Women’s wisdom and indigenous human healthcare practices

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In the study, an effort was made to explore the diversities of indigenous knowledge systems pertaining to human health among rural women of the purposively selected villages of eastern part of Azamgarh district, Uttar Pradesh. Data pertaining to study were collected by using the participatory approach, group discussions, participant learning and personal interview methods. Results indicate that women are having their ancestral wisdom to cure many diseases. A range of indigenous fruits and tubers are utilized during drought and food scarcity to meet nutrition requirement for maintaining health. These indigenous practices of health were found to be appropriate on account of low cost, good efficacy and easy local availability.

Keywords: Ethnomedicine, Women wisdom, Indigenous knowledge, Medicinal plants, Traditional knowledge, Uttar Pradesh

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The renaissance of medicinal plants and indigenous practices for healthcare is becoming more pronounced in the recent years, not only in the developing countries but also in the developed countries. It is evident that making of almost 90% of medicaments have basically natural origin. In India, majority of the women depend on the medicines based on locally available indigenous plants and practices for curing different diseases and health related problems. These people have unique ancestral wisdom gained through trial and error by words of mouth and different kind of folk media

Women have a profound knowledge of plants, medicines and their environment. Traditionally, they have been using a variety of indigenous plants and animals and have a direct stake in their preservation. Womens’ knowledge is an integral part of the culture and history of a local community for their particular identity. Studies have revealed that the women have greater interest in using ethnomedicine, preserving and conserving the local forest plants and other natural resources for perpetual use. In addition, women are traditional caretakers of genetic and species diversity in biodiversity. The knowledge of women about necessary growing conditions and nutritional characteristics of various species have given them a crucial fund of experiences in selection of medicinal plants for their usage. This enables them to maintain the genetic diversity of many indigenous floras required to ensure the survival and use in medicines and traditional crops, etc. Women play a pivotal role in making the link between biodiversity, ethnomedicine and health management. It is important to explore the folk and gender based knowledge about indigenous flora as this play an important role in the diversity maintenance, cultural preservation and development.

During the period of hunger and illness, women know which plant can provide emergency meals to help in keeping their family alive and healthy. It is the women who use various local plants or food recipes at various rituals with intent to maintain the health, meet out the nutritional security as well as preserve the cultural and ethnic identity in particular social systems. Despite the 1992 UN Convention on Biological Diversity (CBD), requiring the rendering of due credit and benefit to local biodiversity conservators and traditional knowledge holders, in which women are major players, due recognition and proper attention have not been paid in India. Keeping in view the enormous importance of
indigenous practices regarding human health, in the investigation an attempt has been made to study the indigenous practices to treat various diseases and disorders in humans.

Methodology
The respondents of the study belong to poor and middle class families and dependent on agriculture, animal husbandry and ethnobotanical resources collected from wild or kitchen garden. The study was undertaken in the purposively selected Sonapur,Kalbalhouti and Hamirpur villages of Jahanaganj block of Azamgarh district, Uttar Pradesh. From the selected village, a list of elderly women (≥50 yrs of age) was prepared taking the help of village chief (Gram Pradhan) and primary school teachers. From the prepared list, a sample of 60 resource-poor women was chosen to explore the varieties of indigenous practices pertaining to human health. These respondents were interviewed to know their perception regarding the attributes responsible for appropriateness of indigenous practices for human health. A transect walk was made to develop the resource-flow map of village and explore the local plants used in various ethnomedicine. The resource flow map has helped in learning the current use of natural resources with special reference to botanical herbs and plants at village level. A participant observation was made in exploring some of the complex ethnomedicine like traditional method of preparing sirka (vinegar) from sugarcane. Focus group discussion (FGD) was adopted to explore the qualitative data regarding cultural, social, social capital and historical aspects of ethnomedicine. The explanatory research design with non-parametric statistics was applied to analyze the data and draw inference from the study. A Prior Informed Consent (PIC) of village chief (since almost ethnomedicine are community property) as well as traditional knowledge holders was taken to put their practices in the public domain for wider circulation.

Results
It has been observed that majority of studied women have an average age of 50-70 yrs. Almost all of them were illiterate, but having more than 30-50 yrs of experience in using and prescribing the ethnomedicine prepared using local plants. They accumulate and blend the knowledge of both places i.e. from the native place as well as husband’s place, while using the ethnomedicine. From the discussions and interaction with these women, following indigenous practices were explored to treat different diseases and disorders:

Ringworm Infection
After scratching the affected body part, one clove of garlic is ground and the paste is applied. It is repeated thrice daily for 7 to 8 days. In severe cases, the latex of papaya fruits is applied over the infected area. This practice is repeated for 4-5 days for full course of treatment.

