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Searching a biomedical bibliographic database from Bulgaria: the ABS database

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Searching a biomedical bibliographic database from Bulgaria: the ABS database

Abstract

Background

The University of Sofia, Bulgaria, disseminates local biomedical literature (1994 to present) through a free online database, ABS.

Objectives

To systematically search ABS, identify citations to controlled trials and find what proportion of these studies are to be found on MEDLINE.

Methods

We searched using Bulgarian and English phrases; manually selected citations of controlled trials and sought these citations on MEDLINE.

Results

Using the two languages we found a total of 628 unique citations, of which 47 of which seem to be relevant controlled trials (precision 7.48%, 13% of ABS citations were found on MEDLINE). The trials in ABS commonly focused on evaluation of care for people with cardiovascular or urological problems.

Discussion

ABS is another source of easily accessed trials not readily available elsewhere.

Background

The Republic of Bulgaria, in south-eastern Europe, borders on Greece, Macedonia, Montenegro, Romania, Serbia, and Turkey. Its population of 7.3m, with a median age of 41 (UK -39), infant mortality 19.8 percentile (UK-5 percentile) and life expectancy at birth of 72.3 (UK-78.5). The major language is Bulgarian, of Cyrillic origin. It is a middle income country (GDP $71.54 billion – UK $1.83 trillion.) but since 1997 Bulgaria has been on the path to economic recovery. Its GDP is growing at a rate of 4–5% per year and it will join the EU in 2007. In Bulgaria medical staffs are trained to a high standard, though hospitals and clinics may not have all the equipment and facilities expected in richer nations. With positive changes in GDP it would be expected that medical research activities would also be increasing[1].

Wide dissemination of research, however, may lag behind its production. There is good evidence that there are many relatively new databases, some of which have open access, containing citations to research of wide general interest[2][3]. There is also the concern that the results of some of the types of studies may change their likelihood of being widely disseminated. For example, when Egger et al. searched German medical journals for randomised controlled trials (RCTs) and then searched for other RCTs published in English from the same authors they found that quality was constant but that the size of the estimates of effect was not[4]. On average, these German trialists' published studies with 'positive' results in English-language journals but studies with 'negative' results or those showing no difference in the effect were more likely to be published in German-language journals—a phenomenon known as language bias.

The Bulgarian database (ABS) is a public access, user-friendly biomedical bibliographic database and can be searched in English and Bulgarian[5]. It is produced by PC-TM Ltd. The main web link is named ABS but the label on the database webpage is AB-Catalogue. We will refer to this database as "ABS". ABS offers easy access to the contents of over 130 ongoing and discontinued Bulgarian journals from 1994. It contains at least 18000 records of medical, pharmaceutical and chemical papers (relative proportions unspecified), 26000 citations to books, and 1400 citations to PhD Thesis publications. All records are indexed using the thesaurus of Index Medicus. Searches can be carried out using 'all words' option or by selecting specific fields such as: title, author, keywords and ISBN. This study describes the formulation of a search strategy for ABS and the comparison of the results of that search with records available in MEDLINE.

Objectives

To search ABS, systematically identify citations to randomized controlled trials and investigate how many of these are found and correctly indexed in MEDLINE.

Methods

We identified the Bulgarian database ABS by searching Google on the Internet using the terms 'Bulgarian', 'bibliographic' and 'medical' [5]. We ran simple searches in English and Bulgarian, using the 'all words' search option. This option searches the whole record including keywords. The search results could be viewed as a list of titles, short references or full bibliographic references (including abstracts where available).We captured the full references. We took terms commonly used to identify trials[6] and employed 'random%' as a benchmark phrase against which all other terms were compared (% is the wildcard symbol). The results of searches using additional phrases were then compared with those of the phrase 'random%', duplicate records deleted and unique reports of trials stored in an MS Access database. Our commercial bibliographic reference management package could not store Cyrillic script. Records that seemed to meet the criteria for RCT or controlled clinical trial[7] were then sought in MEDLINE and the ABS's MeSH classification recorded.

Results

We found ABS to be easy to use for relatively simple searches but it was problematic to export and manage results. We chose 'random%' for our benchmark phrase as we felt it to be acceptable to a wide group of users but recognise that it is possible that the other phrases could have also been of similar value.

ABS contains records of randomised trials and most of what we identified can be found by running a simple search (#2, Table 1.). Additional phrases do identify more studies but at the cost of much loss of precision (#1, Table 1). In order to investigate whether, for at least RCTs, the contents of MEDLINE eclipse that of ABS we sought each citation we had identified in ABS on MEDLINE (PubMed). Most of the RCTs we identified were not in MEDLINE (41/47, 87%). Of those that were in MEDLINE, only four were categorised as RCTs under the 'Publication Type'.

Searching with the native language term for random was fruitful, identifying papers not found using English terms with a high precision.

The 47 trials we identified covered a range of topics from right across health care. Studies were most frequently classified as focusing on cardiovascular problems (9/47) or urology (7/47) according to the existing MeSH classification. We are unsure, however, how this reflects the health care needs of Bulgaria.

Discussion

Biomedical literature from Bulgaria, like that of other formerly communist states of Eastern Europe, is poorly represented in MEDLINE[2][3]. ABS is an easily accessible bibliographic database, available free of charge on the Internet. Since English language medical websites do not link directly to ABS

we used search engines to find it. Direct links are available from Bulgarian medical websites or via search engines (e.g. Google). It contains records of randomised trials most of which can be found even by those using only the English language, although search results are enhanced when using native language search terms. Those undertaking comprehensive searches for such papers should consider this database as a source of further studies. At best, not to do so would leave the results of their reviews less precise than could otherwise have been the case. At worst, not to consider the increasing number of less well known biomedical bibliographic databases emergent from outside of the US and Europe, could lead to biased results[8].

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Table 1. Strategies and results

SEARCH STRATEGY – search option Всички думи [all words]		Total randomised trials	Precision	TOTAL RESULTS
рандом% OR двойно% ORсляпо%OR (клиничен% AND опит%) OR опит% OR random% OR alloc% OR assign% OR double-blind% OR placebo% OR (clinical% AND trial%) OR trial%		47	7.48%	628
рандом% OR двойно% ORсляпо%OR random% OR alloc% OR assign% OR double-blind% OR placebo%		39	23.6%	165
Benchmark term **– search option Всички думи [all words]**		**Randomised trials identified by benchmark**		
random%		25	26%	98
Other terms **– search option Всички думи [all words]**		**Unique RCTs not already identified by 'random%'**		
alloc%		2	10%	20
assign%		2	6.%	33
double-blind%		4	33%	12
placebo%		2	18%	11
clinical% AND trial%		2	0.34%	583
trial%		3	2%	142
рандом%	[random%]	3	60%	5
двойно% OR сляпо%	[double% OR blind%]	1	14.3%	7
Клиничен% AND опит%	[clinical% AND trial%]	1	3.7%	27
опит%	[trial%]	2	0.68%	293