

Give the Thought to the Elderly: A Webometric Analysis

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Introduction

India's population of the elderly was 56.68 millions in 1990-91 and is now expected to be around 75 million. While dream to live long is the legitimate right of every citizen, the social and economic implications and humanitarian issues of a growing population of elderly are causing serious concern and require immediate attention from the government and social organizations. A proper solution would be an integrated approach, involving information providers financiers and providers of healthcare, to deliver "quality healthcare" to people. In the age of INTERNET, if the elderly population is provided with adequate information required by them, on this media, it will be of great help to them. In the present study, attempt has been made to analyze the hits on topics associated to elderly population from the web pages from India as well as rest of the world. The content analysis of few web pages from India has also been done to ensure the topics covered and the hosting bodies and to study the 'link' of those pages with other sites, within a specified time frame. To execute the above, endeavours have been made to explore the availability of information on "health problem" in the field of geriatrics or elderly population. Since the target group of web users were decided to be the elderly adults (not specifically research scientist) all the web pages from research journals or abstracting/indexing services have been excluded. Suggestions have been made to cover subject areas by these services. In Indian conditions this is all the more important. Going through the literature, it has been established that there is no concentrated effort, to take a stock of available health related information specifically oriented towards our elderly population by Indian web servers.

Methodology

In this context 'Web Pages' refer to both text documents and hypertext documents. The only requirement was that the URL for the information entity was from 'Indian Pages' or was having '.in' their address as their server suffix. For limiting the

time period 'year' has also been defined under "Advanced Search" protocol of the search engines.

Search Strategy

For collecting hits on world wide web pages search engine 'AltaVista' as well as 'Google' was used. They provided a reasonable comprehensive search results for both 'Indian Pages' as well as web as a whole. Same query was repeated for each year individually i.e. 1998, 1999, 2000, 2001 and 2002. Total hits thus obtained were tabulated. Search results were randomly screened to collect 'keywords' related to diseases & problems of elderly population. A set of 25 keywords was identified. Afterwards, a set of searches was performed for all the key words using AltaVista advance commands for both world & Indian Pages. For detail analysis of 'Pages from India, Boolean logic, 'AND, OR, NOT' were used to refine and pinpoint the results. Later on the search results of Web pages from India of AltaVista and Google were merged in a database and duplicate entries were removed. Each and every entry in the list was systematically screened for (1) provision of health information, social, psychological (2) evaluated information likely to be accessed by the target population (3) the quality of information against certain criteria for example, by judging the authority of source, usefulness, readability or comprehensiveness of the provided information. This stringent filtering resulted in a set of 200 web pages, which were screened and only those were retained for further analysis, which exclusively were pertinent to the present dataset. Thus 108 pages were retained (out of 200) for further analysis addressing to specific problems of elderly and relevant to Indian conditions. For detailed web page link analysis and hosting of the page, the web addresses were examined and only '37' Web addresses were further analyzed. To these 37 pages all of the 'link' from other sites were tabulated to see the popularity of the site. Well placed 'links' are an excellent source of consistent and targeted traffic. Most of the major search engines now factor 'link' popularity into their relevancy algorithms. In this way we have done a

first exploratory Webometric study of web pages, from India, to find out the contents being hosted by Indian web servers and what is needed. The results can be later tested on a bigger set of data and more intensive analysis like frequency of visitors, time spent and co-link analysis etc.

Analysis and Key Findings of the Study

The geographical location of a site, publication on the web is hard to determine ambiguously since we are not counting corporate services, but 'electronic addresses'. There is no assurance that they represent always the same organization or center. However, the URL's of websites, often do provide information about the location and or type of institution.

1. Search on Health Problems of elderly by Alta vista & Google both, on world wide web revealed that the maximum hits were for the year 2002 and minimum in 1998. Hits for pages from India, revealed a different trend while AltaVista showed an increase in trend from 1720 hits (1998) to 26700 hits in 2002, Google returned maximum hits in 2000 and minimum during 1999. Percentage share of Indian Pages was maximum in 2000 on the basis of returned searches by both the search engine.
2. Disease based search revealed that general well being of elderly population, in all the years was most favored, along with issue related to HIV/AIDS. (Except the year 2002). Other areas in context of world wide web were Neurological Problems & Alzheimer's, Nutrition, Skin care. Pages dealing with Tuberculosis also showed an increasing trend. HIV/AIDS, Nutrition, General well being, Diabetes, Health & Hygiene, Alzheimers and Hypertension were the top most areas during all 5 years together. Pages from India revealed that they are concentrating upon few select problem areas like nutrition, (occupying the top most position in five years 51%), Rural population & health, diabetes, Population policy & old age, Hypertension and General well being. Some of the important areas like Neurological Problems, Urinary incontinence or Musculoskeletal issues have not been addressed adequately.
3. The web addresses were further short listed to execute further level of analysis. The computation and the study revealed that out of 37 sites, 18 sites were hosted from India followed by USA, Switzerland and other countries. The sites from India were mostly from government (8 sites), Commercial Institutions and NGOs. A huge market potential is awaiting content Developers and information service providers from India. There are many areas, which can be covered under this umbrella and calls for immediate attention of all concerned.

4. 'Link' analysis of these pages was also carried out to explore popularity of these websites: www.frontlineonnet.com was having maximum links (54,400) followed by www.who.int, www.inf.org, www.aafp.org, www.haworthpress.com, www.flonnet.com, and expresshealthcarmgmt.com. The data revealed that on the scale of popularity except the site hosted by Frontline (Hindu News Paper) and Indian Express all other sites are very much down the line. This needs immediate attention and probing.
5. As for the areas covered by these sites all the government sites mainly were related to policy issues of target population, economic & social well being.

This may not be the absolute true picture of the web in Indian context, but definitely the study has indicated that potential of web information provision has not been exploited by Indian content developers. This calls for immediate attention of all concerned, as health projections of concerned ministries and census data (Health Status of India) have shown that a large population is of ≥ 60 years of age and number of patients in the areas of Alzheimer, Neurological, Musculoskeletal and Psychological problem is going to increase.

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