

Brazilian Journal
of Pharmacognosy

REVISTA BRASILEIRA DE FARMACOGNOSIA

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Original Article

Traditional phytomedicines for gynecological problems used by tribal communities of Mohmand Agency near the Pak-Afghan border area

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ARTICLE INFO

Article history:

Received 28 November 2017

Accepted 14 May 2018

Available online xxx

Keywords:

Ethnomedicines

Menstrual problems

Use value

Factor of Informant Consensus

Pharmaceuticals

ABSTRACT

Medicinal plants play a vital role in the human health care system of tribal communities and in the treatment of various gynecological problems. This study is an effort to document important medicinal flora used for the treatment of gynecological problems by indigenous people living in a tribal region near the Pak-Afghan border. The main objective of the study was to establish a clear profile of indigenous knowledge and practices from the unexplored tribal territory. Data were collected through semi-structured interviews and group discussions. The data were analyzed through Use Value and Factor of Informant Consensus. A total of 52 medicinal plants were recorded from the area; the most widely accepted were *Withania somnifera* (L.) Dunal (94 Use Value), *Foeniculum vulgare* Mill. (93 Use Value), *Prunus domestica* L. (91 Use Value), *Myrtus communis* L. (91 Use Value), *Cannabis sativa* L. (91 Use Value) and *Nigella sativa* L. (90 Use Value). A high consensus factor was recorded for menses-related problems (0.95). The root was the main part used (23% plants), followed by the leaves (20% plants), whole plant (18% plants), fruit (18% plants), and seed (13% plants). A total of 21 plants were used to treat menses-related problems, followed by sexual problems (ten plants), leucorrhea (nine plants), gastric problems (seven plants) and amenorrhea (seven plants). Knowledge related to ethnogynecological treatments is restricted to midwives and traditional healers. In conclusion, the documented flora that is particularly important to medicinal plants may be researched in the future to discover new pharmaceutical, nutraceutical and other pharmacological agents against gynecological complaints.

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Introduction

Ethnogynecology is a traditional approach that addresses women's health care problems. A number of medicinal plants are being used to cure women problems related to menses, abortion, menopause, gonorrhoea, leucorrhoea, delivery complaints and infertility. It has been reported that sexual and other reproductive health issues account for 18% of the total global disease load (Kaingu et al., 2011). Today, in modern societies, gynecological problems are usually treated with allopathic medicines, surgery, and non-steroidal

anti-inflammatory drugs, which pose risks to the fetus at the gestation stage or the entire pregnancy period (Lawal et al., 2013). Menstrual disorders are generally not perceived as major health concerns by global health organizations. These ailments require effective, safe medications because they can disrupt women's daily activities. Due to limited access to analgesics and sanitary facilities, women in various localities across the globe (Latin America, Africa or Asia) prefer traditional medicines (van Andel et al., 2014).

The rural women of Pakistan frequently experience gynecological problems due to poor living standards, famine, and extensive physical work even during pregnancy. The country has a diversity of six thousand flowering plants, of which six hundred are used for medicinal purposes (Nasir and Ali, 1971–1991). A local health practitioner known as “Daiya” possesses tremendous traditional

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<https://doi.org/10.1016/j.bjp.2018.05.003>

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Please cite this article in press as: Aziz, M.A., et al. Traditional phytomedicines for gynecological problems used by tribal communities of Mohmand Agency near the Pak-Afghan border area. Revista Brasileira de Farmacognosia (2017), <https://doi.org/10.1016/j.bjp.2018.05.003>

knowledge to treat women problems. The “Daiya” primarily utilize medicinal plants and plant-derived medicinal products to treat the ailments (Tareen et al., 2010). A traditional lifestyle and lack of proper access to modern health facilities motivate rural women to consult nearby midwives and traditional healers (Qureshi et al., 2009). There is very little literature regarding ethnomedicinal uses by rural women for the treatment of gynecological disorders. Moreover, due to the introduction of allopathy and recent modernization, knowledge is decreasing rapidly because the younger generation is not taking an interest in learning these valuable practices and healing techniques. Hence, ethnogynecological knowledge may become extinct if not properly documented.

The current study was performed in Mohmand Agency, Federally Administrated Tribal Areas (FATA), Pakistan. The region is dominated by the Pashtun tribe, with low economic status, poor infrastructure and a lack of modern facilities (Murad et al., 2013; Adnan et al., 2014a). Many women in the area seek treatment from traditional healers for a variety of complications associated with the female reproductive organs. Such knowledge has not been documented previously from the study region. Hence, the present study was designed to document the ethnogynecological uses of medicinal plants and highlight candidate plants for further pharmacological investigations. The present research will provide baseline information for future research studies regarding phytochemistry, pharmacology, and the conservation of the plants used by the indigenous communities.

