

INDIGENOUS KNOWLEDGE WEB RESOURCES IN INDIA WITH SPECIAL REFERENCE TO AYURVEDIC RESOURCES

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ABSTRACT

Indian government has taken initiative to preserve the Indian indigenous knowledge of medicinal and health care. Ayurveda is one of them. Today Ayurveda is getting name and fame worldwide. From some years Indian government has taken step by establishing AYUSH department. As the government put the faith on the AYUSH department, it is working very nicely. AYUSH establish some database portal for the access of Ayurveda research. TKDL, AYUSH research portal and DHARA are examples of them. The present paper is based on the features, facilities, structure and content of research portals and databases.

Introduction:

In the 21st century we are living in information technology era. Everybody among us directly or indirectly is the user of information technology and internet. The internet has brought out an unprecedented revaluation in the capacity to access and dissemination of information. Information has never before so accessible. The technology advancement is increasing day by day. These advancement and changing trends have put forward new challenges before Library and information science professionals. Today we are living in digital world and tremendous growth & diversification of knowledge have emerged with multidisciplinary subjects. Information has been identified as one of the vital resources needed for the success in almost every major human endeavour. Collection, organization and dissemination of information with

economy and efficiency dampened on the skills and expertise of the librarians. Information is needed in all aspects of society and in all disciplines. Users demand information up-to-date and quickly. The demands of information users and researchers are increasing day-by-day. Old technologies of information exchange are being replaced by new technologies and methods. In this age internet become an essential medium for information exchange and with its helps to maintain scholarly communication anyone can communicate his/her information with others anywhere in the world. The World Wide Web offers a great wealth of information, as well as the opportunity for people to express themselves and exchange ideas. The Internet is used increasingly for educational purposes. That's why role of library and information professionals has changes worldwide. So the librarian, who was the keeper of books, is now the provider of information and learning opportunities.

Indigenous Knowledge:

The world online encyclopedia Wikipedia described Indigenous knowledge “Traditional knowledge (TK), indigenous knowledge (IK), traditional environmental knowledge (TEK) and local knowledge generally refer to the long-standing traditions and practices of certain regional, indigenous, or local communities.”

The African department of United Nations Environment Programme defined “Indigenous Knowledge (IK) as the knowledge that an indigenous (local) community accumulates over generations of living in a particular environment. This definition encompasses all forms of knowledge – technologies, know-how skills, practices and beliefs – that enable the community to achieve stable livelihoods in their environment. A number of terms are used interchangeably to refer to the concept of IK, including Traditional Knowledge (TK), Indigenous Technical Knowledge (ITK), Local Knowledge (LK) and Indigenous Knowledge System (IKS).

IK is unique to every culture and society and it is embedded in community practices, institutions, relationships and rituals. IK is considered a part of the local knowledge in the sense that it is rooted in a particular community and situated within broader cultural traditions. It is a set of experiences generated by people living in those communities.”

Ayurveda

The Sanskrit meaning of "Ayurveda" is the knowledge for long life. Ayurvedic medicine is a Hindu system of traditional medicine native to India and a form of alternative medicine. The earliest literature on Indian medical practice appeared during the Vedic period in India. Ayurveda, the science of life, prevention and longevity is the oldest and most holistic medical system available on the planet today. It was placed in written form over 5,000 years ago in India, it was said to be a world medicine dealing with both body and the spirit. Before the advent of writing, the ancient wisdom of this healing system was a part of the spiritual tradition of the Sanatana Dharma (Universal Religion), or Vedic Religion. VedaVyasa, the famous sage, shaktavesha avatar of Vishnu, put into writing the complete knowledge of Ayurveda, along with the more directly spiritual insights of self realization into a body of scriptural literature called the Vedas and the Vedic literatures.

There were originally four main books of spirituality, which included among other topics, health, astrology, spiritual business, government, army, poetry and spiritual living and behavior. These books are known as the four Vedas; Rik, Sama, Yajur and Atharva. These texts still contain the original and complete knowledge of this Ayurvedic world medicine, that Ayurveda is known today as the only complete medical system still in existence.

