



Traditional healthcare practices among tribes: A study of Mandla district in Madhya Pradesh

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Received 30 August 2020; revised 31 October 2021; accepted 05 November 2021

Traditional healthcare practices are an integral part of tribal life, especially in hilly and forest areas where modern healthcare facilities are still inaccessible and a convenient alternative in areas where modern healthcare are not very easily affordable. Although, even after considerable progress in modern healthcare services in the last few decades, tribal populations still depend on traditional treatment practices.

In this context, a study was conducted in the Bijadandi block in Mandla district to examine the traditional knowledge for treating various illnesses/diseases with the help of medicinal plants. For this study, the primary field survey was conducted from August to November 2019. For this research work, purposive sampling was used.

A total of 300 households were interviewed in the study from the selected ten villages in the block to gather the information on the traditional healthcare practices and to understand the tribal view points in the context of traditional healthcare practices. All selected villages have more than 90% of tribal households located in hilly and forest areas. The in-depth interviews were conducted with local traditional healers or persons with rich traditional knowledge. Other than healers, the information on traditional medicinal knowledge and its method of treatment at home was also obtained from selected households with the help of open-ended questions.

The information has been collected from total 39 tribal groups during this study. This study found two-fifths (41%), i.e., 19 types of species being utilized were from the trees group. On the other hand, 14 (30%) kinds of plant species, 6 types of herb (13%), 5 (11%) types of climber species and 2 types of shrub groups were being utilized by tribal communities for healthcare treatment.

Keywords: Bijadandi, Diseases, Healthcare, Mandla, Tribes, Traditional

IPC Code: IPC Code: Int Cl.²²: A61K 9/00, A61K 36/00, A61K 45/00

India is a big home land to tribal populations which account for 8.6% of the national population¹. Madhya Pradesh is a tribal dominated state but in the context of notified tribes, Odisha (62) has been identified as the state with largest number of notified tribes, while Madhya Pradesh (43) stands fourth after Karnataka (50), Maharashtra (45) followed by Sikkim (4)². Tribes are emotionally attached to the forest, environment and nature. The forest is not only a means of livelihood for the tribal people but it is also considered a deity and a source of healthcare treatments. Tribes are known as the primitive peoples of the country. And since, they are away from the mainstream, they are less advanced and backward from a socioeconomic perspective. Even in the context of health, the status of tribes is very poor as compared to the general population of the country³⁻⁵. For several centuries, tribal populations have been depending on traditional healthcare practices to deal with health complications⁶.

These traditional methods of health practices are transferred from their forefathers to the subsequent generations, and they are trained to use these traditional healthcare practices under the supervision of traditional healers⁷⁻¹⁰. Raushan & Acharya, 2018, found that 7% of ST Hindus give first preference to home remedies for the treatment of various health problems and diseases¹¹. These home remedies are primarily used for many health issues like headache, earache, stomachache, abortion, wound infections, skin infections, fever, cough, diarrhea, eye infections, general weakness, and throat issues and for their antioxidant-enriched, liver-protective, renal-protective, anti-diabetic and blood purifier properties. Tribes mainly use elements like leaves, stems, seeds, roots, and barks to recover from the diseases and illnesses¹². Generally, tribes use herbal medicines and animal products after the symptoms are diagnosed by the Vaidya and physicians¹³. Several studies revealed that

tribes give first preference to traditional healthcare practices before visiting the modern healthcare center due to lack of accessibility and affordability of modern healthcare facilities in tribal regions¹⁴⁻¹⁷

Throughout history, people were dependent on traditional knowledge for managing health complications and these traditional methods were based on natural products and cultural factors¹⁸⁻²⁰.

Historically, tribes live in forests and hilly areas and they are strongly associated with nature, ritual perception, mysticism, and black magic²¹. In fact, the living arrangement in the forest was useful for tribal people to gain knowledge of herbal-based traditional health care practices rather than modern healthcare system²². Though these people may not have received adequate formal education, they have full of knowledge about herbs and plants and an understanding of traditional healthcare.

