International Journal of Research in Social Sciences

Vol. 6 Issue 10, October 2016,

ISSN: 2249-2496 Impact Factor: 6.278

Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com

Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial

Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gage as well as in Cabell's

Directories of Publishing Opportunities, U.S.A

TRADITIONAL TREATMENT SYSTEM OF BASTAR

DISTRICT

Dr. Suman Panigrahi

ABSTRACT:

The role of a traditional indigenous medicine man, in the tribal community is much more

extensive than of a city physician. In tribal areas due to the less availability of allopathic health

care facilities and costly medicines, people also go for folk practitioner's treatment which is

locally and easily available. The tribes of Bastar district are known for their unique and

distinctive tribal culture, folk treatment and heritage in all over the world. The paper highlights

the folk Practitioners, their status, education, training, nature of visit, methods of treatment with

the various tribes of the region.

To assess the tribal's folk healing practices and knowledge, data were collected by household

surveys of sample villages, focused discussion with elder members of villagers, folk practitioners

of the village and their indigenous medicine personals.

Present studies, therefore bear special significance, to the study of indigenous beliefs and folk

practices regarding health and disease of Bastar district as well as in India, with a systematic

recording the tribal knowledge of folk medicine

KEY WORDS: Traditional treatment, Baiga, Jhar-Phunk, Herbs, Bastar

755

International Journal of Research in Social Sciences http://www.ijmra.us, Email: editorijmie@gmail.com

INTRODUCTION:

Bastar district occupies the Southern part of Chhattisgarh State, India. With 19⁰20'N latitudes and 81⁰93'E longituds (Fig – 1)

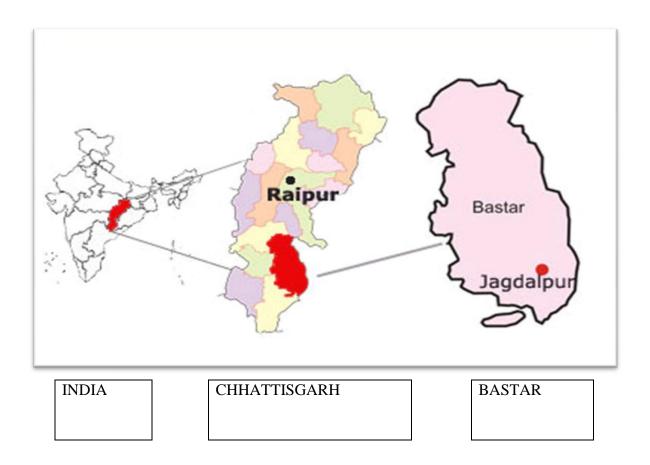


Fig. 1 : Location map of study area(source-google map)

Tribal population of the study region consist 66.31 percent (2001 census) of total population. Narayanpur tahsil with 76.16 percentages, has the highest concentration where as in the Jagdalpur tahsil tribal population is 62.05%, lowest.

Table – 1 : Study area : caste structure (%), Tahsil wise

Sl. No.	Tahsil	ST Population	%	Sc Population	%	OBC snd General caste Population	%
1.	Keshkal	113941	73.35	4236	2.72	37143	23.91

2.	Narayanpur	82716	76.16	3853	3.54	22037	20.29
3.	Kondagaon	231349	68.83	16216	4.82	88526	26.33
4.	Jagdalpur	438482	62.05	14374	2.03	253800	35.91
	Total	866488	66.31	38679	2.96	401506	30.73

Source: Census 2001

The cultural mosaic of the Bastar district is very unique. From time immemorial it is the melting pot of different cultures (Sarkar and Dasgupta, 1996). The original inhabitants of the area are Gonds, Bhatras, Halbas, Murias, Madia/Marias (both Dandami and Abujh marias or Hill Maria), Dhurwas and Dorlas. The tribal people of the area mostly depend on forests for their livelihood and upto 80% of the rural population still depends on traditional medicine and folk practitioners as a primary healthcare source. And Bastar district is one of the area which is very rich in variety of medicinal plants.

Traditional health care practices are of two types in this area, first categorized as faith and folk practitioners (which activities more important) which comprises same on Shamans, Mistics, Tantriks, Faith-healer, Baiga, Gunia, Ojhas, Priests, Babas and other. This folk practitioner are consistent with the cultural belief and have popular mass support. And second traditional medicine as alternative system are the practitioners of AYUSH.

