



ISSN 2320-3862
JMPS 2015; 3(4): 111-114
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Received: 20-05-2015
Accepted: 23-06-2015

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Ethnomedicinal knowledge reserves amongst rural women in Jind district of Haryana, India

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Abstract

Since time immemorial women have been assigned with varied jobs as mother, daughter and sister. She has proven her expertise in every profession. Living under scarcity and hardships, she has been groomed to become a reserve of knowledge of varied traits. Traditional herbal medicines are cheaper and efficacious healthcare options amongst rural and poor people. Women, not merely, are prime source of herbal plant traditional knowledge but also its maximum user and transmitter. Her potential in the area of conservation of ethnomedicines is profound. A support network to strengthen her skills and knowledge will help her emerge out as a useful tool in Indian as well as global economy. Knowledge of medicinal plants amongst women is still an unexplored area. Ethnomedicinal knowledge can be put to proper usage through well defined approaches and policies which will help yield social and economic upliftment of rural women along with empowerment at par with males.

Keywords: Traditional Knowledge, Ethnobotanical, Ethnomedicinal, Rural women, Women empowerment

1. Introduction

Of the 1.3 billion people who live in absolute poverty world over. 70 per cent are women. Poverty for them is just not scarcity of basic needs but also rights denied, opportunities curtailed and voices silenced. Alarmingly, women own only 1 per cent of world's property. Women lack freedom of movement and are treated as a weaker part of the family and society. She is accorded to low status in health, education, political and financial matters. Gender inequality is a grave problem world over but its effects are more pronounced in developing countries especially in the rural area where woman is socially suppressed. Despite critical and pathetic position in society, her significant participation in almost every field is admirable.

Statement of Problem: In India, a vast pool of traditional knowledge with respect to medicinal properties of native plants is available amongst rural people. Both rural men and women have a wealth of traditional knowledge [1-4]. The whole set of information is lying scattered in bits and segments (especially in rural India) without any organization. Ethnomedicinal knowledge is the ancient herbal plant knowledge transmitted over a period of time explaining the relationship between plants and traditional people for mutual care and benefit. Moreover, women are the knowledge carriers but still their knowledge is going unrecognized. During ancient times, people used to rely on the local plant resources for both short term and long term treatment of ailments. But in advanced world today, interest is shifting towards allopathy and other modern medicare options. In India, a wide spectrum of herbal biodiversity exists and plants are integrated with our cultural heritage through cultural beliefs, rituals and festivals and as special offerings to Gods and ancestors [5]. This role is also indirectly taken up by women at large and the responsibility of transfer of traditional knowledge from generation to generation is women's domain [6]. The traditional knowledge of indigenous people is severely endangered as younger generation is no longer interested to acquire and transmit it further. Rural woman has already qualified in varied socially and environmentally threatened areas such as prevention of deforestation, Chipko Movement, Silent Valley Project and Water Conservation strategies in desert areas. Therefore conservation of ethnomedicinal knowledge with due participation of women can also be foreseen as a success landmark. Ethnomedicinal knowledge reveals hat how different ethnic groups living within the same landscape interact with the resources [7].

In India, status of women in comparison to men and other social traits in Jind district of Haryana (undertaken during survey) is listed in Tables 1 and 2.

Table 1: Demographics of Haryana:

Geographic location	30.73°N 76.78°E
Population	25,353,081
Male population	13,505,130
Female population	11,847,951
Sex ratio	877/1000
Literacy rate	76.64
Male literacy rate	85.38
Female literacy rate	66.77

Table 2: Demographics of Jind district:

Geographic location	29.32°N 76.32°E
Population	1,332,042
Male population	712,254
Female population	619,788
Sex ratio	870/1000
Literacy rate (%)	72.70
Male literacy rate (%)	82.50
Female literacy rate (%)	61.60

Source: Demographics according to www.census2011.co.in, Population census India

From this Census data, it is quite obvious that women are far behind their male counterparts in population, sex ratio and literacy rate. Facts indicate clearly that socioeconomic status of women is suppressed and it is more pronounced in rural sector. Our native data was compared in light of available demographic data, social factors and medical facilities available at the survey site.