Material and Methods

Study area

The study was carried out in Bijadandi block in Mandla District of Madhya Pradesh. According to the Ministry of Panchayati Raj, 2006, Mandla was named one of the country's most backward districts (out of a total of 640) and received fund from the Backward Regions Grant Fund Programme (BRGF). Moreover, a report on "District Development and Diversity Index Report for India and Major States" was brought out in 2015 which showed 20 low (Bottom) economic index districts from the country and Mandla district was one of them from Madhya Pradesh²³. Mandla is (57%) the fourth highest tribal populated district and backward district out of 51 districts in the state¹. Within the district, Bijadandi developmental blocks was finalized for the study, since it is the most tribal dominated block having 82% tribal population in Mandla district¹. However, the villages were selected based on their distance from the Community Health Center (CHC). In this regard, villages falling within 15 km from CHC having more than 75% of tribal population were selected for this study to collect information regarding traditional healthcare knowledge and practices among tribes of this block.

Data collection

A primary field survey was conducted during August to November 2019 to fulfill the objectives of the study. In this study, a sample of 300 respondents participated from tribal communities of the study area. A total of 149 male and 151 female respondents

were interviewed with their verbal consent. The inclusion criteria of the respondents were the age groups of 18 and above, those who had highest level of education in the household and they should be present at the residence. For additional information, filed notes and important points were recorded during the survey.

Methodology

This study is based on qualitative research approach which is based on the analysis of information received from the respondents. However, the purposive sampling method was used for conducting this study. Moreover, interviews questionnaire were prepared with open-ended questions as tools of data collection. The in-depth interviews of key informants were also done with traditional healers in their local areas to gain insights into the way of using traditional healthcare practices during illness. The interviews of traditional healer providers were audio-recorded with an average duration of 20 to 45 minutes. In this study, the information on traditional practices was obtained on those diseases which were listed in the 71st round of NSS 2014²⁴.

Results and Discussion

The tribes involved in study

The information has been collected from a total of 39 tribal groups for this study. Out of which 9 tribal groups were highly populated in the study area as shown in Table 1. These 9 tribal groups are contributing nearly three-fifths (66.3%) of the total studied sample. Among them, five tribal groups occupied around 50% of the total sampled populations and they are Maravi (14.7%), Uikey (13%) Markam (8.7%), Parte (7.3%) and Urreti (6.7) and rest of the respondents were from 34 other tribal groups as shown

Table 1 — Name of interviewed tribes for this study

Types of Tribes	No. of Sampled HHs	Percentage
Maravi	44	14.7
Uikey	39	13.0
Markam	26	8.7
Parte	22	7.3
Urreti	20	6.7
Baiga	15	5.0
Marko	14	4.7
Narreti	11	3.7
Vadkade	11	3.7
Other Tribes	98	32.7
Total	300	100.0

Source: Direct from Field, Aug.-Nov., 2019

in Table 1. However, Maravitribes was the dominant population followed by Uikei in the study area.

Socio-economic and demographic profile of respondents

Table 2 provides information about the socio-economic and demographic characteristics of the respondents. Methodologically, the minimum age was decided to be 18 years and above. The age groups between 30-39 (21%) and 40-49 (20%) years had highest participants in this study, while lowest response was from the 70 & above (5%) age group. Likewise, female (51%) were higher than male (49%) respondents. Most of the respondents were uneducated (37%), while only 6% had completed graduation and above. Engagement in economic

activities of tribes was higher in the agriculture sector than the other activities or occupation. Nearly 50% respondents were those who were engaged in agriculture activities followed by wage labor worker (33%). Very few respondents were found holding government and private jobs. Out of total respondents, 78% were married, 11% were unmarried and the rest were widowed. They are mostly in nuclear (73%) families and the remaining 23% are living in joint families. More than half of the area was covered by forests and hills, in which 55% belonged to hilly areas and 26% were from forest areas. Most of the houses were kachcha houses (82%) made of sand, wood and grasses. They used fire wood (82%) for cooking at home. They had reported that tribes do not have clean

Table 2 — Socio-economic profile of studied tribal groups

Characteristics	Percentage	Total Number
Age Group		
18-24	17.7	53
25-29	14.0	42
30-39	20.7	62
40-49	20.3	61
50-59	13.0	39
60-69	9.0	27
70 & above	5.3	16
Sex		
Male	49.7	149
Female	50.3	151
Level of Education		
No. education	36.7	110
Primary Level	18.7	56
Middle Level	14.7	44
High School	14.7	44
Higher Secondary	9.3	28
Graduation & Above	6.0	18
Occupation of Head of HHs		
No Occupation	5.7	17
Farmer	49.7	149
Wage labour worker	33.3	100
Govt. Job	3.0	9
Private Job	1.3	4
House Wife	3.3	10
Others	3.7	11
Marital Status		
Unmarried	11.3	34
Married	78.3	235
Widowed	10.3	31
Types of Family		
Nuclear	72.7	218
Joint	27.3	82
Types of Location		
Hilly	55.3	166

(Contd.)