OBJECTIVES OF THE STUDY:

The objective of the study was to highlight the importance, features, structure, content and facilities of the portal.

SCOPE OF THE STUDY:

The scope of the study was based on the research portals of Ayurveda i.e. AYUSH, DHARA and TKDL.

RESEARCH METHODOLOGY:

Literature search was adopted to study the research portals of Ayurveda. The research portals i.e AYUSH, DHARA and TKDL were downloaded to study the features, links, structure and contents.

AYUSH RESEARCH PORTAL

AYUSH Research portal is meant for dissemination of Research findings in the domain of Ayurveda, Siddha, Unani, Yoga & Naturopathy, Sowa-Rigpa and Homeopathy researchers and allied faculties. Main aim of the portal is to provide access to the research findings, which is arranged in organized fashion and preempt duplication of work to encourage interdisciplinary research and generate evidence for wider acceptance of these systems worldwide.

Snapshot 1: Home page of AYUSH Research Portal

The Portal has been developed by Central Council for Research in Ayurveda and Siddha (CCRAS), and the content is being provided by all AYUSH Research councils, Drug standardization laboratories, and National Institutes. AYUSH Research Portal accessible through www.ayushportal.ap.nic.in. Links to the research finding is the main aim of the portal, which provides information under the headings:

1. Standard Treatment Guidelines
2. Preventive promotive health
3. Preclinical and Clinical Studies
4. Literary and Fundamental Research
5. Drug standardization
6. Local health traditions
7. Drug monographs
8. Formulary of India and other formularies
9. References from Classical text books and

10. Plant monographs.

- The information is categorized as per individual AYUSH medical systems against standard set of Medical conditions, which is based on WHO disease classification ICD-10, and navigation is provided according to ICPC's (International Classification of Primary Care) in 17 disease categories.
- The Portal provides the relevant indigenous name of the medical conditions pertaining to each medical system, which further adds to clarity. The users can browse from a dashboard which provides access to all the categories with visually clear buttons meant for the purpose. On selection of the displayed results, the user gets information in the form of an abstract and full text of the article.
- The portal is categorization of Clinical Research work into Grade A,B,C based on “General Guidelines for methodologies on Research and Evaluation or Traditional.
- The portal content development is a three tier exercise involving rigorous collaborative content uploading and editing process to ensure high quality content.
- The portal provides AYUSH terminological names for every article search after selecting body system and disease name.

Terminologies Research	Ayurveda	Yoga and Naturopathy	Unani	Siddha	Homoeopathy	Total
Clinical	1266	969	127	77	533	2972
Pre- Clinical	1153	198	46	71	72	1540
Drug	2380	0	564	222	329	3495
Fundamental	663	208	286	209	1012	2378
Total	5605	1569	1031	626	1920	10751

Table no. 1. : Total number of articles by AYUSH terminologies and by Research

The total collection of portal is 10751 articles which can classify as 5605 on ayurveda, 1569 on yoga and naturopathy, 1031 about Unani, 626 for Siddha and 1920 for Homoeopathy. The majority of the collection means 52% of the collection is held on Ayurveda. All the collection is classify under research

types a) Clinical research (2972 articles) b) Pre-clinical research (1540 articles)
c) Drug research (3495 articles) and d) Fundamental (2378 articles)

DHARA:

DHARA is the acronym for 'Digital Helpline for Ayurveda Research Articles'. It is comprehensive online indexing service for research articles published in the field of Ayurveda. It is a free accessible portal.

