

Documentation on traditional medicine used for Menstrual Disorders among The Poumai-Naga Women in Senapati District, Manipur

Research Article

Jastone KP^{1*}, Moses M Naga²

1. Research Scholar, 2. Professor. Department of Library & Information Science, North Eastern Hill University, Shillong-22, India.

Abstract

Menstruation is a natural and biological phenomenon in women of reproductive age. It is often associated with certain disorders. Millions of women across the globe are challenged with social stigmas and taboos related to menstruation. This paper aims to assess and compare the menstrual health information between rural and urban areas and explore the herbal medicine used by the Poumai-Naga community to combat menstrual disorders. Respondents included 5 traditional medicine practitioners and 230 women. An interview and survey questionnaire were employed to meet the objectives. After cross checking from literature published in menstrual disorders from different states of India and abroad, nine medicinal plants were noted to be extensively used by the people. *Rhododendron arboreum* Sm. was not found to be reported in any of the literature to treat menstrual disorders. Results also showed that women heavily rely on and prefer traditional medicine and home remedies over modern medicine. Though Traditional Herbal Medicine is used globally, it may come with undocumented risks. And therefore, it is recommended to test and validate every potential herb passing through the proper channel for proper and safe use.

Keywords: Documentation, Dysmenorrhea, Information seeking behaviour, Menstrual disorders, Poumai-Naga, Rural and Urban, Traditional medicine.

Introduction

Menstruation is the most important aspect of women's reproductive cycle. It is a sign of sexual maturation. Adolescent girls first enter this stage at the age ranging from 11-14 years. This first menstruation, called menarche, continues until menopause at about the age of 51. It is a process when the lining of the uterus or the womb sheds itself which is partly blood and partly tissue through the vagina. The normal bleeding period usually lasts from 3-5 days. Lower abdominal or pelvic and back pain, bloating, sore breasts, food cravings, mood swings and irritability, headache, fatigue and acne are some common symptoms developed during menstruation periods. Depending on health, a girl may experience one or multiple symptoms or none. The menstrual cycle usually occurs once every 4-5 weeks, but it may take less or more time than usual for sometimes. In simplest terms, menstruation results from hormonal changes in a woman's body preparing for pregnancy.

In many societies across the globe and especially in India, menstruation is considered an impurity in women and therefore bound to religious, social and

cultural taboos, though it is of a natural and biological phenomenon. It is often associated with issues or problems which adversely affect the quality of life in women of reproductive age. Menstrual disorders include- Menorrhagia, a condition with abnormally heavy and prolonged bleeding at regular intervals; Oligomenorrhea or irregular periods. One reason could be thyroid disorder and, if not treated, Amenorrhea or abnormal stoppage of menstruation, could also be a sign of menopause in older women; Hypomenorrhoea or scanty periods. Dysmenorrhea is a condition with extremely painful periods involving muscle cramps. It is normal to have white or yellow sticky discharge from the vagina or uterine cavity called leucorrhoea. However, excessive discharge may indicate abnormal condition, often containing pus and is a serious indication of infection. Itching and foul smell are other two problems which occur during and after menstruation. It might be the result of bacterial or fungal infection in the vagina or the cervix. Proper care and awareness of hygiene are suggested for healthy reproductive life. Due to the social stigma, the problems are also often left behind only for the women to deal, thus, information seeking behaviour in this regard is limited and mostly revolves among the women. It was encouraged to promote traditional therapies in countries where access to modern health care facilities is limited and for diseases like menstrual disorders where traditional therapies are more culturally appropriate (1).

Rural societies still heavily rely on traditional medicine (TM). According to WHO, approximately 65% of the world population incorporates plants as a

* Corresponding Author:

Jastone KP

Research Scholar

Department of Library & Information Science

North Eastern Hill University,

Shillong-22, India.