Table 2 — Socio-economic profile of studied tribal groups

Characteristics	Percentage	Total Number
Plain	18.7	56
Forest	26.0	78
Types of House		
Pucca	13.3	40
Semi Pucca	5.0	15
Kachcha	81.7	245
Types of Fuel		
Dungcake	1.0	3
Fire Wood	86.0	258
LPG	13.0	39
Source of Drinking Water		
Tap	17.3	52
Hand Pump	75.7	227
Well	2.7	8
Tubewell	3.3	10
Others	1.0	3
Purification of Water		
Boil	2.7	8
Filter	4.7	14
Drink as It is	92.7	278
Do You have BPL Card?		
Yes	85.3	256
No	14.7	44
Name of BPL Card		
Yellow Card	21.3	64
Blue Card	64.0	192
White/No Card	14.7	44
Toilet Facility at Home		
Yes	82.7	248
No	17.3	52
Water Available for Toilet Facility at Home		
Yes	62.7	188
No	37.3	112
Total Number	100.0	300

Source: Direct from Field, Aug.-Nov., 2019

drinking water in their village. Further, three-fourths (75%) of the tribes depended on hand pumps for drinking and cooking water. Among them, more than 90% respondents said that they drank the water without boiling or filtering. However, nearly 3% households are using boil water for drinking. In the context of ration card, it has been divided into three categories such as yellow, blue and white card. Yellow card holders were considered as the poorest category in quintile, while those having blue card are considered under the poor category. Those having white cards are considered as middle and above quintile household. People having the yellow and blue cards were considered as BPL and white card holders are considered as APL categories. About, 85% respondents were from poorest and poor categories and had yellow card (21%) or either blue card (64%). Out of total respondents, 83% respondents had toilet facilities at their home. Among them, only 62% households had toilets with water facility.

Uses of medicinal plants

Figure 1 shows the types of medicinal species used for healthcare treatment by tribes. Total 46 types of ethno medicinal species are found among tribal communities in the studied area, which are used for home remedies. However, it is categorized into major three broad categories of medicinal species: plants, trees and others. Other categories includes herbs, climbers and shrubs. This study found 19 types of species being utilized from trees group such as mango, Chhula/Plash, jujube, neem, drumsticks *Sal (Shorea robusta)*, Gulmohar, (*Delonix regia*), Maida, Babul (*Vachellia nilotica*/Gum arabic tree), black berry, Guava, lemon, banana, Tendu (*Diospyros melanoxylon*), Kair, Kahua, Bargad, Jaysson, Karra, and Chirhul for some of the specific diseases. On the other hand, 14 kinds of plants species which are whole plants are being utilized by tribal communities. The 13 types of others (Including herbs, climber and shrub) herbal species are being utilized by tribes as shown in Figure 1.

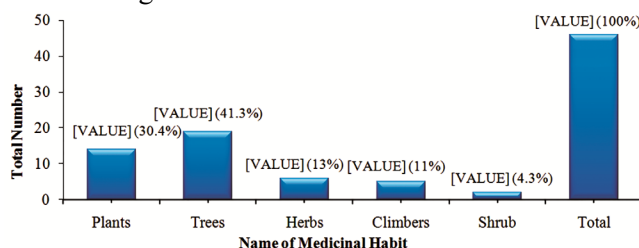


Fig. 1 — Types of Medicinal Habit

Figure 2 presents using parts of the medicinal habits for recovery of illness /disease. The study found more than 15 kinds of illness/diseases for which seven types of medicinal parts being utilized by tribal groups. Out of total seven part, the leaves (26%) are highly preferring part for curing of illness/diseases followed by Bark (23%). On the other hand seeds (13%), whole plant (7%), flowers (3%), fruits (10%) and roots (17%) are used for the purpose of the treatment of the morbidities.