DHARA is a Sanskrit means 'flow'. It symbolizes the facilitation of the free flow of information on research in Ayurveda. It is an offshoot of a collaborative initiative between central Council for Research in Ayurvedic Science (CCRAS), New Delhi, The ayurveda Trust, Coimbatore and Switzerland Medical Academy (SAMA), Switzerland. The objective behind this collaboration is to analyses and systematic reviews of research conducted in Ayurveda. It was realized that systematic access to published research on Ayurveda was a prerequisite to explore the feasibility of meta-analyses and systematic reviews. Such a resource was not available and hence the task of building a data that will allow systematic access to published research in Ayurveda was taken by AVTAR (Ayurveda Trust Institute for Advanced Research), the research wing of Ayurveda Trust with financial assistance from CCRAS. DHARA includes any research that published on Ayurveda research journal that meet basic editorial standards, which mean journal should have an independent editorial board and accept articles for publication only after internal editorial review and external pre review.

DHARA has indexed research articles on Ayurveda that have been published in more than 4227 journals worldwide. Total no of indexed articles are 53225(As per data last accessed on 13 June 2012). The publication that would not qualify as research journal, such as magazines and souvenirs' that has been taken to exclude. DHARA displays bibliographical information about total collection on homepage of the portal and provide break up of article titles, abstracts and full text access whether they are free or paid. Year wise index to published articles is also provided. Link to the list of authors and journals with alphabetical format is also give. DHARA provides search facility by simple and advanced (Boolean search). Regular user of DHARA can use search fields tags to control their search parameters. Users can make limit his/her search by using controlled vocabulary by following 'Limit' link.

DHARA web resource has been designed keeping in mind familiarly to the users with popular database and indexing service. The main features of DHARA are

- Wild keyword search option
- Advanced search with Boolean operation
- Search field tags
- Limiting search with controlled vocabulary
- Journal area and author area for listing keyword search and alphabetical search

DHARA does not provide full version of article directly. It provides links to full text. The link can be seen below the abstract. Full text access may be free or paid as per the research journal policies. A Unique identification number is given to every entry known as DHARA ID.

The screenshot shows the DHARA portal home page. The browser title is "Digital Helpline for Ayurveda Research Articles - Mozilla Firefox". The address bar shows "dharaonline.org/Home". The page header includes "Home | About | Quick Start | FAQ" and "Now, the information flows....". The main heading is "Digital Helpline for Ayurveda Research Articles Beta Version 3.3" with "Users Online : 30".

Below the search bar, there are three main sections:

- Articles at a Glance:**

All Articles :	53225	Articles in 2011 :	3314
Full Text :	2683	Articles in 2010 :	4188
Free Full Text :	1742	Articles in 2009 :	3757
Paid Full Text :	940	Articles in 2008 :	3613
Abstract Only :	39955	Article Yearwise	
Title only :	10587	Most Searched Articles	
Articles in DHARA with keyword Ayurved* :	6431		
PubMed Articles in DHARA with keyword Ayurved* :	2706		
Articles on PubMed with keyword Ayurved*			
- Latest Published Articles:**
 - [Childhood lead poisoning associated with traditional Chinese medicine: A case report and the subsequent lead source inquiry](#) NSM
 - Lin GZ, Wu F, Yan CH, Li K, Liu XY
 - [Clinica chimica acta; international journal of clinical chemistry](#) 2012 Jul 11; 413 :1156-9
 - [Therapeutic potential of terminalia arjuna in cardiovascular disorders](#) NSM
 - Maulik SK, Talwar KK
 - [American journal of cardiovascular drugs : drugs, devices, and other interventions](#) 2012 Jun 1; 12 (3):157-63
 - [Rhus parviflora and its biflavonoid constituent, rhusflavone, induce sleep through the positive allosteric modulation of GABA\(A\)benzodiazepine receptors.](#) NSM
 - Shrestha S, Paik JH, Lee DY, Cho JG, Cho S, Yang H J, Yong HI, Yoon MS, Han DS, Baek NI
 - [Journal of Ethnopharmacology](#) 2012 May 2
 - [Cardoguard, an Ayurvedic antihypertensive formulation, prevents cardiac remodeling in spontaneously hypertensive rats by inhibition of ERK and PKCe signaling pathways.](#)
 - Sankar V, Nair RR, Harikrishnan VS, Fernandez AC, Kumar CS, Madhavachandran V
 - [Canadian Journal of Physiology and Pharmacology](#) 2012 May 2
 - [Curcumin and curcuminoids in quest for medicinal status.](#)
 - Gryniewicz G, Sliński P
 - [Acta biochimica Polonica](#) 2012 May 14
- Authors at a Glance:**

