

Cognitive Dimensions of Health Management among Selected Indian Tribes

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ABSTRACT

Health is keynote affair in all tribal cultures. Good health for tribal people has social, economical and spiritual dimensions. The ‘health – culture’ approach for Indian tribal population is complex and covers beliefs, attitudes, indigenous techniques and therapies, cultural aspects of ethno-medicine, infiltration of western medicine and ethno-psychiatry via magico-religious system.

Primitive tribal groups even today, reside in resource scarce conditions. Multiple studies have linked poor socio-economic status, inadequate access to health infrastructure and lack of awareness with their destitute health status. Among different tribal groups occupying varied ecological zones, traditional belief is deep rooted to an extent that they lay major emphasis to indigenous health care system (i.e. herbal medicine, ethno-medical system and religio-magic approach).

Their indigenous insight and practices is inevitably associated with rich bio-diversity of the inhabited territory. Even present day tribal groups frequently relate ill-health and disease conditions with spirit invasion, sorcery and evil spirits and traditional healer for disease treatment. Thus there prevails a strong association between ecology, culture and health practices which further relates to ‘cognitive uniformity’ among different tribal groups regarding several diseases and health practices. The present paper therefore focuses on cognitive health dynamics prevalent in Indian tribal groups inhabiting select geographical areas. A few suggestions have also been made on health and brain-mapping with reference to cognitive dynamics.

Keywords: Tribal health, ethno-medicine, cognition, religio-magic approach

INTRODUCTION

Tribal population is found in varied concentration in several regions of Indian subcontinent and every tribal group has its own distinct socio-cultural identity, taboos and lineage. Striking similarities are noticed in their modes of living, each tribe lives in a definite area, has common dialect, cultural homogeneity and unifying social organisation (Basu, 2000). Health

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is principal focal point in all tribal societies and cultures. It is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (WHO, 1948).

The health behaviour of a community is determined and affected by its cultural beliefs and practices. Among several primitive and non-primitive tribes, the issue of health, disease and treatment is governed by customs, beliefs and cultural traditions. The 'health-culture' approach provides a valuable framework for analysing the work of anthropologists in health fields. In the present scenario most of the tribal population is characterized by poor and ill-health primarily because of poor sanitation and personal hygiene, poverty and ignorance, lack of modern health care facilities, physical isolation and absence of safe drinking water.

It is essential to differentiate illness and health in this context. Illness and health are two antagonistic concepts where the former is dysfunctional to society and latter vests in functional necessities of member of a society as illness incapacitates for the effective performance of social roles. Parsons (1951) defined illness as a state of disturbance in the normal functioning of the total human individual, including both the state of an organism as a biological system and of his personal and social adjustments. Thus within tribal cultural purview, illness has biological, physical and social dimensions.

Extensive research has been conducted in tribal locale which provide insight upon health services, dynamics of health seeking behaviour, magico-religious approach to health; traditional and indigenous medical knowledge, beliefs and practices, influence of development programmes on tribal health and infiltration of western medicine and disease treatment in tribal areas (Jaggi, 1973; Basu, 1986; Chaudhuri, 1990; Khan, 1986; Kapoor, 1998, 1999, 2000; Basu, 2000; Misra and Kapoor, 2000a, 2000b, 2000c; Misra, 2002; Bhasin, 2007, Pandey, 2011, Pradhan, 2013). Every culture therefore, regardless of its simplicity and complexity, has developed indigenous beliefs, customs and practices linked with disease causation and cure. Different people pertaining to different tribal groups have different perceptions of health and illness.

Tribal people link disease causation with supernatural intervention if not cured by medicines and establish strong totemic associations with inanimate or animate elements of nature. Traditional medicine men or traditional healer is frequently consulted to alleviate illness on the basis of their elaborate ethno-medical knowledge and tradition. The indigenous or 'folk' medicine is an outcome of native indigenous knowledge of biodiversity which has critical influence on tribal ethos.

