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Use of indigenous medicinal plants by tribal women for treatment of digestive disorder

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Abstract

Nanded district of Maharashtra state has the major forest area in the district is in Kinwat taluka (i.e.) about 57,800 hectares. This taluka is also a part of area popularly known as Gondwan. Approximately more than three out of every ten persons in taluka are tribals (32 per cent). Among tribals, Rajgond (47 per cent), Andh (36 per cent), Pardhan (9 per cent) and Bhil (5 per cent) are the main tribals. The tribal area is spread over 1146 square kilometers (Census, 1991). Most of the tribal women working in the farming activities and they take care of health of all family members. They are most of the time used medicinal plants and parts to cure health problems. From kinwat taluka six villages were selected and twenty villagers from each village were randomly selected for the study. Thus, from each village 20 respondents making the total sample size 120 were selected. For this study statistical tools were used as frequency, percentage, correlational analysis, multiple regressions. To collect data regarding use of indigenous medicinal plants for digestive disorder by them interview schedule was prepared with help of information regarding diseases name, plant name, medicinal plants used in the form of seed, root stem, bark, leaves, flowers, rhizome, bulb. Plants are one of the most important sources of medicine. The application of plants as medicines dates back to prehistoric period.

Keywords: Digestive disorder, medicinal plants, sources of medicine etc.

1. Introduction

The Kinwat region of Nanded district is a rich source of medicinal plants. The region is not only outwardly beautiful, but also encompasses numerous species of medicinal plants having great importance. The trees viz. Harda (*Terminalia chebula*), Behda (*Terminalia bellerica*), Awala (*Emblica officinalis*), Jamun (*Syzygium cumini*), Satwin (*Alstonia scholaris*), the herbs and shrubs viz. Adulsa (*Adhatoda vasica*), Pangara (*Erythrina indica*), Nirgudi (*Vitex negundo*), Tulas (*Ocimum tenuiflorum*) are commonly observed everywhere in the region. However, these valuable plants have remained neglected by the common rural people and a handful of knowledgeable people have exploited these species for their own benefits. At present, due to increasing industrialization, mining, and the charcoal making etc. the tree species having medicinal value are disappearing at faster rate.

In country like India, where 65 per cent of the total population has access to only local medicinal plant knowledge systems and 70 per cent of the population lives in villages struggling to access and afford modern allopathic medicines, both traditional systems of medicine (TSM) and folk knowledge system of medicine are of significance. TSM exists in the form of well-known classical traditions of Ayurvedic, Unani and Siddha, which are characterized by a large number of practitioners trained through formal institutions, a well codified body of text either in the form of scriptures or other written forms and an official recognition as "Indian Systems of Medicine." Both Ayurvedic and Siddha systems of medicine originated more than 3000 years ago and were prevalent in North and South India, respectively. The Unani systems of medicine originated in Greece (460-377 BC) and became more popular in India after the establishment of the Central Council for Research in Indian Medicine and Homeopathy in 1969. Complementary to these codified systems, the folk knowledge systems are largely transmitted through oral means and flourish at the village level with little or negligible support from official channels at the state or the national level. (Shukla and Gardner, 2006) [5]

2. Materials & Methodology

Ex-post-facto research design was used for the present study as it is worthy to apply when the

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independent variables have already acted upon. Twenty tribal women from each village were randomly selected for the study. Thus, from each village 20 respondents making the total sample size 120 were selected.

3. Result & Discussion

In this study can conclude that the medicinal plants used in treatment of To collect data regarding use of indigenous medicinal plants for digestive disorder (diarrhoea, stomach pain, vomiting,) by them interview schedule was prepared with help of information regarding diseases name, plant name, medicinal plants used in the form of seed, root stem, bark, leaves, flowers, rhizome, bulb.

4. Use of medicinal plants by tribal women

4.1. Use of medicinal plants by tribal women

Table 1 revealed that majority (69.17 per cent) of the respondents had 'medium' use of medicinal plants. This might be due to medium knowledge about the use of medicinal plants and better access to the medicinal plant due to forest area. Above finding is similar to the findings of Sharma (2000) [3], Anand and Singh (2001) [1] and Shilorkar (1991) [4].