Diabetes
Fermented and filtered juice of jamun (Syzygium cuminii Linn.) fruits is given twice a day to people suffering from acute diabetes.

Vomiting, dysentery and loose motion
The barks of lime (Citrus aurantifolia Christm.) & imli (Tamarindus indica Linn.) and epidermis of banana pseudostem are crushed with little water, filtered and the extract is used four times a day to cure vomiting and loose motion. When a child is suffering from dysentery, root paste of Phyllanthus niruri Hook f. non Linn.) with water and sugar is given thrice a day at 2 hrs interval to the suffering child. The treatment is for about 2-3 days for complete recovery. To control the blood dysentery, mixture of mango kernel powder and banana root extract is used once daily for 4-5 days to get complete relief. Mango bark extract is prescribed thrice daily to control loose motion. To treat the bacterial blood dysentery, mixture of ripe banana pulp and camphor is given twice daily and is continued for two days for complete relief. The juice of bhangaraiya [(Eclipta alba (Linn.) (Hassk.))] and sugar is given to persons suffering from the severe whitish dysentery.

Cough and blood related problems
When the old age people suffer from the low haemoglobin and blood problem, decoction of ghungdi [Phyllanthus indicus Linn.] is used for quick relief. The use of decoction made of ghungdi was learned by Mrs Shyama Devi from her husband Late Shri Rambachan Singh of Sonapur village. The juice of herb is styptic and is used for the elimination of chest pain, cough and recovering and purifying the blood. Lukewarm decoction of ghundi is given once daily during morning on empty stomach. The practice is continued for about a month for getting satisfactory result. Lukewarm water, honey and lime juice mixed
together is given to the person affected with cough, 4-5 times daily till relief. Decoction of *tulsi* (*Ocimum sanctum* Linn.) leaves, black pepper and sugar is given for quick relief from severe cough.

Cut, wound and sores

Paste of leaves of *neem* (*Azadirachta indica* A. Juss. Linn.) and bitter gourd is applied on the wounds and sores of human being. To stop bleeding from cuts and wounds, white spider webs along with its dust are tied over the wound. *Dudhiya* (*Euphorbia hirta* Linn.) sap is an effective medicine for the cut and wounds to human being. Smearing honey is a common practice for recovery from burning and wounds. *Datura* (*Datura stramonium* Linn.) leaves are applied to control the heat sores. Paste of dry leaves of *pudina* (*Mentha viridis* Linn.) and mustard oil is applied to get relief from toothache. The mixture of common soda and lime juice is applied for curing the ear pain. While, the extract of *sudarshan* (*Crinum latifolium* Linn.) is applied for controlling severe ear pain. A mixture of butter milk, honey and lime juice is given twice a day to the people suffering from weakness.

Paralysis

Normal attack of paralysis is treated by using the mixture prepared from tender leaves of tamarind and card given twice daily.

Bites

The mixture of tobacco and barley straw is burnt and the smoke is exposed to the affected part. In case of scorpion bite, the liver of scorpion is taken out, warmed and placed over the bitten part of the body. In the case of snakebite, the mixture of ghee and black pepper is administered orally thrice at an interval of 1 hr. In case of acute poisoning due to snakebite, paste of earthworm and sugar is given to the affected person.

Head lice

Head lice are completely controlled by applying the ground mixture of green papaya pulp and salt.

Boil

Mixture of fried *bhangraiya* (*Eclipta alba* Linn) and mustard oil is applied on immature boils to take our pus and quick healing. Paste of ground leaves of *sahtoot* (*Morus alba* Linn.) is also applied, but it is rather uncommon. Paste prepared from *nagphani* (*Opuntia dellenii* Haw.) is applied over wound in case of severe pain.

