 Reasons for Use and Non-Use of Medicinal Plants for Digestive Problems

Jiwan Jyoti, Dr. Sukhjeet Kaur

Punjab Agricultural University, Ludhiana, India

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Corresponding Author:
Jyoti J.*
MSc. Student
Email: jiwan_sharma90 (at) yahoo (dot) in

Dr. Kaur S.
Professor

Abstract
Digestive problems are mainly the result of present life style. These problems sometimes start from the infancy and become more prevalent as the age increases. For curing these problems Medicinal plants played an important role. These Medicinal plants have proved to be effective for prevention and cure of various disorders. Their use against digestive problems is very common at household level. Thus, the present study was undertaken to study the reasons for use and non-use of medicinal plants for digestive problems in Punjab which will be useful in improving present research. The data was collected personally from 240 women equally representing rural and urban population of three socio-cultural zones of Punjab state regarding sixteen medicinal plants documented under AICRP on Home Science in Punjab. The data were analyzed with the help of frequency distribution and percentages. Results of the study revealed that the reasons cited for the use of medicinal plants were that elders always used these, have no side effects, cost effective and easily available. The reasons stated for non-use were that allopathic medicines are easily available, time consuming preparation and quick relief with allopathic medicines.

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1. Introduction

1.1. Outline
India is a varietal emporium of medicinal plants and is one of the richest countries in the world as regards to genetic resources of medicinal plants. All known types of agro climatic, ecologic and edaphic conditions are met within India. The biogeographic position of India is unique which makes India rich in all the three levels of biodiversity such as species diversity, genetic diversity and habitat diversity (Krishnaraju et al., 2005).

The vast expense of the plant kingdom contains substantial number of trees, herbs and shrubs which have unique medicinal value. Medicinal plants have mainly been used for human nutrition, flavoring for meals, remedy for various diseases and food for animals (Sekeroglu et al., 2006). According to WHO (2002) approximately 20,000 plants are medicinally important and about 80 per cent of the world's people depend on traditional medicine for their primary health needs. There are considerable economic benefits in the development of indigenous medicines and in the use of medicinal plants for the treatment of various diseases. Due to less communication means, poverty, ignorance and unavailability of modern health facilities, most people especially rural people are still forced to practice traditional medicines for their common day ailments. A vast knowledge of how to use the plants against different illnesses may be expected to have accumulated in areas where the use of plants is still of great importance.

Research studies conducted in various parts of the country are in agreement that the flora in connection with indigenous knowledge is diverse and needs to be documented (Bhattiet al., 2001; 2002; Qureshiet al 2001, 2009; Qureshi andBhatti, 2008; 2009; Khan andKhatooton, 2007; Ahmad et al 2009). The mountain communities of Khunjerab, Shimshal, Misgar and Chipursan valleys do have a long history of using local herbs to meet their daily
life needs but very little is known about the local flora (Qureshiet al., 2011) and its traditional use. With the passage of time, modernization and unwise exploitation have fast declined this resource and related knowledge everywhere in the world, and so in the communities of Khunjerab National Park. Due to ever increasing disturbances and pressures on natural ecosystems coupled with loss of interest amongst various groups, especially in youngsters there is a decline of the native flora and its potential uses in the area.

Across the world and throughout the ages plants have traditionally played a major role in the treatment of human diseases (Thirumalai et al., 2009). The use of herbal remedies as an adjunct or alternative to conventional medicine is also becoming increasingly popular all over the world. It is estimated that 80 per cent of the South African population use a traditional remedy at some stage during their lifetime (Lewu and Afolayan, 2009). According to Cheikhyoussef et al., 2011 there are several advantages for people in rural areas in opting for traditional medicine: traditional healers are usually to be found within relative close proximity to their homes; they are familiar with the patient's culture; and environment, and the costs associated with such treatments are generally negligible.

In spite of ease of the modern medical facilities, people in the developing countries still prefer to use these remedial measures at first. One of the reasons that the home remedies and traditional knowledge is more accepted in our society is their availability in most Indian kitchens and neighborhoods. These medicinal plants are affordable, eco-friendly, and have less or no side effects as compared to synthetic drugs (Negi et al., 2010).

Sidhu and Kaur (2007) concluded that the traditional medicines are the basic and alternative remedies to treat various human as well as animal ailments. The knowledge about the medicinal significance of plant species have passed from one generation to the next through oral communication. These were chiefly used by the old people.

1.2. Literature

The most common reasons that people use medicinal plants are: to ensure good health; improve energy; to prevent or treat colds and flu; to improve memory; to ease depression; and to prevent or treat serious illness. Many believe that because herbal remedies are natural, they are less harmful.

