Plants, Holy Book, and Esoteric methods: All go together in folk medicinal healing in Bangladesh

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Abstract
Although folk medicine in Bangladesh is mostly dependent on plants for treatment of diseases, such phytotherapy is occasionally augmented with incantations (reading from holy books), amulets and other esoteric practices. The objective of the present study was to document the multi-modal folk medicine (FM) practice by two folk medicinal practitioners (FMPs) of Brahmanbaria district, Bangladesh. Although they used plants as an essential ingredient for disease treatment, such treatment was augmented with readings from the holy Quran and esoteric practices like using plants from three directions, uprooting plant in one breath, and tying of plant parts to the head. Altogether, nine plant species distributed into nine families were used in their treatment methods. The efficacies of esoteric practices along with the pharmacological properties of the plants are discussed.

Keywords: Phytotherapy, Brahmanbaria district, Bangladesh, esoterism.

Introduction
Folk medicine (FM) can be described as treatment with plants with multiple branches. Almost anything can be used or done in folk medicine so long as the ultimate objective is healing. Since folk medicinal practitioners (FMPs) do not need to graduate from any institution or are subjected to registration and licensing, virtually any person can start folk medicinal practice with or without requisite knowledge of treatment. As a result, in folk medicine practice, charlatans co-exist with genuine practitioners with a great deal of in-depth knowledge on phytotherapeutic properties of plants and deep insight into the human psyche, which can be utilized in introducing esoteric and religious practices in the treatment resulting in instilling psychological confidence in patients.

Esoteric practices in the form of incantations (reading from holy books, ‘mantras’), wearing of amulets, taking medications or preparing medications on a given day of the week are common in most traditional medicinal practices. For instance, ‘Daivavyapashrayya’ or magico-religious practices are common in Ayurveda, which includes recitation from the Vedas as well as recitation of ‘mantras’ (which may or may not be Vedic incantations [1]. In fact, it has been said that in India, curative spells and healing mantras preceded medicine [2]. Divination, spiritualism and herbalism are three distinctive features of African traditional medicine [3]. Use of verses from the Quran (holy book of the Muslims), amulets or even numerology along with plants for the treatment of diseases has been reported before from Bangladesh [4]. Amulets and other esoteric (uncommon) treatments side-by-side with plants have also been reported for tribal medicinal practitioners (TMPs) of the Bede community in Bangladesh [5]. Esoteric home remedies have been reported from Narayanganj district in Bangladesh [6]. Such esoteric remedies have included tying of plants to the body to cure diseases [7]. The major point to be noted is that complementary elements are used along with plants by the FMPs. As such, the diverse practices of the FMPs are to be documented individually to cover the whole gamut of their practices. We had been doing that for the last decade [8-36]; however, much remains to be documented. Such documentation is important for discovery of new drugs. The objective of this study was to document the esoteric practices of two FMPs in Brahmanbaria district, Bangladesh.

Methodology
Our informants were Farida Khatun, female, age 62 years, who practiced in Hossainpur village
of Brahmanbaria district (Kaviraj 1) and Rahish Mia, male, age 50 years, who practiced in Choyfulla kandi village of Brahmanbaria district (Kaviraj 2). Both FMPs preferred to be addresses as Kaviraj, which is the term given usually to an Ayurvedic practitioner, but the term is also used by FMPs of Bangladesh. Informed consent was first obtained from the FMPs as to publication of information provided by them including their names, ages and treatment methods. Actual information was obtained from the FMPs with the help of a semi-structured questionnaire and the guided field-walk method of Martin [37] and Maundu [38]. In this method, the FMPs took the interviewers to spots from where they collected their medicinal plants, pointed out the plants, and described their uses. Local names of the plants were obtained from the FMP. Plants were photographed from several angles. Plant parts were also collected, dried and pressed and brought to Dhaka for identification by a competent botanist at the University of Development Alternative. Plant specimens were deposited with the Medicinal Plant Collection Wing of the University of Development Alternative.

Results and Discussion

The two FMPs in between themselves used nine plants in their treatments. The plants were distributed into nine families. The results are shown in Table 1. The various ailments treated included gastrointestinal disorders (like diarrhea, gastric disorders, dysentery), premature ejaculation, as a diuretic, bleeding from the throat, cough mixed with blood, wounds, sprain, fever, and headache. Esoteric medicinal practices were performed by both FMPs. For instance, for treatment of diarrhea, Kaviraj 1 uprooted whole plants of *Amaranthus spinosus* in one breath following recitation of Surah Al Kausar (chapter 108 of the Quran, the holy book of the Muslims). Juice obtained from crushed whole plant was then prescribed to be taken orally. A literal translation of the Surah (original in Arabic) is as follows – “I. We have certainly given you abundance; II. So pray to your Lord and sacrifice to Him; (III) Surely, he who hates you is the one cut off.” Muslim scholars believe that the Surah is addressed to the Prophet (PBUH) assuring him of happier times ahead. From that view point, utterance of this Surah by the FMP might represents an assurance to the patient that happier times for the patient lies ahead, that is the patient will be cured. Coming from the religious to the scientific, anti-diarrheal and anti-ulcer activities have been reported for the plant [39].

