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Interface between Traditional Knowledge (TK) and Human Rights in Realizing Right to Health and Health Care – An Indian Perspective

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Abstract

India is rich in genetic resources and traditional knowledge (TK) and it is one of the countries with mega biodiversity. Traditional knowledge used by Indian indigenous and local communities is the backbone for their existence, especially in key sectors of food and health. More than 1.5 million traditional medical practitioners in India use medicinal plants for preventive, promotional and curative purposes. About 65% of the Indian population relies upon traditional medicine for its healthcare needs. The World Health Organization (WHO) has stated that the goal of 'health for all' will be accomplished with wide usage of herbal medicines. The relationship between traditional medicinal knowledge and IPR is intricate relates to the equitable sharing of benefits arising out of the commercial exploitation of such knowledge. Hence, this paper argues for the rising need to preserve the traditional medicinal knowledge of the India, and translation of the traditional knowledge into drug development programme. This paper also aims to elucidate the theoretical framework of role of TK in realizing right to health, to identify the potential manifestations and causes of violations of the right to health in practice. The human rights approach will enable the researcher to bring a perspective on potential challenges to the rights of the various stakeholders in creation of TK. This paper concludes that TK can contribute to realizing the right to health through their availability, accessibility, acceptability, and relative quality.

Keywords: *Traditional Knowledge, Indigenous Communities, Public Health Issues, Accessibility of Medicines, Right to Health, IPRs*

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Introduction

Traditional Knowledge (TK) based medicines are in use at more than 60 percent of the world's population. These medicines not only used by the rural masses for their primary health care in developing countries (Boon 2002) but are also used in developed countries where modern medicines dominate. The Indian subcontinent is a vast repository of medicinal plants, which will be used in traditional medical treatments. The TK based medicines in the traditional systems are derived from herbs, minerals, and organic matter, but for the preparation of herbal drugs, only medicinal plants are used. Use of plants as a source of TK based medicine has been an ancient practice and is an important component of the health care system of India. In India, about 70 percent of rural population depends on the traditional Ayurvedic system of medicine. Most healers/practitioners of the traditional systems of medicine prepare formulations by their own recipes and dispense to the patients. In the Western countries, approximately 40 per cent of people are using the herbal medicine for the treatment of various diseases. This interest in traditional medicines is growing rapidly due to the attention being given to it by the governmental agencies and different Non-Governmental Agencies (NGO's) comprising of general public and researchers (Kuei-Jung 2011) as well as the increased side effects, adverse drug reactions, and cost factor of the modern medicines.

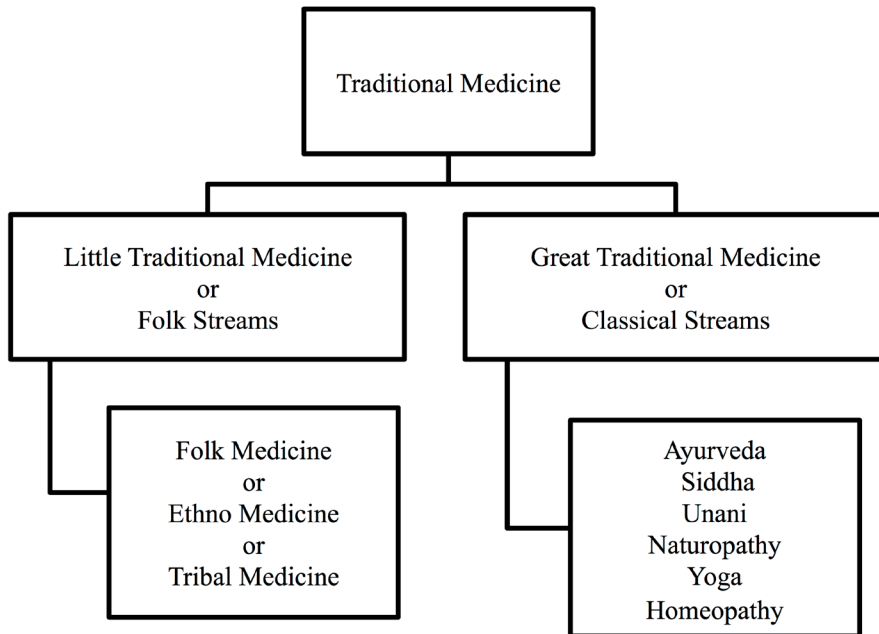
This paper aims to elucidate the theoretical framework of role of TK in realizing right to health, to identify the potential manifestations and causes of violations of the right to health in practice. The human rights approach will enable the researcher to bring a perspective on potential challenges to the rights of the various stakeholders in creation of TK. This paper argues that TK can contribute to realizing the right to health through their availability, accessibility, acceptability, and relative quality. This paper also aims to explore current legal framework regarding TK and to highlight the possibilities of synergies and exchanges between TK, human rights and health from an inter-disciplinary perspective.