Email Id: poumajastone@gmail.com

primary source of medicine and health care, where ethno-medical information plays a key role (2). All societies use TM, and it is common to all cultures. It is the therapeutic experiences of generations of practicing physicians of the indigenous medicine system for over hundreds of years. Even today the importance of TM is very much relevant as it has laid the basis for the development and discoveries of numerous drug formulations. And that in recent years researchers alongside pharmaceutical companies are taking keen interest in traditional knowledge on medicine from across the globe which is fast fading away due to lack of proper documentation. Documentation here refers to the act of recording and compiling information as a result of an investigation, inquiry, research or similar activities. It is a meaning that emphasises on the production of documents containing the facts of the case.

Literature Review

India has a rich biodiversity that is home to many indigenous societies contributing a wealth of information regarding traditional knowledge on herbal medicine to the system of knowledge. Yadav, Kumar and Siwach surveyed by interacting with the herbal practitioners and knowledgeable women from eight districts of Haryana and documented 17 plant species for combating menstrual disorders (3). Kerala reported 19 plant species for treating menorrhagia, 26 plants for treating dysmenorrhea, 25 plants for oligomenorrhea, 5 plants for hypomenorrhoea, 4 plant species for amenorrhea and also listed 18 plant species as dietary supplements during the menstrual cycle (4). Similarly, in Jammu and Kashmir, 50 plant species were used by the locals to treat menstrual disorders (5). A study on medicinal plants used for gynaecological disorders in Vedaranyamtaluk, documented 66 plants for treating 36 different ailments related to gynaecological disorders (6).

With the growing popularity of traditional herbal medicines, researchers around the globe have performed several studies to test the effectiveness and safety of herbal medicine used to treat menstrual disorders. In South Africa, 16 plant species were found to be recorded for the first time in literature to treat gynaecological related problems. The three most common conditions were dysmenorrhea, infertility and menorrhagia (7). Mirabia et al., performed an extensive literature review on Iranian herbal medicine and commented as a suitable replacement for treating menstrual pain (8). Also, to determine the impact of Chinese herbal medicine in patients with primary dysmenorrhea, a systematic review and meta-analysis of published evidences were conducted by Xu et al. (9). Similar kind of work was performed by Xu, Yang and Wang, confirming that cinnamon, fennel and ginger was effectively used for treating primary dysmenorrhea (10).

According to a study, it was found that 21%-26% of women across the United States, United Kingdom and France sought treatment from medical professionals and symptom severity appeared to be an important factor in information seeking behaviour (11).

According to Chan et al., and Esimai & Omoyini Esan, only 6.4% of the Chinese school girls in Hong Kong and about 10.5% of college students in the Urban area of Ile-Ife, Osun State, Nigeria, sought medical help respectively (12,13). In India, under rural settings of Jaipur, Rajasthan, a study found that 77.7% of girls turned to their friends, 15.5% to sisters and other young female relatives while only 6.6% discussed the matter with their mothers with regard to menstrual disorders (14). Similarly, in the urban slums of Bangalore, 30% visited health care for queries related to menstrual disorders. 66% followed home remedies and 22% consulted traditional healers (15). It was also learnt that treatment strategies were unsupervised by professional health practitioners, meaning mostly self-prescribed (16) or sourced from families and friends (14). It is evident from the literature that majority of the women do not seek medical professional advices and rather keep it to themselves. Some reasons for not visiting health care included distance and expenses, embarrassment in openly discussion and physical examination, gender of doctors and not the least, the socio-cultural practices associated etc. (5,7,12,14,16).

This gap between menstrual disorders and social stigma could be solved by spreading education and awareness on the importance of menstruation and its hygiene to the society. Many plants and herbs are used in TM to effectively treat menstrual disorders and that it could once again be a good replacement for modern medicine provided the medicinal plants and herbs are scientifically tested and validated. However, it is also known that TM and its practices is slowly getting lost, or the knowledge is tempered in the process of translation because it lacks proper documentation and passed on to progeny through oral tradition only. Studies carried out in the past also revealed that the interest from TM has shifted to modern medicine because the flow of income is more stable and respected in the present generation, (5) and that some traditional practitioners deliberately do not share their knowledge because they presume that the children are learning while they are preparing the medicine in their presence (7), while some other practitioners keep the knowledge to themselves because of fear of misuse and bio-piracy besides the values it holds on account of their means of livelihood etc. and that these are some reasons to mention the lack of documentation on traditional knowledge especially with regard to TM. Today, like any other indigenous societies, the traditional knowledge on herbal medicine among the Poumai-Naga is deeply rooted culturally and widely accepted socially, coexisting together with modern medicine to meet the medical needs of the people. Many studies have been carried out in the past on TM to combat menstrual disorders in India but no particular study was carried out on the traditional herbal medicine and its applications on various illnesses by the Poumai-Nagas.

