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Ethnobotanical survey of herbal plants used for menstrual pains in Ibarapa local government, Oyo state, Nigeria

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Abstract

Most women will experience 400 menstrual cycles in their bearing lifetime. Millions of women across the globe suffer from several menstrual problem and a similar percentage of population employ traditional medicine for their primary health care. An ethnobotanical survey of herbal plants used for menstrual pains in Ibarapa Area, Oyo State, Nigeria.

A semi structure questionnaire survey was administered on thirty respondents in the study area. Information obtained included the planned time to use the concoction, the time of collection, its side effect and availability of the plants. The respondents were mostly females ranging from 31-45 years and were mainly herbal sellers. Thirteen plant species were documented for the management and treatment of menstrual pain in the study area.

The plants belong to 10 families. *Seamum indica* and *carica papaya* (fruits) (16.7%) were the most effective herbal plants considered for the treatment of menstrual pain while *Oryza sativa fragrans species* and *Terminalia chebula* (3.3%) were less effective for the treatment of menstrual pain.

The time for the collection of those herbals' plants is mostly in the morning (93.3%) and evening (6.7%). The time to use the concoction is mostly (76.7%) before meal and (2.3% after meal). Leaves are the most common part of the plants used for the treatment although seeds or other parts of plant are used in some cases. The result showed that there is no side effect of the herbal plants in the treatment of menstrual pains. The list of the plants and recipes obtained are provided as potential sources for the treatment of menstrual pain from indigenous medicinal plants found in Ibarapa Local Government, Oyo State, Nigeria.

Keywords: Ethnobotanical, menstrual, pains, herbal

Introduction

Menstrual disorder or pain is a risk maker for other reproductive morbidities, abnormal or irregular uterine fibroid, genital haemorrhagic dengue fever and excessive or prolonged bleeding can cause anaemia and may eventually be life threatening if left untreated (Harlow and Campbell, 2016) [3].

Painful menstruation (dysmenorrhea) results partly from an excess production of prostaglandins that stimulate or increase uterine contraction. Although not always life-threatening, menstrual disorder can be particularly disruptive to daily activity patterns, particularly in the absence of appropriate sanitary facilities or analgesics in the case of painful menstrual time (Tjon Aten, 2007) [6].

Menstrual disorder is often treated with hormonal therapy (including contraception) or non-steroidal, anti-inflammatory medication for many women in low-income countries. These treatments are available or affordable (Sledlecky, 2009) [5].

Research on the effectiveness of herbal plants used for dysmenorrhea has focused on compounds that regulate prostaglandins inhibition of any key enzymes in the bio synthetic pathway. This may relieve menstruation pain by preventing contraction of the uterus or by relaxing its smooth muscles (Alaba *et al.*, 2009) [1].

The world health organization (2010) estimate that about 80% of people worldwide rely on herbal medicine for some part of primary health care.

Materials and Methods

Ethno medicinal Plant Survey: This survey was conducted in Ibarapa local government zones; Ibarapa central local government, Ibarapa north and Ibarapa east local government on Oyo state on latitude 3.08° with a population of 102,979 according to the 2006 population census.

The main occupation of the people in the survey area are the concoction sellers and herb sellers. Semi structured questionnaire were distributed to thirty respondents in the study area. The selection of the respondents was based on their social status, names, genders, age, Occupation. The

questions were asked on type of medicinal plants of use, part(s) of plants used and side effects.

Results and Discussion

Table 1: Occupation of the respondent.

	Frequency	Percent	Valid Percent	Cumulative Percent
Concoction seller	15	50.0	50.0	50.0
Valid herbal seller	15	50.0	50.0	50.0
Total	30	100.0	100.0	100.0

Table 2: Medicinal Plant Used and Their Local Name

S/N	Plant name	Local name
1	<i>Moringa oleifera</i>	Moringa
2	<i>Azadirachta indica</i>	Dongoyaro (neem)
3	<i>Oriza sativa</i>	Rice
4	<i>Sesamum indicum</i>	Ellu
5	<i>Carica papaya</i>	Pawpaw
6	<i>Sesamini indicum</i>	Morogbo
7	<i>Sorghum bicolor</i>	Poroporo
8	<i>Ocimum gratissimum</i>	Efinrin
9	<i>Vernonia spp</i>	Ewuro (Anbere)
10	<i>Lactuca virosa</i>	Iyalode leaves
11	<i>Fragrance</i>	Paragon
12	<i>Aloe vera</i>	Iti erin
13	<i>Terminalia chebula</i>	Egbo fruit

