From alternative to complementary and integrative medicine; Bibliometrical analysis of the growth and the consolidation of the alternative field of medicine /

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Abstract:

A bibliometrieal survey was carried out with regard to articles in scientific and professional publications, in order to study the processes which transformed "alternative medicine" from a marginal and disregarded subject into a discipline which is undergoing a process of growth and consolidation within the medical-scientific establishment. These articles were gathered from seventeen databases, specializing in medical-professional subjects and supported by 'DIALOG": the biggest online supplier of data of its kind.

In the databases which served as a basis for the model or representative sample, an online search was carried out, applying the search strategy of placing uniform question. The utilization of the "ALTER?(N)MEDIC?" led to the obtainment of articles which were published during the years 1975 - 1994 in these databases and which contained expressions and concepts on the subject of alternative medicine. The basic assumption of the research was, that inasmuch as the quantity of papers is greater, so is also greater the interest in this field and the awareness in its regard among the authors of these papers and articles, who represent the medical-scientific establishment.

After winnowing the irrelevant articles, the population of the sample was considered as representing one hundred percent. The work assumption was that every article, in which appeared a word relevant to the subject of the research, was worthy of inclusion in the sample. The articles were entered in work schedules, while being sorted out into four sub-periods of five years each, according to the year of their publication, A sub-division was also made according to the country in which each article was published. The terms and

concepts which had relevancy and which were named "key-words", were

classified according to their location in the entire article: in the title, in the

descriptor or in both of them. Each key-word, which was found in the papers,

was counted the number of times it appeared in each one of them. Due to the

vast number of different key-words which were found in the sample, numerical

codes were given for groups of key-words which were related in their

meaning.

Statistical calculations were carried out concerning the data and entered in

tables, while drawing up a comparison between the four sub-periods in order

to follow-up on the different trends during the period of the survey.

A word dictionary was created out of all the key-words which were found in

the articles and a prototype of an authoritative word dictionary, i.e. a

thesaurus, was compiled, containing the central subjects which were found

among these key-words. This dictionary was compiled in the knowledge that

during the collection of data, such a thesaurus did not exist in the field of

alternative medicine within the databases in which the search was conducted.

The dictionary included those terms and concepts which were found only in

those articles which were selected to figure in the sample. In addition, a

distinction was made between key-words whose gist indicated a positive

and/or factual attitude or approach and key-words whose gist indicate a

negative and /or skeptical attitude or approach to the subject of alternative

medicine.

The sample comprised a total of 3743 articles, of which 195 articles were

found in the first sub-period, 443 articles in the second sub-period, 860

articles in the third sub-period and 2236 articles in the fourth sub-period. From

these data it may be observed that during the first three sub-periods the

growth in the quantity of articles was consistent and slow. In contrast, there

was a conspicuous acceleration of the growth process in the fourth sub-

period.

A similar development was observed in the quantity of key-words which were

found during the period of the survey. A total of 7678 key-words were found,

of which 405 were in the first sub-period, 861 in the second sub-period, 1691

in the third sub-period and 4721 in the fourth sub-period.

The number of key-words differing as to their connotation which were found in

the sample reached 286. Due to the fact that a grouping was effected of the

key-words which were related as to their meaning, it was noted that the

number of clusters of key-words reached 113 in the fourth sub-period, versus

43 clusters of key-words which were to be found in the first sub-period. It can

be observed that an evident growth process occurred during the period

covered by the survey. In an analysis that was made to compare between the

key-words that were found in the titles versus those that were found in the

descriptors, a greater acceleration could be observed in the quantity of key-

words that were found in the descriptors.

A follow-up of the contents of the key-words shows a clear quantitative growth

of those whose content indicates a positive and/or factual approach to the

field of alternative medicine, versus a contrary process which occurred in

those whose content indicates a negative and/or skeptical approach to this

field. Likewise, with the appearance of new key-words in the articles, such as:

"complementary medicine" and "integrative medicine", one can deduce that a

fundamental change has occurred in the authors' approach to the new

discipline. The appearance of these key-words can consolidate the legitimacy

that was accorded to the discipline of alternative medicine within the medical

establishment.

An analysis of the geographical location in which the various papers were

published, indicates an increasing gap between the quantity of papers which

were published in the United States of America and Great Britain, and the

quantity published in the other countries included in the sample. It can be

seen that this gap has widened considerably during the years 1990 - 1994.

Furthermore, the gap has widened between the United States and Great

Britain. The negligible quantity of articles published in countries which are not

considered as "western" constitutes another remarkable fact.

According to the results that can be learned from the tables and graphs, it

seems that there is a high degree of correlation between the growth process

occurring in the articles published on the subject of alternative medicine and

the results observed in previous bibliometrical surveys. These surveys, which

dealt with various scientific fields, showed that the growth process in the

publication of papers in a new field was slow at first; at a certain stage one

could note a steep growth curve till it reached a saturation stage from which,

after a period in which the quantity of articles remained stable, this field

became a discipline within that science from which it evolved or developed

into a new, independent discipline.

The point where the quantity of articles during the years 1990 - 1994 is

located, apparently indicates that the field of alternative medicine is still

situated at some place on that same steep growth curve and has not yet

reached the saturation stage.

Amongst the proposals for a new survey, the continuation of this survey

during the years 1995 - 1999 has been discussed, with the aim of finding the

saturation point in the quantity of articles - and the time at which the subject of

alternative medicine becomes a branch discipline within the field of scientific-

establishment medicine or a new, independent discipline.

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