Merged PECO statements

Statements copied across from the working tabs. Need cleaning after copying to this tab. Once cleaned, annotate as such.

| Title of manuscript | Worldwide Estimation of Parental Acceptance of COVID-19 Vaccine for Their Children: A Systematic Review and Meta-Analysis |
| --- | --- |
| Last name of first author | Alimoradi |
| Year of publication | 2023 |
| URL of HTML manuscript | <https://pmc.ncbi.nlm.nih.gov/articles/PMC10051081/> |
| Section PECO statement is in | 2.3. Eligibility Criteria |
| PECO statement | The eligibility criteria based on PECO components were set as follows: (1) Population: parents or children’s guardian with no limitation regarding their demographic characteristics; (2) Exposure: COVID-19 pandemic; (3) Comparison: other populations other than children; (4) Outcome: Frequency or prevalence of COVID-19 vaccination acceptance (and/or no hesitance) or willingness to receive COVID-19 vaccines for children; and (5) Study design: observational studies including cross sectional, cohort, or case-control design.  Other eligibility criteria include being published between December 2019 and July 2022, using English language, published as a peer-reviewed paper, reporting data on frequency or prevalence of parents or children’s guardian acceptance for their children’s COVID-19 vaccination. |
| Annotator comments |  |

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| Title of manuscript | Meta-analysis of the quantitative assessment of lower extremity motor function in elderly individuals based on objective detection |
| --- | --- |
| Last name of first author | Liu |
| Year of publication | 2024 |
| URL of HTML manuscript | <https://pmc.ncbi.nlm.nih.gov/articles/PMC11202321> |
| Section PECO statement is in | Methods/Selection criteria |
| PECO statement | Following Morgan’s PICOS/PECOS program, the inclusion criteria and exclusion criteria were formulated [[6](https://pmc.ncbi.nlm.nih.gov/articles/PMC11202321/#CR6)]. The inclusion criteria were as follows: (1) study subjects included the elderly aged 60–80 years; and (2) interventions included sEMG, gait analysis, IMUs, 3D motion capture systems, and motion sensors to assess motion function during lower extremity tasks. (3) The multiple comparisons met the following criteria: (a) comparison between the movement disorder group and the healthy group; (b) comparison between the movement characteristic parameters of the elderly before and after the evaluation; and (c) comparison of the lower extremity motor function characteristic results with gold standard clinical scale results. (4) Regarding the outcome indicators: the primary indicator was step velocity, and the secondary indicator was step length. (5) The study was an RCT.  Articles were excluded based on the following criteria: (1) duplicate publications or literature; (2) incomplete research data or test data could not be extracted; (3) review and systematic review; and (4) full text not available. |
| Annotator comments | This seems like multiple PECO statements as there are multiple outcome assessment clusters in this PECO. |

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| Title of manuscript | Effects of air pollution on restricted activity days: systematic review and meta-analysis |
| --- | --- |
| Last name of first author | Orellano |
| Year of publication | 2023 |
| URL of HTML manuscript | <https://pmc.ncbi.nlm.nih.gov/articles/PMC10061989> |
| Section PECO statement is in | Methods/Research question |
| PECO statement | The research question for this systematic review was formulated as a Population, Exposure, Comparator, Outcome and Study design (PECOS) question, as elaborated by Morgan and colleagues [[12](https://pmc.ncbi.nlm.nih.gov/articles/PMC10061989/#CR12)]:  In any population, including subgroups of susceptible adults and children (P), what is the effect of the exposure to ambient concentrations of PM2.5, PM10, O3, and NO2 (E), versus the exposure to lower levels of air pollution (C) (difference of 10 μg/m3), on the number of restricted activity days (O), as observed in observational epidemiological studies (S)? |
| Annotator comments |  |

| Title of manuscript | Respiratory Syncytial Virus, Influenza and SARS-CoV-2 in Homeless People from Urban Shelters: A Systematic Review and Meta-Analysis (2023) |
| --- | --- |
| Last name of first author | Riccò |
| Year of publication | 2024 |
| URL of HTML manuscript | <https://pmc.ncbi.nlm.nih.gov/articles/PMC10885116> |
| Section PECO statement is in | 2.1. Research Concept |
| PECO statement | The research concepts were defined by means of the “PECO” strategy (i.e., patient/population/problem; exposure; control/comparator; outcome) [[83](https://pmc.ncbi.nlm.nih.gov/articles/PMC10885116/#B83-epidemiologia-05-00004),[84](https://pmc.ncbi.nlm.nih.gov/articles/PMC10885116/#B84-epidemiologia-05-00004)] ([Appendix A](https://pmc.ncbi.nlm.nih.gov/articles/PMC10885116/#app2-epidemiologia-05-00004), [Table A1](https://pmc.ncbi.nlm.nih.gov/articles/PMC10885116/#epidemiologia-05-00004-t0A1)). More precisely, we assessed among individuals being assisted in urban shelters for homeless people (P) the occurrence (i.e., prevalence and/or incidence) of RSV (E) in children and adults compared to influenza and SARS-CoV-2 infections (C). We eventually collected corresponding health outcomes, including requests for medical assistance, hospitalizations and deaths, where available (O). |
| Annotator comments | I annotated ‘children and adults’ as population, even though it is stated under exposure. |