1. Evolution of Traditional Knowledge (TK) based Medicine in India

TK is the knowledge owned by traditional communities in different parts of the world and richly found in the developing world. In India TK is found in the verbal form and predominantly owned by indigenous community. There was a system of medicine with professional healers in India for several centuries before and after 2000 BC. Harappan culture contained the seeds of

later Indian medicine. That apart, a few lines on definite nature of medicine are to be found in the earliest literature of India, the Rigveda, the data of which may mostly be referred to the later part of the 2nd millennium BC. During this period, disease was believed to be mostly due to wrath of gods and effect of evil spirits and healing art was followed by prayers several hymns and often aided by the herbal remedies and other treatments and they cured some diseases like blindness, lameness and even leprosy. In the late 5th or 6th century before Christ, the traditional Indian medical system formed and references are there (Habib and Raina 2005) in the Hindu texts. During this period, there was a strict system of socio-religious taboos followed by controlling the contacts and dietary habits of the people. Over a period, the science of medicine, which is known as Ayurveda was formed, and a line of sages (B.V. Subbarayappa 2001) were believed to have carried the original lore of the Ayurveda in various eras, down to historical times. In the later stage, Charaka and Susruta contributed to popularise the Ayurveda in India by bringing out Sanskrit medical manuals namely, the Charaka Samhita and Susruta Samhita respectively. The pharmacopoeia of the Vaidya (Nisula and Tapio 2006) was very large and Susruta alone mentioned over 700 medical herbs. Surgery was also practiced like the removal of calculi from the bladder, the replacement of bowels exposed because of wound, stitching the stomach wall and the Caesarean section in the case of mothers who died before giving the birth. The achievements in plastic surgery were unrivalled anywhere in the world until the 18th century. The term hospital was described by Fahsien, the Chinese traveller who visited India at the very beginning of the 5th century AD. Soon other systems of medicines like siddha, Unani etc. also emerged and continued to develop with Ayurveda. These systems have actually survived the onslaught of ages primarily because of the systematic method in which the practitioners of these systems recorded their knowledge. In contrast, tribal medicine being passed from generation to generation by virtue of word of mouth alone is actually losing its ground. According to Reddy (Reddy and Sita 2006), “ Traditional Medicine is that of whole, which includes a holistic knowledge and practices oral or written, functioned in diagnosis, prevention and curative aspects of illness and disease to promote total well-being, confined explicitly or implicitly on practical experiences and observations or know-how techniques with or without local/regional culture having overtone of religion or not”. “The sum total of all the knowledge and 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”.

