

## Ethnomedicinal Study of Important Medicinal Plants Used for Gynecological Issues among Rural Women Folk in district Gilgit, Pakistan

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**Abstract:** Survey based study was conducted to document most ignored and rapidly perishing ethnomedicinal folk wisdom on medicinal plants used for gynecological treatments among elderly women ( $\geq 70$ ) of district Gilgit. Young generation (below age 40) has abandoned traditional healing practices. Interview of hundred (n=100) women identified forty seven (47) medicinal plants belonging to 29 families were used to treat ten different gynecological diseases. Out of twenty (20) identified diseases, most common are irregularities in menstrual cycle, gonorrhoea, spontaneous abortions, infertility and leucorrhoea. It also revealed that whole plant use frequency (19.23%) dominates consumption followed by roots (17.3%) and leaves (17.3%). Most of these plants, informants and folk wisdom are at the verge of extinction. Habitat destruction, over grazing, unwise cutting and commercial exploitation are among the key ecological factors impacting negatively on their population and diversity.

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### Introduction

Gilgit and its surrounded valleys are rich in flora, fauna and cultural diversity. Glaciers, spread over miles in the laps of these mountains, ever-green villages, cold and sweet water fountains, dense forests are rich with abundant valuable medicinal herbs which can be used for medicine. Most of these plants are very significant and beneficial. Wealth of information about these medicinal herbs has been obtained from local "Hakeems" (traditional healers) (Malik et al., 2015).

People living in the mountains of Pakistan use plants in many ways including medicines, timber wood, firewood, food, and fodder (Hussain and Khaliq, 1996). About 3000 species of plants have been reported from Gilgit-Baltistan. Out of 300 approximately 124 have medicinal importance. Whereas, these three mountain ranges collectively contain about 25,000 species, out of which around 10,000 are economically or medicinally useful plants (Pei, 1992). Medicinal plants have been used worldwide for many years. People have been dependent on plants from ancient time. They fulfill their primary needs from plants e.g., food, clothing and shelter subsequently improved by the blessing of science and technology (Koduru et al., 2007).

Herbal medicine has a long history of practice. Our culture and civilization has also highlighted the importance of these medicinal herbals. Today medicinal plants have the same significance as it had centuries back (Fakim, 2006). Herbal medicine even today plays an important role in rural areas and

various locally produced drugs are still being used as household remedies for different ailments (Qureshi and Ghufan, 2005). Medicinal plants provide primary health care to rural communities and it is estimated that approximately 80% of rural people dependent.

Loss of natural habitat by over grazing and exploitations, depletion of medicinal plants occurs (Kitula, 2007). Extracts of medicinal plants are also used in allopathic drugs (Hussain, 2010). But the new generation is now totally unaware about the use and benefits of these plants. Especially collect data about such medicinal plants which are use only female related is a problems. However the knowledge that women have on medicinal plants used for reproductive health and gynecological disease and infant mortality are among the greatest health issues in developing countries Ethnobotany has to deal with generational loss of knowledge on traditional medicine due to development and modernization of cultures.

Traditionally, the rural women prefer to use plant medicines rather than modern medicines for abortion, menstrual trouble, conception disorders, sterility, delivery problems, etc. Some ethnomedicinal observations made from the rural areas of Haryana, revealed valuable phytotherapeutic information on the various gynecological disorders (Yadav et al., 2006). The tribal people depend on medicinal plants for treatment of various gynecological disorders.

Study was aimed at documentation and identification of relevant practices and important

plants used for gynecological issues. Very few elderly women (age 70) are left in the area using and practicing traditionally. Women below age 40 do not practice and use traditional medicines. Keeping in view the high time to document, a survey following a snow ball technique was used to document women specific ethnomedicinal data. Study is unique in its nature and has remained as most neglected and ignored aspect due to socio-cultural taboos.

## Material and method

### Study area



**Figure 1: Map of study area shown as a black dot in red area of Gilgit-Baltistan.**

Study was carried out during January and December 2015 in Danyore and annexed villages (Danyore Valley) of district Gilgit in Gilgit-Baltistan province. Gilgit-Baltistan is located in the north of Pakistan (**Rasool, 1998**). Gilgit-Baltistan is located between the biggest three mountain range Hindokush, Karakorum and Himalaya in Northern part of Pakistan (**Shah, 2013**). It is a narrow, deep and steep mountain valley. Climatically Gilgit-Baltistan falls in dry desert ecosystem with extremes of variations in summer and winter temperatures (**Figure 1**).

