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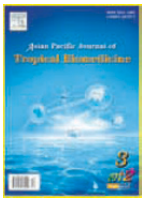

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Ethnobotanical study of antifertility medicinal plants used by the local people in Kathiyavadi village, Vellore District, Tamilnadu, India

K. Sathiyaraj[1], A. Sivaraj[1], T. Thirumalai[2], B. Senthilkumar[1*]

[1]*Department of Zoology, Thiruvalluvar University, Serkadu, Vellore-632 106. Tamilnadu, India.*
[2]*Post graduate and Research Department of Zoology, Physiology wing, Voorhees College, Vellore - 632001. Tamilnadu, India.*

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ABSTRACT

Objective: An ethnobotanical study was undertaken to collect information from local people about the use of contraceptive medicinal plants in Kathiyavadi Village. **Methods:** Kathiyavadi Village was surveyed through interviewing of randomly selected 321 participants using semi-structured questionnaire and regular field visits. **Results:** The investigations revealed that there are about 25 species of medicinal plants which were used by local peoples. **Conclusions:** The study revealed that the local peoples are using folklore medicinal plants for contraceptive purpose. This survey is mostly useful for rural area of local people.

1. Introduction

Over population is a global problem with grave implications for the future. Calls have increased for a wider availability of family planning facilities, and also for men to share in this responsibility. It is now generally accepted that currently available methods of fertility regulation are inadequate to meet the varied and changing personal needs of couples at different times in their reproductive lives, and in the widely different geographical, cultural and religious settings that exist around the world [1]. According to the World Health Organization (WHO) about 65-80% of the world's population in developing countries depends essentially on plants for their primary healthcare due to poverty and lack of access to modern medicine [2]. In recent years, use of ethnobotanical information in medicinal plant research has gained considerable attention in segments of the scientific community [3]. The use of medicinal plants and their products for regulation of fertility in India and other countries is still continuing [4]. Until recently, plants were important sources for the discovery of novel pharmacologically active compounds, with many blockbuster drugs being derived directly or indirectly from plants [5, 6]. However, the benefits of modern drugs are felt primarily in developed countries, leaving almost 75% of the world population without access to the modern health care products. Thus developing countries continue to rely on ethnobotanical remedies as their primary medicines [7]. Traditional medicine played a crucial role in combating multiple and complex conditions affecting Africans. Because of its popularity, accessibility and affordability, more than 80% of the people in the region continued to rely on it for their health care needs [8]. Introduction of modern medicine alone does not adequately provide for the comprehensive or integral health care needs of developing countries. Consequently in many communities the practice of simultaneous use of traditional and western medicine continues. Indeed it is always been difficult to reach poor people with development aid, particularly in health care where most resources benefit the middle classes in urban hospitals. Thus traditional medicine is often the only affordable and accessible form of health care [9]. A survey of pharmacopoeias of developed and developing countries was done to determine whether ethnobotanical information did indeed lead to useful drug discovery. The survey

*Corresponding author: Dr. B.Senthilkumar.Professor, Head of the Department of ZoologyThiruvalluvar UniversitySerkadu Vellore-632106(T.N.) India.
Tel.: +91-416 2263430; +91- 9442376855;
E-mail: senthil_cahc@yahoo.co.in

showed that from 122 compounds identified in the study, 80% of the compounds were used for the same (or related) ethnobotanical purposes. Information based on long-term use of plants by humans (ethnomedicine) likely helps to isolate safer active compounds from plants than isolating active compounds from plants with no history of human use [7]. Thus instead of relying on trial and error, as in random screening procedures, traditional knowledge helps scientists to target plants that may be medicinally useful. The present work was carried out to explore the medical remedies of some medicinal plants used by the rural people of Kathiyavadi Village in Vellore districts for contraceptive purpose.

