

RESULTS FROM THE SEARCH FOR AVAILABLE SYSTEMATIC REVIEWS AND META-ANALYSES ON ENVIRONMENTAL NOISE

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Abstract

In the context of the development of the WHO environmental noise guidelines for the European Region, this paper includes a description of the methodology used to search, select and assess the quality of available systematic reviews and meta-analyses on environmental noise. It presents the search strategies employed for the different databases and the list of included and excluded studies.

Keywords

INFORMATION STORAGE AND RETRIEVAL – METHODS

RESEARCH DESIGN

META-ANALYSIS AS TOPIC

REVIEW LITERATURE AS TOPIC

DATABASES, BIBLIOGRAPHIC

EVIDENCE-BASED MEDICINE - METHODS

NOISE

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Acknowledgements

This document has been prepared in the context of the development of the WHO Environmental Noise Guidelines for the European Region, coordinated by the WHO European Centre for Environment and Health.

The authors would like to thank Tiina Heino, Information Specialist at the University of Helsinki, Finland, for conducting the search for available reviews and meta-analyses on environmental noise. We are also grateful to all the authors of the systematic evidence reviews, performed as part of the development of the WHO environmental noise guidelines for the European Region, for their review and assessment of the papers retrieved. Finally, we thank Stephanie Sangalang, PhD candidate, University of Cologne, Germany, and Lydia Wanstall, copy-editor, for assisting with the language editing and formatting of this document.

WHO Regional Office for Europe acknowledges funding and in-kind contribution from the Swiss Federal Office for the Environment and the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, and the German Environment Agency for the work on the WHO Environmental Noise Guidelines for the European Region.

1 The search for available systematic reviews

1.1 Introduction

Exposure to environmental noise has been demonstrated to have adverse effects on health. Systematic evidence reviews were commissioned as part of the development of new WHO environmental noise guidelines for the European Region to assess the exposure-response relationships between environmental noise and associated health outcomes and to analyse the effects on health outcomes of interventions to change exposure to environmental noise.

Seven systematic reviews were conducted on the following topics:

- effects on sleep;
- annoyance;
- cognitive impairment, mental health and well-being;
- cardiovascular disease, diabetes and metabolic diseases;
- hearing impairment and tinnitus;
- adverse birth outcomes;
- effectiveness of interventions to reduce exposure to or adverse outcomes from environmental noise.

As a first step, a single search was conducted to retrieve all relevant existing systematic reviews on environmental noise, health effects and interventions. The search methodology is detailed in the protocols for the systematic reviews (sections 2.1.5 and 2.2.5 of the document “Methodology for systematic evidence reviews for WHO environmental noise guidelines for the European Region” [hereafter “the methodology paper”]).

1.2 The search strategy

As a first step in the retrieval of evidence, in February 2014 a review of existing evidence on environmental noise published in or after 2000 in all languages was conducted in databases such as Medline/PubMed, Scopus (including Embase), PsycINFO, Web of Science, ScienceDirect and the database of the Organization for Applied Scientific Research of the Netherlands (TNO). The search for available systematic reviews is detailed in sections 2.1.5 and 2.2.5 of the methodology paper. See also chapter 2 lists the search strategies for the various databases.

1.3 Refining the search results

The database search yielded 507 studies. A further 55 articles were identified by the systematic review team through hand-searching and snowballing, yielding a total of 562 literature reviews and articles (see Table 1).