Knowledge of traditional healthcare practices

Many of the tribal communities still depend on traditional healthcare practices as a primary healthcare source. They have adequate knowledge of trees, plants and other substances for curing of illness. Some of the common illness such as cold, cough, eye problems, headache, mouth ulcers, malaria, jaundice, typhoid, itching problem, fever and dysentery are treated by home remedies. The applications of traditional medicine for the particular illness and disease are presented in Table 3.

Table 4 shows the all medicinal trees and plants which are used in this study and their English names and local names along with their scientific names and their parts used for curing of illness/diseases.

The perspective of healer (Vaidya) on traditional healthcare practices

Almost every village has one healer. These healers are known as ‘Vaidya’ in their local areas. A Vaidya provides healing practices for village dwellers and others neighboring villages. ‘They are respected and recognized in their villagers and other neighboring villages for their services of herbal and traditional medicine.

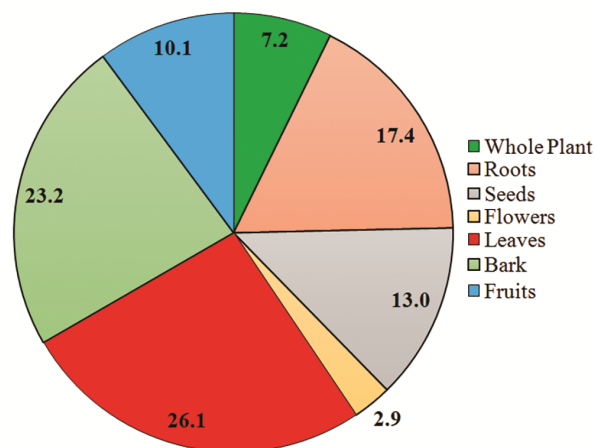


Fig. 2 — Plant parts used by tribal people in the study area (in %)

Table 3 — Traditional healing practices for a particular illness/diseases

	The home remedies for cold and cough is the mix tea with ginger and turmeric and it is known as very useful traditional medicine for cold and cough.
Cold	Tea with basil leaves ginger should be consumed 2-3 times a day. It is very effective for cold and cough Juice of bitter gourd and white pumpkin also being used for the cold and cough Mixture of 'Harra (harad)' and milk is also used for cold and cough
Fever	The syrup of grinded root and stem of 'Gurbel' (Giloy) consumed orally Eating leaves of 'Lediya's' tree Consumption of 'Neem' leaves to recover from fever
Malaria	For malaria the 'Neem' juice is consumed Seeds of 'Chargudiya' with water is consumed. Heat the bark of bark of mango, drumstick, neem and berries with water and take bath The syrup of grinded henna leaves is consumed
Jaundice	Sugarcane juice is mixed with curd and consumes Cairo (kahira) seeds is roasted with ghee and consume To eat the root of sweet potato till the cured The root of the immortal is heated and drink
Diarrhea	Make a syrup of onion, curd and buttermilk and add some sugar or salt and consume it Make paste or liquid of sugar, banana and tea leaves and consume to cure diarrhea Grind Maida, guava and mango bark together and consume it Consume the juice of <i>Litsea (Maida)</i> , drumstick, berries and 'Pakari' barks Babul (Acacia), tea leaves and Guava leaves are eaten
Dysentery	Newly grown leaves of persimmon tree (<i>Tendu</i>), Arjuna plant (<i>Kahua</i>) and <i>Acacia catechu (Khair)</i> are eaten Drink the juice of the 'Umar' tree's bark Grind the mint leaves and drink it Mix the curd and basil's leaves juice and add some sugar and consume it Mix grinded shoe black plant flowers (<i>Jaisun</i>) with milk and drink together
Paralysis	Heat the roots of dodders (<i>Amarbel</i>) plant and drink it continues till relieve Grinded sunflower seeds are fed Turmeric and lime are heated and applied to the brain
Eyes problem (Pain/Reddish)	A piece of cucumber kept in the eyes Onion and basil juice mix together and drop it in the eye
Weakness	The forest gooseberry is eaten Garlic and mustard oil are heated together and drop in the ear
Ear problem	The juice of Arjuna Plant leaves (<i>Kahua</i>) poured into the ear Marigold leaf juice drop in the ear 'Barmasi, Mavari and basil leaves juice put in the ear Neem leaves are grinded and applied to the itching portion
Itching problem	Banana leaves are burnt and the remaining ash is applied into itching part after bathing Cardamom bark juice is applied to the itching part of the body 'Chirhul' leaves are grinded and applied to the itching part of the body
Mouth ulcers	Mix honey and Ghee with pumpkin seeds and grind it and applied in the tongue The juice of jasmine leaves is applied in the tongue Grind the root of henna tree and apply it
Typhoid	Pumpkin and Cairo seeds are grinded in ghee and applied to the body Heat the bark of Shorea (Sal) tree and bath Royal Poinciana (<i>Gulmohar</i>) juice is consume with sugar Dry gram leaves, onions, coriander seeds and mango seeds are mixed with water and bathed or either wetting the cotton cloth in that water and coating it throughout the body Make the juice of mango seeds and mix sugar and consume it
Loo	'Palash or Chhula' flowers put it in to water and take bath and drink same remaining water Eat the leaves of jujube Drink the juice of 'Neem & drumstick trees bark and also eat banana after dry it Mix dry leaves of gram, dry wheat plants and 'Palash/Chhula' flowers in the water and take bath. Coriander leaves should be grinded and apply in the body
Bone fracture	Grind stem of veld grape (<i>Hadjudi</i>) plant and tie it in a broken place and also feed the stem of Veld grape (<i>Hadjudi</i>)
Snake biting	Feed the leaves of 'Kali Dudhiya & persimmon tree (<i>Tendupatta</i>) to control spread of poison in body