## 

| Title of manuscript | Socioeconomic status and brain injury in children born preterm: modifying neurodevelopmental outcome |
| --- | --- |
| Last name of first author | Benavente-Fernández |
| Year of publication | 2020 |
| URL of HTML manuscript | <https://www.nature.com/articles/s41390-019-0646-7> |
| Section PECO statement is in | In the Introduction, caption for Table 1 |
| PECO statement | Table 1 Summary of comparable studies after search based on PECO-framed focused research question: population-preterm infants; exposure-low SES; comparison: high SES; outcome: brain development or brain injury in context of cognitive outcome |
| Annotator comments | Very broad but the PECO is there |

## 

| Title of manuscript | Gut microbial dysbiosis in rheumatoid arthritis: a systematic review protocol of case-control studies |
| --- | --- |
| Last name of first author | Wang |
| Year of publication | 2022 |
| URL of HTML manuscript | <https://pmc.ncbi.nlm.nih.gov/articles/PMC8977794> |
| Section PECO statement is in | Methods/Eligibility criteria |
| PECO statement | The studies, written in English as eligible, will be selected and screened based on PECOS steps (Population, Exposure, Comparator, Outcomes and Study design).[52 53](https://pmc.ncbi.nlm.nih.gov/articles/PMC8977794/#R52) The data items will be extracted as follows: Types of participants (P)  The population of interest of the eligible studies should be adults (≥18 years old) diagnosed with RA according to a standardised diagnostic classification system (EULAR/ACR 2010 or ACR 1987 criteria).[54 55](https://pmc.ncbi.nlm.nih.gov/articles/PMC8977794/#R54)Type of exposure (E)  Trials were applied to assess the gut microbiota. Quantitative synthesis of microbiota in faecal samples was performed by using metagenomic shotgun sequencing, 16s rRNA sequencing techniques and/or real-time polymerase chain reaction (rt-PCR).Comparison (C)  Only healthy adults will be considered eligible for the control group.Type of outcomes (O)  The primary outcome of the study will be the identification of the composition of the gut microbiome and the relative abundance of bacteria in RA. The secondary outcomes will be considered: changes in the gut microbiota diversity (alpha-diversity, beta-diversity), the effects of different gender and region on the relative abundance of gut microbiota.Type of studies (S)  We will only include studies with the case-control design, written in English and published in the original peer-reviewed journals. The animal studies, reviews, case reports and the full text unachieved will be excluded from the qualitative and quantitative synthesis. |
| Annotator comments |  |

## 

| Title of manuscript | **Protocol for a systematic review and meta-analysis of long-term neurocognitive outcomes in paediatric traumatic brain injury** |
| --- | --- |
| Last name of first author | Looi |
| Year of publication | 2020 |
| URL of HTML manuscript | <https://pmc.ncbi.nlm.nih.gov/articles/PMC7304810> |
| Section PECO statement is in | Objectives |
| PECO statement | The Population, Exposure, Comparator and Outcome (PECO) question format[14](https://pmc.ncbi.nlm.nih.gov/articles/PMC7304810/#R14) will be used where we will study children 18 years old and younger who have been exposed to TBI. These patients with TBI with measured neurocognitive outcomes will be compared with either (1) preinjury baseline measurements or (2) healthy controls or orthopaedic injury patients matched for age and gender. The neurocognitive outcomes, used in this study, are chosen with reference to the DSM-V criteria: executive function, perceptual–motor function, language, learning and memory, social cognition and complex attention.[13](https://pmc.ncbi.nlm.nih.gov/articles/PMC7304810/#R13) We aim to evaluate changes in neurocognitive outcome over three defined timepoints (time 1: 0–5 months, time 2: 6–23 months and time 3: ≥24 months). Patients will be stratified by TBI severity. Quantifiable outcome measures will be pooled within each time frame as defined. |
| Annotator comments |  |

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| Title of manuscript | **Impact of Nirsevimab Immunization on Pediatric Hospitalization Rates: A Systematic Review and Meta-Analysis (2024)** |
| --- | --- |
| Last name of first author | Riccò |
| Year of publication | 2024 |
| URL of HTML manuscript | <https://pmc.ncbi.nlm.nih.gov/articles/PMC11209424> |
| Section PECO statement is in | 2.1. Research Concept |
| PECO statement | Research concepts have been defined through the “PECO” strategy (i.e., Patient/Population/Problem; Exposure; Control/Comparator; Outcome) [[65](https://pmc.ncbi.nlm.nih.gov/articles/PMC11209424/#B65-vaccines-12-00640),[66](https://pmc.ncbi.nlm.nih.gov/articles/PMC11209424/#B66-vaccines-12-00640)]. As summarized in [Table 1](https://pmc.ncbi.nlm.nih.gov/articles/PMC11209424/#vaccines-12-00640-t001), the main research question of the present study concerned whether individuals aged less than 2 years old who had received at least one dose of nirsevimab (P), upon being exposed to RSV infection during the following RSV season (E), had different rates of occurrence of LRTIs associated with RSV infection (O) compared to children of the same age group that had not been immunized with either nirsevimab or palivizumab (placebo) (C). |
| Annotator comments |  |

