

PRESERVING TRADITIONAL KNOWLEDGE (VIRAL DISEASES)

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Abstract

India is a very vast country with its rich traditional knowledge system, biodiversity, living habits, ancient culture and most importantly a vast treasure of TK. The pilot study shows that there are various TK (viral diseases) resources/scientific data are available in Maharashtra, India in various forms and formats (oral, semi recorded and recorded). The study describes only TK resources related to viral diseases, its brief history and need to preserve for global access.. **Objectives:** *To collect, collate and preserve TK (viral diseases) before it lost forever and make it accessible worldwide.* **Methodology:** *Literature search and social survey are the main instruments to collect the data, however multi-method approach has been adopted. This is a very basic pilot study based on social survey* **Findings:** *Study indicates that there is a serious need to address the questions related to TK especially viral diseases, which is known to all the communities in India. The TK (viral diseases) is widely scattered and there is an urgent need to preserve the same for the global access.*

Suggestions and Conclusions: *The pilot study will help to give a systematic direction to preserve TK(Viral Diseases). The paper concludes with suggestion for further depth studies as TK(viral Diseases) is under threat.*

Key Words: Traditional Knowledge. Viral Diseases, Preservation,

Introduction

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. Traditional knowledge also encompasses the wisdom, knowledge, and teachings of these communities.

In many cases, traditional knowledge has been orally passed for generations from person to person. Some forms of traditional knowledge are expressed through stories, legends, folklore, rituals, songs, and even laws. Other forms of traditional knowledge are expressed through different means.

Traditional Knowledge is defined by Zhang as “the sum total of all the knowledge and the practices, whether explicable or not, used in diagnosis, prevention and elimination of physical, mental or social imbalance and relying exclusively on practical experience and

observation handed down from generation to generation, whether verbally or in writing.”(Zhang). It is mainly passed down by word of mouth i.e. verbal from generation to generation. However, there is no proper record².

There are different Traditional Knowledge (TK) systems such as Biodiversity Knowledge, Elements of languages, Agricultural Knowledge, Technical Knowledge, Ecological Knowledge; Medicinal related Knowledge, Folk and Culture. Traditional knowledge is evolved through social, cultural, and religious, customs, environment, age-old skills, habits, local languages, crafts, folklore, etc.

Human progress has been possible because of knowledge created in the past. India has around 5000 years of history during which period many great personalities and even common people have mastered the knowledge in various fields such as medicine, mathematics, naturopathy, meditation and yoga, science, etc. From the olden days, people in India like elsewhere have been using traditional systems of medicine to treat diseases including viral ones. Consequently, they have developed their own tradition to make some senses of traditional knowledge and their uses, especially treatment of various diseases.

Some of this traditional knowledge(viral diseases) may seem strange and magical others appear rational and sensible. However, all of them are not only attempts to overcome illness and sufferings but also to enhance the quality of life, public health and hygiene.

As a sequel to this, in 1999, the Department of Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy-(AYUSH), erstwhile Department of Indian System of Medicine and Homoeopathy (ISM&H) constituted an inter-disciplinary Task Force, for creating an approach paper on establishing a Traditional Knowledge Digital Library (TKDL). The project TKDL was initiated in the year 2001. Access to 2.23 Lakh (0.22 million) Medicinal Formulations is available to Patent Office's only under TKDL Access Agreement.

Present status (**April 2011**) of transcription of the traditional medicine formulation in the Traditional knowledge Digital Library is given in the following **Table-1**

Table-1: TKDL status (April 2011) of transcription

Discipline	No. of texts (including volumes) used for transcription	Transcribed
Ayurveda	<u>75 books</u>	97,337
Unani	<u>10 books</u>	1,75,150
Siddha	<u>50 books</u>	23,016
Yoga	<u>15 books</u>	1,680
Total	150 books	2,92,662

(Source: TKDL Home Retrieved on 23rd March 2015)

Traditional Knowledge (viral disease) serves the health needs of vast majority of people, especially in underdeveloped and developing countries. TK (viral diseases) is being used by indigenous people, researcher, clinicians, academicians e.g. Pharmaceutical and Veterinary medicine, food processing, etc.

There is immense value hidden in the TK (viral diseases) of medicinal plants and herbs that our common people especially tribes, possesses. According to the WHO Report, traditional healers constitute the main source of assistance with herbal problems for at least 80% of the rural population in developing countries.

This Traditional knowledge (viral diseases) may be documented (disclosed) or oral (undocumented/undisclosed). Undocumented knowledge is restricted either to locally known traditional healers or to specific community.

Preserving Traditional knowledge has become an important and valuable input in the management of sustainable development programmes. The growing realization that TK has a role to play in national development as well as the knowledge management environment has led to the growth of interest in preserving and managing it.

