Nutritional and Medicinal Knowledge of Wild Edible Flowers Amongst Rural Women

Abstract: The study investigates the nutritional and medicinal knowledge of wild edible flowers among rural women. It identifies the diverse use of these flowers, their nutritional composition, and their traditional culinary applications. The research also highlights the cultural significance of these flowers. Challenges in awareness and perception highlight the need for education and promotion. The study suggests that sustainable use of these flowers can improve nutrition, health, and well-being in rural communities, honoring local traditions.

Keywords: nutritional knowledge, medicinal knowledge, wild edible flowers, rural women, culinary practices, traditional knowledge, awareness, consumption.

1 Introduction

Wild edible plants are nutritionally concentrated in comparison with the stored food items. Wild edible flower species have medicinal properties which can keep people healthy and fit. Wild edible flowers grow in forest, barren land, waste land, without chemical and fertilizers and are also good source of nutrients. The major nutrients present are carbohydrate in the form of starch and sugar, protein, lipids in oil form, vitamin and minerals.

However the dissemination of knowledge over the generation and its documentation is need of the day. It will help in overcoming the malnutrition and negligence towards the balanced diet. Give careful thought to the consumption of nutritious food economically available through various natural sources rather than conventional ones.

The medicinal value of wildflowers is undoubtedly higher than that of common flowers when consumed.

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These flowers can be preserved for the further use by natural drying; however, it maintains the nutritive and medicinal properties. Therefore, cultivation, preservation and consumption for the nutritional enrichment and medicinal protection. Use of wildflowers needs to be propagated the present study is an attempt in this direction.

Objective:

- Identify and document the diversity of wild edible flowers used by rural women.
- Explore the nutritional and medicinal knowledge of wild edible flowers amongst rural women.
- Explore nutritional, medicinal, traditional recipe knowledge, attitude towards consumption and cooking practices of wild edible flowers.

By achieving these objectives, this study aims to enhance our understanding of the potential role of wild edible flowers in improving nutrition, health, and overall well-being in rural communities. The findings will contribute to the development of strategies for promoting the sustainable utilization of wild edible flowers and the preservation of traditional knowledge.

2 Methodology

Selection of Study Site: The study was conducted during 2022-2023, as Amravati district is well known on world map for Megha forest. Various rural communities were selected as study sites, considering factors such as accessibility and cultural significance of wild edible flowers. These communities are representative of different regions and ecosystems to capture a wide range of floral diversity.

The data was collected with the help of following methods.

3 Literature Review

Surveys and Interviews: Structured surveys will be administered to gather quantitative data on the knowledge, utilization, and perception of wild edible flowers among rural households. Additionally, semi-structured interviews will be conducted with key informants, including local residents, traditional healers, and knowledgeable individuals, to gain in-depth qualitative insights into their experiences, practices, and beliefs related to wild edible flowers.

Floristic Survey: Field surveys will be conducted in collaboration with local experts to identify and document the diversity of wild edible flowers present in the study sites. Plant
specimens will be collected, photographed, and catalogued for further taxonomic identification.

Awareness: Observations and participatory activities were conducted to document traditional culinary practices associated with wild edible flowers. This will include observing cooking methods, recipe demonstrations, and collecting traditional recipes from local households. The cultural significance of wild edible flowers in culinary traditions will also be explored.

Medicinal Applications: Through interviews and discussions with local residents and traditional healers, the medicinal applications of wild edible flowers will be documented. Traditional remedies, preparation methods, and knowledge of specific flowers used for common ailments and health conditions will be recorded.

The nutritional and medicinal knowledge before and after education program was recorded as rural women were educated on nutritional and medicinal values of the wild edible flowers during the education program. A sample of 240 rural women in the age group of 30 to 55 years from four taluka, two villages from each taluka and a sample of 30 women from each village.

Data Analysis: Quantitative data from surveys was analyzed using statistical software to generate descriptive statistics and using Z test. Qualitative data from interviews and observations will be thematically analyzed to extract key themes, experiences, and perspectives related to wild edible flowers.

4 Results

The study on nutritional and medicinal knowledge of wild edible flower conducted amongst rural women of Amravati district was based on the sample selection assessing nutritional and medicinal knowledge on wild edible flowers before educational program and after educational program. The educational program was organized in each village for 3 hours on providing complete information of selected wild edible flowers about nutritional knowledge, medicinal knowledge, traditional recipe knowledge, attitude towards consumptions, and cooking practices.

After span of 45 days researcher meet the household ladies selected from for educational program and information was collected with the help of questionnaire. The data recorded on nutritional, medicinal knowledge was analysed for change in knowledge by Z-test and results are presented in the following table.

<table>
<thead>
<tr>
<th>S.N</th>
<th>Wild Edible Flower</th>
<th>Nutritional Knowledge</th>
<th>Z Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cassia fistula (Amaltash)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Sesbania grandiflora (Heta)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>Crotalaria juncea (Boru)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Telosma pallid (Roxb.) (Jivati)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Moringa oleifera (Shevaga)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>Bombax ceiba (Katesavar)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

** Significant at 0.01 level of probability

The analysis presented concludes that significant change in nutritional knowledge was observed among the rural women in the selected area. Concluding educational
The programme was effective in enriching nutritional knowledge of rural women. The medicinal knowledge before and after educational programme was analysed, the main score before and after educational programme are presented below.

