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Issues for conducting meta-analyses in COVID-19. Commentary on “Prevalence and severity of corona virus disease 2019 (COVID-19): A systematic review and meta-analysis”



The rapid outbreak of the corona virus disease 2019 (COVID-19) infection and its impact yields in growing clinical research either observation or intervention researches. Most of the COVID-19 researches is conducting on country or territory levels. However, the world statistics show a large variation between countries in terms of the number of confirmed positive COVID-19 cases, critical or serious cases, and mortality or recovery rate [1]. The meta-analysis research design gives us an excellent opportunity to pool the data and compare results in order to better understand COVID-19 epidemiology, mortality rate, risk factors, management options, and efficacy of prevention strategies as personal equipment, quarantine, and curfew.

In this context, we read with great interest the recent meta-analysis by Young Hu [2] titled as “Prevalence and severity of corona virus disease 2019 (COVID-19): A systematic review and meta-analysis”. Up to our knowledge, it is the first meta-analysis in the epidemiology of COVID-19. This commentary highlights some points in this analysis and for upcoming analyses as follow:

- 1 Time is matter. The Hu and colleges have conducted the analysis with the last search strategy on 10 March 2020 and submitted the work for publication on 11 March 2020. The journal has accepted the manuscript on 11 April 2020, then the work is available on the website and databases on 14 April 2020. In the PubMed database, and using the same search terms and MeSH terms in Young Hu analysis, there are 126 citations, the number of them is eligible to be included. Reporting of the last search is very important. Rapid peer review processing is required to keep the value of published meta-analysis.
- 2 Heterogeneity. The heterogeneity in meta-analysis of COVID-19 is highly expected. In fact, Hu et al analysis shows large heterogeneity in their analyses measured by I^2 index. Identifying and quantifying the heterogeneity, using the appropriate analysis based on the heterogeneity as fixed or random models of analysis, prediction intervals, subgroups analyses, and meta-regression are required [3] to better and precise estimation for the effect size in the meta-analysis that will be one of the primary factors for COVID-19 evidence-based practice.
- 3 Availability of meta-analysis data. Because of the growing number in COVID-19 researches, meta-analysis, and updated meta-analysis

will be increased. The availability of meta-analysis statistical data and assessment of quality or risk of bias in included articles will make conducting of new meta-analysis or updated meta-analysis easier and faster with all respect for institutions' policies, and copyrights.

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Declaration of Competing Interest

All authors declare no conflicts of interest.

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