Table 3: Botanical Names, Local Names and Family Names

S/N	Plant name	Local name	Family names
1	<i>Moringa oleifera</i>	Moringa	Moringaceae
2	<i>Azadirachta indica</i>	Dongoyaro (neem)	Meliaceae
3	<i>Oriza sativa</i>	Rice	Poaceae
4	<i>Sesamum indicum</i>	Ellu	Pedaliaceae
5	<i>Carica papaya</i>	Pawpaw	Caricaceae
6	<i>Sesamini indicum</i>	Morogbo	Pedaliaceae
7	<i>Sorghum bicolor</i>	Poroporo	Poaceae
8	<i>Ocimum gratissimum</i>	Efinrin	Lamiaceae
9	<i>Vernonia spp</i>	Ewuro (Anbere)	Asteraceae
10	<i>Lactuca virosa</i>	Iyalode leaves	Asteraceae
11	<i>Fragrance</i>	Paragon	Asparagaceae
12	<i>Aloe vera</i>	Iti erin	Asphodelaceae
13	<i>Terminalia chebula</i>	Egbo fruit	Combretaceae

Table 4: Variable, Frequency and Percentage.

Variables	Frequency	Percentages (%)
Time of the day for the collection of these medicinal herbs:		
a) Morning	28	98.3
b) Afternoon	-	-
c) Evening	2	6.7
d) Night	2	-
What is the rate of the availability of the medicinal plants?		
a) Mostly common	24	80
b) Scarcely common	2	6.7
c) Rarely common	4	13.3
What are the features used in distinguishing each of these medical plants?		
a) Odour/aroma	8	26.7
b) Shape of the leaf	6	20
c) Texture/structure	16	53.3
Time to use the concoction:		
a) Before meal	23	76.7
b) After meal	7	23.3
Is there any side effect attach to the use of herbal plants:		
a) Yes	3	10

b) No	27	90
Marital status		
a) Single	7	23.3
b) Married	23	76.7

Result

This study examines ethno-medicinal survey of herbal plant used in the treatment of menstrual pain in Ibarapa Area of Oyo State, Nigeria. The study was done using a primary data that was collected from 30 concoction and herbal sellers randomly selected through a cluster sampling procedure. The result revealed a modern age group of (31-35) years. Gender analysis showed that 100% of sellers were females. Also, result showed that both *Carica papaya* and *Sesamum indicum* are most (16.7%) effective herb considered for treatment of menstrual pain, also *Moringa oleifera* leaf (13.3%) is effective in the treating of menstrual pain. Aloe vera, *Azadirachta indica*, *Oryza sativa* (rice) are 10% effective in reducing menstrual pain and others 6.7% and 3.3% effectively.

The time of the day for the collection of these medicinal herbs are mostly in the morning (93.3%) and few in the evening (6.7%).

Result also shows that most (53.3%) texture and structure are features used in distinguishing each of these medicinal plants and 26.7% odour can be used on distinguishing each of the medicinal plants while few (20%) are identified by the shape of the leaf.

The rate of availability of the medicinal plants are mostly (80%) common and rarely (13.3%) common and scarcely (6.7%) common.

Also, result shows that the time to use concoction is mostly 76.7% before meal and after meal 23.3%, in addition the result shows that there is no side effect in the usage of herbal plants in the treatment of menstrual pain.

Conclusion

Botanical plants *Carica papaya* and *Sesamum indicum* were the most effective with a percentage occurrence of (16.7%). Both plants have been traditionally used over the years by different herbal sellers in the study area. The leaf of *Carica papaya* was known to be one of the most effective among those selective herbal plants in the treatment of menstrual disorder in accordance to (Olive-Bever 1986) [4] who revealed that *Carica papaya* are known to contain carpaine and alkaloid and also inhibit mycobacterium tuberculosis.

According to Vanisha and Hema (2012) [7] *Sesamum indicum* was also used in treating health problems such as digestive and nervous disorder, easy in delivery, fever and joint pain. Because of its effectiveness, it can also be used in treating chest pain (Ashidi *et al.*, 2005) [2].

However, it is important to use part of those listed plants to enhance the growth and health care of human. Thus, this result could be used in drug development, for treating and preventing diseases.

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