Classification of TK based Medicine:



Source: Raja Chakraborty (2017)

According to the Task Force Report, Government of India, 'folk streams' and 'classical streams' are the two divisions of traditional medicine. Folk stream comprises mostly of the oral traditions practiced by the rural villages. The carriers of these traditions are millions of house wives, thousands of traditional birth attendants, bone setters, village practitioners, eye treatments, treatment of snake bites and the traditional village physician/herbal healers, the 'Vaidyas' or the tribal physicians. These streams of inherited traditions are popularly known as Local Health Traditions' [LHT]. Classical stream is the second level of traditional health care system in the scientific or classical system of medicine. This comprises of the codified and organised medicinal wisdom (Binu 2011) with sophisticated theoretical foundation and philosophical explanations expressed in classical texts like 'Charaka Samhita', 'Susruta Samhita', 'Bhela Samhita' and hundreds of other treatises including some in the regional languages covering treatises of all branches of medicine and surgery, Systems like Ayurveda, Sidha, Unani, and Tibetan etc. are expressions of the same. India is the largest producer of medicinal plants. There are currently about 250,000 registered medical practitioners of the Ayurvedic system, as compared to about 700,000 of the modern

medicine. In India, around 20,000 medicinal plants were recorded however; traditional practitioners use only 7,000–7,500 plants for curing different diseases. The proportion of use of plants in the different Indian systems of medicine is Ayurveda 2000, Siddha 1300, Unani 1000, Homeopathy 800, Tibetan 500, Modern 200, and folk 4500. In India, around 25,000 effective plant-based formulations are used in traditional and folk medicine. More than 1.5 million practitioners are using the traditional medicinal system for health care in India. It is estimated that more than 7800 manufacturing units are involved in the production of natural health products and traditional plant-based formulations in India, which requires more than 2000 tons of medicinal plant raw material annually. More than 1500 herbals are sold as dietary supplements or ethnic traditional medicines. In India, the people will use alternative medicines where there is no access to conventional medicine. There are number of attempts to define TK by taking into account the concepts and practices but it is difficult to get a comprehensive definition, which can cover all the aspects of traditional medicine in its true logical spirit.

2. Traditional Knowledge (TK) and the Right to Health: Synergies and Implications

Many international legal instruments defines right to health as an economic, social, and cultural right guaranteed by national and international legal instruments to ensure each individual the conservation of better health through actions aimed at improving social, political, and economic conditions of individuals and communities and a better functioning of the health care delivery system.

However, TK and the right to health both aim to ensure the best health conditions to all, the links between the two have neither been investigated nor taken into account while implementation of health policies at national and global levels.

The main sources of this right at the international level are:

- The Universal Declaration of Human Rights 1948,
- The Covenant on Economic Social and Cultural Rights of 1966,
- The Committee of the Economic, Social and Cultural Rights 2000,
- Convention on the Rights of Child 1989,
- African Charter of Human Rights and the Peoples of 1981, American Covenant on Human Rights dedicated to the economic, social and cultural rights of 1988, and

- Convention on Elimination of all forms of Civil and Political Rights (CEDAW) will officially affirm the right to health.

- The United Nations declaration on the Sustainable Development Goals (SDGs), adopted on September 25, 2015, succeeding the Millennium Development Goals (MDGs). SDG-3 (ensuring healthy lives and promoting the well-being for all at all ages) is the only explicit health goal. However, other goals address underlying determinants of health, including food, water, sanitation, housing, and sexual and reproductive rights. The MDGs focused mainly on discrete health concerns often subject to vertical interventions, such as AIDS, tuberculosis, malaria, and maternal and child health. The SDGs not only incorporate many of the same disease-specific targets, but also cover complex multifactorial diseases and health determinants, such as mental illness, non-communicable diseases, pollution, road safety, and more. Other targets address the Framework Convention on Tobacco Control, health financing and the health workforce, research and development, and managing national and global health risks. The health targets vary in precision. Some are numeric targets; others offer little more than issues on which states should make progress. Several have end-state goals (ending AIDS and other epidemics, ending preventable child deaths); others do not. Another health target, universal health coverage, is a critical means towards achieving other SDG 3 targets.

- The Millennium Development Goals constitute an illustration of the global awareness that health is one of the conditions of social development and reduction of poverty. Three of the eight objectives in this declaration pertain to health matters.