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| Title of manuscript | **Antioxidants and clinical outcomes of patients with coronavirus disease 2019: A systematic review of observational and interventional studies** |
| --- | --- |
| Last name of first author | Foshati |
| Year of publication | 2022 |
| URL of HTML manuscript | <https://pmc.ncbi.nlm.nih.gov/articles/PMC9538172> |
| Section PECO statement is in | 2.1. Research question |
| PECO statement | This review was performed according to the guidelines available for systematic reviews of observational (Stroup et al., [2000](https://pmc.ncbi.nlm.nih.gov/articles/PMC9538172/#fsn33034-bib-0081)) and interventional studies (Page et al., [2021](https://pmc.ncbi.nlm.nih.gov/articles/PMC9538172/#fsn33034-bib-0062)). The PECO/PICO approach (participants, exposure/intervention, comparator, and outcome) was used to define the review question (Morgan et al., [2018](https://pmc.ncbi.nlm.nih.gov/articles/PMC9538172/#fsn33034-bib-0058); Santos et al., [2007](https://pmc.ncbi.nlm.nih.gov/articles/PMC9538172/#fsn33034-bib-0074)). The participants of the studies included in this systematic review were individuals with COVID‐19, regardless of their age. In observational studies, different dietary/supplement intake or biological sample levels of vitamins A, C, D, or E, selenium, zinc, or α‐lipoic acid were compared with each other. In interventional studies, supplementation with vitamins A, C, D, or E, selenium, zinc, or α‐lipoic acid was compared to matched placebo, control group, or none (i.e., without comparator). The outcomes of this systematic review were clinical outcomes of COVID‐19 reported in the included studies (e.g., disease severity, disease manifestations and complications, inflammatory biomarkers, hospitalization, and mortality). |
| Annotator comments | This is a difficult PECO statement to parse, but it is eligible for inclusion in our dataset. |

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| Title of manuscript | **A systematic review and meta-analysis of cortisol levels in Plasmodium infections** |
| --- | --- |
| Last name of first author | Kotepui |
| Year of publication | 2024 |
| URL of HTML manuscript | https://pmc.ncbi.nlm.nih.gov/articles/PMC11303744 |
| Section PECO statement is in | Methods/Systematic review question |
| PECO statement | The systematic review questions followed the Population, Exposure, Comparator, Outcome (PECO) framework[20](https://pmc.ncbi.nlm.nih.gov/articles/PMC11303744/#CR20). The “P” are patients with suspected malaria; “E” is the *Plasmodium* infection; “C” is *Plasmodium*-uninfected individuals; “O” is blood cortisol levels. |
| Annotator comments |  |

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| Title of manuscript | Dietary advanced glycation end-products (dAGEs) are not associated with the risk of cancer incidence. A systematic review and meta-analysis of prospective cohort studies |
| --- | --- |
| Last name of first author | Sharifi-Zahabi |
| Year of publication | 2024 |
| URL of HTML manuscript | <https://pmc.ncbi.nlm.nih.gov/articles/PMC11521677> |
| Section PECO statement is in | 2.2. Study selection |
| PECO statement | The EndNote software version 20.4.1 was used to manage the retrieved articles. The eligibility of each study was assessed by two reviewers (ESZ and FH) independently and according to the inclusion criteria. The inclusion criteria for this study were in accordance with the PECOS scheme (Morgan et al., [2018](https://pmc.ncbi.nlm.nih.gov/articles/PMC11521677/#fsn34396-bib-0025)): the population was subjects aged >18 years old; the exposures were dAGEs; the comparator was the topmost versus bottommost intake of dAGEs; the outcome was cancer incidence; the setting included all cohort studies (prospective, retrospective, nested case–control and case‐cohort) in which odds ratios (ORs), or risk ratios (RRs) or hazard ratios (HRs) with their 95% confidence intervals were used to report the associations of dAGEs with cancer incidence. The minimum follow‐up duration for outcomes was considered to be 1 year.  We omitted the letters, comments, reviews, ecological studies, randomized controlled trials, case reports, and cross‐sectional and case–control studies. Moreover, studies conducted on children or teenagers, patients with CVD, and pregnant women were also excluded. Excluded articles were confirmed by the two reviewers and any disparity were reconciled by discussion with the principal investigator (HA). |
| Annotator comments | Not sure how to classify “follow-up” (assuming it is exposure period?) |