In the study area are so many folk practitioner, approximately they are 2088. They highly concentrated in Kondagaon, Jagdalpur, Narayanpur and Keshkal tahsil. The present paper is an attempt to study the folk practitioner in study area, in this reference the vital information has been collected from 159 folk traditional medical practitioner. And all 159 folk practitioners has been interviewed personally. Beside this 450 house hold survey was done separately.

METHODOLOGY:

To asses the traditional treatment system, data were collected by household surveys of sample villages, focused discussions with elder members of villagers, folk practitioners of the village and other indigenous medicine personals. Present studies; therefore bear special significance, to the study of traditional treatment system of Bastar district as well as in India with a systematic

recording the tribal knowledge of traditional beliefs and practice of medicine. And Eight(8) villages from Bastar district have been randomly selected for sample study.

Table -2: Study area; Distribution of folk practitioners

Sl.N	Villages	Total Number of	Diseases
0.		folk practitioner	Treated
1.	Karanjee	92	Snake bite, watRoga, Dhatu Roga, Pimples etc.
2.	Chitrakote	79	Dental pain, Joint pain, Paralysis, Bronchitis, Itch, Pneumonia, Diccup etc.
3.	Badekilepal	60	Skin, piles, Fracture, Dog-bite, Fistula, Dropsy, Jundice, Fever, etc.
4.	Baniyagaon	69	Hydrocele, Acidity, Indigestion, Constipation, Cough, Dropsy, Itch, etc.
5.	Lanjoda	88	Migraine, Pimples, Gastric, Mumps,Gount, Ring-worm, Rabbis, etc.
6.	Deogaon	52	Leucorrhoea, T.B, Dysentry, Gonorhea, Epilepsy, Dhat, etc.
7.	Benoor	62	Diabetes, Malaria, Jundice, Gout, etc.
8.	Singanpur	72	Bleeding, Weakness, Cough cold, Fever, Pain,
C	Fig. 1.1 Comment	2007 2000	etc.

Source: Field Survey 2007 - 2009

In this process it is to made that at least two (maximum three) village will be selected from each tahsil to ensure the representation of whole study region. But due to naxal / maobadi activity, it was unable to go to remote area of some tahsil. But two "Swalba Judum" (Govt. relief camp for naxal affected tribal people) camp was visited by author and many folk practitioner was interviewed at their camp.

Detailed questionnaire and schedule were prepared for village survey, household's survey and folk practitioner survey. Information was gathered through semi-structural interviews that were held with selected knowledgeable elders, folk practitioner, Baiga, Gunia, Dai etc.

A group discussion with villagers was also conducted to collect information regarding traditional health care practices, folk way of disease treatment, their problems, and author participated many live performance of folk treatment.

OBSERVATION AND ANALYSIS:

There are so many folk practitioner in the sample villages. Table 3 shows the year wise status of folk practitioner. Some villages no. of folk practitioner are decrease but in some villages it is fairly increased.

Table – 3 : Sample Village : Year-wise No. of Folk Practitioner (Non-Professional)

Sl. No.	Village	1981	1991	2001	2009
1.	Karanjee	127	126	99	92
2.	Chitrakote	56	69	82	79
3.	Badekilepal	89	93	94	60
4.	Baniyagaon	75	66	64	69
5.	Lanjoda	121	109	98	88
6.	Deogaon	44	59	55	52
7.	Benoor	79	79	64	62
8.	Singanpur	69	72	61	72
Total	•	660	673	617	574

Source: District health office and field survey 2007-2009.

It is observed that in the study area all respondents thought that they have some knowledge about health, disease and diagnosis. As result, at preliminary stage of any disease they use their own method and Jaributi (medicinal plant). And they become Gunia, Baiga, Sirha, Dai etc. Table 3 shows in 1981 total folk practitioner in sample village was 660 that decrease by 574 (2009).

STATUS OF FOLK PRACTITIONERS:

In the study region Gunia, Sirha, Dai etc. are the main health practitioner. They are treated as God. He/she is responsible for cure of any disease.

Table – 4 : Sample folk practitioner (Non professional, interviewed)

Designation	Frequency	in %
Gunia / Ojha	28	17.61
Sirha / Leske	12	7.55
Baiga	2	1.26
Bone Settar	9	5.66
Dai	16	10.06
Priest	6	3.77
Herbalist	7	4.40
Fakir Baba	4	2.51
Jantra Baba	3	1.88
Mantra Vidya	18	11.32
Magicine	13	8.18
Rudraksha and Mala Specialist	12	7.55
witchcraft and Scorrer	15	9.43
Cambiad Practitioner	14	8.80
Total	159	100.00

Source: Field Survey, 2007 - 2009

Gunia: Mainly male are acts as a Gunia. A Gunia uses his 'Jhar-Phunk" method only. Evileye, Fever, Cough-cold, Teeth-pain, etc. are generally treated by a Gunia in the study area.