UNESCO (1976) reported that medicinal plants are more accessible to most of the population in the third world. About 60-65 per cent of the population in countries of the developing world to rely on medicinal plants due to their importance to eliminate ailments and maintain health.

Oliver (1994) concluded in a study of “Traditional agriculture in Tamil Nadu” that indigenous herbal practices were time tested and transmitted from generation to generation. People used these herbal practices because these were very cheap, commonly available and had no side effect.

Punia and Chhikara (1999) found that in the rural Haryana different types of home remedies were prevalent for the treatment of certain ailments and diseases. People adopted home remedies for the treatment of fever; where tea was prepared by boiling of *Tulsi* and *Harad*. For dysentery *Jaiphal* and *Harad* were given. The reason behind the adoption of home remedies was reported to be the continuation of joint family system in which knowledge was passed on. The elder lady or mother in law advises on home remedies as they themselves used the same in past when doctors were not so readily available.

Ahmed et al (2002) claimed that the local traditional healers were one of the sources of indigenous knowledge pertaining to the treatment of animals. The commonly treated diseases include the foot and mouth, mastitis, fever, bloat, impaction, diarrhea and parasitic disease. The reliance of farmers on the use of traditional medicine include the advantages of lack of side effects, the low cost of medicine, easy availability and lack of modern veterinary facilities. Farmers were found to be using more of local remedies, which were several times cheaper than modern drugs with low investment cost for increased livestock productivity. It helped to improve farmers’ monetary profits as well as the nutrition of the animal (Burman, 2002). Some animals’ diseases and conditions were controlled using indigenous remedies alone. The practices were found to have positive effects on the nutritional, economic, socio-cultural and environmental situation of the local communities.

Monika and Rani (2002) concluded from their study that majority of the respondents used indigenous methods for treatment of the diseases of animals and few visited the veterinary doctors, that too when the conditions of animals become worst. The reason behind the use of indigenous methods of treatment of was that women found it difficult to adopt new technologies of treatment in their present conditions and situations.

1.3. Objective of Research

Documentation of indigenous knowledge on
various aspects of health was planned under the All India Coordinated Research Project on Home Science. Technical bulletins were prepared based upon the data collected regarding pharmacological and pharmaceutical status of medicinal plants along with their usage in different states of the country and was validated. Technical bulletin “Medicinal Plants for Digestive Disorders” was developed with a view that much of the disease burden in India in present time is the result of Modern lifestyle. Digestive problems namely diarrhoea, dysentery, constipation, stomach pain, vomiting and food poisoning are the most common ones. During the twenty first century, the life style diseases have engulfed the population irrespective of the region and gender. Digestive problems are the result of present life style. These problems sometimes start from the infancy and become more prevalent as the age increases. Digestive system is considered as the central axis of immune system of the body. While reviewing the literature, it was found that a good quantum of work has been carried out on medicinal plants, their curative properties and use. But the research work on awareness of women regarding medicinal plants particularly used for digestive problems is very scarce. In this regard there is need to disseminate knowledge regarding these plants among the masses so as to enhance their use. Therefore it becomes imperative to have a database to strategically plan strategies for creating interest among masses for increased utilization of medicinal plants, which are known to possess properties for prevention and cure of digestive problems. The present study was hence planned to analyse the reasons for use and non-use by women regarding selected medicinal plants used for digestive problems so as to provide basis for planning extension strategies for dissemination of knowledge.

2. Experimental

2.1. Locale
Punjab has rich cultural heritage and use of medicinal plants in the region is well documented. The state is divided socio-culturally into three regions namely Majha, Doaba and Malwa depending upon their location between two major rivers flowing through the state. (Beas and Sutlej). Administratively, state is divided into districts.

2.2. Sampling
The sample was drawn from one randomly selected district from each of socio-cultural regions. To cover both urban and rural population equally, representation from urban was taken from four different localities of the major city of the selected district and from rural it was drawn from four rural blocks of the selected district, which were further represented by one village from each of the blocks. The urban localities varied with regard to general social economic status of the families residing in them. The sample comprised of women heads of the family. A total of 240 women were selected.

2.3. Data collection:
An interview schedule was developed on basis of the technical bulletin, ‘Digestive Disorders - Data on Digestive Disorders’, ICAR, New Delhi, India. It was prepared under the Extension Component of All India Coordinated Research Project on Home Science. The interview schedule contained items pertaining to the reasons for use and non-use of documented medicinal plants for digestive problems. A team of four scientists were consulted for its preparation and it was pretested by collecting data from one village and one city, which were not part of the study. The schedule was revised on basis of the validity, reliability scores and observations of the interviewers. The final schedule was used to collect the data from the sample.

