

Supplementary Text 1: Detailed Methodology

Eligibility criteria

We limited our study to articles published since 2011, which is the year the International Prospective Register of Systematic Reviews (PROSPERO) was launched. [1] We included all systematic review (SR) protocols registered on both the PROSPERO and non-PROSPERO platforms, which included Protocols.io, ClinicalTrials.gov, International Clinical Trials Registry Platform (ICTRP), Open Science Framework (OSF) Registries, and the following 44 preprint platforms: (1) 17 platforms included in OSF: AfricArxiv, AgriXiv, Arabixiv, EcoEvoRxiv, FocUS Archive, Frenxiv, INA-Rxiv, MarXiv, MetaArXiv, MindRxiv, NutriXiv, OSF Preprints, PaleorXiv, PsyArXiv, SocArXiv, SportRxiv, and Thesis Commons; (2) 6 platforms included in Open Research Central: The African Academy of Sciences Open Research, Association of Medical Research Charities Open Research, Gates Open Research, Health Research Board Open Research, Montreal Neurological Institute Open Research, and Wellcome Open Research; and (3) 21 other platforms: arXiv, Authorea, bioRxiv, Cell Press Sneak Peek, ChemRxiv, ChinaXiv, Earth and Space Science Open Archive, F1000 Research, Journal of Medical Internet Research (JMIR) Preprints, medRxiv, MitoFit Preprint Archives,

NeuroImage: Clinical -First Look, PeerJ Preprints, Preprints with The Lancet, Preprints.org, Research Square, Scientific Electronic Library Online Preprints, Social Science Research Network (SSRN), Surgery Open Science -First Look, Therapoid, and ViXra. We defined non-PROSPERO registrations as SR protocols that were registered in the above non-PROSPERO registries. The definition of an SR was “a scientific investigation that focuses on a specific question and uses explicit, prespecified scientific methods to identify, select, assess, and summarize the findings of similar but separate studies.” [2] We excluded meta-epidemiological studies and overviews of SRs. We excluded studies in which the protocols were withdrawn.

Search

We collected titles and their publication years from the PROSPERO and non-PROSPERO platforms. We searched the titles of records using “systematic review*” and the above limitation on publication year for SR protocols for ClinicalTrials.gov, ICTRP, and OSF Registries. We searched the titles of records using “systematic review*”, AND “protocol” and the above limitation on publication year for SR protocols from other non-PROSPERO registrations.

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38 **Study selection**

39 Two of three review authors (MB, YT, and YK) independently selected titles from
40 the data sources. Disagreements were resolved through discussion. If necessary,
41 a third reviewer arbitrated the disagreement.

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43 **Data items**

44 For eligible records, we obtained the following characteristics or information from
45 the search: published date, title, and whether the theme of preprints is related to
46 coronavirus disease 2019 (COVID-19). We screened the titles to determine
47 whether the theme of preprints is related to COVID-19 using PROSPERO
48 COVID-19 filters for PROSPERO registrations. [3] We did this when the titles
49 included the word “COVID” or “SARS-COV” or “coronavirus” or “corona virus” for
50 non-PROSPERO registrations. We collected the following information for the
51 random samples based on the full text: country of the corresponding author,
52 funding (for-profit, non-profit, none, or unclear), description about adherence to
53 the Preferred Reporting Items for Systematic Reviews and Meta-Analyses
54 (PRISMA) statement or PRISMA for systematic review protocols (PRISMA-P),

and whether the records in preprint platforms include the PROSPERO registration number. [4, 5] We considered funding as “for-profit” when the funds were received from industries. We considered funding as “non-profit” when the funds were received from governments, and other academic, or non-profit organizations. We coded “for-profit” in funding for protocols that had either for-profit-only funding or both for-profit and non-profit funding. We coded “none” in funding if the protocols had no funding. We coded “unclear” in funding if the protocols had no information about funding. We used SciLit or Crossref to extract the data (published date and title) on Authorea. We used SSRN to extract the data (published date and title) on Cell Press Sneak Peek, NeuroImage: Clinical-First Look, Preprints with The Lancet, and Surgery Open Science-First Look. We extracted the data from the official sites of the following data sources: ChinaXiv, JMIR Preprints, Therapoid, ViXra, Protocols.io, ClinicalTrials.gov, ICTRP, and OSF Registries. We used Google Scholar via Publish or Perish 7, [6] software for collecting academic citations, to extract data (published date and title) on the other non-PROSPERO registries.

Sample size

We did not calculate a sample size because this study was explanatory. We used all available data that met our eligibility criteria.

Data analysis

We reported the proportion of non-PROSPERO registration by calendar years.

We also reported the following characteristics of random samples of SR protocols registered on PROSPERO and non-PROSPERO registries: country of the corresponding author, funding (for-profit, non-profit, none, or unclear), and description of adherence to PRISMA statement or adherence to PRISMA-P. We reported the frequency of duplicate registrations on PROSPERO among non-PROSPERO registrations in the random samples. We conducted a pre-specified sensitivity analysis to focus only on the proportion of SR protocols related to coronavirus disease 2019 (COVID-19). The numerator of the proportion was the number of SR protocols related to COVID-19 in non-PROSPERO platforms. The denominator of the proportion was the number of SR protocols related to COVID-19 in PROSPERO plus non-PROSPERO platforms. We used Stata version 15.1 (StataCorp LLC, College Station, Texas, USA) for all statistical analyses.

Ethics

Ethics approval was not required because we only used openly available data.

References

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- 116