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Rapid Policy Brief Number: 006-03 — Effectiveness of different distancing measures in interrupting COVID-19 transmission

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1	RAPID POLICY BRIEF NUMBER: 006-03
2	RESEARCH DOMAIN: COVID-19 PREVENTION
3	TITLE: - Effectiveness of different distancing measures in interrupting COVID-19 transmission
4	DATE OF PUBLICATION: 23/01/2021
5	<p>BACKGROUND</p> <p>Since the coronavirus disease 2019 (COVID-19) outbreak, caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), was declared to be a pandemic, a range of non-pharmaceutical interventions (NPIs), have been implemented to reduce the transmission of the virus [1–3]. One of the NPIs implemented by countries worldwide is social or physical distancing. This implies minimizing contact by limiting public gatherings and getting people to stay in their homes unless necessary, as well as maintaining some distance between persons [4]. Examples of some distancing measures include school closure, workplace non-attendance, case isolation, and community contact reduction[5].</p> <p>This policy brief is aimed at summarizing evidence on the effectiveness of distancing measures in interrupting COVID-19 transmission.).</p>
6	<p>SEARCH STRATEGY / RESEARCH METHODS</p> <p>Three databases were searched for studies conducted between December 2019 and 18th December 2020, including PUBMED, WHO COVID-19 database, and Google scholar. The search terms used were: “COVID-19”, SARS-CoV-2”, and “distancing,” using relevant Boolean operators. A further search was done, which included “Africa” and a search string of all countries in Africa to identify studies specific to the continent. A total of 12 articles were used to synthesize findings summarized in this policy brief.</p>
7	<p>SUMMARY OF GLOBALLY PUBLISHED LITERATURE RELATED TO THE SUBJECT</p> <p>A number of studies have shown that social distancing is an effective NPI that can reduce the transmission of COVID-19 [6,7]. A modelling study conducted in China showed that social distancing and epicenter lockdown might reduce the number of new infection cases by up to 98.9% [7], while an interrupted time series study indicated that social distancing reduced the growth rate of confirmed cases by 52.37% on average [6]. Authors of the latter study [6] suggest that distancing should be adopted as a priority NPI for COVID-19 containment. In another modelling study, a series of experiments were conducted, applying four social distancing interventions: school closure, workplace non-attendance, increased case isolation, and community contact reduction. This study showed that these interventions are highly effective in flattening the epidemic curve and reducing the maximum daily case numbers [5].</p>

	<p>In addition, studies have shown that distancing measures in combination with other NPIs are more effective than distancing alone. For example, an ecological study [1] demonstrated that combinations with more types of NPIs seemed to be associated with a greater decrease in the transmission of COVID-19 [1]. Similarly, a systematic review showed that a combination of interventions, like school closures and other distancing measures like quarantine, reduced the transmission of COVID-19 [8]. Furthermore, a recent Cochrane rapid review assessed the effectiveness of quarantine during severe coronavirus outbreaks [9]. This review is comprised of both observational and modelling studies, with the latter being the predominant. The modelling studies demonstrated that quarantine alone (vs no quarantine) is beneficial and may have averted 44% to 96% of new cases and 31% to 76% of deaths compared to no measures at all. On the other hand, quarantine in combination with other prevention and control measures, such as school closures, travel restrictions and social distancing, demonstrated a larger effect on the reduction of new cases, transmissions, and deaths than measures without quarantine or no interventions. This review also suggests that the earlier quarantine measures are implemented, the greater the cost savings. Although authors of this review included studies on the effectiveness of quarantine on other infectious disease like SARS and MERS, the findings were consistent with findings from the studies on COVID-19 [9]. In another similar systematic review, which assessed the effect of physical distance, alongside other NPIs such as face masks, and eye protection on transmission of SARS-CoV-2, and other infections, like SARS-CoV, and MERS-CoV, the authors noted that at least 1m physical distancing is associated with a large reduction in transmission of infection. Whereas, a distance of 2m or above might even be more effective [10].</p> <p>It has been shown through observational and modelling evidence from past pandemics (e.g. influenza pandemics) and also the experiences with COVID-19 that early, decisive, speedy, coordinated and comprehensive implementation of social distancing measures tend to be more effective in interrupting the spread of the virus than when delayed [11]. It has also been shown that social distancing measures can be beneficial in reducing spread of other infectious diseases. For example, an observational study in Hong Kong showed that social distancing not only reduced transmission of COVID-19, but also reduced influenza transmission [12].</p> <p>It is important to note that most of the evidence on the effectiveness of distancing measures are of low certainty since they are mostly modelling or observational studies without randomization. Also some evidence available is based on lessons from past epidemics such as influenza, SARS and MERS epidemics, hence providing indirect evidence [9,11].</p>
8	<p>SUMMARY OF AFRICA-SPECIFIC LITERATURE ON THE SUBJECT</p> <p>None was found</p>
9	<p>POLICY FINDINGS</p>

	<ul style="list-style-type: none">• Both modelling and observational studies have shown that implementing distancing measures are associated with a decrease in the transmission of COVID-19.• Distancing measures are more effective when they are implemented in combination with other preventive measures• Early, decisive, rapid, coordinated, and comprehensive implementation of social distancing measures are likely to be more effective in slowing the spread of the virus than delayed actions and they are cost effective too.• Distancing measures not only reduces the transmission of COVID-19 but are effective in reducing transmission of other infections like influenza.
10	ONGOING RESEARCH IN THE AFRICAN REGION None was found
11	AFRO RECOMMENDATIONS FOR FURTHER RESEARCH There is need for well-designed studies on the effectiveness of various distancing measures in different settings in Africa to better inform the evidence for these interventions.

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