Searching a biomedical bibliographic database from Hungary – The "Magyar Orvosi Bibliográfia"

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Key Messages

Implications for Policy

1 The development of CENTRAL should aim to include citations from a wider range of sources, utilising databases as they become more easily available

2 CENTRAL contributors should be supported in submitting search results from multi-lingual databases

3 All health sciences researchers should consider supplementing searches on commonly used databases with smaller foreign language databases to avoid language bias

4 Identification of accessible biomedical databases that are not subsets of more commonly used MEDLINE and EMBASE

Implications for Practice

1. Multi-lingual search strategy resource for RCT search strategies used in the Cochrane Collaboration – made freely available
2. CENTRAL software to cope with non-Latin characters
3. Native language plus English should be used where possible for comprehensive searches

Introduction

The Republic of Hungary is a landlocked country in Central Europe. It is known locally as the Country of the Magyars or Magyarország and has a population of over 10 million. Hungary continues to demonstrate strong economic growth as one of the newest members of the European Union (since 2004). The private sector accounts for over 80% of GDP. Foreign ownership of and investment in Hungarian firms is widespread. Inflation and unemployment have declined substantially in recent years. Economic reform measures such as health care reform, tax reform, and local government financing have not yet been addressed by the present government.[1]

Literature searching over a broad range of sources can produce a more representative picture of research findings compared with searches of readily available databases.[2] Cochrane systematic reviews aim to identify all relevant trials in order to increase, at least, the precision of the final summary results. Studies that are difficult to locate may have results that substantially differ from those that are readily accessible. For example when Egger et al. searched German medical journals for randomised controlled trials (RCTs) and then searched for other trials published in English from the same authors they found that quality was constant but that the size of the estimates of effect were not.[3] German trialists, on average, published their more positive work in English and their studies with equivocal or even negative results were more likely to be published in German. There was a language bias operating. The Cochrane Collaboration is acutely aware of this publication and language bias and makes extensive efforts to identify all trials and to make them accessible through the Cochrane Central Register of Controlled Trials (CENTRAL), published in the

Cochrane Library. However, many subject-specific and national databases have not yet been searched for inclusion in CENTRAL, leaving the RCT/CCT coverage of some areas under represented. For example, searching the Australasian Medical Index (1966-2000) identified 512 relevant citations (RCTs or Controlled Clinical Trials - CCTs) but only 12% could also be found in CENTRAL.[4] Inclusion of the remainder into CENTRAL improves its international coverage.

The Magyar Orvosi Bibliográfia (Hungarian Medical Bibliography) can be found by searching on the Internet. It is a public access, user-friendly biomedical bibliographic database and can be searched in English and Hungarian.[5] The database covers Hungarian medical literature and includes English bibliographical information of selected Hungarian medical journals. The Clinical Practice Guidelines Bibliography is a database of diagnostic and therapeutic procedures and recommendations.[6] This study describes the formulation of a search strategy for the Hungarian database and the comparison of the results with the Cochrane Library's CENTRAL database.

Methods

We discovered the Hungarian database by searching the web (Hungary AND bibliographic AND medical). We ran searches in two languages (see table 2) on the Hungarian database to identify papers reporting randomised controlled trials (see table 1). The Magyar Orvosi Bibliográfia provides basic free text searching under headings of title and author (Cím és szerzo), keyword (Kulcsszó), classification (Osztályozási jelzet) and subject heading (Tárgyszó), with automatic truncation of terms and combining terms using Boolean logic. We imported all records into an MS Access database and duplicate checked them. Next we manually inspected all records to identify only those papers that were likely to be describing RCTs. Finally we searched for those citations, and studies on the CENTRAL database of the Cochrane Library.

Results

Using the two languages we found a total of 1000+ unique citations, of which 91 seemed to be relevant controlled trials, giving a precision of 9.1%. For around every 11 citations we inspected one was a randomised, or possibly randomised, study.

When we searched the CENTRAL database of the Cochrane Library for the 91 citations we found 27 (29.7%).

We broadly classified the health care specialty of the studies (Table 1).

Discussion

The Hungarian database is a bibliographic database offering access to Hungarian biomedical research citations, available free of charge. The precision (percentage of RCTs/CCTs found within the search results) for searching using the two languages is rather low at 9.1%, compared to that of EMBASE (23%) when similar searches are run.[7] For completeness Hungarian search terms should be used as well as English.

There has been a proliferation of bibliographic databases published on the Internet. This provides opportunities for those compiling CENTRAL to create a more truly international source of RCTs rather than a subset of already readily accessible databases such as MEDLINE and EMBASE. By exploiting this opportunity CENTRAL will move closer to achieving a comprehensive database of references to RCTs/CCTs, unbiased by geography, language or publication.

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Table 1 Reports of trials by health care sub-speciality

Speciality	Numbers of reports of RCTs/CCTs
Anaesthesiology	3
Cardiology	3
Dentistry	1
Dermatology	5
Endocrinology	2
Fertility regulation	0
Gastroenterology	6
Gerontology	0
Haematology	1
Hepatology	7
Infectious Diseases	4
Internal Medicine	3
Neonatology	1
Nephrology	3
Neurology	1
Neurosurgery	0
Obstetrics and Gynaecology	11
Occupational diseases	0
Oncology	9
Ophthalmology	0
Orthopaedics & Traumatology	5
Otorhinolaryngology (ENT)	4
Paediatrics	1
Psychiatry	7

Respiratory medicine	3
Rheumatology	2
Surgery	9

Table 2 Hungarian terms used for searching RCTs

Hungarian Terms	English Translation of Hungarian Terms
kontrollált vizsgálat	controlled trial
kontrollált tanulmány	controlled study
randomizált vizsgálat	randomised (or randomized) trial
randomizált kontrollált vizsgálat	randomised (or randomized) controlled trial
randomizált kontrollált tanulmány	randomised (or randomized) controlled study
véletlen besorolásos kontrollált vizsgálat	controlled trial with random assignment
véletlen besorolásos vizsgálat	trial with random assignment
véletlen besorolásos tanulmány	study with random assignment
véletlen besorolásos kontrollált tanulmány	controlled study with random assignment
Randomizál	randomizes

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