India has a very rich and valuable source of TK (viral diseases). Consequently; these traditional resources of India have to be preserved properly.

Need for preserving TK(viral Diseases)

1. Viral diseases cause significantly to the human morbidity and mortality, causing severe economic and human losses globally. More than five million people die worldwide, every year from acute gastroenteritis, mainly rotavirus origin, while more than one million children die annually from measles, HIV (AIDS), Avian Flu, Chandipura, Chickenpox, Chikungunya, Crimean-Congo Hemorrhagic Fever (CCHF), Herpes, Dengue, Ebola, Influenza, Hepatitis, Japanese Encephalitis, Measles, Mumps, Polio, Rubella, SARS, Swine Flu, Viral meningitis and, West Nile, are well known cause for our concerns.

2. Traditional Knowledge (Viral Diseases) is a valuable source of information; however, it is very rare, fragile, and local, oral in nature .It is passed from generation to generation. No systematic recording of this TK (viral diseases) is in existence in Maharashtra. So that it is disappearing day by day and causing threats.

3. If it is not collected, recorded, preserved and made available to the future generations, it will be lost forever, which will be a very big loss to society.

4. Preservation of such information will be beneficial in general health care, ecological control, forest conservation, research and providing leads to plants with useful medicinal properties.

5. Preservation will provide evidence that local communities are the owners of TK (viral diseases). It will establish the claims of local communities to share profits obtained from the commercialization of the various products derived from their TK (viral diseases).

6. Uncontrolled and irregular commercial collection and processing of medicinal plants have led to the extinction of valuable medicinal plants, therefore preserving and protecting medicinal plants become global emergency.

Objectives

1. To collect and preserve TK (viral diseases) before it lost forever and make it accessible worldwide.
2. To study the various characteristics of TK(viral diseases) in relation to viral diseases.
3. To identify the role of Library and Information Science Centers.

Research Methodology

A pilot study has been carried for the Thane District. Since Thane is the largest district in Maharashtra the study has been conducted in two tehsils of Thane District, viz Dahanu and Murbad. Questionnaire is used as main data collection tool, however if require interview technique is also adopted for the study.

Usually the traditional healers do not share their knowledge about traditional medicine; therefore the assistance is taken from the social activists, Social Workers of N G Os traditional medicine experts and users of traditional medicine.

Results and Discussions:

1. Study indicates that traditionally traditional healers are treating jaundice, flu, Chicken pox, measles, mumps,, and Herpes, however due to social secrecy, family/community tradition/heritage, spiritualism, this knowledge is not transferred and on the verge of disappearing.
2. Verbal communication is main source of communication of TK (viral diseases) however; very few if not negligible have hand written records of some formulations.
3. Majority of traditional healers are giving medicine for Jaundice. Very few of them are giving medicine for Mumps and Measles. Study also indicates that people are still having the faith in spiritualism even for treating viral diseases. After discussion with them it is found that for treatment of mainly measles and chicken pox people go to mantriaks/tantriaks.
4. Main source of traditional healer's knowledge is from traditional family heritage. Many of them are farm laborers, while some are saints/spiritual leader. Mostly these healers belong to age group above 40, and very few young healers were found. The reason may be they are

educated and they are migrating for work to urban areas. These traditional healers are not ready to transfer their knowledge to other than their blood relations; therefore it has to be preserved.

5. Study also indicates that majority of Traditional healer's source of knowledge about treatment of viral disease is tradition. It means it is passed from generations to generations.

6. Majority of them are using combination of herbal medicines for various communicable as well as non communicable diseases, however, only few of them are also using even to treat the viral disease. Some of the medicinal plants used for the treatment of some viral diseases are given in Table-1.

Table No. 01: Medicinal Plants used for Treatment of Viral Diseases in Thane District

Name of the Disease	Local name of the Plant
Chicken pox	<i>Kavadal, Halim, Umbar</i>
Herpes	<i>Mola, Rui, Pandhari, Umbar, Buradhe</i>
Jaundice	<i>Ganja, Bamboo / Medsing, Ranch kuda, Kateri, Gulvel, Kawil</i>
Measeles	<i>Umbar, Halim</i>

There is a saying in Maharashtra, "There is no plant in Maharastra, which does not have medicinal properties"

7. It is found that these treatments are totally free and traditional healers are not demanding any money for the treatment. They have the feelings that if they demand anything in return of treatment, these TK will not be effective and may disappear forever. However, only in some case the patient and their relatives give present to traditional healers something in kind, such as rice, coconut, Chicken, *mohachi daru*, etc, which is also optional for them.
8. All of them don't sale their medicines and are also not ready to transfer their knowledge to any third person, other than their family, community, disciples (Shishyas), and close relatives. It has also been observed that either there are no disciples or family member for carrying forward the tradition, mainly due to education and also increasing popularity of Allopathy and other medical systems in Maharashtra at different levels.
9. It also indicates that all traditional healers are bringing medicines mainly from forest.
10. It is also found that some of the medicinal plants are used for treating more than one viral disease.
11. In certain cases single plant is used to treat the diseases and in some cases combination of 2-3 plants is used.