Tribal population is frequently linked with ecological legacy, dependency on forest and forest products, geographical isolation, strong faith in indigenous cultural customs and traditions. They lay major emphasis to indigenous health care system (i.e. herbal medicine, ethno-medical system and religio-magic approach). This has led to development of uniform cognitive insight among different tribal populations.

The present paper attempts to provide comprehensive picture related to cognitive health dynamics prevalent in Indian tribal groups inhabiting select geographical areas. In addition a few suggestions have also been made on health and brain-mapping in relation to cognitive dynamics.

MATERIALS AND METHODS

The data was collected from several secondary sources such as government and non-government publications. The data was also collected in different phases by AKK (one of the author) from West India and Himalayan region using several tools and techniques such as participant and non-participant observation, schedules, interviews, case studies and group discussions.

HEALTH DYNAMICS AND HEALTH SEEKING BEHAVIOUR

Certain 'body of beliefs' govern health dynamics in Indian tribal population:

Ethno-medical practices: Ethno-medicine simply relates to traditional medical knowledge and practice. The subject of medicine in fact focuses on the illness as it is conceived by natives; their own methods; criteria of disease classification; the causes and cures; types of therapists and healers who seek to alleviate illness; and their skills and social roles; preventive measures; the relation between medicine and religion; cultural aspects of medicine and also ethno-psychiatry (Hughes, 1968-99).

Ethno-medicine is considered as a cognitive system because it is linked to disease theory. Treatment of a particular disease among tribal people is related to the perception of members of a society for that disease. The traditional medicine knowledge and beliefs is inextricably linked with rich bio-diversity of the habitat which the tribal people inhabit. Amongst most tribal and rural communities in India and other parts of the world, ethno medicine or 'folk-medicine' is an oral tradition of health care and health seeking practices.

Ethno-medical tradition is an autonomous, decentralised and community linked phenomenon which relies upon local resources and indigenous beliefs. Treatment of an ailment/ disease is linked with disease causation and several types of traditional methods and health seeking practices prevail in tribal communities for disease treatment.

Bhasin (2007) suggested five prominent types of methods for disease treatment:

1. Traditional medicine alone;
2. Traditional medicine in combination with spiritual healing;
3. Spiritual healing alone (exorcism is used in spiritual healing, apparently to cast away the evil spirits causing disease);
4. Other forms of alternative medicine; and
5. Western or biomedicine.

TABLE I: Herbal medicines used by Saharia tribe (Rajasthan)

Area/ Region	Tropical / Botanical nomenclature	Medicinal utility
Upreti area	Pila Ganna (<i>Saccharum sp.</i>)	To cure fever (bukhar)
	Nagphani (<i>Cactus sp.</i>)	To cure wounds
	Neem (<i>Azadirachta indica</i>)	To cure stomach-ache and eye infection
	Datura (<i>Datura stromium</i>)	To cure asthma and itching (khujli)
	Bor (<i>Zizyphus jujube</i>)	For teeth-brushing and toothache
Taleti area	Mahua (<i>Basis latifolia</i>)	To cure ulcers, skin diseases (charam rog) and heat stroke (loo)
	Kandol (<i>Sterculia urens</i>)	To cure chapped/ cracked skin
	Thur (<i>Cactus sp.</i>)	For cough and cold (thanda pawan) and earache
	Haldi (<i>Curcuma domestica</i>)	For scabies, eczema and bone dislodgement
	Babool (<i>Acacia nilotica</i>)	For conjunctivitis

cf.: Misra and Kapoor, 2006

TABLE II: Herbal medicines used by Kondh Tribe (Orissa)