Objective of the Study

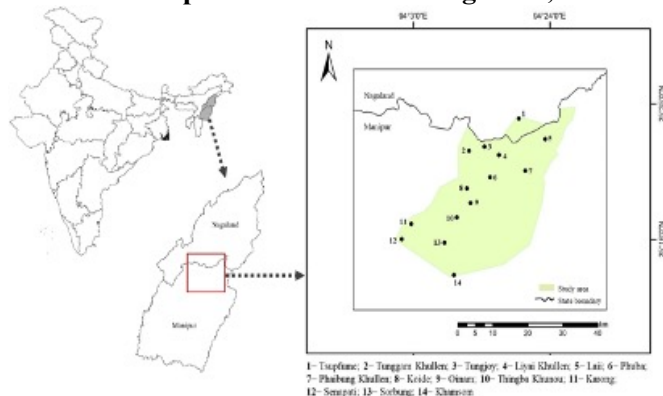
1. To study the information seeking behaviour of Poumai-Naga women with regard to menstrual disorders in the region

- To compile medicinal plants used for the treatment of menstrual disorders among the women of Poumai-Nagas

Research site

The Poumai-Naga is one of the major and oldest Naga tribes in the history of the Naga civilisation that spreads across 94 villages in Senapati district, Manipur and in Phek District of Nagaland in Northeast India. According to the 2011 census, the total population of the Poumai-Nagas stand at 179178 in Manipur and 10000 in Nagaland (17). The people are known for their hospitality and humble nature apart from their fine craftsmanship be it in pottery, cane and bamboo products and also in handlooms. The homeland covers an area of about 1,200 sq. km, which is divided into four circles for smooth administrative functioning- Paomata, Chilvai, Lepaona in Senapati District of Manipur and villages falling under Phek District of Nagaland are collectively known as Razeba range. The Poumai homeland share borders with the Chakhesang of Phek district in Nagaland to the north, the Thangal villages of Saikul Sub-division of Senapati District in the south, Tangkhul villages of Ukhrul District in the east and Mao-Maram Sub-division of Senapati District in the west. The Poumai Naga tribe was given separate recognition as a Scheduled Tribe by an Act of the Parliament of India which received the assent of the President of India on the 7th of January 2003 (The Gazette of India, 2003). Till that time, the Poumai Naga were clubbed together with the Mao Naga tribe as is seen in the list of Scheduled Tribes of Manipur in Part X of the Constitution of India.

Fig. 1 Map showing the study area from Senapati Dist. Manipur and Phek Dist. Nagaland, India



Methodology and Data Collection

Key informants included 230 adult women and 05 traditional healers and herbal practitioners in Senapati district headquarter, Manipur. One-on-One interactive communication processes and field observation were adopted to collect the required data. This survey was carried out from October, 2022 to January, 2023. The objective of the work was let known to the informants while interacting with them. During the interview process, the practitioners were asked to describe the plants, parts used, method of preparation and mode of application followed by field observation to collect the specimen for herbarium. The plants specimen collected from the field were identified with the help of Taxonomists, Department of Botany, North Eastern Hill University and the botanical name of the collected plant specimen were verified from Plants of the World Online (POWO). Plants of the World Online was launched in March 2017, is an online database published by the Royal Botanic Gardens, Kew (Plants of the World Online | Kew Science). To validate the use of medicinal plants for menstrual disorders, thorough literature review published from other states of India was conducted.

