Short Communication:
Diversity of medicinal plants used to treat human ailments in rural
Bahir Dar, Ethiopia

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Abstract. Mazengia E, Beyene T, Tsegay BA. 2019. Short Communication: Diversity of medicinal plants used to treat human ailments in rural Bahir Dar, Ethiopia. Asian J For 3: 75-82. Survey of traditional medicinal plants used to treat human ailments by the rural community of Bahir Dar City Administration was conducted from November 23, 2017 to May 30, 2018 with the aim of identifying and documenting plants and the associated knowledge used to treat humans. We collected data from six study sites using semi-structured interview, field observation and group discussion. Data analyses were made using preference ranking, direct matrix ranking and fidelity level index. A total of 77 medicinal plants were identified. The majority of plants (58.4%) are harvested from the wild. The largest number of plants were herbs (42.6%) followed by shrubs (32.6%). The most frequently used plant parts in human disease treatments are leaves (54%) followed by roots (18%). Most remedies are prepared by pounding and mixing (concoction) (36%). The remedial administration was mostly oral (51%) followed by dermal (31%). Allium sativum and Ocimum lamiifolium are frequently used. The community in the study area uses considerable diversity of plant species for maintaining their health care system. Nonetheless, conservation for those plants whose roots are harvested is necessary.

Keywords: Ethnobotany, ethnomedicine, ex-situ, in-situ, traditional healer, use value

INTRODUCTION

Since time in memory, people have used plants for multiple purposes, i.e. as sources of food, medicines for human beings and livestock, and as materials for household utensils, fuel, etc. Traditional medicine is culturally based cure system different from modern (scientific) medicine and usually considered as indigenous, alternative or folk medicine, which is largely transmitted by words of mouth from elders to young generation (Martin 1995). Most people in the world (70-90 %) use herbal remedies as their primary healthcare system (Nair and Nathan 1998).

Ethiopia is endowed with a wide range of topographic features enabling it to have a variety of ecosystems. These varied ecosystems possess high diversity of flora and fauna which include good number of potentially useful medicinal plants (Abebe 1986; Seid and Tsegay 2011). Majority of Ethiopians (about 80%) use herbal medicine as their primary healthcare system (Giday 1999). However, high rate of land use conversion (deforestation for agricultural land expansion), over harvesting and/ or indiscriminate harvesting and unmanaged population growth with increasing demand and consumption are the principal problems that aggravate the rate of disappearance of medicinal plants from their habitat and the consequent loss of significant number of plant species (Seifu et al. 2006).

All culturally useful medicinal plants were not surveyed and documented in Ethiopia. The traditional knowledge and practices around Bahir Dar City is part of the non-surveyed ones. This study was aimed at identifying and documenting the medicinal plants used by the rural community of Bahir Dar and the associated knowledge used to treat humans. Such a study would be of paramount importance in conserving the plants and ensuring their sustainable use. Moreover, bequeathing the traditional knowledge to the next generation and developing it for new insights is necessary.

MATERIALS AND METHODS

Study location

Ethnomedicinal study was conducted in Bahir Dar rural kebeles (smallest administrative units in Ethiopia) (Figure1) from November 23, 2017 to May 30, 2018. Bahir Dar is located at 11°59’ North latitude and 37°39’ East longitude as determined from the city center. The elevation ranged from 1650 m.a.s.l at Tisabay to 2100m.a.s.l at Meshenti. From the 26,295 hectares area of the rural kebeles, 19,969 hectares of the land is being cultivated (ANRS RLUM, 2018 personal communication). According to fourteen years’ metrological data obtained from Bahir Dar city weather station, the study area received mean annual rainfall and temperature of 1423.2 mm and 27.5°C, respectively (ANRS RLUM, 2018 personal communication).
Informant selection
Six kebeles (small local administrative units) were selected purposely based on the availability of local healers as advised by community elders (Figure 1). Totally 72 informants, 35 men and 37 women, were selected for this study. Seven key informants, one from each kebele except 2 from TisAbay, were selected based on the advice from local authorities, traditional healers and local farmers. The remaining 65 general informants were randomly selected.