Material and methods

Study area

The Mohmand Agency is a part of FATA and is located near the Pak-Afghan border region (Fig. 1). The area is comprised of rugged mountains with barren slopes and extends along the Kabul river bank. The Agency shares its borders with Afghanistan (North-west), Khyber Pakhtunkhwa province (East), the Khyber Agency (North) and the Bajaur Agency (South). The area is populated by the Pashtun tribe, and due to their tribal nature, the economy is primarily pastoral and agrarian. The total irrigated land is approximately 1000 km². FATA consists of a single university, which was recently established the requirements of the entire region. In the study area, there is one available bed in the hospital per 2179 persons, compared to one bed per 1341 persons in the settled areas of the country. A great proportion of the population is partially

devoid of modern health facilities; however, a number of herbal practitioners known as “hakims” are located in the territory.

Data collection

An ethno-gynecological survey was performed between June and October 2016. During this time, the identification of plant species is easy due to flowering. Regular field visits were conducted in June to target the informants, while ethnobotanical data were gathered in the other four months. Fieldwork was performed using a Participatory Rural Approach (PRA). PRA is considered an effective, popular approach in botanical studies. In the approach developed by Chambers (1992), the indigenous population actively participates and describes the methodologies and patterns of their interaction with environmental and natural resources. The collection of indigenous knowledge and the survey were based on direct interactions with local respondents in the study area (Mahmood et al., 2013). Under PRA, information was gathered through semi-structured interviews, meetings and group discussions. Informants were selected through a snowball technique. Seventy-five key informants (50 males and 25 females, including house wives, midwives and traditional healers) were selected and belonged to different age groups (Table 1). Informants were selected based on their good reputation in the field of traditional medicine. Interviews were conducted in the local language, “Pashto”. Mr. Amir Hasan Khan was the local resident of the study area familiar with the native dialect of the Pashto language.

Prior to interviews, the main theme of the study was presented to each informant. Mr. Amir Hasan Khan stayed with the informants to document ethnogynecological medicinal practices. The ethnogynecological data were documented, including plant botanical name, local name, family name, part used, mode of preparation and drug administration method (e.g., juice, paste, decoction, powder). Through semi-structured interviews, information about gender, age, profession background and knowledge of the herbal recipes for gynecological problems were recorded. The initial documented results were recorded for each respondent for the possible feedback. Additionally, group discussions were arranged to clarify and validate the field data. Semi-structured questionnaires were subjected to harmonization using free interviews and informal conversation (Huntington, 2000). Gender and age differences were considered, and interviews were taken individually and collectively. There were certain cultural barriers preventing females from participating in interviews, but the investigated female informants

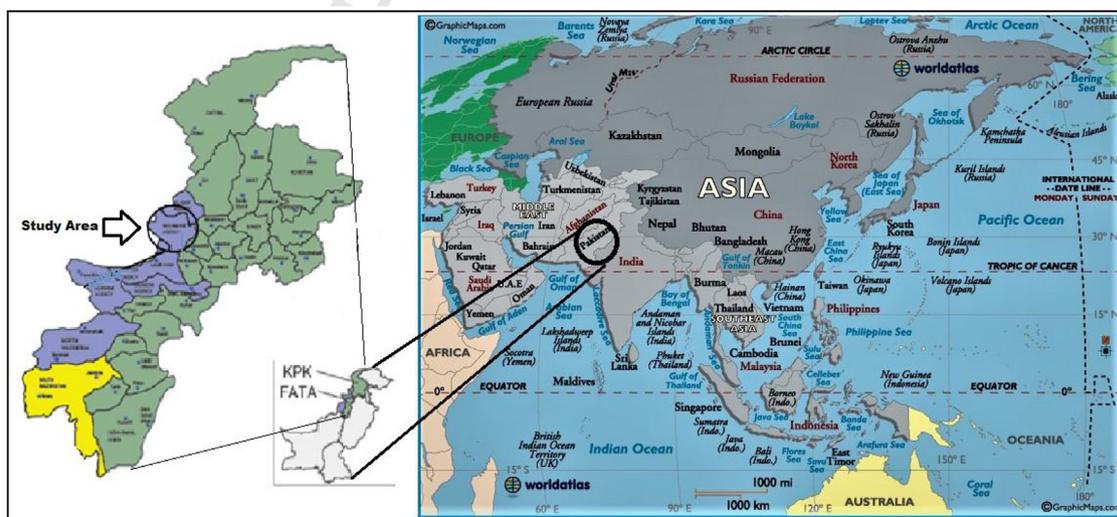


Fig. 1. Showing the location of Pakistan and the study area.

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