Botanical nomenclature (Tribal vernacular name)	Parts utilized and preparation	Treatment of ailment
Acacia torta (Dentari)	Leaves, leaf juice applied on forehead	Headache
Achyranthus aspera (Apamaranga)	Stem, utilized to get relief from toothache. Leaf paste with jiggery and curd taken twice daily (Kondh)	Toothache, blood dysentery
Alanthus excels (Mahanim)	Dried stem bark powdered	Diarrhoea, worm infestation, piles, chronic fever, skin disease, vomiting, leprosy, cough, cold, asthma
Careya arborea (Kumbhi)	Bark and Bark extract used (Kondh)	Blood dysentery
Cissus quadrangularis (Hadbhanga)	Whole plant part used as paste	Bone fracture
Hibiscus rosasinensis (Mandar)	50 gm dried flowers powdered with 7 black-pepper berries powdered drug given approx. 5 gm per dose thrice a day for 3 days	Bleeding piles
Limnonia crenulata (Kumballi, Biyut)	Root pounded and made into pills, taken orally (Kondh)	Body pain
Magnifera indica (Amba)	Bark paste with water is taken twice daily. Bark powder given with jaggery twice a day and person bath in boiled bark water	Diarrhoea, Rheumatism
Terminalia chebula (Harida)	Seed coat powdered	Constipation
Vitex negundo (Begunia)	Leaf vapour generated by boiling with water in a closed earthen vessel inhaled through mouth	Cough and Asthma

cf.: Bulliyya et al., 2006

Owing to rich ecological legacy, several tribal populations utilize herbal medicines as a part of traditional medical system. Misra and Kapoor (2006) suggested that Saharia tribe resort to herbal medicine for certain ailments (Table I). Bulliyya et al. (2006) provided account of ethno-medical practices prevalent among Kondh tribal group of Orissa (Table II).

Maternal and child health forms a crucial facet of health seeking practices among tribal population. Pregnancy wastages, low birth weight babies and pre-mature deliveries are a consequence of maternal malnutrition in tribal communities. Nema and Gautam (2006) provided an account of several birth care practices followed by Baiga tribe in Madhya Pradesh (TABLE III)

Table III: Indigenous medicine used in birth care practices by Baiga tribe (M. P.)

S. No.	Indigenous medicine	Ailment treatment	Method of preparation	Dosage	Duration of application
1	Baichandi	Weakness	Crush the root and boil in water to prepare extract	2-3 teaspoon extract taken-once or twice	Applied up to relief
2	Bela	Body pain	Shoot is boiled in water	Take bath (once)	3-5 days
3	Ajwain+ Dry ginger+ Coconut + Piper Carain	Post-natal care	Boiled in water and extract prepared	50-100 ml extract taken as drink- 5-6 times	1 week
4	Mustard oil	-----	Massage of body	2 times	More than 1 week
5	Chirayata	Fever	Shoot is boiled in water	2-3 teaspoon extract	Twice a day
6	Van Maithi	Urinary infection	Crush the root and boil in water to root	50-70 ml	Twice a day
7	Katanga Bans (Bamboo)	Cough and cold	Leaf paste	1-2 teaspoon twice or thrice a day	
8	Kirmich (shrub)	Skin disease	Ash of shoot	Dry ash applied on affected area	Twice or thrice in a day