## 

| Title of manuscript | Systematic review of patient-specific pre-operative predictors of pain improvement to endometriosis surgery |
| --- | --- |
| Last name of first author | Ball |
| Year of publication | 2021 |
| URL of HTML manuscript | <https://pmc.ncbi.nlm.nih.gov/articles/PMC8812445> |
| Section PECO statement is in | Methods |
| PECO statement | Our interest was in prognostic factors that can be used to identify women most likely to experience pain relief from laparoscopic surgery for the treatment of endometriosis-related pain. Only patient-specific pre-operative factors were explored, surgery-specific factors were beyond the remit of this review, as the former would be the most relevant for patient counselling before surgery. Thus, the inclusion criteria, using the PECO format ([Morgan *et al.* 2018](https://pmc.ncbi.nlm.nih.gov/articles/PMC8812445/#bib36)), were:   * Patients: women with endometriosis * Exposure: Women, for whom the presence of any type of prognostic patient-specific factor was reported (this could be any sociodemographic, lifestyle and disease-related factors). We did not specify the prognostic factor before a priori, but approached the search with an open mind and recorded the prognostic factors that were available in the literature and where the pain outcomes were stratified by those predictors. * Comparison: Women without the prognostic factor of interest (e.g. parous women (exposure) nulliparous women (non-exposure)) * Outcomes: Improved dysmenorrhoea, dyspareunia, non-cyclical pelvic pain and dyschezia or global pain reported after at least 6 months on the visual analogue score (VAS) or as ‘better’ or ‘improved’ vs ‘not better’ or ‘not improved’ |
| Annotator comments | Difficult to annotate the outcomes. I think the annotation is technically correct, but the formulation of the outcomes includes quite specific details on improvement on a particular scale, which doesn’t seem appropriate for an objectives statement (it is more eligibility criteria related). |

## 

| Title of manuscript | **Linkages between maternal experience of intimate partner violence and child nutrition outcomes: A rapid evidence assessment** |
| --- | --- |
| Last name of first author | Carreno |
| Year of publication | 2024 |
| URL of HTML manuscript | <https://pmc.ncbi.nlm.nih.gov/articles/PMC10947923> |
| Section PECO statement is in | Methods |
| PECO statement | The eligibility criteria were structured using the PECO framework–Population, Exposure, Context and Outcome [[30](https://pmc.ncbi.nlm.nih.gov/articles/PMC10947923/#pone.0298364.ref030)] (see [Table 1](https://pmc.ncbi.nlm.nih.gov/articles/PMC10947923/#pone.0298364.t001)).   Population: Boys or girls, under the age of 18 Exposure: Any indirect exposure to IPV (in-utero and/ or household IPV exposures). IPV included physical, sexual or psychological violence or controlling behaviors, perpetrated against a maternal caregiver. Context: A country in receipt of United Nations Central Emergency Response Funding any time during 2006–2021 Outcome: a) fetal growth (measured indirectly with birth weight), b) breastfeeding, including infant feeding practices, c) indicators of child growth (using anthropometry), and d) nutrient blood markers. |
| Annotator comments | We’ve treated the PECO statement in the eligibility criteria section as if it were the objective statement for the systematic review. We wouldn’t normally do this but it seems functionally equivalent to the less structured objectives statement in the introduction section. There is no comparator in this PECO statement - refers to Context instead (misapplication of Morgan guidance?) |

| Title of manuscript | Effects of ambient temperature on mental and neurological conditions in older adults: A systematic review and meta-analysis |
| --- | --- |
| Last name of first author | Byun |
| Year of publication | 2024 |
| URL of HTML manuscript | <https://www.sciencedirect.com/science/article/pii/S0160412024007529> |
| Section PECO statement is in | 1. Introduction |
| PECO statement | This systematic review and meta-analysis study aims to summarize the epidemiological evidence of the effects of ambient temperature, including both heat and cold exposures, on mental and neurological conditions in older adults. The PECOS (Population, Exposure, Comparator, Outcomes, and Study) question of this study is as follows: Among the older population (P), what is the effect of ambient temperatures (E) compared to relatively lower or higher temperatures (C) on the mortality or morbidity from mental and neurological disorders (O) in human observational studies (S)? The exposure considered includes not only continuous ambient temperatures but also extreme temperature events such as heat waves and cold spells, compared to days without heat waves or cold spells. |
| Annotator comments | The authors appear to confuse comparator and exposure. First, they state ambient temperature is the exposure, then later say that days without heat waves or cold spells are the comparator. I annotated for consistency according to their first use of exposure (i.e. ambient temperature as exposure). |