Ethnobotanical data collection
The primary data were collected directly from the informants in the study area by semi-structured interviews, group and individual focused discussions, filed visits and informal conversations. During group discussion, necessary information related to medicinal plants, mode of preparation, rout of application, types of disease treated, plant part used for preparation of remedies were documented to obtain detailed quantitative and qualitative data. The plants were identified using different volumes of “Flora of Ethiopia and Eritrea” (https://www.nhbs.com/series/flora-of-ethiopia-and-eritrea) (Edwards et al. 2000; Hedberg and Edwards 1989, 1995; Hedberg et al. 1995, 1997, 2003, 2007, 2009a, 2009b; Tadesse. 2005), as well as Bekele-Tesemma (2007) and Dagne (2009). Online references were also used (Table 1).

Data analysis
Descriptive statistics (Microsoft Excel 2010) was used to analyze data. Information provided by respondents was determined using preference ranking, direct matrix ranking and fidelity level index following the method from Alexiades (1996) and Martin (1995).

RESULTS AND DISCUSSION
Most of the medicinal plants used by the traditional healers in rural kebeles of Bahir Dar are presented in Table 1. Seventy-seven (77) ethnomedicinal plant species belonging to 75 genera and 42 families were collected with the guidance of local healers. Out of the 77 species, 58.4% were from the wild and 27.3% were cultivated while 14.3% were both wild and cultivated.

Figure 1. Map of the study area (drawn by Andargachew Baye, member of the GIS team, Amhara National Regional State, Ethiopia)
**Table 1.** List of traditional medicinal plants (majority of the 77 species) used to treat human ailments in rural community of Bahir Dar City Administration, Ethiopia

| Botanical and family name                  | Local name (Amharic) | Ailment treated                           | Part used for preparation and their application as reported by healers. |
|-------------------------------------------|----------------------|-------------------------------------------|-----------------------------------------------------------------------|
| Achyranthes aspera L. (Amaranthaceae)     | Telege               | Hemorrhoids                               | The leaf is pounded, squeezed and then creamed on infected part.       |
| Allium cepa L. (Liliaceae)                | Kei shinkurt         | Stomach complaints, Cough                 | Pound the stem and mix with A. sativum, R. chalepensis and honey. Then eat them every morning until getting recovered. |
| Allium sativum L. (Liliaceae)             | Neh shinkurt         | Malaria                                   | Pound, mix with Cicer arietinum for night long and eat them in the morning. |
| Argemone mexicana L. (Papaveraceae)       | Yaheya eshoh         | Wound                                     | Apply the latex on the wound or use it as massage cream.              |
| Artemisia abyssinica Sch.Bip.ex.A.Rich    | Chikugn              | Stomach complaints (ache) with diarrhea   | Dried leaf is grinded & mixed with water and drunk.                  |
| Arundo donax L (Poaceae)                 | Shenbeko             | Rh factor “shotelay”                       | The root of Arundo donax is tied on neck.                             |
| Brassica carinata A. Braun (Brassicaceae) | Yabesha gomen        | Placental retention (delay)               | Roasted and grounded, then mixed with leaf juice of Ziziphus spin-christi in hot water. Then drink or place it in vagina. |
| Brucea antidysenterica J.F.Mil. (Simaroubaceae) | Waginose             | Wound                                     | The leaf of Brucea antidysenterica is pounded, squeezed and then creamed on wounded part until getting recovered. |
| Carica papay L (Caricaceae)               | Papaye               | Swelling                                  | Split the fruit and remove seeds and its content. Use the pulp as massage cream on the infected body part. |
| Carissa spinarum L. (Apocynaceae)         | Agam                 | Devil disease                             | Boil fruit and mix with roots of P. schimperi, C. macrostachyus & A. schimperiana and drink the suspension. |
| Catha edulis (Vahl) Forssk. ex Endl. (Celastraceae) | Chat                  | Asthma/Coughing                           | The leaf powder is mixed with melted butter and drink them in the morning until getting recovered. |
| Chenopodium ambrosioides (Chenopodaceae)  | Amedmado             | Infection on swelling                     | Pounded plant is mixed with Datura stramonium L. & Kalanchoe sp and bandage them on the swelling. |
| Coffee arabica L. (Rubiaceae)             | Buna                 | Wound sore                                | The seed is roasted & pounded (powdered) and put on the wound until it is healed. |
| Croton macrostachyus Hochst. ex Delile (Euphorbiaceae) | Bisansa              | Face fungus (Tinea faieti)                | Mixed leaf extract with A. sativum & honey. Then apply them on the infected body. |
| Cucubita pepo L (Cucurbitaceae)           | Duba                 | Tape warm                                 | Powdered seed is mixed with butter and eaten                         |
| Cucumis ficifolius A. Rich (Cucurbitaceae) | Yemder Embuyu        | Wound sore                                | The leaf extract of Cucumis ficifolius is heated and applied on the wound. |
**Cyathula polycephala** Beker (Amaranthaceae)  
http://www.villege.ch/musinfo/bd/cjb/africa/details.php?language=an&id=34  
Chegogot  
Skin rash (“chiffee”)  
The leaf of *Cyathula polycephala* is crushed, squeezed and the pure solution is applied on affected body part until getting recovered.