Ethical Consideration

During the entire data collection trip, informed consent was obtained stating that the informants participated in full consciousness and awareness and that no force was implemented upon them. The participants were guaranteed anonymity if required. Further ensuring that the survey was solely for academic purposes only. Also, no animals or individuals were harmed or abused during the whole process.

Data Analysis and Interpretation

In the quest to find a pattern of information-seeking behaviour on menstrual disorders, it was revealed that in the olden days, isolating menstruating women from the house was once practiced. They were restricted from social gatherings and even at home they were served to eat separately. This practice is however no longer prevailing in society but women do not discuss the matter openly. During data collection, 80 women were identified to be from the rural villages who had come to district headquarters (Senapati town) for personal works and 150 women were identified to be resided in the town. Using SPSS software, the following comparative data between rural and urban women was represented in descriptive simple frequencies.

Table 1: Comparative chart of menstrual health information seeking behaviour between rural and urban women of Poumai-Naga tribe

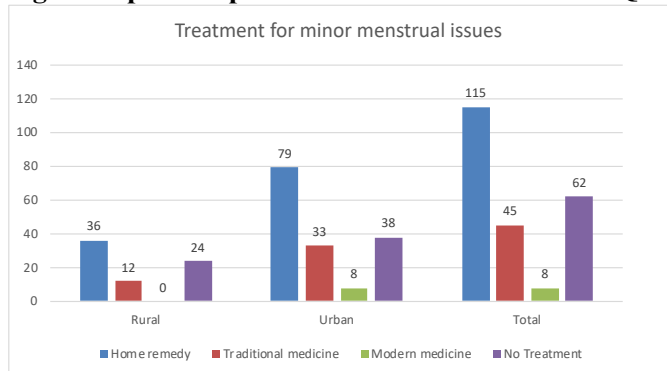
	Rural	Urban	Total
No. of Respondents	80	150	230
1. Awareness about Menstruation before attaining menarche			
Yes, aware.	42 (52.00%)	108 (72.00%)	150 (62.00%)
No	38 (48.00%)	42 (28.00%)	80 38.00%
2. Comparative Usage of Sanitary Pads			
Cloth only	23 (28.75%)	0	23 (10.00%)
Modern Pads Only	10 (12.50%)	68 (45.33%)	78 (33.91%)

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Both	47 (58.75%)	82 (54.66%)	129 (56.08%)
3. Treatment for minor issues like mild menstrual cramps or mood swings etc.?			
Home remedy	36 (45.00%)	79 (52.66%)	115 (50.00%)
Traditional medicine	12 (15.00%)	33 (22.00%)	45 (19.56%)
Modern medicine	0	08 (05.33%)	08 (03.47%)
No Treatment	24 (30.00%)	38 (25.33%)	62 (26.96%)
4. Did you suffer from any menstrual disorders that needed medical attention?			
Yes	32 (40.00%)	83 (55.33%)	115 (50.00%)
No	48 (60.00%)	67 (44.66%)	115 (50.00%)
5. Different Menstrual disorders suffered by 115 women			
Dysmenorrhea	09 (28.13%)	17 (20.05%)	26 (22.60%)
Irregular/Scanty	16 (50.00%)	40 (48.19%)	56 (48.70%)
Excessive Bleeding	07 (21.86%)	26 (31.33%)	33 28.70%)
6. Source of information for treatment of menstrual disorders?			
Family and Friends	19 (59.37%)	27 (32.53%)	46 (40.00%)
Medical Professionals	03 (09.37%)	20 (24.10%)	23 (20.00%)
Traditional Health	04 (12.50%)	11 (13.25%)	15 (13.04%)
Pharmacist	0	11 (13.25%)	11 (09.57%)
Books and internet sources	06 (18.75%)	14 (16.86%)	20 (17.40%)

The data showed that 62% were already aware of menstruation even before attaining menarche from family and friends. Majority of the women in rural settings use both modern sanitary measures and cotton cloth during menstruation, but 28.75% use only cotton cloth because of poverty, non-availability of sanitary pads, more accustomed to using cloth, etc. However, in urban area, the use of modern sanitary pads is 45.33% and 54.66% used both cloth and proper sanitary pads.