Sirha : Sirha are mainly faith healer. Sirha prepared medicine by different "Churna" (dust) and liquid. They collects raw material from different places, shops and from jungle (forest). Backpain, Headache, Lower Pain, Fever, Malaria, Asthama etc. are treated by a Sirha.

Baiga : Baiga are two in one. Sometime they performs with Jhar-Phunk and sometime they performs with some medicine. Snake-bite, Insect-bite, Evil-eye, Diarrheoa, Cholera are treated by a Baiga.

Bone-Setter: Bone-setter are only setting bones by uses some medicinal plants. In the study area some bone-setter are very famous. Patients comes from far distance to the bone-stter for their treatment in the study area.

Dai: Dai (traditional female birth attender) has a big role for pregnancy period of a women. Dai tells so many traditional method and food for a pregnant women which is suitable for her.

Priest: 'Pandit/Pujari/Priest' are arranges different type of Puja for different disease. They uses 'mataguri'place for treatment. People visit them for disease like piles, malaria, dysentery, skin diseases etc. in the study area.

Herbalist : They are non-professional ayurvedic men. Their medicine made from different parts of plants like leaf, root and branches.

Fakir Baba : Fakir baba (muslim medicine men) gives amulets, unani medicine and sometime they uses 'Jhar-Phunk' method for cure any diseases. Evil-eye, Weakness, Fertility Malaria, Blindness etc. are generally treated by a Fakir baba in the study area.

Jantra-Vidya: It is observed that in the study area there have so many practitioner; they uses different jantra for different disease. Jantra means one of writing forms on any type of plate like white paper, cloth, copper, iron, tin, silver, gold etc. According to Jantra-Vidya writing on gold plate it will be better effective than white paper. Below figure is an example of Jantra for high fever.

fkJ	х&	nk	I
Hte&	s ą	zt	Z&
	lt	b	
Ji	٧i	f &	A&

Fig. 2 : Jantra for high Fever (Field Survey)

Mantra Vidya: This is the classical treatment method for snake-bite and insects-bite. A number of men gather round the victim and begin to sing mantra. There are thousand of mantra uses by professional mantra baba/men to cure different diseases.

Magician: When a magician is called for a sick man, his first and most important work is that of diagnosis. After rectify the disease he starts his magic method. There are so many magic method like "ban-bati", "Pidha-Gumana", "magic-monkey"etc.

Rudraksha and Mala Vidya: Rudraksha is a seed of Rudraksha tree which is very coastly. To relief from cronic disease like back-pain, headache, paralysis etc., tribal people used rudraksha. Sometime they uses different mala (garlic, nimbu etc.)

Witch Crafts: Male / Female may be a witch. Mainly female becomes mainly witch. They tells about patients past and future. And they apply their method on patients. There have so many witchcrafts in the study area.

Combine Practitioner: In the study area there are so many combine practitioners. It means some Gunia also a Magician or some sirha also a witch and some bone-setter are pujari. So, their treatment is combine process.

Beside this there are so many seasonal practitioner who comes different season like summer, winter from neighbour district or state.

Caste of Folk Practitioners : In the study area it is observed that there are different castes tribal people are involve in this traditional practices.

Table – 5 : Sample Folk Practitioner : Caste

Caste	Frequency	in %
Muria	39	24.53
Bhatra	9	5.66
Bison Horn-Maria (Chota + Bada)	39	24.53
Dhurwa (Parja)	11	6.92
Dorla	7	4.40
Gond (Raj.)	18	11.32
Hill Maria / Abuj Maria	0	0.00
Halba	11	6.92
Gond (Unclassified)	12	7.55
Baiga	2	1.26
Adibasi	4	2.52
Muslim	4	2.52
Harizan	1	0.62
Rawat	1	0.62
Teli	1	0.62

Others	0	0.00
Total =	159	100

Source: Field survey 2007-2009.

Education of Folk Practitioner :From table no. 6 it is observed that education of traditional healer in the study area is very low. 40.25 percent of folk practitioners are illiterate and 23.27 percent of below 5th standard passed. Where only 25.16 percent are class 5th passed and 10.06 percent healer are middle class passed.