Table 1: Distribution of the tribal women according to their extent of use of medicinal plants N=120

Sr. No.	Use of medicinal plants	Number	Per cent
1.	Low	18	15.00
2.	Medium	83	69.17
3.	High	19	15.83

5. Use of medicinal plants by tribal women

5.1 Medicinal plants seeds used for treatment of digestive disorder

It is observed from Table 2 that for getting relief from diarrhoea seeds of *Trigonella foenum-graecum* (48.33 per cent), *Foeniculum vulgare* (69.16 per cent), *Cuminum cyminum* (37.5 per cent), *Coriandrum sativum* (41.66 per cent) were used for getting relief from stomach pain seed of *Trigonella foenum-graecum* (45 per cent), *Tephrosia purpurea* (43.33 per cent), *Trachyspermum ammi* (96.67 per cent). For vomiting seeds of *Gossypium arboretum L.* (56.66 per cent), *Foeniculum vulgar* (85.00 per cent), *Cuminum cyminum L.* (65.00 per cent), *Coriandrum sativum* (63.33 per cent), *Syzygium cumini* (70.83 per cent), *Elettaria cardamomum* (42.5 per cent) were used.

Table 2: Medicinal plants seeds used for treatment of digestive disorder

Sr.no.	Disease name	Plant name	frequency	percentage
1.	Diarrhoea	<i>Syzygium cumini</i>	35	29.16
		<i>Trigonella foenum graecum</i>	58	48.33
		<i>Foeniculum vulgare</i>	83	69.16
		<i>Cuminum cyminum</i>	45	37.5
		<i>Coriandrum sativum</i>	50	41.66
		<i>Lawsonia inermis</i>	24	20
2	Stomach pain	<i>Tephrosia purpurea</i>	52	43.33
		<i>Trigonella foenum-graecum</i>	54	45
		<i>Trachyspermum ammi</i>	116	96.67
		<i>Cuminum cyminum</i>	36	30
		<i>Murraya koenigii</i>		
		<i>Pterocarpus marsupium</i>	16	13.33
		<i>Coriandrum sativum</i>	8	6.66
		<i>Piper longum</i>	9	7.5
		<i>Plantago ovata forsk</i>	18	15
3	Vomiting	<i>Gossypium arboretum</i>	68	56.66
		<i>Foeniculum vulgare</i>	102	85
		<i>Cuminum cyminum</i>	78	65
		<i>Coriandrum sativum</i>	76	63.33
		<i>Syzygium cumini</i>	85	70.83
		<i>Tamarindus indica</i>	7	5.83
		<i>Elettaria cardamomum</i>	51	42.5
	F= Frequency		P = %	

5.2 Medicinal plants roots used for treatment of digestive disorder

It is portrayed from Table 3 that for getting relief from stomach pain root of *Citrus aurantifolia* (43.33 per cent),

Whereas, root of *Ficus religiosa* (58.33 per cent), *Ficus benghalensis* (74.16 per cent), *Glycyrrhiza glabra* (64.16 per cent) were used in the treatment of Vomiting

Table 3: Medicinal plants roots used for treatment of digestive disorder

Sr.no.	Disease name	Plant name	frequency	percentage
1.	Stomach pain	<i>Tephrosia purpurea</i>	23	19.16
		<i>Citrus aurantifolia</i>	52	43.33
2.	Vomiting	<i>Glycyrrhiza glabra</i>	77	64.16
		<i>Trichosanthes anguina</i>		
		<i>Ficus benghalensis</i>	89	74.16
		<i>Ficus religiosa</i>	70	58.3

5.3 Medicinal plants stems used for treatment of digestive disorder

It is observed from Table 4 that for getting relief from

diarrhoea stem of *Glycyrrhiza glabra* (70.00 per cent) were used.