Medicinal plants selected for the study

<table>
<thead>
<tr>
<th>Common name</th>
<th>English name</th>
<th>Botanical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pyaz</td>
<td>Onion</td>
<td>Allium cepa</td>
</tr>
<tr>
<td>Sunf</td>
<td>Fennel</td>
<td>Foeniculum vulgare</td>
</tr>
<tr>
<td>Jamun</td>
<td>Black plum</td>
<td>Syzygium cumini</td>
</tr>
<tr>
<td>Pudina</td>
<td>Mint</td>
<td>Mentha arvensis</td>
</tr>
<tr>
<td>Methi</td>
<td>Fenugreek</td>
<td>Trigonella foenum</td>
</tr>
<tr>
<td>Palak</td>
<td>Spinach</td>
<td>Spinacia oleracea</td>
</tr>
<tr>
<td>Tulsi</td>
<td>Sacred basil</td>
<td>Ocimum tenuiflorum</td>
</tr>
<tr>
<td>Harad</td>
<td>Black myrobolan</td>
<td>Terminalia chebula</td>
</tr>
<tr>
<td>Harimirch</td>
<td>Green chillies</td>
<td>Capsicum annuum</td>
</tr>
<tr>
<td>Ajwain</td>
<td>Omum</td>
<td>Trachyspermum annuum</td>
</tr>
<tr>
<td>Adrak</td>
<td>Ginger</td>
<td>Zingiber officinale</td>
</tr>
<tr>
<td>Pipal</td>
<td>Sacred fig</td>
<td>Ficus religiosa</td>
</tr>
<tr>
<td>Anar</td>
<td>Pomegranate</td>
<td>Punica granatum</td>
</tr>
<tr>
<td>Nimbu</td>
<td>Lime</td>
<td>Citrus aurantiifolia</td>
</tr>
<tr>
<td>Iliachi</td>
<td>Cardamomum</td>
<td>Elettaria cardamomum</td>
</tr>
<tr>
<td>Lahsun</td>
<td>Garlic</td>
<td>Allium sativum</td>
</tr>
</tbody>
</table>

Data was analysed using frequencies and percentages.

3. Results and discussion

3.1. Multiple responses
Data presented in table 1 revealed that 82.50 per cent of respondents used medicinal plants because their elders always used these followed by 80.00 per cent respondents used for being medicinal plants more beneficial than allopathic and 78.75 per cent respondents used because medicinal plants had no side effects. Majority of respondents about 75 per cent always used medicinal plants because they were fully convinced for its usefulness. It
further shows that about 75 per cent and 73 per cent of respondents used medicinal plants because they are time tested for their effectiveness and easily available. Low cost was also an important reason for the use of medicinal plants as reported by 75.42 per cent. It may be concluded that use by elders, beneficial and no side-effect were the major reasons for using medicinal plants.

Abbiw (1996) also reported that traditional medicines are beneficial and no side-effects.

The results of the study undertaken are presented and discussed below:

**Table 1:** Distribution of respondents according to reasons for using medicinal plants for digestive problems

<table>
<thead>
<tr>
<th>Reasons for always use</th>
<th>No</th>
<th>% age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time tested for effectiveness</td>
<td>179</td>
<td>74.58</td>
</tr>
<tr>
<td>Fully convinced for usefulness</td>
<td>181</td>
<td>75.41</td>
</tr>
<tr>
<td>Elders always used</td>
<td>198</td>
<td>82.50</td>
</tr>
<tr>
<td>Beneficial</td>
<td>192</td>
<td>80.00</td>
</tr>
<tr>
<td>No side effect</td>
<td>189</td>
<td>78.75</td>
</tr>
<tr>
<td>Easily available</td>
<td>176</td>
<td>73.33</td>
</tr>
<tr>
<td>Cheap</td>
<td>181</td>
<td>75.42</td>
</tr>
</tbody>
</table>

**Table 2:** Distribution of respondents according to reasons for not using medicinal plants for digestive problems

<table>
<thead>
<tr>
<th>Reasons for not using</th>
<th>No</th>
<th>% age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unaware of usefulness</td>
<td>39</td>
<td>16.25</td>
</tr>
<tr>
<td>Not convinced of usefulness</td>
<td>38</td>
<td>15.80</td>
</tr>
<tr>
<td>Might have some ill effects</td>
<td>138</td>
<td>57.50</td>
</tr>
<tr>
<td>Witnessed the ill effects of their use</td>
<td>160</td>
<td>66.67</td>
</tr>
<tr>
<td>Allopathic medicines are easily available</td>
<td>236</td>
<td>98.33</td>
</tr>
<tr>
<td>Have faith in allopathic medicines</td>
<td>148</td>
<td>61.67</td>
</tr>
<tr>
<td>Allopathic medicines provide quick relief</td>
<td>210</td>
<td>87.50</td>
</tr>
<tr>
<td>Have never seen anyone using these</td>
<td>17</td>
<td>7.10</td>
</tr>
<tr>
<td>Not readily available</td>
<td>122</td>
<td>50.83</td>
</tr>
<tr>
<td>Time consuming to prepare their products</td>
<td>177</td>
<td>73.75</td>
</tr>
</tbody>
</table>