One of the 'vaidya' mentioned that the people from different villages come to him to get the traditional and herb-based medicines. He also pointed out that he

provided medicines for all major and minor disease and illness such as ear pain, eye pain, cold, cough, TB, typhoid, loo, fever, malaria, jaundice, bone

Table 4 — Plants and herbs used for treatment of diseases and ailments by tribes

English Name	Local Name	Scientific Name	Using Part
Turmeric	Haldi	<i>Curcuma longa</i>	Root
Gram/ chick pea	Chana	<i>Cicer arietinum</i>	leaves
Onion	Pyaj	<i>Allium cepa</i>	Root
Coriander	Dhaniya	<i>Coriandrum sativum</i>	Seeds
Mango	Aam	<i>Mangifera indica</i>	Seeds
<i>Palash/Butea</i>	Chhula	<i>Butea monosperma</i>	Flowers
Jujube/Berry	Ber	<i>Ziziphus</i>	Leaves
<i>Neem</i>	Neem	<i>Azadirachta indica</i>	Bark, Leaves
Drumstick	Munga	<i>Moringa oleifera</i>	Bark
Wheat	Genhu	<i>Triticum</i>	Whole Plant
Pumpkin	Kumhada	<i>Cucurbita moschata</i>	Seeds
Jasmine	Chameli	<i>Jasminum</i>	Leaves
Henna	Menhadi	<i>Lawsonia inermis</i> L	Root
Shorea	Sal	<i>Shorea robusta</i>	Bark
Royal Poinciana	Gulmohar	<i>Delonix regia</i>	Bark
Litsea	Maida	<i>Litsea monopetala</i> Roxb.	Bark
Acacia	Babul	<i>Acacia</i>	Bark
Blackberry	Jamun	<i>Syzygium cumini</i>	Bark
Guava	Amrood	<i>Psidium guajava</i>	Leaves, bark
Java Plum/Black Plum	Nibu	<i>Syzygium cumini</i>	Fruits
Banana	Kela	<i>Musa</i>	Fruits, leaves
persimmon tree	Tendu	<i>Diospyros melanoxylon</i>	Leaves
Acacia catechu	Khair	<i>Senegalia catechu</i>	Leaves
Arjuna plant	Kahua	<i>Terminalia arjuna</i>	Leaves
Mint plant	Pudina	<i>Mentha</i>	Leaves
Banyan tree	Bargad	<i>Ficus benghalensis</i>	Bark
Shoebark plant	Jaysoon	<i>Hibiscus rosa-sinensis</i>	Flowers
bitter gourd	Karela	<i>Momordica charantia</i>	Fruits
Asafetida	Hing	<i>Ferula assa-foetida</i>	Whole Plant
Chebulic Myrobalan	Harra	<i>Terminalia chebula</i>	Seeds
Ginger	Adrak	<i>Zingiber officinale</i>	Root
Basil	Tulsi	<i>Ocimum tenuiflorum</i>	Leaves
Sugarcane	Ganna	<i>Saccharum officinarum</i>	Whole Plant
Sweet potato	Shakarkaknd	<i>Ipomoea batatas</i>	Root
Doddars	Amarbel	<i>Cuscuta</i>	Root
Tea leaves	Chay Patti	<i>Camellia sinensis</i>	Leaves
Sunflowers	Suryamukhi	<i>Helianthus</i>	Seeds
Cork tree	Chirhul	<i>Holoptelea integrifolia</i>	Leaves
Cardamom	Ilaayachee	<i>Elettaria cardamomum</i>	Seeds
Veld grape	Hadjudi	<i>Cissus quadrangularis</i>	Whole Plant
Mustard seeds	Rai (Sarso)	<i>Brassica nigra</i>	Seeds
Marigold	Genda	<i>Tagetes</i>	Leaves
Water hyacinth	Jalkumbhi	<i>Eichhornia crassipes</i>	Seeds
Giloy	Gurbel	<i>Tinospora cordifolia</i>	Roots