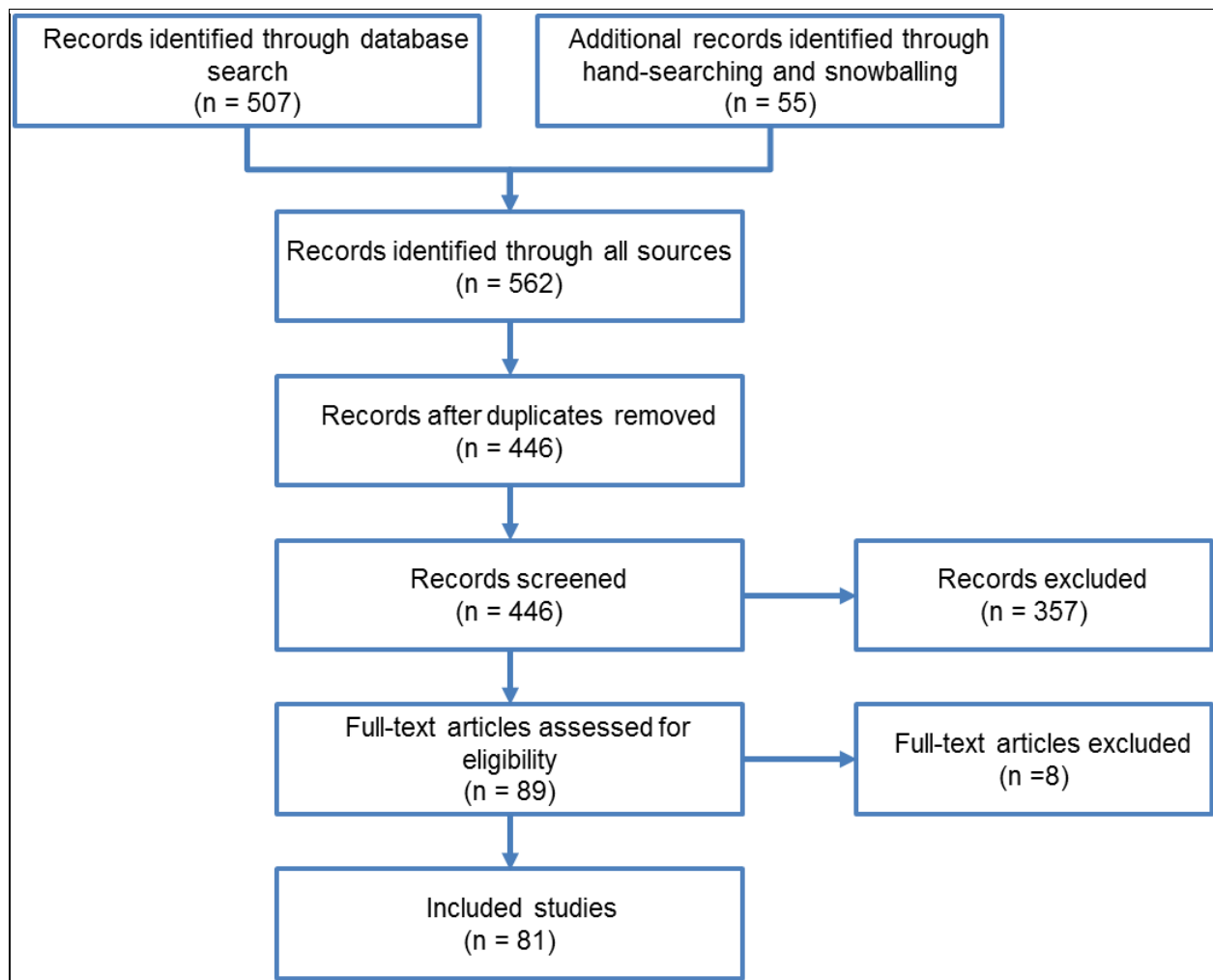
Table 1. Search results by source

Source	Number of search results
Databases	507
Medline/PubMed	275
Web of Science	114
Scopus (including Embase)	77
Science Direct	25

PyscINFO	11
TNO database	5
Hand-searching and snowballing	55
Total	562

The experts reviewed all the results and finally narrowed the list down to 81 eligible studies, assessed to be relevant for the purposes of the guidelines (see chapter 3 for lists of the included and excluded studies). Fig. 1 provides a visual summary of the reviews retrieved during the search and the process used to assess the papers and identify the eligible studies.

Fig. 1. Flowchart of assessment of eligible studies



1.4 Suitability of exposure and assessment of quality

The authors assessed and documented the suitability of exposure and quality of the systematic reviews retrieved to decide whether they were relevant for the purposes of the guidelines and how best to use them (section 2.1.6 of the methodology paper). For systematic studies to be included in the review, they were required to meet a high quality standard and to have been published recently (in the last two years, based on availability and rate of production of new information). Where the condition for quality was met but the review was older than two years, an updated search of systematic reviews was performed to include new papers. If more than one up-to-date high-quality systematic review was

available for a particular outcome but they provided inconsistent results, further exploration was done to develop a rationale justifying why a specific review was selected to inform the guidelines. Where appropriate, this is reported separately as part of the evidence reviews commissioned for the guidelines. Finally, where no high-quality systematic reviews were available for a particular health outcome and/or intervention, a new search was conducted.