Finally, the mandates of several intergovernmental agencies entrust stakeholders with the responsibilities of realizing the right to health. It is the case for WHO, UNFPA, UNDP, the African Union, and the European Union. The right to health is essential for the enjoyment of other rights but its realization also depends on the recognition and the effectiveness of other rights (for example, right to education, freedom of association, housing right).

An analysis of the developments of the right to TK shows that the contribution and the role of these rights were not taken into account, because:

- Article 12 of the International Covenant on the Economic, Social and Cultural Rights, which guarantees the right to health, contains no mention of the contribution of the TK. It also does not specifically mention conventional medicine or otherwise prescribes the types of medicine required to meet the highest attainable standard of health.

- In its General Comment No. 14 on the right to health, the Committee of Economic, Social and Cultural Rights takes a reductionist view by framing

the question of TK as a matter of interest and concern only for native people. In doing this, the Committee misses what current data show, namely that everybody (including urban populations) resorts to non-conventional and complementary medicines. The Committee confines these medicines to the used materials (healing plants, animals, and minerals) without mentioning their psychological and spiritual components.

- At the operational level, in his efforts to identify indicators of implementation of the right to health, the former special UN Rapporteur on the right to health underlines the necessity for health professionals to respect cultural differences. Yet a single reference mentions traditional practitioners among the healthcare professionals.

- Finally, on the technical level, few health systems studies integrate the contributions of TK in matters of prevention or health care costs.

The contribution of TK to the realization of the right to health has not been studied empirically. Yet a theoretical assessment of the comparative nature between the normative components of the right to health and the characteristics of TK might bring some clarification on possible links. Both approaches consider availability, accessibility, acceptability, quality of care, and non-discrimination as important features. This shows the potential of TK to contribute to the effective realization of the right to health where modern medicine falls short:

- Obligation to arrange sufficient installations, resources, services, and functional programs for public health and health care. This is a central obligation of states regarding the right to health. Many states are failing to fulfil these obligations. By contrast, TK are often readily available in these states, mostly without state intervention.

- Obligation to make health installations, resources, services, and public health and health care programs accessible to all citizens without discrimination. This right to health obligation implies physical, economic, and cultural dimensions of accessibility. Affordability is often an obstacle to accessible formal health services. Yet TK often have low costs. A Japanese study of 1,000 patients indicated that the annual average cost of direct payment for the non-conventional medicines was one-half lower than that of modern medicines.

- Obligation to make health care and public health infrastructure, resources, services, and programs readily acceptable to all users in terms of satisfaction with medical ethics and cultural sensitivity. This is a third right to health obligation, which emphasizes acceptability and requires health infrastructures and services to be delivered with respect and in a culturally acceptable manner. Cultural acceptance of TK, above all, explains their current use.

- The demand for quality health care implies cultural acceptability, scientific rigor, and medical appropriateness of therapeutic procedures, services, technical installations, and properly qualified medical staff. In contrast to the possible advantages of TK cited above, certain NCM malpractice raises particular concerns. Charlatanism, exploitation of the patients, and unacceptable hygiene conditions are all too common, especially when these services escape or do not require the approval of competent authorities. (Shabalala, D. 2007) Here, many traditional medicines show important flaws. Furthermore, therapeutic efficacy is a crucial issue: in this regard, TK have sometimes been shown to be therapeutically effective – but often not.

Non-discrimination in the organization and supply of health services requires health infrastructure and services to be accessible to all, particularly to the most vulnerable and marginalized populations. Services must be administered according to the law, without discrimination by race, sex, age, and religion. In some regards, (Tong 2017) TK are less discriminatory since they are community-driven in developing countries and individually chosen in industrialized countries.

Furthermore, there are guidelines (promulgated by WHO) dealing with Regulation of TK:

- Quality control methods for medicinal plants (1998);
- Safety monitoring of herbal medicines in pharmaco vigilance systems (2004);
- Regulation of herbal medicines in South East Asia Region (2003);
- Methodologies on research and evaluation of traditional medicines (2000);
- National policy on traditional medicines and regulation of herbal medicines (2005);
- Good agricultural and collection practices for medicinal plants (2003).