fracture, mouth ulcers, dysentery, snake bites, scorpion bites, etc. However, they give herbal medicine after the diagnosis of disease by the physician or modern doctors. Even women who do not want to do the delivery in hospital are given herb or 'Jadi Buti' and the delivery is done at their home. Even in the context of traditional method of home delivery, the healer himself shared his own story.

According to him, his wife had three home deliveries with the help of traditional methods without any complications. Vaidya said that if the woman is having the problem of infertility, it is possible to conceive with the help of traditional 'Jadi-Buti' and herb medicine. He also gave information about traditional practice for sterilization which is followed by tribal women.

This traditional sterilization among tribal women information was also shared by one of the nurses at PHC. A nurse of PHC revealed a story of women's sterilization. The nurse said that a woman refused to come to hospital for the sterilization because she had root of banana which is used for the sterilization. Later on, when the hospital health worker had home visit to the same women she came to know that the women did not conceive for around five years after having the roots of banana.

Discussion and Conclusion

Tribes of this block mainly live in forest and hilly areas. These tribes mainly depend on natural products for the treatment. The forest is also a source of livelihood for the tribes. Even after a huge progress in a modern healthcare system in the last few years, traditional healthcare practices are still primary source of treatment among the tribes of this block. Interestingly, most of the traditional practices use firsthand information which may serve as resource material for development of new bio-actives and traditional preparation for cure or management of quite prevalent diseases like rheumatism, diabetes, cancer, and skin diseases²⁵. The regular relief observed from the medicinal plant strengthens the belief and association with traditional healthcare practices. On the other hand, lack of accessibility, unavailability of essential medicine at healthcare centers and the expensive modern healthcare services compel them to use traditional healthcare practices. In some cases, though the modern healthcare facilities are available, they preferred to use traditional healthcare practices provided by the healer practitioners²⁶⁻²⁷. Tribal people mentioned the main reasons for using traditional healthcare practices among which the most important was that traditional medicine is not expensive. Secondly, they did not to go very far since it was available in their locality. It is believed that they do not have side effects. According to tribal people, the traditional medicine is very effective to save the life and keep them away from modern healthcare⁵. On the other hand, they were not satisfied with the quality of modern healthcare services, lack of infrastructure and transportation, the distance between residence and the healthcare centers was too far and not available within the locality. They were also not satisfied with the approach of the healthcare provider and delay in services which were the reason for being attracted to traditional based medicine for treatment²⁸. One more

reason for tribal people to use traditional practices was that due to language barrier they were unable to follow the instructions of the healthcare provider, similarly the healthcare providers were also not able to understand the combination of the tribes which made them dependent on traditional practices which is also finding of the one of the study²⁹.

Government should make effective policies and programs to save tribal culture and their traditional knowledge of healthcare practices. It would be also useful to reduce the burden on modern healthcare system.

Acknowledgements

Author did not get any funding from funding agencies in the public, commercial, or not-for-profit sectors for conducting of this study. The author is thankful to Ph.D supervisor Dr. Rajesh Raushan and director of Institute (Indian Institute of Dalit Studies, New Delhi) for the permission to conduct a small survey for this study. Author also gratefully acknowledges the tribal people from Bijadandi block for sharing their medicinal plant knowledge and other essential information for this study.

Conflict of Interest

It is certified that author does not have any conflict of interest with respect to the publication of this manuscript and approved the final manuscript.

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