In some cases, systematic reviews that were narrative in nature or did not entirely match the key questions addressed in the WHO guidelines were included in the final list of papers. They were retained if they addressed one facet of the guidelines, provided useful background information or informed the systematic reviews commissioned (even though they did not directly describe exposure-response relationships between environmental noise and health outcomes or interventions). This was particularly the case for the reviews of health effects, for which limited quantitative evidence was found.

In the second phase, a search for individual papers was conducted, and the search strategy was adapted according to the outcome of the first phase. As availability of systematic reviews and meta-analyses differed for the various health outcomes considered under the guidelines, as well as for the review of interventions, the search process varied for each evidence review. As noted in the methodology paper, expert judgement was used to decide how the results of this search affected the search strategy for individual studies, based on the quality of the systematic reviews, as well as the coherence with the main research question of the evidence reviews. Specific results from the evidence reviews are available as open access papers in the Special Issue “WHO Noise and Health Evidence Reviews” of the International Journal of Environmental Research and Public Health (IJERPH) at http://www.mdpi.com/journal/ijerph/special_issues/WHO_reviews.

OR (((((((((((((((((((((((((((((((("classroom"[All Fields] OR "classrooms"[All Fields] AND ("noise"[MeSH Terms] OR "noise"[All Fields]))) OR ("noise, transportation"[MeSH Terms] OR ("noise"[All Fields] AND "transportation"[All Fields]) OR "transportation noise"[All Fields] OR ("transportation"[All Fields] AND "noise"[All Fields]))) OR (("Traffic"[Journal] OR "traffic"[All Fields]) AND ("noise"[MeSH Terms] OR "noise"[All Fields]))) OR (("aircraft"[MeSH Terms] OR "aircraft"[All Fields]) AND ("noise"[MeSH Terms] OR "noise"[All Fields]))) OR (("airports"[MeSH Terms] OR "airports"[All Fields] OR "airport"[All Fields]) AND ("noise"[MeSH Terms] OR "noise"[All Fields]))) OR (("community"[All Fields]) AND ("noise"[MeSH Terms] OR "noise"[All Fields]))) OR (("environment"[MeSH Terms] OR "environment"[All Fields] OR "environmental"[All Fields]) AND ("noise"[MeSH Terms] OR "noise"[All Fields]))) OR (("hospitals"[MeSH Terms] OR "hospitals"[All Fields] OR "hospital"[All Fields]) AND ("noise"[MeSH Terms] OR "noise"[All Fields]))) OR (("household"[All Fields] OR "households"[All Fields]) AND ("noise"[MeSH Terms] OR "noise"[All Fields]))) OR (("leisure activities"[MeSH Terms] OR ("leisure"[All Fields] AND "activities"[All Fields]) OR "leisure activities"[All Fields] OR "leisure"[All Fields]) AND ("noise"[MeSH Terms] OR "noise"[All Fields]))) OR ("motor vehicles"[MeSH Terms] OR ("motor"[All Fields] AND "vehicles"[All Fields] OR "motor"[All Fields] AND "vehicle"[All Fields])) OR ("motor vehicles"[All Fields] OR "truck"[All Fields] OR "trucks"[All Fields])) AND ("noise"[MeSH Terms] OR "noise"[All Fields]) OR ("motorcycles"[MeSH Terms] OR "motorcycles"[All Fields] OR "motorcycle"[All Fields]) AND ("noise"[MeSH Terms] OR "noise"[All Fields])) OR ("neighbourhood"[All Fields] OR "neighborhood"[All Fields] OR "neighbourhoods"[All Fields] OR "neighborhoods"[All Fields]) AND ("noise"[MeSH Terms] OR "noise"[All Fields]) OR ("noise"[MeSH Terms] OR "noise"[All Fields]) AND personal[All Fields] AND ("electronics"[MeSH Terms] OR "electronics"[All Fields] OR "electronic"[All Fields]) AND ("devices"[All Fields] OR "device"[All Fields])) OR ("noise"[MeSH Terms] OR "noise"[All Fields]) AND "mp3-player"[MeSH Terms] OR "mp3-player"[All Fields] OR "mp3-players"[All Fields] OR "mp3"[All Fields] AND "players"[All Fields] OR ("mp3"[All Fields] AND "player"[All Fields] OR "mp3 players"[All Fields] OR "mp3 player"[All Fields])) OR ("noise"[MeSH Terms] OR "noise"[All Fields]) AND ("play and playthings"[MeSH Terms] OR ("play"[All Fields] AND "playthings"[All Fields]) OR "play and playthings"[All Fields] OR "toys"[All Fields] OR "toy"[All Fields])) OR ("noise"[MeSH Terms] OR "noise"[All Fields]) AND nuisance[All Fields]) OR ("noise"[MeSH Terms] OR "noise"[All Fields]) AND exposure[All Fields])) OR ("noise"[MeSH Terms] OR "noise"[All Fields]) AND load[All Fields])) OR ("railway"[All Fields] OR "railways"[All Fields]) AND ("noise"[MeSH Terms] OR "noise"[All Fields])) OR ("schools"[MeSH Terms] OR "schools"[All Fields] OR "school"[All Fields]) AND ("noise"[MeSH Terms] OR "noise"[All Fields])) OR ("train"[All Fields] OR "trains"[All Fields]) AND ("noise"[MeSH Terms] OR "noise"[All Fields])) OR ("wind"[MeSH Terms] OR "wind"[All Fields]) AND turbine[All Fields] OR turbines[All Fields] AND ("noise"[MeSH Terms] OR "noise"[All Fields])) OR ("wind"[MeSH Terms] OR "wind"[All Fields]) AND farm OR farms[All Fields] AND ("noise"[MeSH Terms] OR "noise"[All Fields])) OR ("wind"[MeSH Terms] OR "wind"[All Fields]) AND turbine[All Fields] OR turbines AND ("sound"[MeSH Terms] OR "sound"[All Fields] OR sounds)) OR ("wind"[MeSH Terms] OR "wind"[All Fields]) AND farm OR farms[All Fields] AND ("sound"[MeSH Terms] OR "sound"[All Fields])) OR (combined[All Fields] AND ("noise"[MeSH Terms] OR "noise"[All Fields]) AND exposure[All Fields])) OR (high-volume[All Fields] AND ("noise"[MeSH Terms] OR "noise"[All Fields])) OR (high-volume[All Fields] OR (high AND volume[All Fields]) AND ("music"[MeSH Terms] OR "music"[All Fields])) OR (low[All Fields] AND ("frequency"[All Fields]) AND ("noise"[MeSH Terms] OR "noise"[All Fields])) OR (road[All Fields] AND ("Traffic"[Journal] OR "traffic"[All Fields]) AND ("noise"[MeSH Terms] OR "noise"[All Fields])) OR (social[All Fields] AND ("noise"[MeSH Terms] OR "noise"[All Fields])) AND systematic[sb]) Filters: Publication date from 2000/01/01 to 2014/12/31