Fig 2. Graphical representation of data from table 1 Q3.

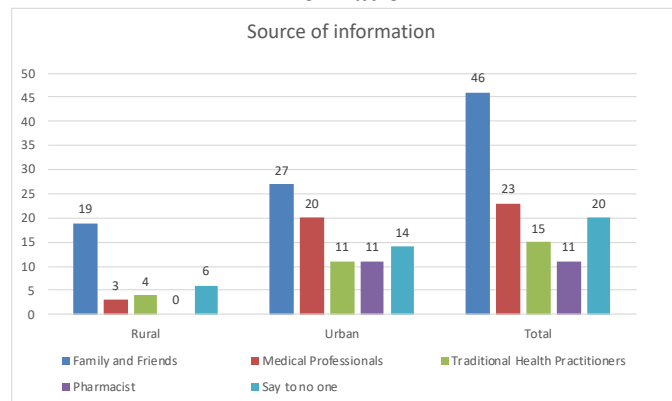


Menstrual cramps, body aches, food cravings, mood swings, etc. are some common physical and mental issues known as Premenstrual Syndrome (PMS) that occur just prior to or during menstruation. Most women go through PMS but are however considered normal during menstruation due to certain hormonal changes in the body which may last for about a week depending on one's health condition. Light physical exercises, a healthy diet, hot water therapy, herbal tea/soup, etc. are some means that is helpful to control PMS. The result from the survey also showed that half of the women turned to home remedies and physical exercises to battle symptoms of PMS. Whereas 19.56% chose TM which may include traditional herbal tea or soup, 08% opted for modern medicine for fast relief because of their personal lifestyle and busy schedule.

However, there are women in the group accounting to 28.70% that preferred not to disturb the naturally occurring and normal phenomena unless medical attention became necessary.

The data on menstrual disorder showed that 50% of the women had normal menstruation cycle, whereas 11.30% claimed to have experienced dysmenorrhea or extremely painful menstruation in early stages; 24.34% reported irregular or scanty periods and 14.34% had excessive bleeding that needed medical attention. These women were also asked about sources of information that help them follow directions and treat abnormal menstruation. Accordingly, a comparative analysis between the rural and urban women was compiled. Lastly, books and the Internet were accounted for 17.40%.

Fig 3. Graphical representation of source of information



The result revealed that the majority of the women who underwent treatment for abnormal menstruation, consulted their families and friends first to seek help altogether summing up to 40%, followed by medical professionals who constituted 20%. Traditional health practitioners formed 13.04% as the source of information. The pharmacists also contributed their role in providing information to the patients but only to the urban women probably because there is no

proper pharmacy or qualified pharmacists available in remote rural areas. Lastly, books and Internet were accounted for 17.40%.

The study also focused on compilation of medicinal herbs used to treat menstrual disorders or

abnormal menstruation. After investigation and field observation the following medicinal plant species along with their uses have been listed below.

Table 2: Traditionally used medicinal plants and their applications for menstrual disorders practiced by Poumai-Nagas