cf.: Nema and Gautam, 2006

Table IV: Indigenous medicines used by the Rajis for disease treatment

Disease	Vernacular name	Herbs used	Remedial measures
Headache	<i>Sardard</i>	Shyarhee, dalta, khajima	Resin of <i>shyarhee</i> is applied on forehead to get relief from it. The other medicine is <i>dalta</i> . To relieve headache the seed oil of dalta is used in massage. Root juice of <i>khajima</i> is also rubbed on forehead
Body ache	<i>Badandard</i>	Mahua	The oil of <i>mahua</i> seed is applied over the entire body. The beer of the mahua is applied over the body to get relief from pain. Besides, the above mentioned medicines like resin of shyarhee, seed oil of dalta and root juice of khajima are generally used.
Cold & cough	<i>Khansi aur sardi</i>	Binait	Root juice of <i>binait</i> is given in the treatment of cough and asthma. Seed water with warm water is given in cold. The patient is also advised to take cold water. If the child is suffering from acute cough then the intestine of <i>saura</i> is rubbed on the stone and is given in it.
Cuts & wounds	<i>Katna aur chot</i>	Mana, shyarhee	As soon as an individual meets a cut, she or he moves a little away to dhonjun urinate over the cut. The soft leaves of plants available nearby are plucked and crushed in hands to get juice. The juice is dropped over the cut. A paste is prepared from the bulbs of <i>mana</i> on cuts. The poultice is applied on it. Resin of <i>shyarhee</i> is applied on cuts and some other folk medicine for cuts are also used like the leaf juice of <i>dhonjan</i> , which is externally applied.
Burns	<i>Jalna</i>	Nirbusi	In case of burning, the tribals prepare part of leaves, flowers, seeds etc. to apply over the affected part of the body. The paste of <i>nirbusi</i> is rubbed on the affected part. They also apply the wood paste on burns.
Itching & other	<i>Khujli</i>	Mothy, angyan	To remove itching and other skin ailments they have their indigenous skin ailments lampatya medicines. Poultice of leaves of <i>mothy</i> is applied on various skin ailments. Young shoots and leaves of <i>angyan</i> are made into paste which is applied with mustard oil in various skin ailments. Leaf part of <i>lampatya</i> is applied to itching and eczema. Ash from leaves and roots is applied externally on sores and various skin ailments.
Arthritis	<i>Pair totna</i>	Churya, daiya, seeru	Oil from the seeds of <i>churya</i> is massaged in sciatica pain. Root paste of <i>daiya</i> is applied on swollen joints. Young shoots and leaves of <i>seero</i> are thoroughly washed, boiled and cooked as vegetable and is recommended for arthritis. They also use the extract of animal in the treatment of joint pains. The leg of <i>kankar</i> if rubbed on a stone the colour of it will change into yellow and this is rubbed on the affected area.
Toothache	<i>Daant pirana</i>	Katharhowle	For the toothache <i>katharhowle</i> is smoked with tobacco. Fruit paste is filled in decaying cavities of tooth.

cf.: Pandey, 2011

Ethno medical studies are planned and executed to evaluate the effectiveness of traditional health care practices; the prevalence of illnesses and the distribution of knowledge about illness attributes; the negotiations and instantiation of illness identities; the power of discourse to produce as well as cure affliction; discourse as moral commentary; linkages between medico-religious institutions, models of self, power and the state (Bhasin, 2007).

Misra and Kapoor (2006) suggested sequential treatment strategies adopted by Saharia tribe (Rajasthan) for remedial actions related to the ailment (Fig 1-3).

Fig 1 demonstrated that among 96 Saharia individuals (who opted for allopathic treatment as their primary choice) only 26 (27.1%) individuals had visited district hospital to receive allopathic treatment (as their secondary treatment). The prime reasons for denial of allopathic treatment among Saharia tribe were costly treatment and lack of health care infrastructure in their vicinity. Out of 96 Saharia individuals, 34 (35.4%) individuals shifted to spiritual treatment after primary or initial allopathic treatment.