Other UN agencies have issued guidelines that indirectly concern TK, such as the World Intellectual Property Organization's protection of traditional knowledge, to a situation where TK traditional cultural expressions, and legislative texts concerning the genetic resources (expressions of the folklore). Furthermore, some states, including members of the European Union, have issued directives in the field of TK, such as directive 2004/24/EC.

3. Traditional Knowledge (TK) Based Medicine—A Key Tool for Realizing Right to Health

Traditional medicine forms a central health-seeking arena for a large part of the world population in developing countries. Traditional medicine is highly dependent on ecosystems for providing services, such as natural medicinal

resources and nutritional sources. It also depends on cultural or recreational services insofar as nature, the environment and their attributes have cultural, religious and symbolic value in determining health and promoting healing. The persistence and current use of TK is not harmless. The analysis of this domain reveals complex stakes of political, economic, security, cultural, and legal nature. Politically, recourse to TK is an answer to the health needs of the populations, which points to the responsibilities of governments on one hand, and on the other hand, relates to power struggles between diverse modalities of social organization and interests of numerous actors in the health sector. These medicines long represented a form of colonial resistance, as well as a strategy to insure health care for all, especially rural populations. TK represent an economic reality.

TK is cultural products, vectors of knowledge, but also a form of connection among members of the society. TK is inheritances of various societies and so from a social perspective deserve protection. The use of TK also implicates various human rights, including:

- The right to life, by the conservation of the human lives;
- The right to health, by the access to diverse therapies, where they have demonstrated their therapeutic efficacy;
- The right to intellectual property, because they belong to the communities that have been using them for centuries;
- The right to work, due to the fact that they generate income for traditional medicine practitioners;
- Cultural rights, because they belong to and shape the identity of the peoples.

The interplay of the various issues has generated obstacles that deny traditional medicines their role and limit their impact on global health. These challenges are multiple. Following section will throw some light on this.

4. TK Based Medicine – Case Studies from India

4.1 Case study – Kani Tribals Jeevani

The Kanis tribes are subsistence dwellers of the forest and are collectors of non-timber forest produce. Their society includes medicine men and women who have expert knowledge of the medicinal and nutritive value of the plants, herbs and tree products of the vegetation that grows around them. They consider this knowledge secret and sacred and the knowledge is passed on from generation to generation by the oral tradition. Although these tribes were traditionally nomads travelling from forest to forest, for the past 150

years they settled down in tribal hamlets of between 10 and 20 families in the forest of the Agast-Hymalai hills of the Western Ghats. A group of scientists working on the All India Co-ordinated Research Project on Ethnobiology (AICRPE) was assigned to survey the Kani tribal settlements, for which purpose, in the absence of any road network through the region, was in 1987 trekking through the tropical forest hills. Some Kani tribesmen who acted as points men accompanied the group. Members of the group grew tired and had to halt periodically. However, their Kani guides continued to be fresh and energetic throughout the trek by occasionally munching small wild-growing blackish fruit. One of the guides offered the fruit to some of the tired scientists who were astonished to find their fatigue disappearing and that they were able to continue the trek at a faster pace. The members of the group reported this episode to the Tropical Botanical Gardens Research Institute (TBGRI) in Kerala who was assigned the task of scientifically testing the plant. This plant was identified as *Trichopuszeylanicus* ssp. *Travancoricus*, colloquially referred to as *Aarogyappacha*. Chemical and phamacognosical investigations showed that the leaf of the plant contained various glycolipids and some other non-steroidal compounds with profound adaptogenic and immuno-enhancing properties and the fruit of the plant has stress and fatigue combating properties. Using this plant, and extracting substances from the plant, and after standardisation the TBGRI formulated a drug named 'Jeevani'. The Kani tribe members were using only the fruit of the plant whereas jeevani was developed from its leaves (never used by the Kani tribe members). Patent applications were filed by TBGRI for the process of making the novel formulations. TBGRI has successfully licensed the process for manufacturing and marketing of the drug to Arya Vaidya Pharmacy a private company for a period of 7 years. The consideration was also fixed as Rs.1 million (USD \$25,000) towards licensing fee and a right to receive royalties from the sale of the drug at a rate of 2% ex-factory price on the sales of the product. 'Jeevani' medicine was sold in India as well as in other countries like the USA and Japan.