**Dovyalis abyssinica** A.Rich. (Sakaiaceae)  
Embelia schimperi Batke (Myrsinaceae)  
Euphorbia amplipilis L. (Euphorbiaceae)  
https://www.pfaf.org/user/Plant.aspx?LatinName=Dovyalis+abyssinica  
Kosha  
Abdominal pain  
Eat six to ten fruits.

**Embelia schimperi** Vatke (Myrsinaceae)  
http://www.westafricanplants.senckenberg.de/root/index.php?page_id=14&id=3116  
Inkoko  
Tapeworm  
Drink water with powdered seed.

**Euphorbia amplipilis** L. (Euphorbiaceae)  
WCSP (World Checklist of Selected Plant Families)  
Quoloula  
STDs  
The drop of latex is collected, mixed with *Eragrostis teff* powdered and backed and then eaten before any food for 3 days.

**Foeniculum vulgare** Miller (Apiaceae)  
http://www.hindawi.com/journals/bmri/2014/842674/  
Inslal  
Gonorrhoea  
Leaf is mixed with *Lepidium sativum* (seed) and eaten.

**Justicia schimperiana** (Hochst.ex A. Nees) T.Ander (Acanthaceae)  
http://www.africanplants.senckenberg.de/root/index.php?page_id=78&id=5715  
Smiza  
kuruba’ stomach ache  
The leaf is crushed and drink the leaf latex.

**Kalanchoe petitiana** A.Rich. (Crassulaceae)  
http://www.africanplants.senckenberg.de/root/index.php?page_id=78&id=5657  
Endehula  
'Ebach’ (lymphadenopathy) head leaf dressing on the infected part until the tumor is removed.

**Len sculinaris** Medik (Fabaceae)  
http://eol.org/pages/647510/overview  
Feto  
Stomach complaints  
Grinded seed is mixed with water and then eat.

**Linum usitatissimum** L. (Linaceae)  
http://swbiodiversity.org/seinet/taxa/index.php?taxon=2472  
Telba  
Retained placenta  
The seed of *Linum usitatissimum* is mixed with water and boiled and then drink the solution after cooled.

**Lonchocarpus laxiflorus** Guill.Perr. (Leguminosae)  
http://www.westafricanplants.senckenberg.de/root/index.php?page_id=14&id=1989  
Timatam  
Eye disease  
The seed of *Lycopersicon esculentum* is eaten.

**Lycopersicon esculentum** Mill. (Solanaceae)  
http://www.theplantlist.org/tpl/record/tropgeno/MIR356  
Timatam  
Eye disease  
The seed of *Lycopersicon esculentum* is eaten.

**Mentha piperita** L. (Labiatae)  
https://www.avogel.ch/en/plant-encyclopaedia/mentha_piperita.php  
Nana  
Diarrhea  
Pound the leaf and mixed with *A. sativum, R. chalepensis* and drink them.

**Optica ficus-indica** (L) Mill. (Moraceae)  
http://www.theplantlist.org/tpl1.1/record/kew-2391911  
Beles  
Ringworm (*Tinea corporis*)  
Add leaf secretion on the infected skin.

**Otostegia nitida** Benth. (Lamiaceae)  
http://tropical.theserms.info/viewtropical.php?id=Phytolacca+dodecandra  
Endod  
Miscarriage (abortion of unwanted pregnancy)  
Pound, squeeze and mix with water then drink it.

**Phytolacca dodecandra** L. (Phytolacaceae)  
http://powo.science.kew.org/taxon/urn:lsid:i pni.org:names:682369-1  
Endod  
Miscarriage (abortion of unwanted pregnancy)  
Pound, squeeze and mix with water then drink it.