Sl. no	Vernacular Name	Common Name	Botanical Name	Family	Part(s) Used	Medicinal Use(s)	Method of Preparation and Application
1	<i>Daipah</i>	Rhododendron	<i>Rhododendron arboreum</i> Sm.	<i>Ericaceae</i>	Leaf and flower	Oligo-menorrhea	Fresh flowers or leaves are added to boiling water for 5-10 minutes. Sweetening agents like sugar/honey/jaggery may be added to the infusion prepared. This infused tea helps in treating irregular periods. Orally ingested
2	<i>Dupouhou</i>	Commonly known as malabar nut; and vasaka/ adusa in hindi	<i>Justicia adhatoda</i> L.	<i>Acanthaceae</i>	Leaf and flower	Amenorrhoea, menorrhagia, leucorrhoea, dysmenorrhoea	To treat the mentioned conditions of menstrual related problems, fresh flowers or leaves or both are used to make infused tea. This prepared tea promotes and regulates the monthly menstrual cycle besides helping in cramps and monitoring abnormal white discharge. Orally ingested Not advised for expecting women.
3	<i>Haihbe</i>	Commonly known as castor oil plant	<i>Ricinus communis</i> L.	<i>Euphorbiaceae</i>	Leaf and seed	Dysmenorrhoea	1) A bunch of fresh leaves are soaked in boiled water for about 5 minutes. With a piece of cotton cloth, the back and the waist are given hot water bath to ease the cramp. 2) Oil is extracted from the seed by a heating process. The filtered oil is used to gently massage wherever pain or discomfort in muscles causing cramps. For external use only.
4	<i>Houshi</i>	Commonly known as gooseberry; and amla in hindi	<i>Phyllanthus emblica</i> L.	<i>Phyllanthaceae</i>	Fruit	Dysmenorrhoea and leucorrhoea	The fruits are boiled in water with sugar or jaggery for about an hour. The result is thick syrup like honey. 3-4 teaspoons of the syrup is mixed with lukewarm water and drunk. The syrup helps in relaxing the muscles and is used by those who encounter painful menstrual cycle regularly as it prompts and regulates the cycle. Orally ingested

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5	<i>Naipiah</i>	Commonly known as turmeric; and haldi in hindi	<i>Curcuma longa</i> L.	<i>Zingiberaceae</i>	Rhizome	Fungal and bacterial infections	Abnormal menstrual cycle may develop itching sensation in the vagina caused by bacteria and may be accompanied by foul smell. The rhizome is ground to paste which is applied to the itching/irritated area or the paste is mixed in warm water and then gently washed. External use only
6	<i>Stabon</i>	Known as Passion fruit (English), Bail (Hindi)	<i>Passiflora edulis</i> Sims	<i>Passifloraceae</i>	Leaf and flower	Dysmenorrhea	Herbal tea prepared from flowers, especially leaves is used to treat dysmenorrhea. They are known to have pain-killing effects. This tea is also used as a sedative to help you sleep better at night and help fight anxiety. Orally ingested
7	<i>Tahpa</i>	Known as Papaya (English) and Papita (Hindi)	<i>Carica papaya</i> L.	<i>Caricaceae</i>	Seeds	Oligomenorrhea	In case of irregular periods or late periods in women, half a spoon of the seed is crushed, and mixed with a little honey to regulate and induce the menstrual cycle. Orally ingested
8	<i>Rah Vouh</i>	Commonly known as ginger; and adrak in hindi	<i>Zingiber officinale</i> Roscoe	<i>Zingiberaceae</i>	Rhizome	Amenorrhea, Dysmenorrhea and regulation of menstrual flow	About 5-10 gm of ginger is smeared or simply sliced into small pieces and then added to boiling water. According to one's liking fresh lemon drops and honey/sugar may be added to make desirable tea. This lemon-ginger tea helps in relieving painful menstrual. It is also taken regularly by many women during their menstrual cycle. Orally ingested
9	<i>Champra</i>	Commonly known as lemon and nimbu in hindi	<i>Citrus limon</i> (L.) Osbeck	<i>Rutaceae</i>	Fruit		

Findings and Discussion

The result showed nine plant species that were extensively used by practitioners to treat menstrual disorders. The leaf and flower of *Rhododendron arboreum* Sm. is used to treat oligomenorrhea or irregular periods. The use of this plant species has not been reported to treat menstrual disorders; therefore further scientific research to validate the data should be carried out. *Justicia adhatoda* L. was described as "wonderful gift of nature to women" by a practitioner. It is used to treat amenorrhea, menorrhagia, dysmenorrhea and also leucorrhoea, making it most complete medicinal plant for menstrual disorders in the region. The use of this plant was crosschecked in literatures and found that in Haryana it is used to regulate menstrual cycle and to treat leucorrhoea (3), in Kerala it is used to treat menorrhagia (4) and in Siddha medicine it is used for amenorrhea (18). The use of *Ricinus communis* L. has been reported to treat dysmenorrhea (3,5) as is used by the Poumai-Naga community. In a study, the juice extracted from the leaves is consumed orally every