Fever

In case of cold fever, the decoction of *arush* (*Adhatoda vasica* Nees) with the sugar is taken orally thrice daily and continued for 2 days to get complete relief. The mixture of *arush* leaves, fruits of *gular* (*Ficus glomerata* Roxb.), mustard, barley, black salt and onion are kept in an earthen pot for fermentation. After 5-6 days, it is filtered and given to the animal suffering from stomach disorders like gas trouble, indigestion and improper feed intake. In case of severe fever, decoction of 150 gm each of roots of ash gourd and bitter gourd is given to the patient suffering from fever. This practice is continued for about one week for compete recovery. Root decoction of *gadahpurna* (*Boerhaviva diffusa* Linn.) is given to women suffering from fever after the delivery orally twice daily and is continued for 6-7 days. To cure fever and get relief from the delivery pain, women take cooked mixture of turmeric, dry ginger, *jeera* (*Cuminum cyminum* Linn.), cow ghee, sugar and milk thrice daily for 6-7 days. For curing the *parsuti bukhar* (fever after delivery), decoction of *jharbaila* (*Zyzyphus nummularia* Linn.) roots is given to the patient once daily in morning on empty stomach and is continued for about one week for the assured recovery from fever.

Pain

To get relief from headache, people apply (twice a day) paste of eucalyptus (*Eucalyptus obliqua* L. Herit) leaves on forehead. *Mahua* seed oil (*Madhuca latifolia* Macbr.) is smeared on waist and back to prevent the pain. This practice is popular among women folk just after delivery and improper menstruation cycle. In case of acute conjunctivitis, tender leaves of *neem* is applied on the eye and then smeared with cow ghee. The extract of *kunkroundha* (*Blumea balsamifera* D.C.) leaf is applied over the wound caused by any hard implements. Fenugreek seeds and lukewarm water is taken to get relief from the stomach pain. The solution of dry garlic powder with little water is given to get relief from the *Adhkapari* (migraine). For women suffering from continuous waist pain, shade dried leaves of *bael* (*Aegle marmelos* Correa ex. Roxb.), and roasted & powdered fenugreek seeds mixed with sugar-candy is given on empty stomach once daily in the morning.

Gas trouble

Powder od dry leaves of *bael* (*Aegle marmelos* Correa ex. Roxb.), *aonla* (*Emblica officinalis* Gaertn.) and *Babool* (*Acacia nilotica* Linn.) mixed with fenugreek seeds and sugar is taken twice daily after
meals to get relief from gas trouble. Roasted seeds of *tinpattia* (*Casia tora* Linn.) are given to persons suffering from gas and stomach pain twice daily after the interval of 2 hrs. Use of *Cassia tora* Linn. in curing the stomach ulcer has been reported earlier. *Sirka* made from sugarcane juice after fermentation is given on empty stomach in morning once on each alternative day to get quick relief from gas trouble and stomach pain. The practice is continued for one week. The same treatment can be given to the animal after adding salt to control the *Galaghontu* disease, in which throat is infected and suffered from flatulence. After looking to the initial symptoms, if *Sirka* with salt is given, then it can be easily controlled.

**Piles**

Dry powder of *suran* (*Amorphophallus campanulatus* Blume ex Dence) is taken to get relief from piles. This treatment is continued till complete cure.

**Pregnancy and gynaecological disorders**

Seeds of *ghonghchi* (*Abrus precatorious* Linn.) are used for abortion. Powder of *ghonghchi* is given thrice daily for quick result. This treatment is appropriate only when administered within 3 months of pregnancy. In case of over-bleeding after the delivery, root bark paste of *mahua* (*Madhuca latifolia* Macbr.) is given twice daily and the practice is continued for 3-4 days for complete recovery.

**Jaundice**

Paste of bottle gourd (*Lagenaria siceraria* (Mol.) (Standl.)) leaves, roots of cucumber and radish is administered for the treatment of jaundice for about 20-25 days. In addition to this, some people take radish with curd in the morning and evening to get quick relief.

**Bone dislocation**

Paste of tamarind leaves, *pasarbanda* (*Loranthus spp.*) bark (parasite on the mango tree), *usar mitti* (acidic soil) and powder made traditionally from milk of sheep are boiled together with little water and tied with cotton cloth on the dislocated part and kept for 3-4 days.

**Hair care**

Honey and curd or limejuice mixture is used on the head for removal of dandruff and giving strength to the hair. Use of *Karail mitti* (black cotton soil) for removing the dandruff is quite effective practice among women.

**Cure of moles, blain and blister**

When a person is suffering from moles, pulp of *nagphani* (*Opuntia dillenii* Haw.) mixed with vermillion is applied over the moles for quick recovery. This practice is repeated twice daily and continued for about one week for complete relief. To cure the blain, paste of *bhadbhadwa* (*Argemone mexicana*) roots boiled with goat milk is applied over the blain twice a day and continued for over one week for complete cure. To cure the blisters found especially on legs, hands and arms, paste prepared from green leaves of *karemua* (an aquatic creeper, leaves are used as vegetable) mixed with curd is applied over the blister (*chhale*) and repeated 3-4 times daily for about 3-4 days.