Woman and health care in rural area-present status: In rural India, women face major struggle in domestic as well as social front. Woman in general has been put at a disadvantageous position. Discrimination at every step forces her to lead a submissive, deprived and tolerant life. Health status of Indian woman especially, in rural area is in poor state. Woman and girl child are also deprived of recent health care facilities due to gender biasness. Women are sometimes not allowed to visit health centres or local dispensaries even if these are available in their village.

In role of mother, daughter or wife, rural woman is also loaded with the responsibility to take care of health needs of the family. Therefore, with all the limited means and resources at her disposal, she tries to their health through traditional medicinal knowledge and plant resources available in rural vicinity. But this forced responsibility has also helped her to acquire basic knowledge about local plants, their morphological nature and use of various plant parts as therapeutics. With the help of self acquired traditional knowledge, she tries to help the family and also transmit it to the younger woman folk who come in contact with her. Rural woman has very well mastered the technique to identify the plant at right developmental stage of use through visual markers which sometimes are not even known to the scientific world e.g. height of plant, color of leaves and fruits, etc. elderly women play a pivotal role in retaining and passing on traditional knowledge to the next generation. Women share and practice herbal medication for both day to day as well as chronic ailments^[8].

2. Material and Methods

As traditional knowledge carrier and user, woman can gain strength in social and economic front. In order to identify her position and contributions, a survey was conducted in rural

areas of Haryana. During a survey by our group in rural Haryana, it was proved that under forced deprived conditions she has learnt to explore the available resources as substitute health care options. Nearly 99 percent women were tackling problem of thorn removal by using latex of Aak plant (*Calotropis procera*). In medical world till date no such formulations are available and the only way of thorn removal is through a minor surgery. Similarly, our survey deals with an another important medicinal plant yellow oleander (*Thevetia peruviana*). Its seeds and other plant parts have been used as an abortifacient, to induce menstruation and for blood purifying by woman for herself and for her children.

For our survey, four villages of Jind district i.e. Lijwana Khurd, Lijwana Kalan, Karsola and Fatehgarh were taken into consideration. In total, 49 informants were surveyed out of which 28 were male and 21 female. Survey included adults who voluntarily agreed. Photograph and signatures were obtained on the format to maintain authentic records. Adults above 18 years of age were selected randomly.

Design of format: An ethnobotanical format was designed in order to help the authors to screen out the significant informative features relating to traditional medicinal knowledge in our society. Format included two parts:

Part I: Socio-economic profile of the person and his village were obtained. Personal details of an individual were filled up i.e. age, sex, qualification, occupation, address, etc.

Part II: Knowledge regarding the medicinal plant in which medicinal uses of plants, their side effects, plantation (wild/cultivated), level of information, domain of diffusion, status of knowledge were included. Our survey was carried out under following steps:

1. Field visit to select villages: Random selection of four villages of Jind district was done and a field survey trip was planned to these villages for the collection of first hand native, useful and effective data.
2. Collection and analysis of data: Village Sarpanch of the concerned village was approached so that the verification of credentials through a responsible authority could be done.

Following the guidelines of village Sarpanch, an accurate, authentic and related information about the village could be collected. Rural subjects were queried according to the format to collect information about the plant, its vernacular names, medicinal value, side effects and any other related information. Authors tried to communicate with them in their local language so that maximum information can come out in an easy way. Traditional words originally used by them for the plant and plant parts were noted down. The socio-economic profile of each individual was filled up along with a photograph and signatures/thumb impressions as a record. Health care centres, hospitals, doctors, aanganwaari workers, hakims (local physicians) were also approached for the collection of maximum information. Minimum ten samplings were done in each selected village. The native data was analyzed, regrouped and lately managed in tabular and histogram form for better interpretation.