Table 4: Medicinal plants stems used for treatment of digestive disorder

Sr.no.	Disease name	Plant name	frequency	percentage
1.	Diarrhoea	<i>Glycyrrhiza glabra</i>	84	70

5.4 Medicinal plants bark used for treatment of digestive disorder

Table 5: Medicinal plants bark used for treatment of digestive disorder

Sr.no.	Disease name	Plant name	frequency	percentage
1.	Diarrhoea	<i>Punica granatum</i>	43	35.83
		<i>Acacia arabica</i>	70	58.33
		<i>Azadirachta indica</i>	42	35
		<i>Butea monosperma</i>	40	33.33
		<i>Piper longum</i>	2	1.66
		<i>Tephrosia purpurea</i>	6	5
2	Stomach pain	<i>Cassia auriculata</i>	57	47.5
		<i>Alangium salvifolium</i>	40	33.33
3.	Vomiting	<i>Punica granatum</i>	15	12.5
		<i>Cinnamomum zeylanica</i>	14	11.66

It is portrayed from Table 5 that for getting relief from diarrhoea bark of *Acacia arabica* (58.33 per cent), *Punica granatum* (35.83 per cent), *Butea monosperma* (33.33 per cent) *Azadirachta indica* (35.00 per cent) were used further it is revealed that for getting relief from stomach pain bark of

Cassia auriculata (47.5 per cent), *Alangium salvifolium* (33.33 per cent) were used.

5.5 Medicinal plants leaves used for treatment of digestive disorder

Table 6: Medicinal plants leaves used for treatment of digestive disorder

Sr.no.	Disease name	Plant name	frequency	percentage		
1.	Diarrhoea	<i>Tamarindus indica</i>	7	5.83		
		<i>Phyllanthus emblica</i>	65	54.16		
		<i>Cocculus villosus</i>	81	67.5		
		<i>Tinospora cordifolia</i>	55	45.83		
		<i>Azadirachta indica</i>	71	59.16		
		<i>Mentha arvensis</i>	88	73.33		
		<i>Saraca indica</i>	23	19.16		
		<i>Anethum sowa</i>	22	18.33		
		<i>Adhatoda vasica</i>	4	3.33		
		<i>Piper betle</i>	20	16.66		
		2.	Stomach pain	<i>ficus benghalensis</i>	10	8.33
				<i>Aloe barbadensis</i>	109	90.83
				<i>Eclipta alba</i>	107	89.16
<i>Centella asiatica</i>	84			70		
<i>Chrysanthemum coronarium</i>	24			20		
<i>Calotropis gigantea</i>	67			55.83		
<i>Datura stramonium</i>	38			31.66		
<i>Ocimum tenuiflorum</i>	35			29.16		
<i>Murraya koenigii</i>	42			35		
<i>Mentha arvensis</i>	33			27.5		
3.	Vomiting	<i>Murraya koenigii spreng</i>	89	74.16		
		<i>Mentha arvensis</i>	93	77.5		
		<i>Aegle marmelos</i>	30	25		
		<i>Ocimum tenuiflorum</i>	62	51.66		
		<i>Adhatoda vasica</i>	28	23.33		
		<i>Vitex negundo</i>	12	10		

It is noticed that from table 6 for getting relief from Diarrhea leaves of *Phyllanthus emblica* (54.16 per cent), *Cocculus villosus* (67.5 per cent), *Tinospora cordifolia* (45.83 per cent), *Azadirachta indica* (59.16 per cent), *Mentha arvensis* (73.33 per cent) whereas, for stomach pain leaves of *Aloe barbadensis* (90.83), *Eclipta alba* (89.16) and for getting

relief from vomiting leaves of *Murraya koenigii spreng* (74.16 per cent), *Mentha arvensis* (77.50 per cent), *Ocimum tenuiflorum* (51.66 per cent) were used.

5.6 Medicinal plants flowers used for treatment of digestive disorder

Table 7: Medicinal plants flowers used for treatment of digestive disorder

Sr.no.	Disease name	Plant name	frequency	percentage
1.	Diarrohea	<i>Syzygium aromaticum</i>	45	37.5
2.	Stomach pain	<i>Chrysanthemum coronarium</i>	10	8.33
3.	Vomiting	<i>Syzygium aromaticum</i>	51	42.5

It is revealed from table 7 for getting relief from diarrohea flower of *Syzygium aromaticum* (37.5 per cent) for stomach

pain *Chrysanthemum coronarium* (8.33) and for getting relief from vomiting *Syzygium aromaticum* (42.5) were used.