All Author Names* :	106724
Articles written by only one Author :	7343
Maximum Articles for an Author Name :	233
First Author Names :	35373
Last Author Names :	31810
*Names of one author in different formats have not been merged	
- Journals at a Glance:**

All Journals :	4227
Ayurveda (3805 Articles) :	14
Complementary and Alternative Medicine (496 Articles) :	17
Mainstream and Other Medical Disciplines (48924 Articles) :	4186
Journals not Indexed in Pubmed (3776 Articles) :	16
Most Searched Journals	

At the bottom, there are two buttons: "Journals Area" (with a book icon) and "Authors Area" (with a person icon). The "Journals Area" button includes the text: "Click on icon to search Journals in DHARA database by keyword or in alphabetical order". The "Authors Area" button includes the text: "Click on icon to search Authors in DHARA database by keyword or in alphabetical order".

Snapshot no.2: Home page of DHARA portal

TKDL (Traditional Knowledge Digital Library)

Traditional Knowledge Digital Library is known as TKDL. The project of TKDL is a result of collaborative efforts by Council of Scientific and industrial Research (CSIR), Ministry of science and technology and Department of AYUSH, Ministry of Health and Family welfare. This project is implemented at CSIR. For the successful creation of the project TKDL the knowledgeable team like traditional medicine experts from each field (Ayurveda, Unani, Siddha), patent examiners, Information Technology experts, scientist and technical experts devote their important efforts. TKDL involves documentation of the traditional knowledge available in public domain in the form of existing literature related to Ayurveda, Unani & Siddha and Yoga in digital form in five international languages (English, German, French, Japanese and Spanish).

This is a representative database containing 1200 formulations selected from various classical texts of Ayurveda, Unani and Siddha systems of medicine. 500 formulations from Ayurveda, 500 formulations from Unani and 200 Siddha formulations are readily available.

The selected formulation has made use of about 291 plants as ingredients besides ingredients of animal or mineral origin. These formulations are in turn used to treat 186 diseases. This is a searchable database which can be started by clicking on the Ayurveda, Unani or Siddha icons on the homepage.

Simple Search: Different search terms including Keywords, Diseases and IPC Codes can be used with the operator 'OR' (the use of operator 'AND' is not supported). The corresponding menu lists all the search terms available in this database and can be used to select the appropriate search term.

- Terms to be searched may be entered or selected from corresponding help menus.
- Single or multiple search terms may be entered.
- Multiple search terms may be searched using operator OR.
- To search using local names with Keyword Help, tick the check box labelled 'with local name'.

Advance Search:

This option allows search using several search terms such as Keywords, Disease, IPC Code, Bibliography and Title, each individually specified. All these terms can be selected from appropriate help menus.



Snapshotno.3: Home page of TKDL

Conclusion:

Indigenous knowledge like medicinal and health care specially an Ayurveda has long successful historical background. Today we find that Ayurveda the Indian Medicinal literature and knowledge is getting famous worldwide. But because of some negligence and lacunas for not having proper and systematic access to this literature, it feels that the ayurveda community has lagged behind but Indian government took care of this and formed AYUSH under the department of Ministry of Health and Family welfare. AYUSH shows their successful working capacity to preserve indigenous knowledge by forming and funding to such types of research databases. It seems that these databases will perform a great role in the development of new researches in the field of ayurveda and put a boost speed and encouragement in the young ayurveda researchers. May the dream of 'Swami Vivekananda' for 2020 India will do come true. May be India will be at the top position in the field of medicinal and health care researches by the mean of Ayurveda.

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