Scoring Pattern: To plot histograms, scores were allotted to different attributes on the basis of their significance and contribution e.g. people having complete knowledge about the plant were assigned with 20 grade scores and 10 grade scores were allotted for incomplete information. Authentic information was allotted 20 grade scores and for vague information, no scores were allotted. For extent of diffusion, 20 grade scores were granted for high diffusion, 10 for moderate and no scores were awarded for low diffusion.

3. Results and Discussion

Four villages were selected randomly and general information was gathered in Part I of the format which is tabulated as

under. Four villages i.e. Lijwana Khurd, Fatehgarh, Lijwana Kalan and Karsola were coded as village 1, 2, 3 and 4 respectively (Table 3).

Table 3: Showing general healthcare profile and literacy rate of four selected villages

S. No.	Name of the village	Name of the village Sarpanch	Literacy Rate	Health facility
Village 1	Lijwana khurd	Sh. Vidyadhar	70%	One Ayurvedic dispensary available. Beds not available in Civil Hospital for admission during emergency conditions.
Village 2	Fatehgarh	Sh. Shriniwas	40%	No health facility is available in the village. People have to rush to the block associated i.e. Julana for the treatment of any ailment.
Village 3	Lijwana Kalan	Sh. Ram Mehar	70%	No Government health centre. People have to rush to the block associated i.e. Julana for the treatment of any ailment.
Village 4	Karsola	Sh. Ramphal	60%	Government Health Centre is available but not with proper facilities.

Our native data was screened, grouped and organized firstly in tabular form. Scores were assigned to different attributes based on their strength and total relative score was obtained. For critical analysis of the data, histograms were plotted (Figs 1 to 4).

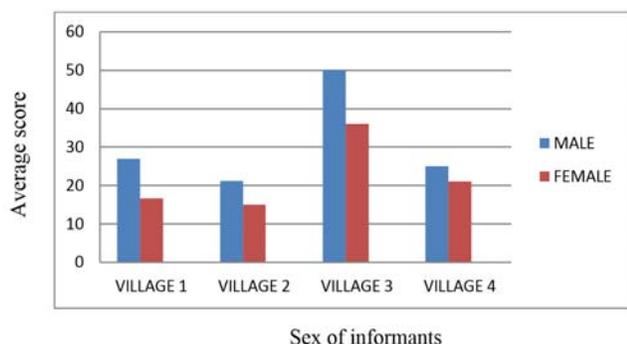


Fig 1: Sex vs Average score of Traditional Knowledge in *Calotropis procera*.

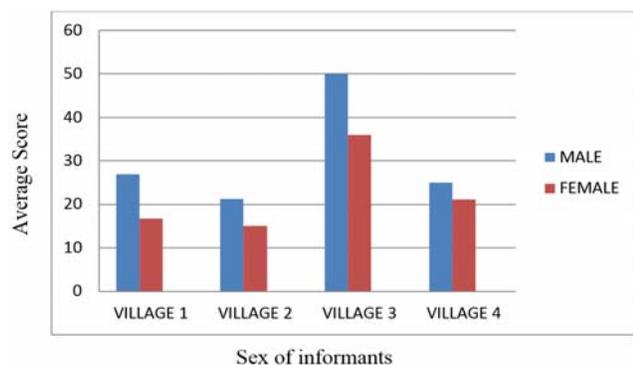


Fig 2: Sex vs Average score of Traditional Knowledge in *Thevetia peruviana*

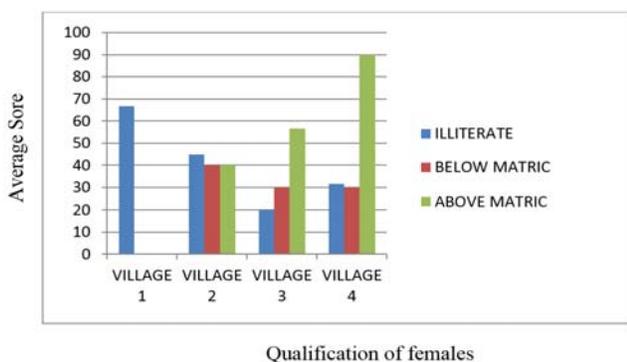


Fig 3: Females of different categories with different Qualification vs. Average score in *Calotropis procera*