**Treatment of stomach disorders in animals**

If an animal is suffering from dysentery, it is fed with tender leaves of *sisson* (*Dalbergia sissoo* Roxb.) for recovery. In acute case, fruits of *datuta* put in the moist wheat or barley flour and roasted over low flame are given. This practice is continued for about one week for complete recovery of animal. Similarly, for vermiciding calf, after 10-15 days of calving, green *neem* leaves added with butter milk and common salt is given to new born calf for about one and half month.

**Indigenous ways of survival during drought**

In drought condition, *peepal* (*Ficus religiosa* Linn.), *bargad* (*Ficus benghalensis* Linn. Fig.1) and *pakad* (*Ficus rumphii* Blume. Fig.2) were kept under the supervision and care of village elders for its proper fruiting so that no body can pluck the fruits before ripening. After ripening, family wise, the branches of these trees were divided for collection of fruits. *Laddu* is made after adding sugar and ghee. After eating this, drinking of butter-milk (*chhachh*) was unique ethnic food habit to survive and maintain the health during drought period. The indigenous and location specific drought and pest tolerant paddy varieties like *bhandani*, *karanga*, *karanagee*, *sahdeiya*, *timm* and *karahani* were used to cultivate. These varieties were used for making foods during the drought period due to their high starch content. Besides, many local varieties of maize, sorghum and *bajra* helped local people to fight against the drought. Further, a knowledge holder, Mrs Shyama Devi (Fig. 3) narrated that the traditional foods like *sathu* and *laddu* made of millet crops like *mandua* (Fig. 4), *sanwan*, *kodo* and *kutki* were given to the person, who were doing more physical work. But with the passage
of time these foods have been eroded from the society.

Social capital, ethnic foods and ethnomedicine

To combat the health and food related problem, the poor people try to solve by using their existing social capita\footnote{Social capital is the approach of informal rural social institutions in which group of people solves the problem related to food, health, natural resources, etc. collectively and everybody feels integral part of a particular social institution. The social capitals are found more predominantly in the traditional community, where locals still celebrate the festival and social and cultural occasions in the group. In this regard, some interesting social capital could be explored from the rural women. They reported that collection and share of neem, mahua and mango fruits are done in the group collectively. These fruits are used in various diseases. For example, neem is used in curing several skin and eye diseases and mahua (Fig. 5) for curing waist, muscles and bones pain. The flowers are used for making nutritious ethnic food called latta, thukwa and halwa after adding the wheat flour. Latta is used in rainy and winter season to warm up the body. The dried mahua flowers mixed with goat milk, boiled in earthen pot is given to person suffering from paralysis and bones pain. The immature fruits are used for preparing vegetables during the lean period. Mahua seed oil is used as massage by ladies suffering from waist pain due to gynaecological disorders. Dry mahua flowers are given to bullocks especially during peak ploughing season. Dry mahua flowers are given to buffalo/cow suffering from some deficiency and not coming into heat period timely. This ethnoveterinary medicine is continued for 7-8 days continuously.

The local institution called Mahua Binia helps in proper collection and equitable share of mahua flowers from the common garden. It also helps in avoiding conflict during the flower collection. During the month of March, huge quantity of mahua flowers drop in common garden called Bagaicha. The women from the villages related by blood form a group to collect these flowers. While collecting these flowers, an old lady starts singing the song on the ways of flower collection and use of flowers in various foods items. In the noon time, the collected flowers are divided according to the rule of percentage of property right in the tree and members involved in collecting the flowers. The pulp of ripen mango is used for preparing varieties of ethnic food like amawat to use during the food crisis. Amawat is well known for recovering the body weight and is given to the old aged person.

After the birth of a new baby, old ladies of a village gather in the house where baby is born. They sing songs related to ethnomedicine, culture and nature. Just after the birth, these women give the solution made of mother’s milk and hing (asafoetida) to the new baby for fighting against the fever and pneumonia. On the sixth day after birth, called Chhathi, a special food made of dried ginger, turmeric, cow ghee, dry fruits and sugar is given to the mother for improving lactation.