### Specimen/Data collection

Data on different gynecological issues, medicinal plants used and various practices practiced for treatment/healing of such ailments was collected from a total of 100 elderly female of age 70 and above. Female enumerators made this possible using a snow ball survey technique. A standardized instrument and semi structured interviews were used as data collection tools.

## Results

A total of forty seven (n=47) plant species belonging to twenty (29) families were documented from the study areas (**Table**). Twenty (20) diseases were identified. Most frequent ones are irregular menstrual cycle (7%), gonorrhoea (7%), spontaneous abortion (7%), infertility (7%) and leucorrhoea (7%). Rest of diseases were found less common in the population (**Figure 2**).

**Table: Showing different plants used for gynecological issues**

#	Scientific name	Family	Disease	Parts used	Mode of application
1	<i>Vitexnegundo</i> L.	Verbenaceae	menstrual cycle	Root	crushed and cooked with rice in the form of porridge and taken daily.
2	<i>Cynodondactylon</i> (L.) Pers	Poaceae	Amenorrhoea	Whole plant	Fresh plant parts are ground and mixed in rice soup and taken.
3	<i>Flycyrhia glabra</i> linn	Zygophyllaceae	skin	stem	Powder of plant parts are use to cure skin.
4	<i>Curcuma longa</i>	Zingiberaceae	back pain after delivery	underground stem	crushed and make a fine powder used few gram with milk .
5	<i>chenopodium botrys</i> L.	chenopodiaceae	painful delivery	Whole plant	whole plant soaked in water ,it is used formaking bread used twice in a day for 5 days.
6	<i>portulaca oleracea</i> linn	partulaceae	Gonorrhoea	leaves	this herb is cooked and eatten as vegetable to treat gonorrhoea .
7	<i>Tagetes erecta</i> linn	Asteraceae	Irregular menstrual cycle	Root	irregular menstruation ,watery extract of root is (1 tsp 5 days)is used.
8	<i>Taxus wallichiana</i>	Taxacaceae	abortifacient	leaves	leaves (10gram ror 10 days) are used to induce menstrurston and as abortifacient also.
9	<i>Tribulus terrestris</i>	Zygophyllaceae	infertility /lactation	Whole plant	Dried the whole plant and make a fine powder (1 tsp)is taken with milk for infertility and lactation feeding mother.
10	<i>Buddleja asiatica</i>	Buddlejaceae	abortifacient	leaves	Make a fine powder of leaves and used(2 tsp for 10 days evert days).
11	<i>Cedrus deodara</i>	Pinaceae	lactation	stem/oil	Powdered stem or oil is taken with milk to improve mother milk.
12	<i>Chenopodium ambrosides</i> L.	chenopodiaceae	lactation	leaves	Tea made from leaves is used(1 cup every day for 5 days) to reduce post-delivery pain and also enhance milk in nursing mothers.
13	<i>Cyperus rotundus</i> linn	Cyperaceae	leucorrhoea	tuber	Extract of tuber (1 tsp every day for 5 days) is used to cure menorrhagia and leucorrhoea.
14	<i>Ficus religiosa</i> L.	Moraceae	leucorrhoea	Bark	Decoction of bark is employed as vaginal douch in leucorrhoea for 5-6 days.
16	<i>Acorus calamus</i> L.	Araceae	Irregular menses	Root	fine powder of rhizome (1 tsp)is mixed with honey and used as tonic
17	<i>Ajuga bracteosa</i>	Lamiaceae	Amenorrhoea	Whole plant	Extraction of plant (1 tsp every for 5 days)nis cure for amenorrhea.
18	<i>Amaranthus spinosus</i>	Amaranthaceae	Leucorrhoea	leaves	Fresh leaves are cooked and eaten to cure leucorrhoea.
19	<i>Androsacer rotundifolia</i>	Primulaceae	Menstrual flow	leaves	crushed and mixed with sugar (1table spoon) is used to normal menstrual flow.
20	<i>Mentha piperita</i> L.	Lamiaceae	Vomiting	leaves	Fresh leaves are chewed to prevent vomiting during early pragnency.
21	<i>Memordica charantia</i> L.	Cucurbitaceae	Abortifacient	Root	The dried root are grinded and powder (1 tsp for 15 days) used as abortifacient.
22	<i>Plantago ovate</i>	Plantaginaceae	Gonorrhoea	Seed/husk	2tsp seed/husk are soaked in water with sugar 1 cup is taken for 4 days
23	<i>Polygonum bistorta</i> L.	Polygonaceae	Menstruation	Root	Dried root powder (1tsp for 5 days)is taken to treat excessive menstruation.
24	<i>Medicago sativa</i> L.	Papilionaceae	Menopause	whole plant	Fresh and dried plant is cooked and eatan (1 week) as vegetable, considered as treatment of