4.2 Case Study: Gunis and Medicinal Plant Conservation at Rajasthan

The *Gunis* (traditional healers) and medicinal plant conservation farmers live in the Mewar Region of Rajasthan, India. As their communities' primary health providers, the *Gunis* ensure people's well-being through adherence to their virtues of selfless service and caring for the environment. Their spirituality is integrally connected with nature through a sacred relationship and deep sense of kinship and compassion. In August 2009 the community

developed a bio-cultural community protocol to address the protection of their traditional knowledge. *In situ* medicinal plants conservation areas (which include endangered species), home herbal gardens, conservation farming of medicinal plants for local markets, *Guni* Ashrams (nurseries for donation to villagers), and customary norms of harvesting all embody the bio-spiritual values that ensure the conservation and sustainable use of medicinal plants.

The *Gunis*, which include both women and men, are culturally diverse and have specific types of traditional knowledge, practices, and understanding of ailments and illnesses that are shared between *Gunis* and with their students. They have traditional knowledge and practices about medicinal plant resources and they also have ethno-veterinary knowledge about livestock breeds and help conserve nearby pastoralists' animal genetic resources.

5. Conclusion – TK Vital Tool in Realizing Right to Health

From the above discussion, it was observed that TK is a pre-requisite for endurance of humanity, key tool for realizing right to health. TK is often presumed to hold the key to sustainability due to its interconnectedness with various facets of life, as well as local patterns of resource use and management. However, TK has been marginalized in the process of modernization, in most countries, cultural or traditional knowledge comes under a ministry of culture or religion with insufficient inter-sectoral attention from the more politically strong and resource-rich ministries of science, technology, education or development in such countries. But in India the significance of TK can be traced from vedic period to till date, in step to give legal sanction to right to health, Article 21 of Constitution of India, explicitly declares 'right to life' as a fundamental right. Further, for promotion of TK based medicine it has established Ministry of AYUSH, this department will work for promotion and standardization of TK based medicine. Besides this for protection and conservation of TK Government of India has established a National Bio-diversity Authority it is responsible for benefit sharing to indigenous communities whenever there as a commercialization of TK. The Indian government is also keen in commercialization of TK and is evident from above two case studies, Kani Tribes Case Study, and Gunis Case study. TK can play a central role if contemporarily relevant elements can be strengthened through revival of the social processes of its generation, conservation and transfer. The integration of traditional and contemporary health practices in the state of Kerala, India is used as an illustrative model in this context. An important challenge is to identify and transform such an understanding into practicable community programs. There is a critical need

for culturally and locally relevant educational practices linking this to the success and appropriateness of learning for sustainability. It is essential that increasing numbers of educational institutions have sensitive approaches to understanding traditional knowledge and promoting its integration in development planning. While the development approach involving TK can be an endogenous model based on principles of social learning, exchange between various cultures is also important for the dynamic growth of such knowledge systems. Designing and implementing culturally appropriate pedagogies and their integration into formal and informal learning processes are therefore part of this process. Through such an approach, countries that are rich in biodiversity and TK can capitalize on their inherent strengths to rise to higher levels of sustainable well-being of humans. Finally the linkage between TK and right to health are not unidirectional. The two areas offer significant possibilities of synergies, which generally have not yet been sufficiently exploited. The availability, accessibility, and quality of modern medicines do not seem to discourage the appeal of the TK or contribute to their disappearance. Establishing synergies between TK and modern medicines could improve global health care.

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