**Piper nigr** L. (Piperaceae)  
http://www.theplantlist.org/tpl1.1/record/kew-2391911  
Qundoberre  
Stomach complaints  
Pound the seed and mix with *N. sativa, Z. officinalis, R. chalepensis & A. sativum*; then leave for 7 days and eat every morning during pain.

**Podocarpus falcatus** (Thunb) R.Br.ex Mirb. (Podocarpaceae)  
http://pza.sanbi.org/podocarpus-falcatus  
Zegba  
Sudden sickness  
The leaf of *Podocarpus falcatus* is squeezed and drink it.
| Plant Name                          | Scientific Name                          | Application                                                                                   | Instructions                                                                                     |
|-------------------------------------|------------------------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| **Rhamnus prinoides** L. Her (Rhamnaceae) | http://pza.sanbi.org/rhamnus-prinoides   | Gesho                                                                                         | Pound the seed mix with *Artemisia rehan* then squeeze and drink it                              |
| **Ricinus communis** L. (Euphorbiaceae) | https://plants.usda.gov/core/profile?symbol=rico3 | Gulo                                                                                         | Dried seed is chewed during stomach ache                                                        |
| **Rumex abyssinica** Jacq. (Polygonaceae) | https://www.prota4u.org/database/protav8.asp?g=psk&p=Rumex+abyssinica+Jacq. | Mekmeko                                                                                      | The leaf powder is boiled with water and drink the juice                                         |
| **Rumex nasovis** Vahl (Polygonaceae) | http://www.maltawildplants.com/RUTA/Rumex_nasovis.php | Embuacho                                                                                     | A leaf is pounded & boiled and drink a cup of it before breakfast                                |
| **Ruta chalepensis** L. (Rutaceae) | http://www.maltawildplants.com/RUTA/Ruta_chalepensis.php | Tenadam                                                                                       | The leaf is pounded or grinded, mix it with water and drink it every morning                    |
| **Senna singueana** (Fabaceae) | https://www.researchgate.net/figure/Photographs-of-Senna-singueana-Del-Lock-Fabaceae-and-the-collected-leaves_fig2_273791660 | Gufa                                                                                         | Dried leaf, stem, root, bark powder are mixed with butter and applied on swelling part           |
| **Sida tenuicarpa** Vollesen (Malvaceae) | https://botany.cz/cs/sida-tenuicarpa/ | Chifrig                                                                                       | Erectile dysfunction                                                                           |
| **Sida rhombifolia** L. (Malvaceae) | https://keysolver.lucidcentral.org/weeds/data/media/Html/sida_rhombifolia.htm | Gorgegit                                                                                      | Wound                                                                                           |
| **Solana dasyphyllum** Schumach & Thonn. (Solanaeae) | http://www.westfricanplants.senckenberg.de/root/index.php?page_id=14&id=2608 | Embuay                                                                                       | Physical damage                                                                                 |
| **Thymus schemperi** Ronniger. (Lamaceae) | http://www.africanplants.senckenberg.de/root/index.php?page_id=78&id=4789 | Tosign                                                                                       | Boiled in water and drink it like tea until the symptom is recovered                            |
| **Tragia cinerea** (pax) M.G.Gilbert & Radel-SM. (Euphorbiaceae) | http://www.tropicos.org/Name/12806195?ta=b=images | Aleblabet                                                                                     | Dried or fresh root is consumed orally                                                          |
| **Trigonella foenum-graecum** L. (Leguminosae) | http://flora.org.il/en/plants/TRIFOE/ | Abish                                                                                         | Diabetic                                                                                        |
| **Triumfetta pilosa** Roth. (Tiliaceae) | https://www.prota4u.org/database/protav8.asp?g=psk&p=Triunfetta+pilosa+Roth | Shemgegit                                                                                   | Dried seed is grinded & mixed with water and drink the suspension in the morning                |
| **Urtica simensis** Host. ex Steudel (Urticaceae) | https://plants.jstor.org/stable/history/10.5555/al.ap.specimen.hal0110249 | Sama                                                                                         | Seeds are worn by women as necklace to prevent evil attack                                      |
| **Vernonia amygdalina** Del. (Asteraceae) | https://www.yumpu.com/en/document/view/41885798/vernonia-amygdalina-asteraceae-del-world-agroforestry-centre2 | Girawa                                                                                       | Eating the crushed leaf when the disease occurred                                               |
| **Withania somenifera** (L) Dunal (Solanaeae) | http://flora.org.il/en/plants/WITSOM/ | Gizawa                                                                                       | Babies Disease                                                                                 |
| **Zingiber officinale** Rosc. (Zingiberaceae) | http://www.globinmed.com/index.php?option=com_content&view=article&id=102052:zingiber-officinale-rosc&catid=209&Itemid=143 | Zinjibile                                                                                   | Bathing with crushed leaf                                                                       |
Among the total plants recorded, Fabaceae was the most dominant family containing 8 species (10.4%) followed by Euphorabaceae (6 species (7.7%),) Liliaceae (6.5%) and Asteraceae (4 species (5.2%), respectively. The majority (42.8%) was herbs followed by shrubs (32.6%), trees (20.8%) and climbers (3.8%).

