost 10%. However, the achievement of the project might be even more pronounced. Those familiar with community intervention projects know about the problems occurring in interpreting the results. Applying sophisticated statistical means in comparing variables between intervention and control groups doesn't lay open spill-over effects. The people in the control areas might know about activities going on in intervention places and follow by their own initiative. In addition, measuring the essential variables within the control population might raise awareness about the issue of concern. The result turns out to be similar as caused by the spill-over effect. All in all, indirectly, the intervention might have worked in the control area as well.

Literature

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Frank P. Schelp is responsible for the content of the manuscript, and points of view expressed might not reflect the stance and policy of the Faculty of Public Health, Khon Kaen University, Thailand

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