Kaviraj 2 had his own esoteric methods also. For treatment of gastric disorders and dysentery, three plants of *Centella asiatica* are to be uprooted, first from the north, second plant from the west and the third plant from the east side of where the person is standing. The uprooting has to be done in one breath for each plant at the time of Fazr prayers (first prayer of the Muslims at the break of dawn). Three drops of juice obtained from whole plant was applied to the ears (right ear for men, left ear for women). Alternately, leaf juice was mixed with 500 ml cow milk and 250g mishri (crystalline sugar) and taken orally. In rural areas of Bangladesh, elderly women folk herbalists can be observed collecting medicinal plants at dawn, but that is for the purpose of obtaining enough sunlight throughout the day for proper drying and preservation of the plants. The motive of Kaviraj 2 in collecting plants at the break of dawn could not be ascertained; nor it could be ascertained why the Kaviraj did not collect plants from the south side. It was also surprising that for treatment of gastrointestinal disorders, plant juice was applied inside the ears, and then again right ear for men, left ear for women. Once again, coming from the esoteric to the scientific, *Centella asiatica* has been found to improve healing of the gastric epithelium [40], and give protection against indomethacin-induced gastric mucosal injury in rats [41]. The plant is also used to cure enteritis and dysentery by rural people in three southern districts of West Bengal, India [42].

It can be concluded that despite the esoteric nature of some of the treatments employed by the two FMPs, there is an undercurrent of scientific validation in their selection of plants. Both *Amaranthus spinosus* and *Centella asiatica* have been scientifically shown to be effective against gastrointestinal disorders, precisely the ailments the FMPs were using them for. To give one more example, the plant *Glycyrrhiza glabra*, used by one FMP for treatment of diarrhea and fever has also been found effective against fever and has spasmylytic activity, which can be beneficial in stopping intestinal spasms leading to stopping of diarrheal episodes [43].

**Table 1:** Medicinal plants and formulations of the two FMPs of Brahmanbaria district, Bangladesh.

<table>
<thead>
<tr>
<th>Serial Number</th>
<th>Scientific Name</th>
<th>Family Name</th>
<th>Local Name</th>
<th>Plants used</th>
<th>Ailments treated</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>Amaranthus spinosus</em> L.</td>
<td>Amaranthaceae</td>
<td>Kata khura</td>
<td>Whole plant (non-flowering)</td>
<td>Diarrhea. Whole plant is uprooted in one breath after reciting Surah Al Kausar (chapter 108 of the Quran, the holy book of the Muslims). Juice obtained from crushed whole plant is taken orally (children are given lower doses). Kaviraj 1.</td>
</tr>
<tr>
<td>2</td>
<td><em>Lannea coromandelica</em> (Houtt.) Merr.</td>
<td>Anacardiaceae</td>
<td>Kafila</td>
<td>Bark, Fruit</td>
<td>Premature ejaculation. A portion of bark measuring around nine inches (the distance from the end of the thumb to the end of the little finger) is taken and crushed to obtain juice, which is taken daily orally in the morning. Diuretic. Fruits are taken orally. Kaviraj 2</td>
</tr>
<tr>
<td>3</td>
<td><em>Centella asiatica</em> (L.) Urb.</td>
<td>Apiaceae</td>
<td>Thankuni, Taymangipata</td>
<td>Leaf, whole plant</td>
<td>For the diseases mentioned below, three plants are to be uprooted, first from the north, second plant from the west and the third plant from the east side of where the person is standing. The uprooting has to be done in one breath for each plant at the time of Fazr prayers (first prayer of the Muslims at the break of dawn). Gastric disorders, dysentery. Three drops of juice obtained from whole plant is applied to the ears (right ear for men, left ear for women). Alternately, leaf juice is mixed with 500 ml cow milk and 250g mishri (crystalline sugar) and taken orally. (Kaviraj 2)</td>
</tr>
<tr>
<td>No.</td>
<td>Species</td>
<td>Family</td>
<td>Part</td>
<td>Use</td>
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<tr>
<td>4</td>
<td>Eclipta alba</td>
<td>Asteraceae</td>
<td>Whole plant</td>
<td>Headache. Leaves are crushed within the palms and the palms are then rubbed over the head. Alternately, leaves are tied to the head with a leaf of Musa ornata. Diuretic. Fruits are taken orally. (Kaviraj 2)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Heliotropium indicum</td>
<td>Boraginaceae</td>
<td>Leaf</td>
<td>Wound. Leaf paste is warmed and applied topically to wounds. Sprain. Leaf juice mixed with seed oil of Ricinus communis is applied topically to painful areas. (Kaviraj 1)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Ricinus communis</td>
<td>Euphorbiaceae</td>
<td>Seed oil</td>
<td>See Heliotropium indicum.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Glycyrrhiza glabra</td>
<td>Fabaceae</td>
<td>Whole plant, Root</td>
<td>Diarrhea. Juice obtained from whole plant is taken orally for 2-3 consecutive days. Intermittent fever. Roots are tied around the head. (Kaviraj 1)</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Ficus racemosa</td>
<td>Moraceae</td>
<td>Leaf, Fruit</td>
<td>Headache. Leaves are crushed within the palms and the palms are then rubbed over the head. Alternately, leaves are tied to the head with a leaf of Musa ornata.</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Musa ornata</td>
<td>Musaceae</td>
<td>Leaf</td>
<td>See Ficus racemosa.</td>
<td></td>
</tr>
</tbody>
</table>

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References
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