The perusal of data in table 2 revealed that 98.33 per cent of respondents never used some medicinal plants because allopathic medicines are easily available followed by 87.50 per cent respondents who never used because allopathic medicines provide quick relief and 73.75 per cent never used as it is time consuming to prepare their products. About 67 per cent, 62 per cent, 58 per cent and 51 per cent of respondents never used medicinal plants because they have witnessed the ill effects of their use, have faith in allopathic medicines, Might have some ill effects and not readily available. It further shows that about 16 per cent and 15.80 per cent of respondents never used medicinal plants because they were ‘not aware regarding their usefulness’ and they were also ‘not convinced regarding their usefulness’. Only about 7 per cent respondents never used medicinal plants because they have never seen anyone using these. These results provide the ground for creating awareness regarding use of medicinal plants for digestive disorders.

**Research Highlights**

The study is first attempt to cover the entire state for data collection regarding medicinal plants for digestive problems and data substantially provide evidence for a need to generate interest and motivate present generation particularly the women who in present socio-cultural context play reproductive role. They perform all activities related to care and nurturing of the family. Capacitating them with knowledge of medicinal plants and their reasons can also encourage them to plant these and enhance their usage. Studies can be conducted with similar methodology to study the any other reasons for usage and non-usage of these medicinal plants.

**Limitations**

The investigation was carried out only in the Punjab state; therefore the results of the study cannot be generalized for other states. The study is limited to only digestive problems. Although every effort has been made to get unbiased responses from the respondents, psychological behavior of not revealing the truth cannot be completely ruled out. Being a student’s project, it has all the limitations which are common i.e. the limitation of time, money and other resources. The findings of the study are based solely on the expressed opinion of the respondents and the objective to the desired level might not be achieved for extrapolation.

**Recommendations**

Punjab is a habitat for a large number of medicinal plants, which are easily and free by available to people. Therefore education material regarding the use of plants for various diseases may be prepared for disseminating this information.

**Funding and Policy Aspects**

Capacitating extension workers can ensure passage of indigenous knowledge regarding the importance and properties of medicinal plants to the masses. Electronic media in public sector can play a vital role in this context. Availability of plants can be enhanced by making them part of the afforestation drive.

**Authors’ Contribution**

First author Ms. Jiwan Jyoti planned and conducted
the study under the guidance of the second author Dr. Sukhjeet Kaur (Advisor/Guide) as part of Masters Programme in Punjab Agricultural University, Ludhiana, Punjab (India).

Acknowledgement

Technical support provided by the committee members of the faculty of Punjab Agricultural University, Ludhiana, India is acknowledged.

Conclusion

Modern lifestyle is highly stressful, fast paced and can involve regularly eating salty, processed foods, convenience foods, excessive alcohol consumption, lack of exercise using recreational drugs and relying heavily on prescriptive and non-prescriptive drugs to get rid of our illness. All this can lead to a dysfunctional digestive system and thus an unhealthy body. If food is not digested properly, the cells lack the nourishment required for the optimal functioning. Most of the health problems have their roots in digestive system. These digestive problems namely diarrhoea, dysentery, constipation, stomach pain, vomiting and food poisoning are the most common ones. There are some 42 million cases annually and estimated 75,000 deaths across the globe due to amoebic dysentery alone. WHO (2008) estimated that every year 58 million people suffer from diarrhea in terms of death, illness and disability due to unsafe drinking water, hygiene and sanitation. About 94 per cent death from diarrhea occurs worldwide which is considered as biggest childhood killer. People try using different local resources beside different medicines to prevent health related problems.

Documentation in the technical bulletin of the selected medicinal plants was based upon the data collected and validated from across the state of Punjab showing that women knew about these plants and their properties and hence were using them for curing these digestive problems but some women use these selected medicinal plants just for taste because they don’t know its medicinal properties. However, the data from the present study revealed that the reasons cited for the use of medicinal plants were that elders always used these, have no side effects, cost effective and easily available. The reasons stated for non-use were that allopathic medicines are easily available, time consuming preparation and quick relief with allopathic medicines. Abbiw (1996) also reported that traditional medicines are beneficial and no side-effects.

References


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