2. Materials and methods

Frequent field tours were conducted throughout the year January 2011 to October 2011 to the area described above. Accordingly, the survey was taken for contraceptive purpose. Kathiyavadi is a Village in Arcot Taluk in Vellore District in Tamil Nadu State in India. Kathiyavadi is 20.8 km away from its District Main City Vellore. And 102 km away from its State Main City Chennai. The entire area of Kathiyavadi village lies between 12°88′ north latitudes and 79° 27′ East latitudes in Tamilnadu state. The village is spread over an area of about 705 km2. Very famous traditional healers and other versatility people of each area were interviewed to document detailed information on local names, folklore plants, Plants parts used and all other kinds of details offered by the informants. All collections were made by the first author who can speak the local language and was also familiar with some of the folklore medicinal plants used by the local people of the region. The collected plants were identified correctly with the help of Pokharkar et al., [10]. These plant species were verified by Dr.Annaduari Former Head of the Department of Botany, C.Abdul Hakeem College, Melvisharam, Vellore Dt., Tamilnadu. The photographs of

Table 1
Medicinal plants used for the contraceptive purpose.

Scientific name	Family	Local name	Parts used	Mode of action
Andrographis paniculata	*Acanthaceae*	Nilavembu	Leaves	Leaf is used for contraceptive purpose.
Azadirachta indica	*Meliaceae*	Veempu	Leaves	Leaf is used as a contraceptive.
Aegle marmelos	*Rutaceae*	Vilvam	Leaves	The boiled leaves is eaten to contraceptive purpose.
Aristolochia bracteolate	*Aristolochiaceae*	Aaduthinapalai	Leaves	A leaf extract is given for antifertiltiy effects
Achyranthes aspera	*Amaranthaceae*	Nayuruvi	Whole	Plant Decoction of the whole plant is taken internally.
Bambusa vulgaris	*Poaceae*	Mughil	Leaves	Leaves extract is taken orally to reduced sperm count.
Cissampelos pareira	*Menispermaceae*	Appatta	Leaves	Juice of tender leaves is taken orally
Crotalaria juncea	*Fabaceae*	Sanapai	Flowers	The flowers are boiled in water and filtered. The extract is taken orally.
Cassia auriculata	*Caesalpinaceae*	Avaram	Flowers	Flowers are crushed and mixed with water and taken orally.
Calotropis gigantea,	*Asclepidaceae*	Erukku	Root	Decoction of roots is taken internally
Carica papaya	*Caricaceae*	Pappaali	Leaves	Leaf juice is used for contraceptive purpose.
Curcuma longa	*Zingiberaceae*	Kasturimanja	Rhizome	Decoction taken by mouth before sexual intercourse
Eugenia jambolana	*Myrtaceae*	Naval	Flower	Flower that can be used to reduced sperm count.
Euphorbia hirta	*Euphorbiaceae*	Amman pacharisi	Leaves	Leaf is crushed and mixed with hot water
Hyptis suaveolens	*Lamiaceae*	Tulsi	Leaves	Decoction of leaf is taken orally.
Hibiscus rosa-sinensis	*Malvaceae*	Sembaruthi	Root	Root are crushed and taken orally.
Lantana camara	*Verbenaceae*	Unni chedi	Leaves	Decoction is used orally.
Momordica charantia	*Cucurbitaceae*	Pavakai	Seed	The powder is mixed with water and the mixture is orally taken
Mimosa pudica	*Mimosaceae*	Thottasurungi	Root	The decoctions of roots are used for the Contraceptive purpose.
Melia azedarach	*Meliaceae*	Malaivembu	Bark	Bark is used for contraceptive purpose
Morus alba	*Moraceae*	Kambli chedi	Leaves	Leaf juice is taken orally
Nerium oleander	*Apocynaceae*	Arali	Leaves	The powder is mixed with water and orally taken
Prosopis cinearia	*Mimosaceae*	Vannimaram	Leaves	Leaf juice is taken orally in morning.
Phyllanthus amarus	*Euphorbiaceae*	Nelli	Leaves	Leaf juice is taken orally.
Solanum surattense	*Solanaceae*	Kadakathiri	Seed	Seed soaked in water and used to reduced sperm count