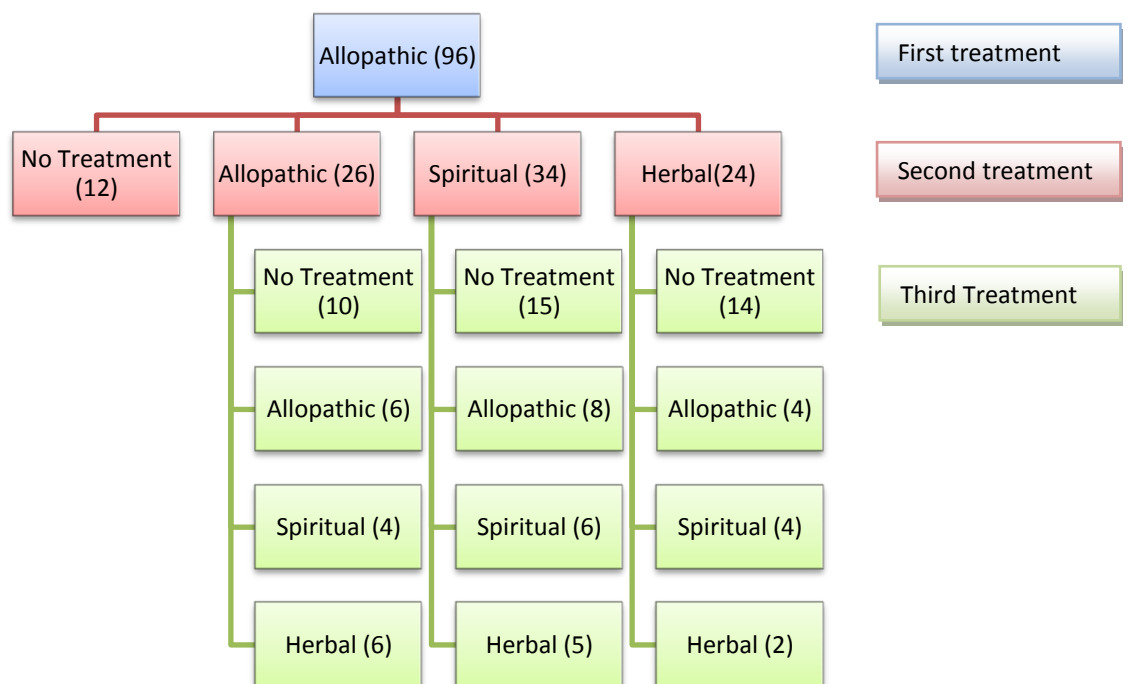


FIG 1: Sequential treatment process followed by Saharia people who adopted allopathic treatment as their first choice. (Number of individuals)

Fig 2 exhibited that among 34 persons, who adopted initial spiritual treatment, only 6 persons (17.6%) followed allopathic treatment as their secondary recourse. Among these six Saharia individuals, who followed allopathic treatment as their second recourse, majority (50%) did not follow any further treatment.