| Title of manuscript | The effect of exposure to radiofrequency fields on cancer risk in the general and working population: A systematic review of human observational studies – Part I: Most researched outcomes |
| --- | --- |
| Last name of first author | Karipidis |
| Year of publication | 2024 |
| URL of HTML manuscript | <https://www.sciencedirect.com/science/article/pii/S0160412024005695> |
| Section PECO statement is in | 2. Objectives |
| PECO statement | Population: Humans (members of the general population), without restriction based on sex, age, or other individual characteristics. Exposure Definition: Near-field RF exposure from personal use of mobile or cordless phones, occurring prior to outcome, and based on indirect measures (subscriber status, self-reported history of mobile phone or cordless phone use), traffic data, or modelling. Classification: Ever exposed; time since first exposure; cumulative exposure level. Comparator: No or low-level exposure (never or non-regular users of wireless phones). Outcomes: Critical: (incidence-based) glioma/brain cancer in adults; paediatric brain tumours\*; meningioma; acoustic neuroma; pituitary gland tumours; salivary gland tumours.  Important: Any other neoplasm investigated in relation to the exposure of interest. \*Brain tumours in children, adolescents and young adults |
| Annotator comments | Presented as a table. Seems to be a PECO statement for the objectives rather than eligibility criteria (these are discussed in narrative text in the Methods section). Some ambiguity about adult and child populations being of interest, or if adult brain cancer and paediatric brain tumours are different outcomes. There are three PECO statements for this systematic review: SR-A, SR-B and, SR-C. Note the asterisk for more information about the paediatric population, instead of including it in the PECO. Strictly, this study looked at more than 3 PECOs as well, as they are interested in different outcomes for children / adolescents / young adults as for adults. |

| Title of manuscript | The effect of exposure to radiofrequency fields on cancer risk in the general and working population: A systematic review of human observational studies – Part I: Most researched outcomes |
| --- | --- |
| Last name of first author | Karipidis |
| Year of publication | 2024 |
| URL of HTML manuscript | <https://www.sciencedirect.com/science/article/pii/S0160412024005695> |
| Section PECO statement is in | 2. Objectives |
| PECO statement | Population: Humans (members of the general population), without restriction on sex, age, or other individual characteristics. Exposure Definition: Far-field RF exposure from radio-television transmitters, base stations or any other fixed-site transmitter, occurring prior to outcome, and based on environmental measures, modelling, or geocoded distance to the sources (the latter limited to broadcast transmitters). Classification: Ever exposed; duration of exposure or time since first exposure; average or cumulative exposure level. Comparator: No or low-level exposure from environmental sources of RF-EMF. Outcomes: Critical: (Incidence-based) childhood leukaemia, paediatric brain tumours\*, glioma/brain cancer in adults, and leukaemia in adults. Important: Any other neoplasm investigated in relation to the exposure of interest. \*Brain tumours in children, adolescents and young adults |
| Annotator comments | Presented as a table. Seems to be a PECO statement for the objectives rather than eligibility criteria (these are discussed in narrative text in the Methods section). Some ambiguity about adult and child populations being of interest, or if adult brain cancer and paediatric brain tumours are different outcomes. There are three PECO statements for this systematic review: SR-A, SR-B and, SR-C. Note the asterisk for more information about the paediatric population, instead of including it in the PECO. Strictly, this study looked at more than 3 PECOs as well, as they are interested in different outcomes for children / adolescents / young adults as for adults. |

| Title of manuscript | The effect of exposure to radiofrequency fields on cancer risk in the general and working population: A systematic review of human observational studies – Part I: Most researched outcomes |
| --- | --- |
| Last name of first author | Karipidis |
| Year of publication | 2024 |
| URL of HTML manuscript | <https://www.sciencedirect.com/science/article/pii/S0160412024005695> |
| Section PECO statement is in | 2. Objectives |
| PECO statement | Population: Occupationally active individuals, with no further restriction on sex, age, or other individual characteristics. Exposure Definition: Near- or far-field RF exposure from professional use of hand-held transceivers or RF-emitting equipment in the workplaces, occurring prior to outcome, and based on measurements, estimates of exposure level from job- or source-exposure matrices (JEM, SEM), or indirect measures such job title or task (option limited to studies explicitly aimed at assessing the effect of exposure to well-characterized sources and types of RF-EMF). Classification: Ever exposed; exposure frequency; exposure duration or time since first exposure; average or cumulative exposure level. Comparator: No or low-level occupational exposure to RF-EMF. Outcomes: Critical: (Incidence-based) glioma/brain cancer, leukaemia. Important : Any other neoplasm investigated in relation to the exposure of interest. |
| Annotator comments | Presented as a table. Seems to be a PECO statement for the objectives rather than eligibility criteria (these are discussed in narrative text in the Methods section). Some ambiguity about adult and child populations being of interest, or if adult brain cancer and paediatric brain tumours are different outcomes. There are three PECO statements for this systematic review: SR-A, SR-B and, SR-C. |