**Parts and conditions of medicinal plants used**

Results revealed that greatest proportion used as medicine are Leaves (54%) followed by Roots (18%). Other parts include seeds (16%), latex (7%), stem/bark (3%) and whole plant (2%). The majority of medicinal plants are harvested from wild vegetation that indirectly shows the presence of high pressure on wild vegetation. Wild vegetation is the source of medicinal plants in many places of Ethiopia as shown by Giday (1999) and Amenu (2007) in Lake Ziway and Ejaqi areas, respectively.

**Method of remedy preparation and application**

Traditional healers in the study area used various types of preparations in which pounding/pulverizing (36%) is the major type followed by cooking (14%), squeezing (10%), chewing (7%) and others (33%). Preparations were administered by different routes: oral (51%) dermal (31%), Nasal (9%), Eustachian (2%), ocular (1%) and fumigation (6%) based on the type of the disease.

**Fidelity Level (FL) of medicinal plants**

Medicinal efficacy of a species was determined by calculating fidelity level index. In this study, *Petrolium stellatum* and *Echinops kebercho* have high medicinal value against Evil eye and Devil disease, respectively (Table 2). *Withania somenifera*, being reported by 54% of informants, with FL value of 0.50 is found to be the second species next to *Petrolium stellatum* (FL=0.80) used in the medication of Evil eye.

**Preference and direct matrix rankings**

Different plant species are used for the treatment of different ailments. In such cases, local people showed preference towards plant species on the basis of their healing power against a given disease. Key informants were asked to show their preference from eight selected plant species on the basis of treating several diseases and they showed that *Allium sativum* is the most preferred one followed by *Ruta chalepensis* (Table 3).

Medicinal plant species that have multiple purposes could be screened using direct matrix. In this study, ten multipurpose species were selected out of the total medicinal plants and eight use-categories were listed for 7 selected key informants to assign use values to each species. The informants listed *Coridia africana* to be highly used by local community for multiple purposes. *Juniperus procera*, *Ficus carica*, and *Carissa spinarum* stood at 2\textsuperscript{nd}, 3\textsuperscript{rd} and 4\textsuperscript{th} position, respectively (Table 4). However, the unsustainable use of these plant species for multiple uses made them scarce in the locality.

**Major human diseases and corresponding number of plant species used**

In the study area, a total of 36 human diseases and health defects (like injuries) are documented. Of these, 30 ailments (83%) are treated using two or more medicinal plant species while 6 ailments (17%) are treated using only one plant species (Table 5). Treatment of ailments by more than a single species was reported by researchers in some parts of Ethiopia (Amenu 2007).

| Table 2. Fidelity level index for plant species used to treat Evil eye and Devil disease in the study area |
|----------------------------------------------------------------------------------|
| **Ailsments** | **% of informants** | **Species** | **Np** | **N** | **Fidelity index (Np/N)** |
|---|---|---|---|---|---|
| Evil eye | 54 | *Withania somenifera* | 18 | 36 | 0.5 |
| | 9 | *Petrolium stellatum* | 5 | 6 | 0.8 |
| | 6 | *Triumphetta pilosa* | 1 | 4 | 0.25 |
| | 7 | *Tragia cenera* | 1 | 5 | 0.20 |
| Devil disease | 42 | *Capparis tomentosa* | 12 | 28 | 0.43 |
| | 9 | *Echinops kebercho* | 3 | 6 | 0.50 |
| | 9 | *Rosa abyssinica* | 1 | 6 | 0.20 |