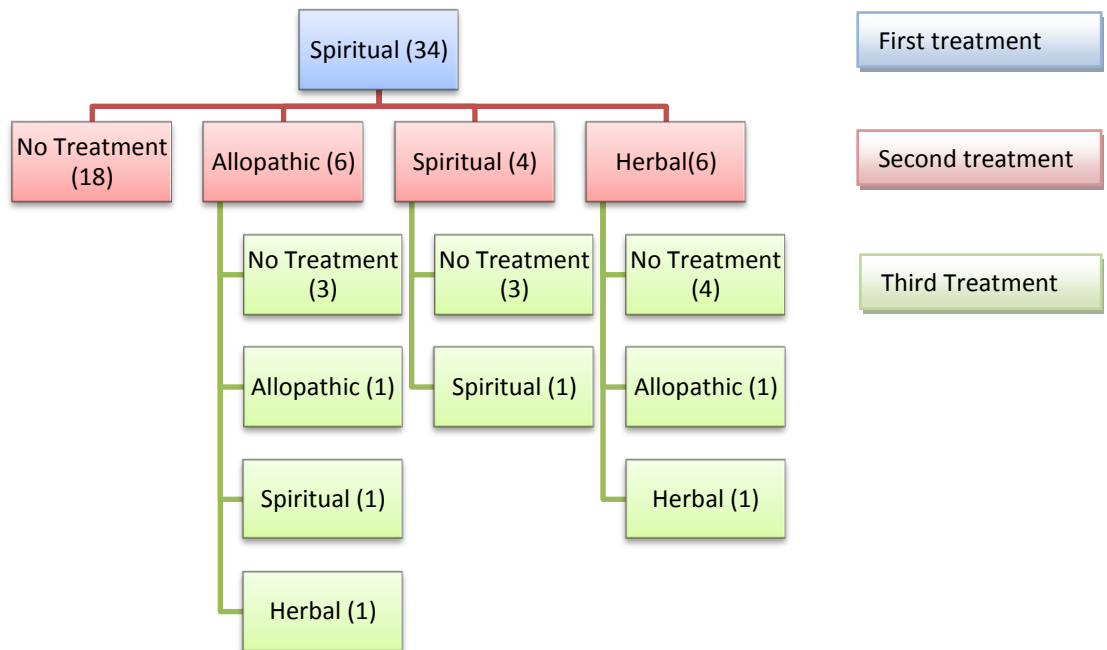


FIG 2: Sequential treatment process followed by Saharia people who adopted spiritual treatment as their first choice. (Number of individuals)

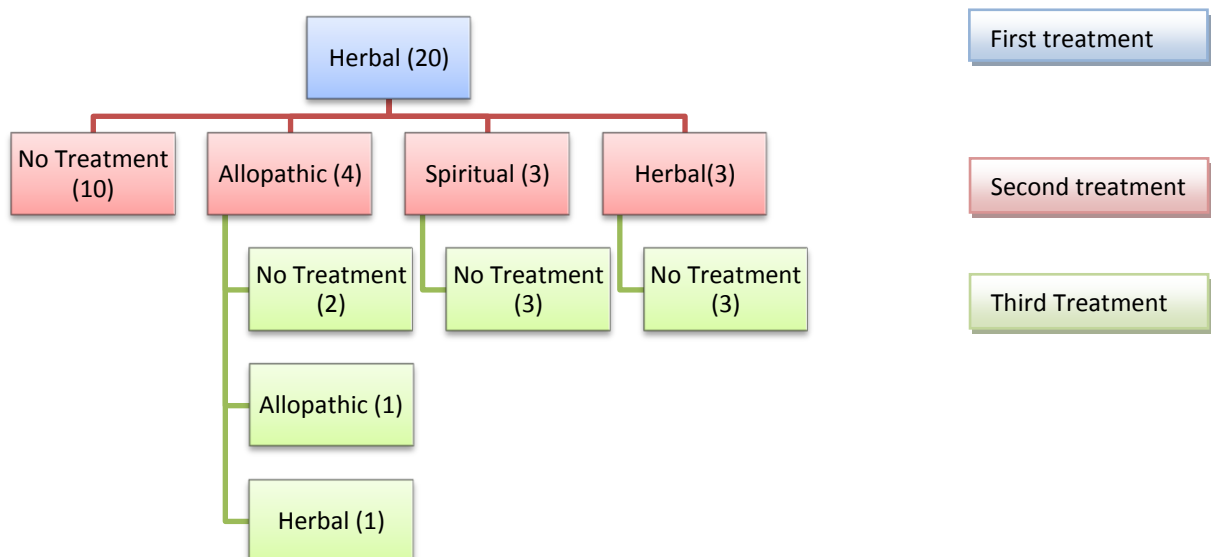


FIG 3: Sequential treatment process followed by Saharia people who adopted herbal treatment as their first choice. (Number of individuals)

Every tribal community has a faction of traditional healers/ sacred priest or medicine men. AFRO Technical Report Series (WHO) (1976) defined traditional healer, as a person who is

recognized by the community in which he lives as competent to provide health care by using vegetable, animal and mineral substances and certain other methods based on the social, cultural and religious background, as well as on the knowledge, attributes and beliefs that are prevalent in the community, regarding physical, mental and social well-being and the causation of disease and disability. Bulliyya et al. (2006) provided terminology of medicine men and magicians prevalent among tribal groups of Orissa (TABLE V).