Means to preserve TK (viral diseases)

Based on findings some of the suggestions have been provided with recommendations to preserve TMK (viral diseases). This will also enhance the exchange of traditional, educational and cultural heritage between India and other developed and developing countries.

1. India needs to have in place appropriate policies that encourage and provide guidelines on the innovation, conservation and preservation of TK with special provision of viral/infectious diseases, which provides government stance on those areas.
2. Since, there is no systematic recording of TK (viral diseases) is in existence in Maharashtra, India. Hence there is an urgent need to conduct such studies in other areas of Maharashtra and India.
3. Study and literature review also indicates that documented traditional knowledge (viral diseases) is scattered in various sources. That should be preserved at one central place and National Institute of Virology; Pune should take a lead by creating multimedia based database of documented and oral TK (viral diseases).
4. There is also lack of sharing of knowledge due to various reasons, hence there is an urgent need to have networks at local, regional and national level and should be linked with other similar international databases to share this knowledge.

5. Co-ordination with international bodies such as World Intellectual Property Organization (WIPO) needs to be strengthened.
6. The TK (viral diseases) should also be patented.
7. The documentation should be compiled as a National Bio-resource register.
8. National Centre of traditional knowledge (viral diseases) should be established into which member libraries could send the copies of their traditional medicinal knowledge (viral diseases) records.
9. Different players like libraries, information centers and NGO's should have specific ongoing programmes for collection, organization, preservation and dissemination of TK (viral diseases).
10. Information centers and Libraries can play an important role in collection, compilation, protect, and preserve, digitization for proper communication at global level of TK (viral diseases) in regional language with its translation facilities. This is possible by establishing TK (viral diseases) Centers.
11. TK (viral diseases) information policies should be the part of health policy of Govt. of Maharashtra, India to collect, record, preserve make available to future generations in order to strengthen the use of TK (viral diseases).
12. The government should exploit the talents of traditional healers living in the remote areas of the country.

13. Regional, National and global research programs are essential to identify traditional healers and their TK (viral diseases).
14. Research in TK (viral diseases) should be supported by Govt. agencies. According to the community, spreading awareness of conservation among the common people and the younger generation should be made obligatory.
15. It is also necessary to adopt sustainable IT based techniques and tools to protect TK in order to preserve them for future generations.
16. Various methods of documenting and preserving tribal culture & knowledge can be broadly classified as Photographs, Audio matter visual recording including documentary films, Textual Matter, Audio-video recording, Audio-video recording, Digitizing

Problems in TK (Viral Diseases) Collection

- Collecting information directly from healers is a sensitive issue because many of them do not want to share their knowledge due to their orthodox belief that powers/knowledge will be lost if they will share with others. Guru had to communicate the knowledge to his/her shishyas, which passed from generation to generation and parents to child mostly in local languages. So it becomes difficult to document and preserve it. The other reasons are brain drain, lack of capacity to undertake tedious process of collecting information about TK (viral diseases). Documentation of TK (viral diseases) is not co-ordinated as these

activities are either restricted to individuals or libraries and information centers (ICLs) as well as NGO's.

- **Legal policy:** There is no strong Indian law. It is rather unfortunate that like Indian Patent Act 1970, the WTO too does not make provision of protection of the ancient traditional national heritage of India. However, now some of initiatives have been taken in this direction.
- **Herbal plants:** Ayurveda Medicine and Indian herbs form one of the most vulnerable sectors in the context of patent regime. There are numerous foreigners, who have patented on basis of secondary researches *Neem, Haldi, Sunthi, Aswagandha*, have patented medicinal herbs and plants of India and Basmati are few among them. This piracy can be prevented only by major changes in patent laws designed to protect the national heritage of the country.

Conclusions

This study of preserving Traditional Knowledge (Viral Diseases) will support to carry out specific disease and traditional knowledge wise research. It will also be very helpful in validation of indigenous claims for various viral diseases covering **Ethno-biology, Ethno-medicine, Ethno-pharmacology, Ethno-pharmacognosy & Clinical Studies on efficacy.**

This study will also be useful for developing model for documentation and preservation of other branches of traditional knowledge.

Acknowledgment

Author is particularly grateful to informants in local community for their hospitality, cooperation and sharing their valuable information. Author is also grateful to social activists, Social Workers of NGOs, traditional medicine experts, users of traditional medicine and teachers for their kind support.

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