Table – 6: Education of Sample Folk Practitioner

Educational Qualification	Frequency	in %
Illiterate	64	40.25
Upto 5 th Class passed	37	23.27
5 th class passed	40	25.16
Middle	16	10.06
10 th	2	1.20
10+2	0	0
College Degree	0	0
University Degree	0	0
Total =	159	100

Source: Field Survey, 2007-09.

Age of Folk Practitioners :From the very young age folk practitioner starts their work. Most of the practitioners 63.52 percent are belongs to 20 - 59 years age group.

Table – 7: Sample Folk Practitioner: Age

0 – 19 ye) – 19 year			20 – 59 year			Above 60 year				
Male	Female	Total	%	Male	Female	Total	%	Male	Female	Total	%
9	3	12	7.54	89	12	101	63.52	34	12	46	28.93

Source: Field Survey, 2007-09.

Table – 8 : Sample folk practitioner : Training Status

Variables	Frequency	In %
By self experiment	45	28.30
By father / mother / grand- father / grand- mothers inspiration	43	27.04
By any Guru / Swamijee	17	10.69
Social Cause / Traditionally	49	30.82
No Specific Cause	5	3.14
Total	159	100

Source: Field survey, 2007-2009.

Father/mother/Grandfather/Grandmother plays a vital role to hand-over technique to new generation. In the study area 27.04 percent practitioner took knowledge from their family members. Following 28.30 percent from their self experiment.

Nature and types of fees :It is observed from table no. 9 that 49.69 percent folk practitioner prefered to take cash and different items as fees. Where 27.67 percent folk practitioner takes items only as fees.

Table – 9 : Sample Folk Practitioner : Nature of Fees.

Types of Fees/Visit	Frequency	in %
Cash (only)	12	7.55
Items		
(Rice/Dal/Kosra/Kodo/Kutki/Vegetable/Hen/Egg/Milk/Landa/Mohu	44	27.67
a/Wine etc.)		
Cash + items	79	49.69
Tree/Land/Seasonal (For cronic/Old diseases) crops.	10	6.29
Without Fees	14	8.81
Total =	159	100

Source: Field Survey, 2007-09.

Methods of Treatment :In the study area 22.64 percent practitioner uses "Jhar-Phuk" and "Joributi" method parallely. And 19.50 percent practitioner uses only "Jhar-Phuk" method. While 18.24 percent practitioner uses only "Jori-buti" for treatment. There are 15.09 percent practitioner uses magic method. And 13.21 percent practitioner uses Jantra / Mala as a method of treatment. (Table-10).

Table – 10 : Sample Folk Practitioner : Method of Treatment.

Methods	Frequency	in %
Jhar-Phuk	31	19.50
Jori-Buti	29	18.24
Jhar-Phuk and Jori-buti	36	22.64
Mantra-Jantra-Mala	21	13.21
Magic	24	15.09
Stone/Mineral	8	5.03
Others	10	6.29
Total =	159	100

Source: Field Survey, 2007-09.

It is observed that there are 5.03 percent practitioner uses stone/mineral for their treatment. At "Mataguri" place they keeps a stone (heavy weight) or any solid mineral like iron. Patient goes to 'mataguri' place and left up it by his/her little finger (There are a hole on the stone / solid mineral), if he/she success to complete round (3/5/7th time) a banyan tree then he/she will be fully cure. Beside this 6 percent practitioner uses other methods of treatment like malish, touch etc.

Place of Treatment :Every indigenious professional practitioner have a dispensary or a place of treatment. But non-professional folk practitioner are mobile doctor, they have not fixed dispensary. They move place to place regularly. From table 11, 51.57% of practitioner like to treatment / perform at the residence of patients.

Table – 11 : Sample Folk Practitioner : Place of treatment

Place	Frequency	in %
At the residence of practitioner	33	20.75
At the residence of patients	82	51.57
At common but isolated place i.e. temple, mataguri, river, bank, etc.	44	27.67
Total =	159	100

Source: Field Survey, 2007-09.

Responsibility of Practitioner and highly preference of Traditional Methods by tribal people:

Traditional folk practitioner has very careful to their work. 24 hours they are in their village. So, they are easily available. and after treatment, mostly they comes next day and collect all news about patient and decides for next dose.

Table – 12: Seeking Traditional Healer for Treatment

Status	No.	In %
Yes	344	76.44
No	106	23.55
Total	450	100

Source: Field (Household) survey, 2007-2009

Table 12 reveals that out of 450 families (separate house hold survey) 106 family (23.55%) had reported that they prefer allopathic treatment for disease. And 344 (76.44%) families believe in folk practitioner for their treatment.