TABLE V: Tribal terminology of medicine men and magicians in Orissa

S.No.	Ethnic group	Name of medicine man	Name of magician
1.	Bhumia	Disari	Disari
2.	Bondo	Disari	Sisa
3.	Dal	Jhankar	Jhankar
4.	Didayi	Palasi	Palasi
5.	Gadaba	Disari	Disari
6.	Ho	Dehuri	Dehuri
7.	Jatapu	Jani	Jani
8.	Kondh	Jani	Jani
9.	Kissan	Disari	Disari
10.	Kotia	Kabiraj	Pujari
11.	Koya	Wadde	Wadde
12.	Paroja	Gunia	Disari/ Gunia
13.	Santal	Disari	Disari
14.	Saora	Disari	Disari
15.	Oraon	Bhagamati	Bhagamati
16.	Paroja	Disari	Disari/ Beju/ Gurumai
17.	Bhuyan	Raulia, Gunia	Raulia, Gunia
18.	Juang	Raulia, Gunia	Raulia, Gunia

cf.: Bulliyya et al. (2006)

Perception of ill-health and disease: W. H. R. Rivers viewed medicine, magic and religion as “three sets of social processes... so closely interrelated that the disentanglement of each from the rest is difficult or impossible” (Rivers, 1924: 1). This statement is aptly suited to illness and disease etiology in tribal terminology as they attribute both supernatural and natural media for disease causation. Evil spirit intervention; asperity of divine being, magical beliefs such as evil-eye and evil pronunciation constitute supernatural media. Environmental events and faulty dietary intake relates to natural media for ill-health and disease causation.

Certain tribal groups in Rajasthan relate evil eye, *Dakan* (witch), *Mooth* (zooming through, grains appearing like dazzling) and crossroad motif with disease transference (Bhasin, 2007). This suggests their belief in magic practices. Khatua (2006) suggested that among Kamars,

Mai and *Devi* are goddess of small-pox and cholera respectively and they worship several deities so as to protect and safeguard their health and community (TABLE VII).

Sahu and Mukherjee (2008) suggested that tribal people have deep faith in four principle spirits:

1. Protective deities: they are worshipped at community level as they are linked with the welfare of village.
2. Benevolent spirits: regularly worshipped at family and community level or else they might bring disease and other calamities
3. Evil or malevolent spirits: controlling small pox, fever, abortion etc.
4. Ancestral spirits: very benevolent spirits and safeguard the family members.

Kapoor (2006) provided elaborate classification of disease linked with supernatural media among Himalayan communities (TABLE VI).

Table VI: Disease classification among Himalayan communities: Cause and symptom

S.No.	Class of Disease causation	Specific cause recognized	Symptoms of Disease
1	Wrath of Gods and Goddesses or ' <i>Dev Rog</i> '		
	(a) A type of small pox or ' <i>Bari Mata</i> ' (b) Chicken pox or ' <i>Choti Mata</i> '	Caused by goddess <i>Sitla Devi</i> Caused by goddess <i>Jagat Mata</i>	Blisters all over the body
2	Evil-spirit intrusion or ' <i>Chal</i> ' or ' <i>Pain</i> '	' <i>Chal</i> ' attacks those who possess a weak-heart, especially infants and girls.	1. Pulse beats faster than normal. 2. Eyes like that of a drunkard 3. Rise in temperature only in day and night time
3	Evil-eye or ' <i>Nazar</i> '	A person may envy or feel jealous or for the amount of food he eats, etc.	1. Vomiting 2. Slight fever 3. The child cries the whole day
4	' <i>Karam-rog</i> '	Bad deeds of the past or in everyday life	Accident, miss-happening, death at young age

cf.: Kapoor, 2006

Table VII: Deities worshipped by Kamar tribe (Chhattisgarh)