Factors responsible for appropriateness of indigenous practices

The majority (87.50%) of the people reported that economic viability of indigenous health management practices is the most important indicator for its appropriateness (Table 1). Each practice has logical rationality to cope with the diseases/problems reported by 85% of the people, while, no adverse effect, good efficacy and local availability are third and fourth important factors responsible, respectively, for the appropriation of practices as perceived by people. Compatibility with socio-economic conditions, past experiences, efficacy nature and compatible with cultural conditions were found to be the most important indicators for appropriateness of indigenous practices which got fifth, sixth and seventh ranks in the order of magnitude. Least important but unavoidable factors for

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<th>Indicators of appropriateness</th>
<th>Percentage of response</th>
<th>Ranks</th>
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<tr>
<td>Economically viable</td>
<td>87.50</td>
<td>I</td>
</tr>
<tr>
<td>No adverse effect</td>
<td>81.25</td>
<td>III</td>
</tr>
<tr>
<td>Good efficacy</td>
<td>81.25</td>
<td>III</td>
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<tr>
<td>Easy to handle</td>
<td>62.25</td>
<td>IX</td>
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<tr>
<td>Widely used</td>
<td>66.25</td>
<td>VIII</td>
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<tr>
<td>Locally available</td>
<td>77.50</td>
<td>IV</td>
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<tr>
<td>Rationality</td>
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<td>Reproducibility nature</td>
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appropriateness of indigenous practices as perceived by poor people were noted as wide potential in the applicability, easy to handle and reproducibility in nature. All these attributes contribute significantly for the existence and use of natural resources by following the indigenous approach.

Communication and intergenerational transfer of traditional knowledge

Words of mouth, weekly market and various informal rural social institutions play significant role as the modes of communication of traditional knowledge and predominantly transfer the practices from one place to another (Fig. 6). The existence and use of folk songs, proverbs, folk tales and story were found to be the important modes of communication in the human healthcare practices.

Sources of learning about traditional knowledge and health practices

With the calculated mean score values, it is obvious that parents (64.78) are still major sources of learning about the traditional practices on human health in the joint family system, followed by grandparents (59.22). In the traditional communities, elders of society (28.13) and inter-and-intra communal interactions (25.19) are viable sources of learning about the knowledge systems pertaining to human health, medicinal and nutritious foods practices. Similarly, friends, relatives and neighbours also play a pivotal role for intergenerational learning and transfer of ethnomedicine (Fig. 7).

Discussions

Women have time tested years of informal knowledge systems in curing the diseases and maintaining the human health. They know the types of local plants, their properties, use in various diseases and disorders. These indigenous practices are compatible to their socio-economic and cultural conditions. Wide adaptability, nature of practices, local availability and no cost nature are the major factors responsible for the continuance of indigenous practices in human health. Women not only know the local medicines for treating diseases, but also have the wisdom to use the ethnobotanical resources for making nutritious and medicinal foods. The local plants and practices are not merely used in human health but also found useful in some of the diseases of animals. Hence, it shows the dynamism of the knowledge of women. The knowledge systems using ethnomedicine are saturated with various social, cultural and spiritual beliefs, which also help in conserving and sustaining the existing plant biodiversity. Other studies also indicate that spiritual and cultural value of biodiversity helps in conservation and sustainability.

Therefore, it is of paramount need that locally available indigenous health practices should be incorporated in the research system to test their scientific rationality and assure the validity. A participatory research project can be designed with the help of people to carryout the research, treatment and health maintenance. The social capital and informal rural social institutions, as studied can be taken into account while preparing such plans, to make the efforts participatory and successful. Many elements need to come together for positive changes to preserve the treasure of ethnomedicine. On account of above discussions, the following policies could be framed, which may offer better growing and sustaining the indigenous practices dealing with human and animal medicines.

Various necessary educational learning elements are required to be blended with existing system of school education. For this, training and capacity building of primary school teachers may be done to give them an opportunity for transferring the knowledge among younger generations. To guide and promote substantial dialogue between school teachers and community elders for transferring the indigenous knowledge systems of local plants, foods and medicines to the children for making the knowledge dam and avoid erosion. Invite the women traditional healers and knowledge holders in the school for giving the lecture as well as interacting with teachers and school children so that knowledge network could be developed. Various educative medias, video games and cartoons may be developed pertaining to traditional knowledge about ethnomedicine for transferring the knowledge from one generation to another through the young children. A knowledge network of like minded women can be developed through various print and electronic media for preserving and promoting the indigenous practices of human health. The value addition through scientific research and development can make the local medicines more popular. It will also help in assuring the intellectual property rights after knowing scientific active ingredients in a particular medicinal plant. The equitable benefit share in terms of both
tangible and non-tangible benefits should be assured with the help of Prior Informed Consent (PIC) before putting the women’s knowledge into the public domain.

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