

7.D. Regular workshop: Systematic reviews in Public Health fields: challenges and how to bridge with policy

Organised by: EUPHA Sections on Chronic Diseases; Public Mental Health; Public Health Epidemiology; Social Security, Work and Health
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Chair: Giuseppe La Torre

The use of systematic reviews and meta-analyses has been increasing in the last decade, and this approach is considered the most important for producing evidence in science. Systematic reviews differ according to the topic under investigation and a variety of guidelines and approaches exist such as

At the same time, the bridge between the production of evidence (science) and decision making process (politics) and healthcare and/or public health practice requires extensive use of systematic reviews and meta-analyses.

So, the workshop aims to present four different aspects on this topic as a bases for discussion:

The goal is of this workshop is to contribute to better understand the use, challenges and problems of systematic and narrative reviews in Public Health. The following four abstract will be presented:

- How to assess the methodological quality of Systematic and narrative Reviews in a Public Health perspective (Public Health Epidemiology)
- The use of systematic review in the field of sickness absence (Social Security, Work and Health)
- The challenges of performing Systematic Reviews in mental health (Public Mental Health)
- The use of Systematic Reviews for political challenges (Chronic Diseases)

Key messages

- The workshop deals with the methods for assessing systematically the scientific literature on mental and neurological disorders
- to discuss future perspective of the interaction between research and policy making

‘smoking’, ‘tobacco’, ‘nicotine’. Two authors independently screened the titles, abstracts and full texts of the retrieved literature to assess their eligibility, and assessed the methodological quality. Meta-analyses were judged using the AMSTAR. On the other hand, narrative reviews were judged with a newly developed tool called INSA (International Narrative Systematic Assessment tool).

Results

1309 articles were retrieved, 419 articles from PubMed and 889 articles from Scopus. Fourteen narrative reviews and three meta-analyses were relevant for this study. Only three narrative reviews particularly dealt with the association between smoking and MS. The other focused on general environmental risk factors. The meta-analyses reported small and medium effect sizes for smoking being a risk factor for MS. Smoking was associated with increased risk for ever versus never smokers and current versus no-smoker. Most reviews concluded, however, that while the evidence shows that smoking is a risk factors for MS, further research is needed to understand the mechanism behind this association.

Conclusion

This comprehensive review of reviews identifies smoking as a risk factor for MS susceptibility. However, in conclusion, in order to achieve a higher level of understanding about the mechanisms of smoking and MS more research is needed. Finally this review may serve as tool not only for clinicians and patients but also for policy makers in order to adopt or implement policies and prevention strategies.

Problems in assessing the methodological quality of systematic and narrative reviews: the case of tobacco smoking and Multiple Sclerosis

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Background

The aim of this study was to review all systematic reviews and meta-analyses of smoking as a risk factor for Multiple Sclerosis (MS). In fact, the methodological quality of these reviews is far from being robust, since many of them are not systematic.

Methods

PubMed and Scopus were searched for systematic and narrative reviews. The keywords used: ‘multiple sclerosis’,

Problems encountered in systematic reviews regarding sickness absence/insurance medicine

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Different types of systematic reviews are conducted in the area of sickness absence. Examples are risk factors for sickness absence or disability pension; factors affecting return to work; consequences of being sickness absent or on disability pension, or about sickness certification practises. Such reviews are conducted for sickness absence in general or for specific diagnoses.

Although sickness absence and disability pension affect many people and involves substantial costs, there so far are few studies and very limited evidence.

Challenges when conducting systematic reviews in this area includes that type of measures vary substantially between studies (presently at least 60 different ones can be found in the literature regarding sick leave and many others regarding return to work) hampering comparisons. Also, type of study groups varies much as well as social security systems. Basic factors that influence levels if sick leave and disability pension, such as employment frequencies in different ages and in women and men, vary much between countries and over time, however, seldom presented. RCTs are few and often not possible to conduct, while observational studies are more frequent.

Several of these challenges can be found in other public health areas.

In this presentation, different aspects of systematic reviews and meta analyses in this research area as well as how they so far have been handled will be presented as bases for discussion.

Child sexual and physical maltreatment and depression and anxiety in later life - a systematic review and meta-analysis?

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Background

Measurement of exposure and outcomes and meta-analyses methods are a challenge in Public Mental Health reviews. We aim to present an example of a systematic review in the field of Public Mental Health that will illustrate risks and methodological challenges.

Methods

We conducted a systematic literature search for studies from January 2000 to March 2012 describing the association between child and adolescent physical or sexual abuse and depression or anxiety according to the 'Meta-analysis of Observational Studies in Epidemiology Guidelines' in the following databases: PubMed/MEDLINE, EMBASE, and PsycINFO using controlled terms. We applied the following inclusion criteria: original data; at least 100 participants from the general community; quantitative categorical assessment of child abuse; depression and anxiety assessed with validated scales or clinical diagnoses after age 16. We calculated combined ORs and 95% CI using random effects models. Heterogeneity of effects was assessed using the Cochrane Q test and quantified using the I² test. Potential sources of

heterogeneity were investigated by running a random-effects meta-regression.

Results

The inclusion criteria were met by 19 studies with 115, 579 study participants. 14 studies assessed depression, 13 anxiety and seven distress. Conclusion: Our analyses suggests that 1.) exposure and outcome measures in original studies are potential sources of misclassification bias in systematic reviews; 2.) sensitivity and meta-regression analyses maybe potential useful methods for analyzing data. Yet, further developments of methods are needed in Public Mental Health to minimize potential bias to provide sound evidence and inform policy makers and politicians with robust data.

Systematic Reviews: What have they got to offer evidence based policy and practice?

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There is an increasing effort in translating research outcomes into policy decisions in a wide range of policy areas. Producers of systematic reviews use different methods to make their findings more accessible to decision-makers. These include plain language summaries, structured critical abstracts, overviews of reviews on a particular topic, and briefings that combine systematic reviews with other evidence sources. This presentation will contribute to the debate on extending the use of systematic reviews in public health and healthcare policy areas. It will examine the ways in which systematic review presents a distinctive approach to synthesising research. It will discuss the barriers to knowledge translations and challenges faced by researchers who use systematic review outside clinical medicine. It will also address the issues of effectiveness of knowledge translation strategies focusing on policy makers and senior health service manager as well as the wider impact of systematic reviewing on the quality of primary research together with the tools and training resources available to support this activity.