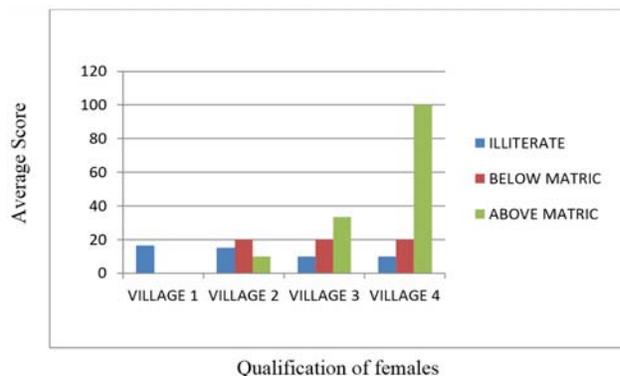


Fig 4: Females of different categories with different Qualification vs. Average score in *Thevetia peruviana*

Calotropis procera is an age old ancient plant which has been used from the time immemorial for curing various ailments. In all the villages undertaken for the present survey, females carry lesser ethnomedicinal traditional knowledge as compared to males (Fig 1). Similar trend was observed in case of *Thevetia peruviana* which is a migrated plant, not native to India [9] (Fig 2). Despite the fact that female is the actual plant identifier and formulation developer but she is not given her due reward as is evident from our observations above. Rural woman carries the sole responsibility as a housekeeper as well. Better expertise rests in female group as she is also exposed to application as well as preservation of the formulation under local available conditions because majority of population does not have a choice of allopathic medicines due to side effects, unavailability and high cost. Most of the population in East India also depends on different medicinal plants [10]. Though female constitute ignored and deprived group in rural society yet she figures out as unrewarded commander in possessing and using ethnobotanical knowledge for the welfare of her family and relatives. A variable trend was observed when qualification of the female informants was taken as a parameter. All the four villages followed a variable pattern in case of both the plants (Figs 3 and 4). In village I i.e. Lijwana, all the females surveyed were illiterate and in village II i.e. Fatehgarh, ethnomedicinal knowledge was disturbed equally amongst illiterates and educated. In villages III and IV i.e. Lijwana Kala and Karsola, illiterates were less knowledgeable in contrast to women holding above matric qualification. These observations reveal that cultural integration of the plant is not drastically affected due to illiteracy amongst rural women. But this knowledge is carried forth and transmitted to progenies due to its significance. In light of demographic data which indicates that sex ratio and literacy rate is less amongst female folk in Haryana and Jind district yet the percolated and

stored knowledge is immense (Tables 1 and 2). There is a dire need to put more efforts in the documentation of such knowledge before it gets vanished^[11].

4. Conclusion

The present survey revealed that females are the actual carriers of ethnomedicinal traditional knowledge but their knowledge is going unacknowledged. Females should be given due recognition for all the elite knowledge they carry with them. Her unrewarded contribution is not even recognized by males and elders of the family. So there is a dire need to recognize her as a useful linker tool between rural and national economy and to frame policies and rural projects seeking her participation. With this voluminous self acquired knowledge, she has emerged as an untitled scientist. Given the opportunity, so called most deprived and unprivileged women folk in rural area can be organized to pool their knowledge into a Traditional Knowledge Data Bank for new drug development programmes in the area of therapeutics. In current medicinal research discovery and availability of newer drug molecules are immensely warranted. So this is one challenge area where her inputs can be collaborated to serve mankind at large. She can also be made a beneficiary in profit sharing which lead to the economic upliftment and empowerment of rural women.

Acknowledgement

Authors acknowledge Smt. Phooli Devi to act as a translator for local language in order to provide better understanding of facts to the authors.

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