2.2 Web of Science

114

#36 AND #35

Refined by: PUBLICATION YEARS=(2013 OR 2008 OR 2003 OR 2012 OR 2011 OR 2006 OR 2009 OR 2000
OR 2001 OR 2010 OR 2005 OR 2002 OR 2004 OR 2007)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years

133

#36 AND #35

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years

103,746

#34 OR #33 OR #32 OR #31 OR #30

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years

88,201

#29 OR #28 OR #27 OR #26 OR #25 OR #24 OR #23 OR #22 OR #21 OR #20 OR #19 OR #18 OR #17 OR
#16 OR #15 OR #14 OR #13 OR #12 OR #11 OR #10 OR #9 OR #8 OR #7 OR #6 OR #5 OR #4 OR #3
OR #2 OR #1

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years

31,376

(TS=(evidence* AND based*)) AND DOCUMENT TYPES: (Review)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years

6,252

((SO=cochrane*)) AND DOCUMENT TYPES: (Review)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years

1,512

(TS=(health* AND technol* assess*)) AND DOCUMENT TYPES: (Review)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years

40,997

(TS=(meta* AND analys*)) AND DOCUMENT TYPES: (Review)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years

47,764

(TS=(systemat*)) AND DOCUMENT TYPES: (Review)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years

10,909

TS=(social* AND noise*) OR TS=(noise* AND load*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years

103

TS=(motorcycle* AND noise*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years

449

TS=(motor* AND vehicle* AND noise*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years

408

TS=(truck* AND noise*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
12,362

TS=(noise* AND expos*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
472

TS=(noise* AND nuisance*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
509

TS=(combined* AND noise* AND exposure*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
1,027

TS=(hospital* AND noise*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
239

TS=(noise* AND toy*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
59

TS=(noise* AND mp3* AND player*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
32