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| Title of manuscript | The effects of radiofrequency electromagnetic field exposure on biomarkers of oxidative stress in vivo and in vitro: A systematic review of experimental studies |
| --- | --- |
| Last name of first author | Meyer |
| Year of publication | 2024 |
| URL of HTML manuscript | <https://www.sciencedirect.com/science/article/pii/S0160412024005269> |
| Section PECO statement is in | 1. Introduction |
| PECO statement | As reported in peer reviewed, non-epidemiological studies with original data (S), what is the effect of exposure to RF-EMF (E) on the most important and best validated biomarkers for oxidative stress (O) compared to an independent no-exposure, sham-exposure, or temperature-controlled no-exposure group (C) in animals, humans, or cells (P)? |
| Annotator comments | None |

| Title of manuscript | The effect of using personal-level indoor air cleaners and respirators on biomarkers of cardiorespiratory health: a systematic review |
| --- | --- |
| Last name of first author | Shuo Liu |
| Year of publication | 2022 |
| URL of HTML manuscript | <https://www.sciencedirect.com/science/article/pii/S0160412021006061?via%3Dihub> |
| Section PECO statement is in | Introduction; Methods |
| PECO statement | The objective of this systematic review is to assess the efficacy of two types of personal-level intervention (using portable air cleaner indoors and wearing respirator outdoors) on mitigating adverse effects of air pollution on cardio-respiratory health (e.g., not at a laboratory or occupational setting).**2.1.1. Population** The population of review was people of all ages who were exposed to air pollution. We included both healthy population and vulnerable subgroups, such as children, elderly, and patients of [chronic diseases](https://www.sciencedirect.com/topics/pharmacology-toxicology-and-pharmaceutical-science/chronic-disease). We also included non-occupationally exposed workers, such as office workers and taxi drivers. Nevertheless, we excluded populations working in occupationally exposed environments such as [agriculture](https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/agricultural-science) farms and industrial factories. **2.1.2. Exposure (intervention)** The personal-level intervention measures were the uses of portable air cleaner indoors or respirators outdoors to reduce exposures to air pollutants (PM2.5 as a surrogate) at individual levels. Both interventions are presumed to reduce exposure to all [airborne particles](https://www.sciencedirect.com/topics/biochemistry-genetics-and-molecular-biology/airborne-particle) (not only PM2.5) but with little impact on gaseous pollutants unless equipped with adsorbent. We excluded intervention studies being conducted under artificial (in chamber) or industrial environments, such as controlled and filtered experimental environments, or occupationally exposed environments. We also excluded studies using central ventilation or air cleaning system as intervention measures and studies on reducing exposures to pollen, environmental tobacco smoke, or pet allergen. **2.1.3. Comparator** In these identified intervention studies, the health impacts of intervention measures were generally assessed by comparing the level changes in cardio-respiratory health endpoints between with and without intervention measures. The comparator for each intervention measure was using sham portable air cleaner indoors and wearing sham or not wearing respirator outdoors, either in the same population (e.g. randomized crossover or self-controlled studies) or in the randomized different population (e.g. randomized parallel controlled studies). **2.1.4. Outcome** The health endpoints assessed in this review were clinical cardio-respiratory biomarkers that have been associated with health outcomes, which were commonly assessed in identified intervention studies and available for *meta*-analyses. Following four types of representative health endpoints of interest were included in this review: 1) cardiovascular biomarkers including systolic blood pressure (SBP), diastolic blood pressure (DBP), heart rate (HR), reactive hyperemia index (RHI) and heart rate variability (HRV) parameters [including standard deviation of normal-to-normal intervals (SDNN), the square root of the mean of the squared differences between adjacent normal-to-normal intervals (rMSSD), low frequency (LF) and high frequency (HF)]; 2) lung function parameters including forced expiratory volume in 1 s (FEV1), peak expiratory flow (PEF) and forced vital capacity (FVC); 3) inflammation biomarkers including CRP (containing high-sensitivity C-reactive protein, hs-CRP, which were reported by some studies), interleukin-6 (IL-6), fibrinogen (Fib) and fractional exhaled nitric oxide (FeNO); and 4) oxidative stress biomarkers including 8-Hydroxylated [deoxyguanosine](https://www.sciencedirect.com/topics/medicine-and-dentistry/deoxyguanosine) (8-OHdG) and Malondiadehyde (MDA). Studies without health endpoints or merely with uninterested endpoints, namely not among the listed health endpoints, were excluded. |
| Annotator comments | No PECO statement; eligibility criteria used instead as assumed equivalent. |

| Title of manuscript | The effect of per and polyfluoroalkyl substance (PFAS) exposure on gestational diabetes mellitus and its subclinical risk factors: A systematic review and meta-analysis protocol |
| --- | --- |
| Last name of first author | Bline |
| Year of publication | 2024 |
| URL of HTML manuscript | <https://www.sciencedirect.com/science/article/pii/S0160412024002976> |
| Section PECO statement is in | 2. Review question and objectives |
| PECO statement | Population: People who are pregnant at the time of outcome assessment  Exposure: Exposed or more exposed to any individual PFAS/PFAS mixture based on measurement in maternal blood or urine  Comparator: Unexposed or less exposed to PFAS (if applicable) or lowest PFAS exposure group  Outcomes: Primary outcome: GDM diagnosis  Secondary outcomes:  Impaired glucose tolerance (IGT) diagnosis  Fasting plasma glucose (FPG)  Postprandial plasma glucose  Random plasma glucose  Blood glycated hemoglobin A1c (HbA1C)  Fasting plasma insulin  Fasting plasma C-peptide  Homeostasis model assessment of insulin resistance (HOMA-IR) value  Homeostasis model assessment of insulin sensitivity (HOMA-IS) value  Blood tumor necrosis factor alpha (TNFα)  Blood fatty acid-binding protein 4 (FABP4) |
| Annotator comments | Note the mention of biological matrix in this PECO statement. Also worth noting that in the PECOs there are quite often acronyms (presumably given earlier in the paper, but means the PECO doesn’t contain all the information communicated across the manuscript). |