Health Seeking behaviours :Most of the therapeutic agents were derived by primitive man from his immediate environment like plants, animals and other mystical powers. To the tribal people / folk practitioner of the study area, the term of health means "right condition of the body", "the proper functioning of the body is known as health". And those who regarded as healthy, who can take heavy food, have a good muscular body and are able to work hard.

According to folk practitioner of the study area, and their beliefs, the cause of illness are classified into three categories –

- (i) Diseases produced exclusively by supernatural power deities, spirities, ghosts and other non-material entity.
- (ii) Diseases produced by sorcerers and witches.
- (iii) Diseases produced by natural or other any special cause.

Wrath of local deities, sins, crimes and disobedience of religious laws:

It is still believed that many disease are due to curse of some God or Goddess. Table 13 shows some different God and Goddess and diseases by them and treatment by folk practitioner.

Table – 13 : Name of God and Goddess and Diseases by them and Treatment by folk Practitioners

Sl. No.	Name of God and Goddess	Diseases by them	Treatment (Giving Things)
1.	Sitla Mata	Small Pox	She must be given a white hen annually and white goat in every three year by one family
2.	Chotimata	Chicken Pox	Same as above.
3.	Danteswari Mata	Weakness and Madness	She must be given a coconut monthly and white goat annually.
4.	Didneswari Mata	Same Disease (above)	She must be given a coconut and a bell annually.
5.	Murari Mata	Cholera	A black chicken and coconut.
6.	Chandi Mai	Cholera and Vomitting	Black hen and black goat is given.
7.	Jogini mai	Typhoid	Red hen and brown goat is given.
8.	Maura Mata	Childrens diseases	She must be given a black chicken and coconut.
9	Jappi Mata	Sleeping diseases	She must be given "Ghee" and "Gur"

10.	Mataguri	All disease	Daily puja (Prayer)
11.	Hanumanji	lGood health for men	Spell the Name of Hanumanji, 108^{th} time in a day.
12.	Burha Deo (Muria Principal Deities)	Madness, Skin diseases	Daily Prayer
13.	Thakur Devi (Gond)	All diseases	Daily prayer

Source: Field survey, 2007-2009

Supernatural causes: Way of Diagnosis and Treatment:

In attempting such a diagnosis and treatment, there are different diagnostic and treatment Procedures found in different tribal groups in the study region, which differs but have some basic similarities.

Example -1:

The Gunai / Bhumka takes some black mustard seeds and puts them in fire in the name of some omen. If there is a flame after throwing the seeds in fire, the omen is taken as good, if not, the omen is considered as bad. This process is repeated thrice. If all the three times the result is the same, it is very bad or very good omen. Then Gunia starts his treatment, he loudly sing a Mantra and gives some Jari-buti to the patient. When the patient does recover Gunia demand his fees.

Example -2:

The simple recitation of Mantra, without any ceremonies or apparatus, is often effective to defeat the nefarious activities of witches, to drive away trouble some ghosts, to save a man from different disease. For example if anyone have ear problem then folk practitioner recitas below mantra 21th times and rubbing by 'neem patta' on the effected place.

Mantra for Ear Problem:

Asmin na goth banhi!

Karmahin na jayete dohai!

Mahabir je rahe kan ke pir!

Anjani putra kumari banye!

Putra Mahabal ke mar brahamachari!

Hanumantai namo namo duhai mahabir je!

Rahe pir mundo ke sab dukho dur bhagai!

(Local language).

Local Medicinal plants and treatment system:

Medicinal plants and their uses are a great important in the study area. Folk Practitioners uses many common and uncommon plants for the treatment of their ailment and various diseases. A list of common diseases and the types of indigenous medicines used for their cure, in the study region, are provided in table -14.

Table – 14: Name of medicinal plants and method of treatment.

Sl.	Name of the	Causes	Use of	Botanical	Parts	Method of use /treatment
No.	Diseases		plants name (local)	name	used	
1.	Headache	Extrem work in sun light.	Kohka	Semicarpus anacardium	Seed	The seed is slightly broken and heated. The oil of the seed comes out and is applied on the forehead. The wound will be healed.
2.	Cold, cough, crackes in skin.	Work in rain or unhealthy living.	Tora (Mahua)	Madhuca longifolia	Seed	At first the oil is heated then the warm oil is massaged all over the body.
3.	Skin diseases	Unhealthy living	Karanj	Pongania glabra	Seed	Extracted oil is applied on the affected parts of the body.
4.	Malaria	Mosquito bite	Chiraita	Swerita Cirata	Bark	Grind it and soak in water overnight and the water is taken.