morning to regulate menstruation (6). *Phyllanthus emblica* L. is another plant that has been widely used and reported to treat dysmenorrhea and leucorrhoea. It was also reported in Haryana (3) to treat leucorrhoea and also in Kerala (4) to treat dysmenorrhea and hypomenorrhoea or scanty periods.

The use of *Curcuma longa* L. to combat foul smell and itching sensation was also reported in Rajasthan (5) as is used by the Poumai-Naga practitioners to fight fungal and bacterial infections which cause irritation and itching sensation in the vaginal area. It contains curcumin that shows anti-fungal, anti-viral, anti-inflammatory, anti-oxidant and anti-cancer properties. In Siddha medicine, it is administered as syrup to control excessive bleeding (18). Use of passion fruits flowers and leaves to treat painful cramps was also reported (19). Primary dysmenorrhea occurs because of the excessive amount of prostaglandins in the blood. Papaya leaf extract is considered to be able to reduce prostaglandin and menstrual pain (21) and the positive effects of the fruit

The images below are pictures showing plants used as medicine by the people to treat various menstrual

1) *Rhododendron arboreum*



2) *Justicia adhatoda*



3) *Ricinus communis*



4) *Phyllanthus emblica*



5) *Zingiber officinale*



6) *Passiflora edulis*



7) *Citrus limon*



8) *Curcuma longa*



9) *Carica papaya*



was tested for smooth menstruation (22). Last but not the least, the use of *Zingiber officinale* Roscoe and *Citrus limon* (L.) Osbeck together to make tea as a supplement to regulate the menstrual cycle is very a commonly used remedy in households of the region. Gingerol is a chemical compound in ginger that has anti-oxidant and anti-inflammatory properties which is helpful during cramps because it emits natural heat to act as instant pain relief. It is also used to combat menorrhagia or excessive bleeding (4,5).

It was revealed that both in rural and urban areas, the major health information source was from family and friends. And therefore, home based remedy and TM is used extensively by the women when compared to modern medicine. It was learnt that medication were mostly not consulted by health professionals which may be lethal in patients with health complications. Therefore, it is suggested that proper consultation with health professionals looking into one's health history of diseases or allergies should be taken into account before using any undocumented traditional or home-based

remedy. Women's health is an integral part of societal progress and well-being. In this regard, the Poumai-Naga women advocated for good public sanitation facilities everywhere possible and the abolition of social stigma and myths related to menstruation. Governments and NGOs should take measures to provide sanitary pads in schools, colleges, medical centres, etc. for emergency purposes; and also to make it more affordable. This will help women from embarrassment and traumas which could trigger mental and behavioural disorders.

Conclusion

The practice of TM was once a flourishing profession in the past, but with the advancement of science and technology and urbanisation, it has now diminished as a profession and left with very few practitioners. Some traditional knowledge of medicine has been documented while some lost with the passing generations. The findings of this paper suggest that efforts must be made to document and preserve traditional knowledge of medicine for the fact that many more possible remedies could be discovered just like it did multiple times in the past. However, there are researchers who advocate against and raise concerns over safety measures of using untested TM because very few plants have been examined for their pharmacological activities to combat against menstrual disorders. Here in this paper the use of *Rhododendron arboreum* Sm. to treat oligomenorrhea or irregular period was revealed but has not been reported in the literature so far and therefore scientific research on such plant is suggested to discuss toxicity-related issues and validate the safe use of plant in treating the same. Menstrual disorders though not life threatening, it does have adverse effects on the quality of life in women of reproductive age and it can harm the physical and mental balance of any adolescent girl. Therefore, it is suggested that awareness of following proper sanitary measures must be promoted in the region to alleviate healthy living.

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