TS=(noise* AND personal* AND electronic* AND device*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
5,231

TS=(high* AND volume* AND noise*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
178

TS=(high* AND volume* AND music*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
860

TS=(school* AND noise*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
348

TS=(classroom* AND noise*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
34,228

TS=(low* AND frequency* AND noise*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
306

TS=(household* AND noise*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
2,198

TS=(neighborhood* AND noise*) OR TS=(neighbourhood* AND noise*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
132

TS=(leisure* AND noise*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
11,744

TS=(train* AND noise*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
1,141

TS=(transportation* AND noise*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
1,702

TS=(road* AND traffic* AND noise*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
1,140

TS=(railway* AND noise*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
4,041

TS=(airport* AND noise*) OR TS=(aircraft* AND noise*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
235

TS=(wind* AND farm* AND sound*) OR TS=(wind* AND farm* AND noise*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
562

TS=(wind* AND turbine* AND sound*) OR TS=(wind* AND turbine* AND noise*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
4,957

TS=(traffic* AND noise*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
2,710

TS=(communit* AND noise*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years
9,278

TS=(environmental* AND noise*)

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, BKCI-S, BKCI-SSH Timespan=All years

2.3 PsycINFO

((environmental* NEAR/1 noise*) OR (community* NEAR/1 noise*) OR (traffic* NEAR/1 noise*) OR
(wind* NEAR/1 turbine* NEAR/1 sound*) OR (wind* NEAR/1 turbine* NEAR/1 noise*) OR (wind*
NEAR/1 farm* NEAR/1 sound*) OR (wind* NEAR/1 farm* NEAR/1 noise*) OR (airport* NEAR/1 noise*)
OR (aircraft* NEAR/1 noise*) OR (railway* NEAR/1 noise*) OR (road* NEAR/1 traffic* NEAR/1noise*) OR
(transportation* NEAR/1 noise*) OR (train* NEAR/1 noise*) OR (leisure* NEAR/1 noise*) OR
(neighborhood* NEAR/1 noise*) OR (neighbourhood* NEAR/1 noise*) OR (household* NEAR/1 noise*))

OR (low* NEAR/1 frequency* NEAR/1 noise*) OR (classroom* NEAR/1 noise*) OR (school* NEAR/1 noise*) OR (high* NEAR/1 volume* NEAR/1 music*) OR (high* NEAR/1 volume* NEAR/1 noise*) OR (noise* NEAR/1 personal* NEAR/1 electronic* NEAR/1 device*) OR (noise* NEAR/1 mp3* NEAR/1 player*) OR (noise* NEAR/2 toy*) OR (hospital* NEAR/1 noise*) OR (combined* NEAR/1 noise* NEAR/1 exposure*) OR (noise* NEAR/1 nuisance*) OR (noise* NEAR/1 expos*) OR (truck* NEAR/1 noise*) OR (motor* NEAR/1 vehicle* NEAR/1 noise*) OR (motorcycle* NEAR/1 noise*) OR (social* NEAR/1 noise*) OR (noise* NEAR/1 load*) OR (SU.EXACT.EXPLODE("Noise Effects") AND SU.EXACT.EXPLODE("Environment")) AND (((systemat* NEAR/1 review*) OR (meta* NEAR/1 analys*) OR (health* NEAR/1 technol* NEAR/1 assess*) OR cochrane* OR (evidence* NEAR/1 based*))

2.4 Scopus

NOISE-combinations:

(TITLE-ABS-KEY(environmental* AND noise*) OR TITLE-ABS-KEY(communit* AND noise*) OR TITLE-ABS-KEY(traffic* AND noise*) OR TITLE-ABS-KEY(wind* AND turbine* AND noise*) OR TITLE-ABS-KEY(wind* AND turbine* AND sound*) OR TITLE-ABS-KEY(wind* AND farm* AND sound*) OR TITLE-ABS-KEY(wind* AND farm* AND noise*) OR TITLE-ABS-KEY(airport* AND noise*) OR TITLE-ABS-KEY(aircraft* AND noise*) OR TITLE-ABS-KEY(railway* AND noise*) OR TITLE-ABS-KEY(road* AND traffic* AND noise*) OR TITLE-ABS-KEY(transportation* AND noise*) OR TITLE-ABS-KEY(train* AND noise*) OR TITLE-ABS-KEY(leisure* AND noise*) OR TITLE-ABS-KEY(neighbourhood* AND noise*) OR TITLE-ABS-KEY(neighborhood* AND noise*) OR TITLE-ABS-KEY(household* AND noise*) OR TITLE-ABS-KEY(low* AND frequency* AND noise*) OR TITLE-ABS-KEY(classroom* AND noise*) OR TITLE-ABS-KEY(school* AND noise*) OR TITLE-ABS-KEY(high* AND volume* AND music*) OR TITLE-ABS-KEY(high* AND volume* AND noise*) OR TITLE-ABS-KEY(personal* AND electronic* AND device* AND noise*) OR TITLE-ABS-KEY(mp3* AND player* AND noise*) OR TITLE-ABS-KEY(toy* AND noise*) OR TITLE-ABS-KEY(hospital* AND noise*) OR TITLE-ABS-KEY(combined* AND exposure* AND noise*) OR TITLE-ABS-KEY(nuisance* AND noise*) OR TITLE-ABS-KEY(expos* AND noise*) OR TITLE-ABS-KEY(truck* AND noise*) OR TITLE-ABS-KEY(motor* AND vehicle* AND noise*) OR TITLE-ABS-KEY(motorcycle* AND noise*) OR TITLE-ABS-KEY(social* AND noise*) OR TITLE-ABS-KEY(load* AND noise*))

COMBINATION: noise et al AND (systematic review OR meta analysis) AND publ year >1999 AND NOT Medline

(((((TITLE-ABS-KEY(environmental* AND noise*) OR TITLE-ABS-KEY(communit* AND noise*) OR TITLE-ABS-KEY(traffic* AND noise*) OR TITLE-ABS-KEY(wind* AND turbine* AND noise*) OR TITLE-ABS-KEY(wind* AND turbine* AND sound*) OR TITLE-ABS-KEY(wind* AND farm* AND sound*) OR TITLE-ABS-KEY(wind* AND farm* AND noise*) OR TITLE-ABS-KEY(airport* AND noise*) OR TITLE-ABS-KEY(aircraft* AND noise*) OR TITLE-ABS-KEY(railway* AND noise*) OR TITLE-ABS-KEY(road* AND traffic* AND noise*) OR TITLE-ABS-KEY(transportation* AND noise*) OR TITLE-ABS-KEY(train* AND noise*) OR TITLE-ABS-KEY(leisure* AND noise*) OR TITLE-ABS-KEY(neighbourhood* AND noise*) OR TITLE-ABS-KEY(neighborhood* AND noise*) OR TITLE-ABS-KEY(household* AND noise*) OR TITLE-ABS-KEY(low* AND frequency* AND noise*) OR TITLE-ABS-KEY(classroom* AND noise*) OR TITLE-ABS-KEY(school* AND noise*) OR TITLE-ABS-KEY(high* AND volume* AND music*) OR TITLE-ABS-KEY(high* AND volume* AND noise*) OR TITLE-ABS-KEY(personal* AND electronic* AND device* AND noise*) OR TITLE-ABS-KEY(mp3* AND player* AND noise*) OR TITLE-ABS-KEY(toy* AND noise*) OR TITLE-ABS-KEY(hospital* AND noise*) OR TITLE-ABS-KEY(combined* AND exposure* AND noise*) OR TITLE-ABS-KEY(nuisance* AND noise*) OR TITLE-ABS-KEY(expos* AND noise*) OR TITLE-ABS-KEY(truck* AND noise*) OR TITLE-ABS-KEY(motor* AND vehicle* AND noise*) OR TITLE-ABS-KEY(motorcycle* AND noise*) OR TITLE-ABS-

KEY(social* AND noise*) OR TITLE-ABS-KEY(load* AND noise*)) AND ((TITLE-ABS-KEY(systemat* AND review*) OR TITLE-ABS-KEY(meta analys*) OR SRCTITLE(cochrane*)))) AND (not DBCOLL(medl)) AND ((PUBYEAR > 1999))