**Table 3. Preference ranking of eight selected medicinal plants on the degree of healing several ailments by key respondents**

| **Species** | **Family** | **Respondents** | **Total** | **Rank** |
|---|---|---|---|---|
| *Allium sativum* | Liliaceae | A | 8 | 8 |
| *Ruta chalepensis* | Rutaceae | B | 8 | 7 |
| *Nigella sativa* | Ranunculaceae | C | 8 | 6 |
| *Zingiber officinale* | Zingiberaceae | D | 8 | 6 |
| *Clutia abyssinica* | Euphorbiaceae | E | 7 | 5 |
| *Euphorbia ampliphylla* | Euphorbiaceae | F | 6 | 5 |
| *Rumex nervosus* | Polygonaceae | G | 4 | 5 |
| *Carica papaya* | Caricaceae | Total | 3 | 2 |

Note: A-G: key respondents
In conclusion, this study revealed the use of medicinal plants by rural community of Bahir Dar City for maintaining their primary health care. The use of herbas has been an age long practice in the area. Despite their irrereplaceable use, the future existence of medicinal plants resource and the associated knowledge is under question because of the ongoing practice of urbanization, deforestation, agricultural encroachment, overgrazing and overexploitation. So, in-situ and ex-situ conservation strategies of medicinal plants should be adopted and implemented by training the practitioners. The local government should organize medicinal practitioners in association(s) in such a way that their valuable knowledge can be used along with modern medicine.

Table 4. Direct matrix analysis of selected medicinal plants based on a general use-value

| Species                | Medicine | Food | Fencing | Forage | Firewood | Charcoal | Construction | Furniture | Total | Rank |
|------------------------|----------|------|---------|--------|----------|----------|--------------|-----------|-------|------|
| Acacia abyssinica      | 3        | 0    | 4       | 1      | 4        | 3        | 1            | 0         | 16    | 6th  |
| Croton macrostachyus   | 4        | 0    | 3       | 2      | 3        | 0        | 3            | 3         | 15    | 7th  |
| Piper nigrum           | 4        | 0    | 3       | 1      | 3        | 0        | 3            | 3         | 17    | 5th  |
| Arundo donax           | 4        | 0    | 0       | 2      | 1        | 0        | 0            | 0         | 3     | 10th |
| Pterolobium stellatum  | 4        | 0    | 3       | 2      | 0        | 0        | 0            | 0         | 9     | 10th |
| Ocimum lamifolium      | 4        | 0    | 2       | 1      | 3        | 1        | 1            | 0         | 12    | 8th  |
| Cordia africana        | 4        | 2    | 1       | 3      | 3        | 3        | 3            | 5         | 24    | 1st  |
| Ficus carica           | 4        | 0    | 2       | 3      | 3        | 3        | 3            | 3         | 20    | 3rd  |
| Carissa spinarum       | 3        | 3    | 4       | 3      | 3        | 2        | 1            | 0         | 19    | 4th  |
| Juniperus procera      | 4        | 0    | 4       | 1      | 4        | 1        | 4            | 4         | 22    | 2nd  |

Table 5. Lists of major human diseases and the corresponding medicinal plant species used by rural people of Bahir Dar

| Diseases (injuries) | Medicinal plants (number) | Diseases (injuries) | Medicinal plants (number) |
|---------------------|---------------------------|---------------------|---------------------------|
| Stomach complaints  | 17                        | Swelling            | 4                         |
| Devil’ disease      | 7                         | Tonsilitis          | 2                         |
| Diarrhea            | 4                         | Ascaries            | 2                         |
| Eczema              | 4                         | Miscarriage (abortion) | 1                      |
| Hepatitis           | 4                         | Infection on swelling | 1                       |
| Hair fungus         | 2                         | Heart disease       | 1                         |
| Febrile (fever)     | 2                         | Diabetic            | 7                         |
| Malaria             | 8                         | STDS                | 2                         |
| Hemorrhoid          | 4                         | Broken leg/hand     | 3                         |
| ‘Evil eye’          | 7                         | Eye disease         | 2                         |
| Erectile dysfunction | 3                         | Sudden sickness     | 4                         |
| Cancer              | 3                         | Skin rash           | 4                         |
| Snake biting and scorpion bite | 1  | Face fungus  | 2                         |
| Ringworm            | 3                         | Boil                | 1                         |
| Cough               | 4                         | Allergic            | 1                         |
| Wound sore          | 6                         | Common cold         | 5                         |
| Headache            | 4                         | Tumor               | 4                         |
| Placental retention (delay) | 4  | Hypertension  | 2                         |

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