# Supplementary materials

**Table S1. Naive Boolean search string used in initial literature search.** Wildcards (\*) were used to return results containing different word endings. Texts were limited to those since 2020. Search was conducted on 10/07/2021.

|  |  |
| --- | --- |
| Concept group (PICO) | Terms |
| Academia (population) | ( academi\* OR author\* OR database\* OR journal\* OR research OR scien\* ) |
| Gender (population) | AND    ( female\* OR gender OR male\* OR men OR women ) |
| Pandemic (intervention) | AND    ( coronavirus OR covid OR pandemic ) |
| Inequality (comparator) | AND    ( bias\* OR disparit\* OR disproportion\* OR fewer OR gap OR "gender difference\*" OR imbalance\* OR inequalit\* OR inequit\* OR parity OR "sex difference\*" OR skew\* OR unequal ) |
| Productivity (outcome) | AND  ( performan\* OR publication\* OR publish\* OR productiv\* ) |
| Exclusion of biomedical studies (population) | AND NOT  ( surviv\* OR experiment OR laboratory ) |

**Table S2. Top 60 strongest terms in the term co-occurrence matrix and their rank in ascending order.** Terms in bold were included in the AND NOT operator concept group excluding biomedical studies.

|  |  |  |
| --- | --- | --- |
| Term | Strength | Rank ascending |
| child | 4257 | 2063 |
| regression | 4335 | 2064 |
| survey | 4367 | 2065 |
| ***acute respiratory*** | 4427 | 2066 |
| embase | 4637 | 2067 |
| databases | 4646 | 2068 |
| death | 4664 | 2069 |
| knowledge | 4764 | 2070 |
| hip | 4918 | 2071 |
| mortality | 5000 | 2072 |
| female | 5065 | 2073 |
| rights reserved | 5257 | 2074 |
| city | 5504 | 2075 |
| information | 5700 | 2076 |
| symptom | 6108 | 2077 |
| sars-cov-2 | 6112 | 2078 |
| sars-cov | 6185 | 2079 |
| coronavirus disease 2019 | 6397 | 2080 |
| systematic review | 6506 | 2081 |
| rest | 6578 | 2082 |
| science | 6659 | 2083 |
| distance | 6679 | 2084 |
| literature | 6816 | 2085 |
| database | 6916 | 2086 |
| medical | 7023 | 2087 |
| ***icu*** | 7170 | 2088 |
| affect | 7297 | 2089 |
| control | 7386 | 2090 |
| population | 7418 | 2091 |
| women | 7422 | 2092 |
| bias | 7665 | 2093 |
| gender | 7693 | 2094 |
| male | 7977 | 2095 |
| coronavirus disease | 8009 | 2096 |
| article | 8135 | 2097 |
| virus disease | 8230 | 2098 |
| ***iga*** | 8235 | 2099 |
| hospital | 8318 | 2100 |
| work | 8319 | 2101 |
| covid-19 pandemic | 8377 | 2102 |
| ***gis*** | 8489 | 2103 |
| severe | 8518 | 2104 |
| time | 8831 | 2105 |
| infection | 8914 | 2106 |
| ***rna*** | 10303 | 2107 |
| outcome | 10461 | 2108 |
| review | 11869 | 2109 |
| coronavirus | 12243 | 2110 |
| stem | 12316 | 2111 |
| ***risk*** | 12776 | 2112 |
| analysis | 13610 | 2113 |
| research | 13737 | 2114 |
| virus | 13835 | 2115 |
| pandemic | 14212 | 2116 |
| author | 14333 | 2117 |
| car | 15893 | 2118 |
| over | 15964 | 2119 |
| health | 16176 | 2120 |
| covid-19 | 21088 | 2121 |
| age | 21194 | 2122 |
| covid | 21330 | 2123 |

**Table S3. Flowchart of questions used for initial screen of title, abstract and key-words**. Any 'No' answer meant that the article was excluded. 'Yes' AND/OR 'Maybe' answers to all of the below meant that the articles were included. Reports such as reviews or comments that may contain secondary data investigating our PICO framework were included. Articles that lack a formal abstract, but have a title or informal abstract suggesting at least 3 of the above questions can be answered with a ‘yes’.

|  |  |
| --- | --- |
| 1) Population: Is there suggestion the article investigates academia/ research/academics/journals? | Note: If the population is not narrowed to academia/research/academics/journals, but the study considers the effect on ‘work’ or ‘work productivity’ at a broad level, and looks like it has enough power to subdivide effects on different workplaces such as academia, then include.  Some academic fields such as those within medicine and engineering are dominated by a practical/applied/professional/labour component. Explicit reference to only investigating the professional/practical/labour context of these fields are excluded. If no reference is made to whether the academic field is investigated in a research or professional capacity, we include. |
| 2) Intervention: Is there suggestion the article investigates the effect of the pandemic? |  |
| 3) Comparison: Is there suggestion the article investigates pre-pandemic? | Note: Often titles and abstracts do not have dates and will not refer explicitly to pre-pandemic data being included. If there is suggestion the ‘effect of the pandemic’ (or similar) is considered, we are generous and assume a comparison with pre-pandemic data is included. |
| 4) Outcome: Is there suggestion the article investigates the effect on gender in productivity/publication/submission/authorship numbers? | Note for gender: If there is no reference to investigating the effect of gender or sex, but does refer to investigating broader sociodemographic or socioeconomic factors, then include because gender may be investigated in the full text.    Note for productivity: If there is no direct reference to publication or submission numbers, but does refer to, ‘productivity’ or ‘output’ in a research context, then include because publication or submission metrics may be included in the full text. |

**Figure S1. PRISMA flow diagram for number of records included at each stage in first and iterated search.**

**Screening**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | | 10/07/2021 search | | | | |  |
|  | Web of Science | | | Scopus | | EBSCO | | ProQuest |
|  | n=199 | | | n=126 | | n=276 | | n=99 |
|  | |  | | | **↓** | |  | |
|  | |  | | | Total | |  | |
| **Identification** | |  | | | n=700 | |  | |
|  | |  | | | **↓** | |  | |
|  | |  | | | De-duplicated | |  | |
|  | |  | | | n=580 | |  | |
|  | |  | | | **↓** | |  | |
|  | |  | | | Title, abstract, keyword screened | |  | |
| **Screening** | |  | | | n=81 | |  | |
|  | |  | | | **↓** | |  | |
|  | |  | | | Full text screened | |  | |
| **Included** | |  | | | n=25 | |  | |
|  | |  | | |  | |  | |
|  |  | | 28/02/2022 search | | | | |  |
|  | Web of Science | | Scopus | | | EBSCO | | ProQuest |
|  | n=413 | | n=258 | | | n=542 | | n=433 |
| **Identification** | |  | | | **↓** | |  | |
|  | |  | | | Total | |  | |
|  | |  | | | n=1646 | |  | |
|  | |  | | | **↓** | |  | |
|  | |  | | | De-duplicated | |  | |
|  | |  | | | n=1208 | |  | |
|  | |  | | | **↓** | |  | |
|  | |  | | | Title, abstract, keyword screened | |  | |
|  | |  | | | n=169 | |  | |
|  | |  | | | **↓** | |  | |
| **Included** | |  | | | Full text screened | |  | |
|  | |  | | | n=50 | |  | |