S. no.	Type of deities	Name of the Deities	Abode Deities	Sacrifying/ Offering objects
1	Universal Deities	1. <i>Bhima-deo</i>	In the shape of round stone under the <i>sarai</i> (<i>Shorea robusta</i>) tree	Goat/ pig
		2. <i>Gata-Dooma</i>	Ancestor spirits of inner room	
		3. <i>Dharti-mata</i>	Cooking room	
		4. <i>Murmati</i>	Particular place (<i>mati</i>) from where clan originates	
2	Family Deities	1. <i>Budharaja</i>	Inner room	Reddish Goat
		2. <i>Dulha-Deo</i>	Cooking room	
3	Village Deities	1. <i>Chhotemata</i> (<i>Hinglajin</i>)	Small pox	Goat
		2. <i>Badi mata/ Budhi ma</i>	Chicken Pox	Hen/ goat
		3. <i>Kankalin/ Kalipat</i>	Vomiting with loose motion	Black hen/ goat
		4. <i>Debi</i>	Cholera (outside the house but within the tribal settlement)	Goat
4	Territorial cults	1. <i>Bamhini Mai</i>	Top of the hill	One flag & goat
		2. <i>Kachna</i>	Top of the hill	Coconut
		3. <i>Dhurwa</i>		Goat/ Hen
		4. <i>Bhalgarh-mai</i>	Top of the hill	Coconut Goat/ Hen

cf.: Khatua, 2006

Table VIII: Disease causation linked with deities: among Bhils (M.P.)

S.No.	Name of the Deity	Disease associated
1	<i>Sitla Mata</i>	Measles and Rashes
2	<i>Sawan Mata</i>	Fever
3	<i>Amba Mata</i>	Fever, stomach related ailments, ailments related to hands and feet
4	<i>Galiya Okha</i>	Feebleness of the body
5	<i>Sujaniya Okha</i>	Swelling on the face
6	<i>Gadisar Okha</i>	Burning sensation
7	<i>Ragad ji Okha</i>	Irregular menstrual cycle
8	<i>Motijhara Okha</i>	Blisters inside mouth
9	<i>Baba Narhing</i>	Miscarriages
10	<i>Baba Ghorajan</i>	Defects in male reproductive organ (erection difficulty)
11	<i>Baba Motisar</i>	Difficulty during coitus
12	<i>Fofaliya Okha</i>	Swelling in cheeks

cf.: Joshi and Khatri, 2008

Cognitive uniformity in health seeking practices

Each and every tribe inhabiting different ecological zones develops different culture and indigenous health care practices. The knowledge and belief linked with traditional or 'folk' medicine is largely governed by rich biodiversity of particular ecological zone. Further, there exists similarity and uniformity in cognitive perception of different tribal groups occupying different ecological zones.

Although a particular tribal group is unaware about the existence of other, but they utilize similar indigenous herbal medicine for treatment of same or different ailments. Neem (*Azadirachta indica*) is extensively utilized by Saharia and Kondh tribal groups. Both the tribal groups occupy different ecological zones. Similarly Harida (*Terminalia chebula*) is frequently utilized as an herbal medicine by several tribal groups occupying different geographical domains.

The individual health condition is linked with their environment conditions. These environmental attributes such as geographical isolation and rich ecological legacy have profound impact on cognitive dimension regarding health practices. Besides different tribal groups exhibit similarity in cultural beliefs, customs and traditions which further formulates uniform cognitive perception regarding health.

Cognitive similarity in health seeking practices among tribals is also governed by medical pluralism. Tribal people frequently indulge in self care practices, consultations with medicine-men and /or primary health care services (PHCs) and these medical systems are complementary and unconventional which give rise to medical pluralism. Socio-cultural ideas and beliefs, ecology and political aegis play a crucial role in growth and evaluation of co-existing medical systems.

It is suggested that more researches on cognitive anthropology and neuro-anthropology with reference to various health dimensions should be carried out to focus on cognitive health dynamics understanding as there is lack of information in this field.

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