Table 2. Medicinal knowledge before and after educational programme

<table>
<thead>
<tr>
<th>S.N</th>
<th>Wild Edible Flower</th>
<th>Medicinal Knowledge Before</th>
<th>Medicinal Knowledge After</th>
<th>Z Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cassia fistula (Amaltash)</td>
<td></td>
<td></td>
<td>21.86**</td>
</tr>
<tr>
<td>2</td>
<td>Sesbania grandiflora (Heta)</td>
<td></td>
<td></td>
<td>17.08**</td>
</tr>
<tr>
<td>3</td>
<td>Crotalaria juncea (Boru)</td>
<td></td>
<td></td>
<td>16.80**</td>
</tr>
<tr>
<td>4</td>
<td>Telosma pallid (Roxb.) (Jivati)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Moringaoleifera (Shevaga)</td>
<td></td>
<td></td>
<td>16.60**</td>
</tr>
<tr>
<td>6</td>
<td>Bombaxceiba (Katesavar)</td>
<td></td>
<td></td>
<td>18.44**</td>
</tr>
</tbody>
</table>

**Significant at 0.01 level of probability

The difference between the mean values before and after was tested with the help of Z test. The significance of Z value concludes that, medicinal knowledge was significantly higher among the rural women after educational programme.

The relational analysis among the variable's nutritional, medicinal, traditional recipe knowledge, attitude towards consumption and cooking practices are presented below.

Table No. 3. The relational analysis among the variable's nutritional, medicinal, traditional recipe knowledge, attitude towards consumption and cooking practices

<table>
<thead>
<tr>
<th>S.N</th>
<th>Nutritional Knowledge</th>
<th>Medicinal Knowledge</th>
<th>Traditional recipe knowledge</th>
<th>Attitude towards consumption</th>
<th>Cooking practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>0.193**</td>
<td>0.199**</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>0.164**</td>
<td>0.179**</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>0.199**</td>
<td>0.208**</td>
</tr>
</tbody>
</table>

**Significant at 0.01 level of probability

The significance of correlation concludes that the nutritional and medicinal knowledge has significant positive relation with attitude towards consumption, traditional recipe knowledge and cooking practices. Concluding rural women were increase in knowledge about nutritive value and medicinal importance of wild edible flowers were cautious about attitude towards consumption, cooking practices and traditional recipe knowledge.

5 Discussion

The wild edible flowers included in the study Cassia fistula (Amaltash), Sesbania grandiflora (Heta), Crotalaria juncea (Boru), Telosma pallid (Roxb.) (Jivati), Moringaoleifera (Shevaga), Bombaxceiba (Katesavar) are the richest source of energy, protein, calcium, iron, phosphorus, potassium. Which are cheapest and easily available in the vicinity of villages. Concluding the consumption of wild edible flowers will meet the human nutritional requirement.

Beegum Junna et al. (2014) studied nutritional and anti-nutritional properties of Boerhaviadiffusa L. The study noticed that the presence of alkaloid, tannin, flavonoid, saponin, tryptophan and phenols and absence of cardiac glycoside in ethanol chloroform extract of plant. The presence of anti-nutritional properties in the extract supports the role of plant for human consumption.
and petroleum ether extracts. The whole plant is being consumed as a part of various treatment helpful in the standard natural drug. Pallabi et al. (2017) evaluated nutritional potential of five unexplored wild edible plants from eastern Himalaya. Study reported that wild edible content organic photochemicals which are useful in promoting good health and they are highly nutritious. Seal et al. (2017) analyse nutritional potential of wild edible flowers, while vegetables are rich in crude protein, energy, potassium, iron, zinc, copper, magnesium, calcium and sodium. Jadav et al. (2011) studied ethano-medical aspects of wild edible flowers. The flowers possess medicinal properties as it contributes to herbal medicinal properties which forms an important part of the culture and traditions. Wadankar et al. (2011) studied on 21 wild edible plant species for medicinal uses. Utilisation of plants or plant parts against the gynaecological disorders needs to be documented. The present study based on botanical name Cassia fistula (Amaltash), Sesbania grandiflora (Heta), Crotalaria juncea (Boru), Telosma pallid (Roxb.) (Jivati), Moringaoleifera (Shevaga), Bombaxceiba (Katesavar). Concludes that wild edible flowers has medicinal importance in relation to digestive disorders, skin infection, liver function, sunstroke, cold, acidity etc. Concluding the herbal medicine is the cheapest source available to rural household needs to be preserved and propagated. The nutritional and medicinal knowledge of wild edible flowers amongst rural households is a valuable resource that can contribute to improved nutrition, health, and well-being. This study sheds light on the diversity of wildflowers, their nutritional composition, traditional culinary practices, medicinal applications, awareness and perception, and factors influencing consumption. By promoting the sustainable use of wildflowers, preserving traditional knowledge, and providing educational resources, rural communities can harness the potential of these natural resources for their benefit.

6 Conclusion

The consumption of wild edible flowers in various edible forms in acceptable recipe meets the human nutritional requirement. The herbal medicine is the cheapest source available to rural household needs to be preserved and propagated. Rural women who are increase in knowledge about nutritive value and medicinal importance of wild edible flowers are cautious about attitude towards consumption, cooking practices and traditional recipe knowledge. The study emphasizes the potential role of wild edible flowers in improving nutrition, health, and overall well-being in rural communities. By promoting their sustainable utilization, raising awareness, and preserving traditional knowledge, these flowers can contribute to a more diverse and resilient food system, while also honoring local traditions and promoting the well-being of rural households.

References