5.	Irregular Menstruation		Neem	Azadirachta Indica	Bark	Bark of neem tree is ground and soaked in water for few hours and then the water is drank.
6.	Diarrhoea	Use of dirty water	Duli		Root	It is grinded and soaked in water overnight. It is drank early in the morning.
7.	Body Pain		Pendra		Root	Grinded and taken
8.	Asthama	Smoking, etc.	Harra	Terminalia Chebula	Leaf	Mixed and pasted and then it is consumed with water.
9.	Chest Pain		Arjun	Terminalia Arjuna	Bark	Bark is soaked in water over night and water is taken.
10.	Sexual Weakness		Semal	Boxbax Ceiba	Root	Root dipped in a cup of water overnight, next morning the softened roots are crushed and given with sugar, internally.
11.	Morning sickness		Chirai Jam	Syzygium Cumini	Fruit	The dried pulp mixed with sonth (Dried Ginger) is boiled in water and decoction is prepared, uses internally.
12.	Snake bite and cold cough		Bhuikuriva	Rauwolfia Serpentina	Root	The root is used as a remedy for snake bite.
13.	Dysentry		Shankarjata	Oraria picot	Root	Dried root is grinded and diluted with water and taken orally, twice daily.
14.	Pregnancy		Soon-Sunia		Roof, Leaf	Leaf is grinded and mixed with water and taken orally.
15.	Irregular Menstration		Karghie		Root, Stem	Root is kept in water for one hour and boiled with are glass water. The mixture is boiled

					until the quentity becomes half.
					It can be taken orally before tea.
	Pata (Stomach Ulcer)	 Dumar	Ficas Heterophylla	All Parts	Any part of plant is boiled with 1 cup of water and filtered. Mixture and filtered can be taken.
17.	Fracture	 Harjori	Eduisetum remosissium	Bark	Bark is grinded and can be applied on fractured area and stem is also grinded and taken orally with 1 or ½ glass water.
18.	Constipation	 Aloevera		Leaf	Juice is taken.
19.	Burh	 Pipal		Branches	Branches ash mixed with cow ghee is applied externally on effected parts immediately on first aid measure.
20.	Safe delivery	 Bamboo		Leaf	The decoction is prepared by boiling the new bamboo leaves in water.
21.	Ring Warm	 Papita		Tree milk (safed pani)	Apply the affected place as gel.
22.	Sexual Energy	 Mohuya		Flower	Juice of flower is taken.
23.	Skin, Cough, Blood Purify	 Haldi		Root	Juice is used.
	Fracture	 Gurud		Stem	Juice is applied in the fractured area by cutting the skin only applied once just after fracture.

Source: Field survey, 2007-2009.

CONCLUSION:

It has been noticed that it is the traditional form of medicine which strides ahead among the tribal people when both forms of medical systems are operating, tribal people turn towards the traditional medicine because it is free from side-effect, as well as it is inexpensive, easily accessible, informal and pays due respect to one's cultural traditions. Statistics show that study area, there are large no. of folk health practitioners.

If this enormous no. of medical practitioners are added to the modern medicine systems figure, study area has one of the best patients-practitioners-ratio in the India. These enormous resources have not been systematically utilized by the health planners so far. So, this paper will provide adequate view to academic and researchers working on the promotion and restoration of Indigenous knowledge systems of tribal communities of India and world.

ACKNOWLEDGEMENT:

Author is thankful to tribal peoples and folk practitioner for helping and supporting during field work in studying sites of Bastar district. Author also thankful to Prof. Dr. (Smt.) Kaveri Dabhadkar, Govt. Bilasa Girls P.G. College, Bilaspur (C.G.)

REFERENCES:

Sl.	Author	Year	Book
No.			
01.	Hemadri, Koppula and Rao SS	1989	Folk medicine of Bastar, J Ethnobot, 25, - 32, 55 – 65
02.	Verma DM, Balkrishna NP and Dixit RD.	1993	Flora of M.P. (Botanical Survey of India), Vol – I
03.	Agnihotri R.C.	1995	Geomedical Environment and Health Care, Rawat Publication, 47-49
04.	Elwin, V.	2002	The Baiga, Gayan Publishing House, 43-44
05.	Grigson, W.V.	1938	Maria Gonds of Bastar, London
06	Pal, D.C. and Jain, S.K.	1998	Tribal medicine, Naya Prakashan.