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| Title of manuscript | Greenspace and human microbiota: A systematic review |
| --- | --- |
| Last name of first author | Zhang |
| Year of publication | 2024 |
| URL of HTML manuscript | <https://www.sciencedirect.com/science/article/pii/S0160412024002484> |
| Section PECO statement is in | 1.2. Aims and objectives |
| PECO statement | among the general population (Population), what is the effect of higher greenspace exposure (Exposure) vs. lower and no greenspace exposure (Comparison) on human microbial diversity and composition (Outcome), observed in epidemiology observational and interventional studies (Study design)? Specifically, the population refers to general population regardless of age, gender, and health status. Exposure refers to exposure to greenspace, including but not limited to parks, forests, urban green areas, and natural environments. Comparator is defined as comparing the microbiota in participants with relatively high versus relatively low greenspace exposure, or among participants with greenspace exposure versus those without greenspace exposure. Outcome includes microbial alpha-diversity and beta-diversity, represent the diversity of whole microbial community, and relative abundance of each taxon in the microbial community |
| Annotator comments | Did not annotate the sentences after the PECO statement, as these seem to relate to eligibility criteria. |

| Title of manuscript | Fertilizers and Human Health—A Systematic Review of the Epidemiological Evidence |
| --- | --- |
| Last name of first author | Tagkas |
| Year of publication | 2024 |
| URL of HTML manuscript | <https://pmc.ncbi.nlm.nih.gov/articles/PMC11511508> |
| Section PECO statement is in | Materials and Methods, Table 1 |
| PECO statement | **Population**: Humans of all age groups without language or geographical limitations **Exposure**: Exposure to fertilizers (inorganic and organic) through occupational or residential exposure **Control**: Non-exposed individuals or those with lower levels of exposure **Outcome**: Health-related outcomes including cancer, multiple myeloma, infections, diarrhea, amyotrophic lateral sclerosis, rheumatoid arthritis, narcolepsy, polydactyly, aplastic anemia, and Creutzfeldt–Jakob disease |
| Annotator comments | Since it was a table, I reformatted it to fit this format. |

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| Title of manuscript | Physical activity and physical fitness among children and adolescents after the onset of the COVID-19 pandemic in the WHO European Region: a systematic review protocol |
| --- | --- |
| Last name of first author | Ludwig-Walz |
| Year of publication | 2023 |
| URL of HTML manuscript | <https://pmc.ncbi.nlm.nih.gov/articles/PMC10514655> |
| Section PECO statement is in | Methods and analysis, Table 1 |
| PECO statement | **Population**: General population ≤19 years\* of any gender† in the WHO European Region[76](https://pmc.ncbi.nlm.nih.gov/articles/PMC10514655/#R76) without exclusion studies  s with specific populations (eg, chronically ill children) **Exposure**: At least one data collection within COVID-19 pandemic **Comparison**: Pre-pandemic baseline included in the study (eg, same population, similar population, cross-sectional population sample) **Outcome**:  Physical activity (PA)   * + In time specifications (minutes or hours) per day or week   + In scores (eg, instrument ‘PA Questionnaire for Adolescents’) measured with validated instruments   Physical fitness (PF) measured with validated instruments. |
| Annotator comments | After thinking about it for a few hours, I included this. However I have trouble grasping if they by ‘without exclusion’ mean except. Since it was a table, I reformatted it to fit this format. |

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| Title of manuscript | Impact of the COVID-19 Pandemic on Older Adults: Rapid Review |
| --- | --- |
| Last name of first author | Lebrasseur |
| Year of publication | 2021 |
| URL of HTML manuscript | https://pmc.ncbi.nlm.nih.gov/articles/PMC8043147 |
| Section PECO statement is in | Methods, Table 1 |
| PECO statement | **Population**: People aged 60 years and older, excluding COVID-19 survivors  **Exposure**: COVID-19 and its associated isolation and protective measures  **Comparator**: Other age groups, before the pandemic, or none  **Outcomes**:   * Personal factors such as identity factors (facilitator or obstacle), organic systems (integrity or impairment), and capabilities (ability or disability) * Environmental factors such as societal (facilitator or obstacle), community (facilitator or obstacle), and personal (facilitator or obstacle) levels * Life habits such as daily activities (social participation situation or disabling situation) and social roles (social participation situation or disabling situation) |
| Annotator comments | After thinking about it for a few hours, I included this. Since it was a table, I reformatted it to fit this format. |