#	Scientific name	Family	Disease	Parts used	Mode of application
4					menopauses related problems.
2	<i>Verbena officinalis L.</i>	Verbenaceae	Miscarriage	whole plant	Extract of fresh plant (1tsp for 5-6days) is used to prevent miscarriage.
2	<i>Ephedra gerardiana Wall.</i>	Ephedraceae	body swelling	Whole plant	Boiled stocks used for in appropriately healed bones and rheumatic relief.
2	<i>Ferula foetida, Regel.</i>	Umbelliferae	Abortion	Gum	Gum/resin is used in treatment of abortion.
2	<i>Daucus carota Linn</i>	Apiaceae	UTI	seed	Seeds decoction is useful in kidney diseases, nerve tonic given in uterine pain.
2	<i>Elaeagnus aungustifolia L.</i>	Elaeagnaceae	skin/hair	Gum	The gum is used as Shampoo as tonic for long , healthy and silky hairs.
3	<i>Galium aparine</i>	Rubiaceae	UTI	Whole plant	Its decoction is used in urinary tract infection.
3	<i>Fragaria nubicola</i>	Rosaceae	Beauty	Fruit	Fruits Juice is used as tooth paste, anti-diarrhea, anti-dysenteric and anti-diabetes.
3	<i>conyza Canadensis</i>	Asteraceae	Uterine hemorrhage	Whole plant	This plant is used for diuretic and uterine hemorrhage.
3	<i>Rheum emodi wall</i>	Polygonaceae	infertility	Root	Root decoction is used for infertility 1tsp per day for 5 days.
3	<i>Hippophae rhamnoides,L.</i>	Elaeagnaceae	Infertility, urinary	Berries	4-5 given to patient 7days for urinary problem, reproductive disorder in women.
3	<i>Rosa brunonii</i>	Rosaceae	Skin/ eczema	Flower	The powder of flowers sprinkled over skin infections.
3	<i>Rosa webbiana Wall.</i>	Rosaceae	Fever	stem bark	Stem bark is used for making tea.
3	<i>Spiraea canesens D</i>	Rosaceae	abortion	Flower	Flowers are used for abortion.
3	<i>Juniperus excels</i>	Cupressaceae	gonorrhoea	Fruit	The fruit and oil is used.
3	<i>Onasma hispidum Wall.</i>	Boraginaceae	Hair	Root	Roots are put in oil than apply for hair long ant strong.
4	<i>Caragana tragacanthoides</i>	Papilionaceae	Beauty	leaves/root	Leaves used as soap while roots are used as a tooth brush.
4	<i>ligularia jacquemontiana</i>	Asteraceae	Gynae	Root	Root decoction is used to women after delivery to control bleeding.
4	<i>Arnebia benthamii</i>	boraginaceae	Gynae	stem/leaves	Stem with leaves is boiled in water; extraction is used for abdominal pain and also used swelling of women after delivery.
4	<i>prunus persica</i>	Rosaceae	hair strong	fruit	Pulp is apply on hairs, after 30 min wash it give strength to hair.
4	<i>prunus amygdalus</i>	Rosaceae	Skin	seed	Oil is used massage therapists to lubricate the skin during a massage session.
4	<i>Juglans Regia</i>	Juglandaceae	skin/gyni prob	seed	Oil is obtained from seed used of irregular menstruation and skin ailments.
4	<i>Peganum harmala L.</i>	Zygophyllaceae	Menorrhagia	whole plant	The juice of fresh roots is mixing with rice water is given to treat menorrhagia.
4	<i>Ipomoea batatas</i>	Convolvulaceae	infertility	underground stem	Underground stem is used for infertility.