5.7 Medicinal plants fruits used for treatment of digestive disorder

Table 8: Medicinal plants fruits used for treatment of digestive disorder

Sr.no.	Disease name	Plant name	frequency	percentage
1.	Diarrohea	<i>Punica granatum</i>	99	82.5
		<i>Citrus aurantifolia</i>	110	91.66
		<i>Mangifera indica</i>	84	70
		<i>Aegle marmelos</i>	81	67.5
		<i>Tamarindus indica</i>	81	67.5
		<i>Syzygium cumini</i>	53	44.16
		<i>Phyllanthus emblica</i>	75	62.5
		<i>Ficus racemosa</i>	79	65.83
		<i>Trichosanthes anguina</i>	32	26.66
		<i>Myristica fragrance</i>	74	61.66
		<i>Musa paradisiaca</i>	47	39.16
		<i>Cyperus rotundus</i>	48	40
		2	Stomach pain	<i>Citrullus colocynthis</i>
<i>Citrus aurantifolia</i>	107			89.16
<i>Terminalia bellirica</i>	104			86.66
<i>Momordica charantia</i>	40			33.33
<i>Phyllanthus emblica</i>	29			24.16
<i>Cyperus rotundus</i>	10			8.33
3.	Vomiting	<i>Citrus aurantifolia</i>	87	72.5
		<i>Punica granatum</i>	66	55
		<i>Syzygium cumini</i>	58	48.33
		<i>Aegle marmelos</i>	5	4.16
		<i>Tamarindus indica</i>	52	43.33
		<i>Trichosanthes anguina</i>	41	34.16
		<i>Myristica fragrance</i>	57	47.5

It is noticed that from table 8 for getting relief from Diarrhea fruit of *Punica granatum* (82.5 per cent), *Citrus aurantifolia* (91.66 per cent), *Mangifera indica* (70.00 per cent), *Aegle marmelos* (67.5 per cent), *Tamarindus indica* (67.5 per cent), *Syzygium cumini* (44.16 per cent), *Phyllanthus emblica* (62.5 per cent), *Ficus racemosa* (65.83 per cent), *Myristica fragrance* (61.66 per cent), *Musa paradisiaca* (39.16 per cent), *Cyperus rotundus* (40.00 per cent) were used. Whereas, mostly fruit of *Citrus aurantifolia* (89.16), *Terminalia bellirica* (86.66), *Momordica charantia* (33.33 per cent) for

getting relief from stomach pain. Further noticed that fruit of *Citrus aurantifolia* (72.5 per cent), *Punica granatum* (55.00 per cent), *Syzygium cumini* (48.33 per cent), *Tamarindus indica* (43.33 per cent), *Trichosanthes anguina* (34.16 per cent), *Myristica fragrance* (47.50 per cent) were also used for getting relief from vomiting.

5.8 Medicinal plants rhizomes used for treatment of digestive disorder

Table 9: Medicinal plants rhizomes used for treatment of digestive disorder

Sr.no.	Disease name	Plant name	frequency	percentage
1.	Diarrohea	<i>Zingiber officinale</i>	41	34.16
		Dried ginger	9	7.5
2.	Stomach pain	<i>Zingiber officinale</i>	12	10

It is portrayed from table 9 Rhizome of *Zingiber officinale* (34.16 per cent) were mostly used in treatment of diarrhoea.

5.9 Medicinal plants bulbs used for treatment of digestive disorder

Table 10: Medicinal plants bulbs used for treatment of digestive disorder

Sr.no.	Disease name	Plant name	frequency	percentage
1.	Diarrohea	<i>Allium cepa</i>	12	10
2.	Vomiting	<i>Allium cepa</i>	6	5

It is observed that from table 10 for getting relief from Diarrhea *Allium cepa* (10) people were used. These findings

are in conformity with that of findings of Kshirsagar and Singh (2001) [7], Chakma *et al.* (2003), Antwal *et al.* (2003)

[2], Gupta *et al.* (2007) [6], Singh (2007) [8].

6. Conclusion

It is concluded that most of the tribal women reported the difficulty in storage of seasonal medicinal plants. Therefore, technique of storage of seasonal medicinal plants needs to be disseminated to tribal women through extension programme. Increasing plantation of medicinal plants programme has great promise in the area. The potential is so great that medicinal and forest plants would change the economy of the farming community and world provide gainful employment of tribal women.

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