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| Title of manuscript | Noise pollution and human cognition: An updated systematic review and meta-analysis of recent evidence |
| --- | --- |
| Last name of first author | Thompson |
| Year of publication | 2022 |
| URL of HTML manuscript | <https://www.sciencedirect.com/science/article/pii/S0160412021005304?via%3Dihub> |
| Section PECO statement is in | 1. Introduction |
| PECO statement | Participants: human populations across the lifespan,  Exposure: environmental noise (exposure to noise in day-to-day life, as opposed to noise presented in a lab to measure concurrent effects on cognition).  Control/Comparison: persons less exposed (continuously or in high/low exposure groups)  Outcomes: non-pathological cognitive abilities  Study Design: epidemiological study designs- cohort, case-control and observational studies. |
| Annotator comments |  |

| Title of manuscript | The effect of occupational exposure to noise on ischaemic heart disease, stroke and hypertension: A systematic review and meta-analysis from the WHO/ILO Joint Estimates of the Work-Related Burden of Disease and Injury |
| --- | --- |
| Last name of first author | Teixiera |
| Year of publication | 2021 |
| URL of HTML manuscript | <https://pmc.ncbi.nlm.nih.gov/articles/PMC8204276> |
| Section PECO statement is in | 3. Methods, 3.4 Eligibility criteria |
| PECO statement | The PECO ([Liberati et al., 2009](https://pmc.ncbi.nlm.nih.gov/articles/PMC8204276/#b0320), [Morgan et al., 2018](https://pmc.ncbi.nlm.nih.gov/articles/PMC8204276/#b0360)) criteria are described below. Our protocol paper provides a complete, but briefer overview of the PECO criteria (see [Teixeira et al., 2019](https://pmc.ncbi.nlm.nih.gov/articles/PMC8204276/#b0535) in [Appendix A](https://pmc.ncbi.nlm.nih.gov/articles/PMC8204276/#s0605)). 3.4.1. Types of populations We included studies of working-age (≥15 years) workers in formal and informal economy. Studies of children (aged < 15 years) and unpaid domestic workers were excluded. Participants residing in any Member State of WHO and/or ILO and any industrial setting or occupation were included. We note that occupational exposure to noise may potentially have farther population reach (e.g. through the release of noise from the workplace into the community) and acknowledge that the scope of our systematic reviews may not be able capture these populations and impacts on them. 3.4.2. Types of exposures We included studies that define occupational noise in accordance with our standard definition ([Table 1](https://pmc.ncbi.nlm.nih.gov/articles/PMC8204276/#t0005)). We included all studies of occupational noise, whether measured objectively (e.g. by means of technology, such as a sound level meter), semi-subjectively, such as studies that used measurements by experts (e.g. scientists with subject matter expertise) or based on self-reports by a worker or workplace administrator or manager. If a study reported both objective and subjective measures, then we prioritized the objective measure. We included studies with measures from any data source, including registry data. 3.4.3. Types of comparators The comparator considered was participants exposed to the theoretical minimum risk exposure level ([Table 1](https://pmc.ncbi.nlm.nih.gov/articles/PMC8204276/#t0005)). We excluded all other comparators. 3.4.4. Types of outcomes This systematic review included nine outcomes:   * 1. Has IHD (IHD prevalence). * 2. Acquired IHD (IHD incidence). * 3. Died from IHD (IHD mortality). * 4. Has stroke (stroke prevalence). * 5. Acquired stroke (stroke incidence). * 6. Died from stroke (stroke mortality). * 7. Has hypertension (hypertension prevalence). * 8. Acquired hypertension (hypertension incidence). * 9. Died from hypertension (hypertension mortality).   We included studies that defined CVD in accordance with our standard definition of the eligible outcomes ([Table 2](https://pmc.ncbi.nlm.nih.gov/articles/PMC8204276/#t0010)). We expected that most studies on occupational exposure to noise and its effect on CVD would have reported ICD-10 diagnostic codes. Otherwise, methods proxying the ICD-10 criteria to ascertain the outcome, such as self-reported physician-diagnosis, were employed (see also section *5.3. Limitations of this systematic review*).  The following measurements of cardiovascular disease were regarded as eligible:   * (i) Diagnosis by a physician with imaging. * (ii) Hospital discharge record. * (iii) Other relevant administrative data (e.g. record of sickness absence or disability). * (iv) Registry data of treatment for an eligible cardiovascular disease. * (v) Medically certified cause of death.   All other measures were excluded from this systematic review. Objective (e.g., health records) and subjective (e.g., self-reports) measures of the outcome were eligible. If a study presented both objective and subjective measurements, then we prioritized the objective one. |
| Annotator comments | Exposure definition in outcome, and the format of this PECO statement was complex. |

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