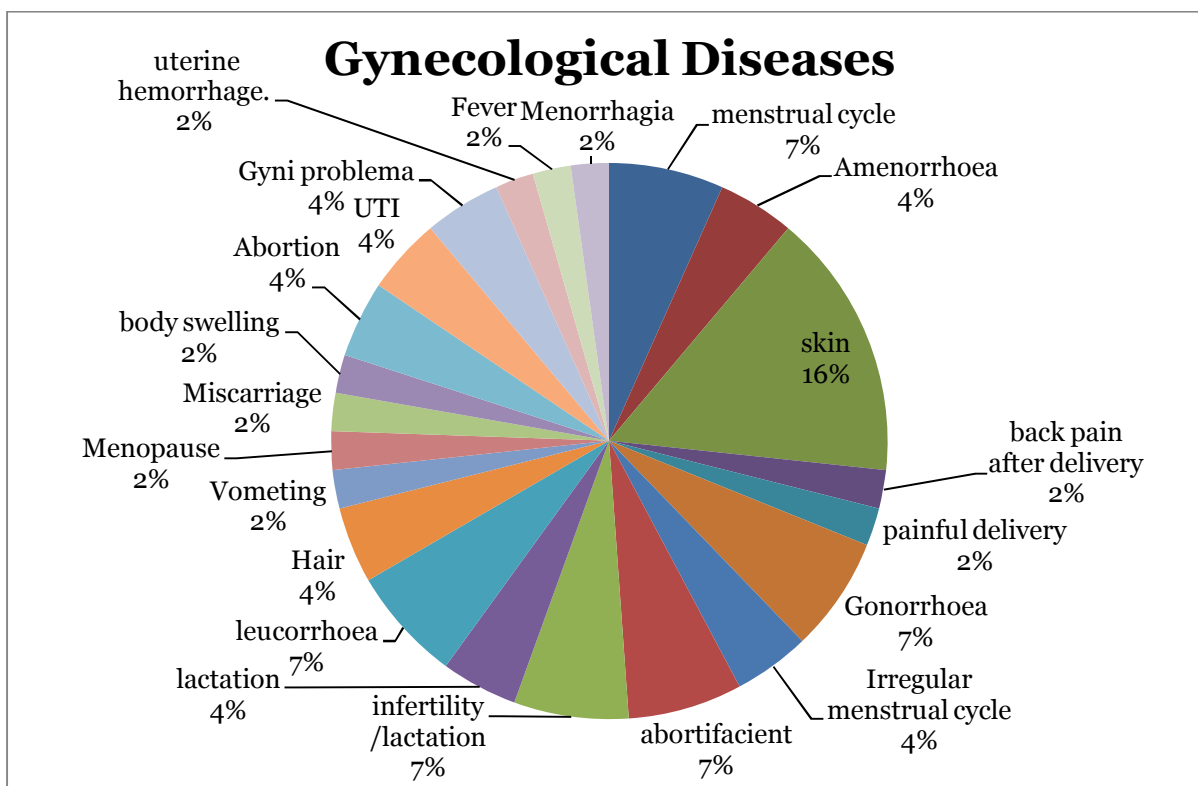
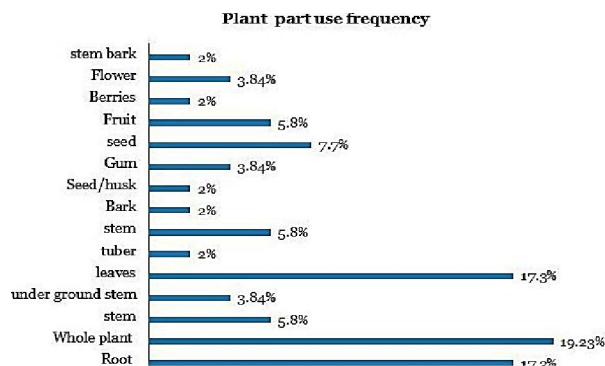