2.5 ScienceDirect

((TITLE-ABS-KEY(environmental* AND noise*) OR TITLE-ABS-KEY(communit* AND noise*) OR TITLE-ABS-KEY(traffic* AND noise*) OR TITLE-ABS-KEY(wind* AND turbine* AND noise*) OR TITLE-ABS-KEY(wind* AND turbine* AND sound*) OR TITLE-ABS-KEY(wind* AND farm* AND sound*) OR TITLE-ABS-KEY(wind* AND farm* AND noise*) OR TITLE-ABS-KEY(airport* AND noise*) OR TITLE-ABS-KEY(aircraft* AND noise*) OR TITLE-ABS-KEY(railway* AND noise*) OR TITLE-ABS-KEY(road* AND traffic* AND noise*) OR TITLE-ABS-KEY(transportation* AND noise*) OR TITLE-ABS-KEY(train* AND noise*) OR TITLE-ABS-KEY(leisure* AND noise*) OR TITLE-ABS-KEY(neighbourhood* AND noise*) OR TITLE-ABS-KEY(neighborhood* AND noise*) OR TITLE-ABS-KEY(household* AND noise*) OR TITLE-ABS-KEY(low* AND frequency* AND noise*) OR TITLE-ABS-KEY(classroom* AND noise*) OR TITLE-ABS-KEY(school* AND noise*) OR TITLE-ABS-KEY(high* AND volume* AND music*) OR TITLE-ABS-KEY(high* AND volume* AND noise*) OR TITLE-ABS-KEY(personal* AND electronic* AND device* AND noise*) OR TITLE-ABS-KEY(mp3* AND player* AND noise*) OR TITLE-ABS-KEY(toy* AND noise*) OR TITLE-ABS-KEY(hospital* AND noise*) OR TITLE-ABS-KEY(combined* AND exposure* AND noise*) OR TITLE-ABS-KEY(nuisance* AND noise*) OR TITLE-ABS-KEY(expos* AND noise*) OR TITLE-ABS-KEY(truck* AND noise*) OR TITLE-ABS-KEY(motor* AND vehicle* AND noise*) OR TITLE-ABS-KEY(motorcycle* AND noise*) OR TITLE-ABS-KEY(social* AND noise*) OR TITLE-ABS-KEY(load* AND noise*)) AND ((TITLE-ABSTR-KEY(systemat* review)) OR (TITLE-ABSTR-KEY(meta analys*))) AND LIMIT-TO(earnav, "2014,2013,2012,2011,2010,2009,2008,2007,2006,2005,2004,2003,2001,2000")

2.6 TNO database

COMBINATION: environment

((environmental* OR communit* OR traffic* OR (wind* AND turbine*) OR (wind* AND farm*) OR airport* OR aircraft* OR railway* OR (road* AND traffic*) OR transportation* OR train* OR leisure* OR neighbourhood* OR neighborhood* OR household* OR (low* AND frequency*) OR classroom* OR school* OR (high* AND volume*) OR (personal* AND electronic* AND device*) OR (mp3* AND player*) OR toy* OR hospital* OR (combined* AND exposure*) OR nuisance* OR expos* OR truck* OR (motor* AND vehicle*) OR motorcycle* OR social* OR load*) AND (noise* OR sound*)) OR (high* AND volume* AND music*) AND (noise* OR sound*)

COMBINATION: environment AND noise AND system* review:

((environmental* OR communit* OR traffic* OR (wind* AND turbine*) OR (wind* AND farm*) OR airport* OR aircraft* OR railway* OR (road* AND traffic*) OR transportation* OR train* OR leisure* OR neighbourhood* OR neighborhood* OR household* OR (low* AND frequency*) OR classroom* OR school* OR (high* AND volume*) OR (personal* AND electronic* AND device*) OR (mp3* AND player*) OR toy* OR hospital* OR (combined* AND exposure*) OR nuisance* OR expos* OR truck* OR (motor* AND vehicle*) OR motorcycle* OR social* OR load*) AND (noise* OR sound*)) OR (high* AND volume* AND music*)) AND system* review

COMBINATION: environment AND noise AND meta-analysis:

((environmental* OR communit* OR traffic* OR (wind* AND turbine*) OR (wind* AND farm*) OR airport* OR aircraft* OR railway* OR (road* AND traffic*) OR transportation* OR train* OR leisure* OR neighbourhood* OR neighborhood* OR household* OR (low* AND frequency*) OR classroom* OR school* OR (high* AND volume*) OR (personal* AND electronic* AND device*) OR (mp3* AND player*) OR toy* OR hospital* OR (combined* AND exposure*) OR nuisance* OR expos* OR truck* OR (motor* AND vehicle*) OR motorcycle* OR social* OR load*) AND (noise* OR sound*)) OR (high* AND volume* AND music*)) AND meta analys*

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Original: English