Figure 2: Pie chart shows gynecological diseases identified from the study area

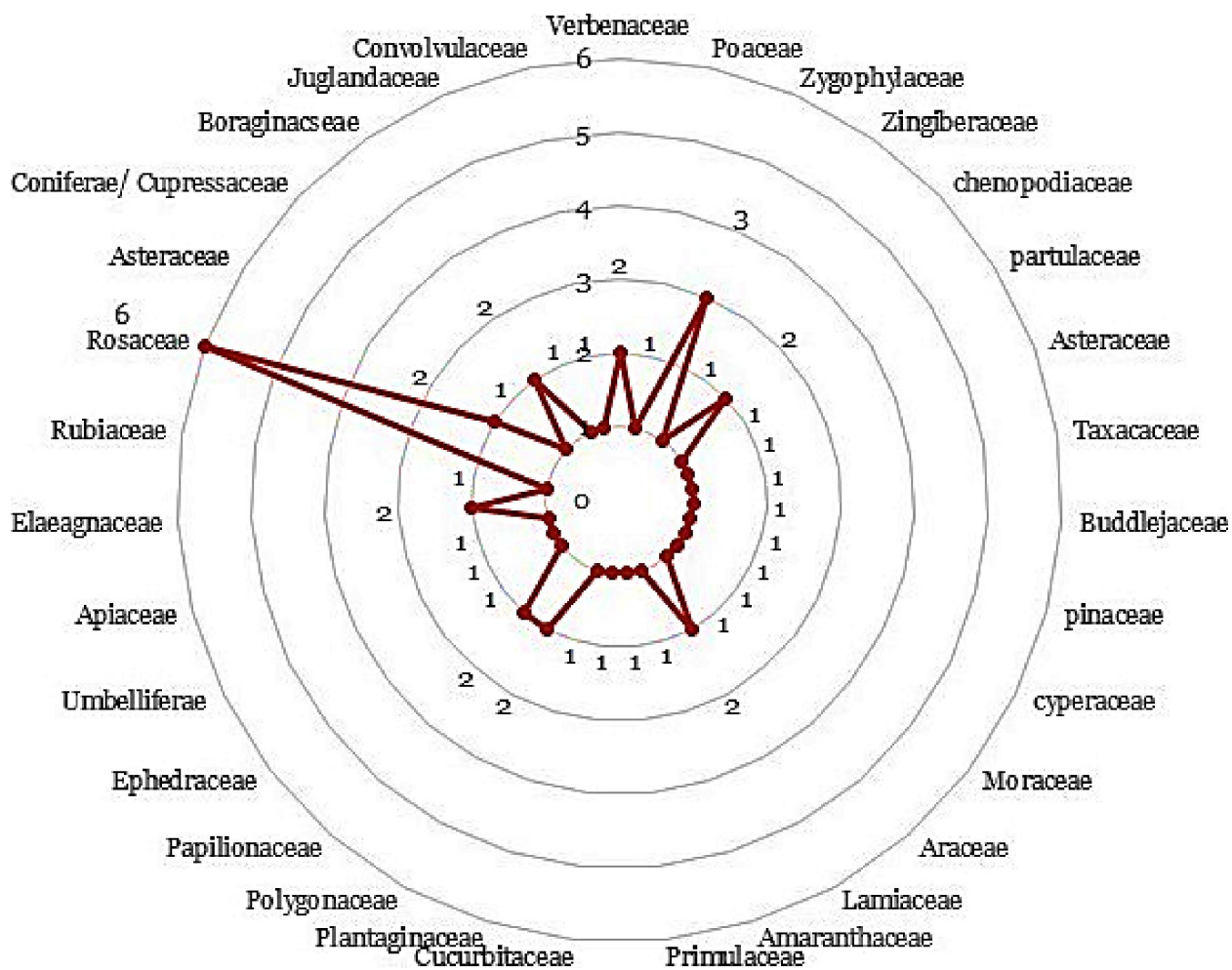


**Figure 3:** Bar chart shows various part use and their relative frequency

Study revealed that during the treatments, a total of fifteen (15) different parts/consumption mode of these medicinal plants are identified which are used

differentially. Most common and frequent uses are whole plant (19.23%), roots (17.3%) and leaves (17.3%). Four parts including seed (7.7%), stem (5.8%) and fruit (5.8%) are moderately used parts. Infrequently used parts include stem bark (2%), flowers (3.84%), berries (2%), gum (3.84%), seed husk (2%), bark (2%), tuber (2%) and underground stem (3.84%) (Figure 3).

Plant families with higher contributions are Rosaceae (12.8%), Zygophyllaceae (6.38%), Chenopodiaceae, Verbanaceae, Boraginaceae, Asteraceae, Elaeagnaceae, Papilionaceae, Polygonaceae and Lamiaceae carry 4.25%. while rest of families contribute 2.12% in overall utilization towards medication of gynecological issues (Figure 4).



**Fig.4.** Radial graph shows plant families and their respective contribution through their members.



## Discussion

With the advent of new age and increasing connectivity with rest of the world, younger generation below age fifty (50) have almost forgotten using traditional healing practices however elderly women of age above sixty (60) still rely on these traditional practices of using folk phytotherapy. After ten to twenty years from now, this knowledge and practice will be part of history and will neither be available to other nor will any female will practice in the area. Young generations are increasingly relied on the market and allopathic medication. There is no research institution working towards exploring their efficacy against mentioned diseases. Furthermore, bulging population and rapid commercialization in the area have posed serious threats to both folk wisdom and rare and unique medicinal plants used for folk phytotherapy. Moreover, in patriarchic settings transmission of such female (gynecology) related information from one generation to the other is also a barrier. This study will be an inspiration for several others who face the same issues around the world.

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