



# The prevalence and perceived efficacy of medicinal plants used for stomach ailments in the Amathole District Municipality, Eastern Cape, South Africa



O.A. Wintola <sup>a,\*</sup>, W.M. Otang <sup>b</sup>, A.J. Afolayan <sup>a</sup>

<sup>a</sup> Medicinal Plants and Economic Development (MPED) Research Centre, Department of Botany, University of Fort Hare, Private Bag X1314, Alice 5700, South Africa

<sup>b</sup> Indigenous Knowledge Systems (IKS) Centre, Faculty of Agriculture, Science and Technology, North-West University, Mafikeng Campus, P/bag X2046, Mafikeng 2745, South Africa

## ARTICLE INFO

### Article history:

Received 20 May 2016

Received in revised form 18 July 2016

Accepted 13 October 2016

Available online xxxx

Edited by V Steenkamp

### Keywords:

Prevalence

Perceived efficacy

Medicinal plants

Stomach ailments

## ABSTRACT

The high rate of immuno-compromised individuals in South Africa has been associated to the increase of different kinds of stomach related infectious diseases such as persistent diarrhoea, gastroenteritis and candidemia. An estimated 70–80% of black people in South Africa consult with traditional healers before consulting formal health-care services. The aim of this study was therefore to evaluate the prevalence and perceived efficacy of medicinal plants used in the management of stomach ailments in the Eastern Cape, South Africa. The study was carried out by interviewing 101 local inhabitants in 4 locations of the Amathole District of the Eastern Cape. A total of 101 informants with a mean age of 33.56 participated in the study, comprising 53 (52%) males and 48 (48%) females. Twenty three plant species distributed in 15 families and 19 genera were cited for the treatment of one or more stomach disorders. The most representative family was Xanthorrhoeaceae (3 species) while Apiaceae, Apocynaceae, Euphorbiaceae, Fabaceae and Lamiaceae were represented by 2 species each. The species with the highest use-values (UV) were *Aloe tenuior* (UV = 12), *Strychnos henningsii* (UV = 11), *Sonchus asper* (UV = 10), *Ricinus communis* (UV = 12), *Hypoxis argentea* (UV = 10), while *Acacia mearnsii*, *Acokanthera oppositifolia* and *Zingiber officinale* each had a use-value of 9. Herbs constituted 44%, trees 13% and shrubs 43%. The leaves (57%) were the most frequently used plant part for the treatment of the stomach diseases, followed by the bark and root (10%) each. Seven methods of preparations were mentioned, among which infusion (34%) was the most frequently mentioned, followed by decoction (23%) and juice (16%). Administration of the different plant parts was mainly oral (100%).

© 2016 SAAB. Published by Elsevier B.V. All rights reserved.

## 1. Introduction

Stomach ailments encompass a broad spectrum of disorders involving the lower and upper abdominal cavity (Okem et al., 2012). Disorders of the stomach are very common and induce a significant amount of morbidity and suffering in the population. The general term used for stomach diseases is gastropathy, however, there are many other stomach diseases such as gastric or peptic ulcer disease, gastroparesis and dyspepsia. Many stomach diseases are associated with infection and chronic disorders with typical symptoms like nausea, vomiting, bloating, cramps, diarrhoea and pain. Gastroenteritis is the inflammation of the digestive tract, involving both the stomach and the small intestines which are characterised by symptoms such as stomach pain, diarrhoea, dysentery, vomiting, fever, inflammatory infections of the colon and abdominal cramp (Njume et al., 2011). *Escherichia coli* is known to produce enterotoxins that induce watery diarrhoea and abdominal tissue damage resulting in acute or chronic

abdominal pains and cramps (Njume et al., 2011). The menace of diarrhoea and cholera caused by some of these etiologic agents in tropical and subtropical countries have been reported as one of the worst scenarios of disease outbreaks, as these have claimed lives of millions of people especially children and infants (Okem et al., 2012). In developing countries there is a high rate of morbidity and mortality resulting from co-existing conditions of infectious and parasitic diseases. This is attributed to several conditions such as poor hygiene and lack of clean water that make individuals vulnerable to infections.

The current increase in the number of immunosuppressed and/or debilitated patients in South Africa resulting from the high rate of immune compromised epidemic, have led to a number of patients suffering from different kinds stomach related infectious diseases such as persistent diarrhoea, gastroenteritis and candidemia (Okem et al., 2012). Data from hospitals indicate that more than 25% of the population suffers from some type of chronic stomach disorder including abdominal pain and indigestion. Research in the traditional healing area has estimated that between 70% and 80% of black people in South Africa in both rural and urban areas consult with traditional healers before going to hospitals and clinics, or to private doctors (Nxumalo et al., 2011). According to Bateman (2004) and Van Niekerk (2012), many

\* Corresponding author.

E-mail addresses: [owintola@ufh.ac.za](mailto:owintola@ufh.ac.za) (O.A. Wintola), [wilfred.otangmbeng@nwu.ac.za](mailto:wilfred.otangmbeng@nwu.ac.za) (W.M. Otang), [aafolayan@ufh.ac.za](mailto:aafolayan@ufh.ac.za) (A.J. Afolayan).

South Africans first attempt to self-diagnose and treat or seek help from traditional health practitioners (THPs) before consulting formal health-care services. Furthermore, the Xhosas of the Eastern Cape Province of South Africa have a long history of traditional plant usage for the treatment of various diseases and ailments; for many years, the Xhosas had no interaction with the Western world and they relied mainly on the traditional of medicinal plants to meet their requirements (Bhat, 2014).

Several studies in South Africa show that herbal medicine (HM) co-exists with allopathic medicine and health-care services and people are likely to combine them (Tugendhaft, 2010). The multiplicity of these medicines leads not only to potentially severe side effects, but also to clinically significant interactions. It is therefore important to establish the extent of use of herbal medicine in the management of stomach ailments. The aim of this study was therefore to evaluate the prevalence and perceived effectiveness of medicinal plants used in the management of stomach ailments, in order to facilitate future scientific validation through phytochemical, antimicrobial and toxicological studies.

## 2. Materials and methods

### 2.1. Description of the study area

This study was carried out in the Amathole District (Fig. 1) of the Eastern Cape Province, South Africa. The Eastern Cape Province falls within the latitudes 30100' to 34115'S and longitudes 22145' to 30115'E (Grierson and Afolayan, 1999) is bounded by the sea in the East and the drier Karroo (semi-desert vegetation) in the west. The Amathole District Municipality is situated within the Eastern Cape Province, between Port Alfred and Port St John, and includes the city of East London. The population is estimated at 1.7 million, comprising

of 91% African, 3% Coloured and 5% White. The climate is highly varied; the west is dry with sparse rain during winter or summer, with frosty winters and hot summers (Grierson and Afolayan, 1999). The main tribes of the area are Xhosa-speaking peoples who are divided into several tribes with related but distinct heritages (Dyubeni and Buwa, 2012). High poverty levels, lack of modern health facilities and the extensive use of medicinal plants are characteristic of the study area.

### 2.2. Ethnopharmacological investigation

The study was carried out by interviewing 101 local inhabitants in 4 locations (Ntselamanzi, Golf course, Alice and Fort Beaufort) of the Amathole District of the Eastern Cape. Study participants were selected by convenience sampling with particular focus on local people who regularly use plants for medicinal purposes and in order to ensure a sample that includes representatives of the whole community, we attempted to interview both males and females of different age groups (Singh et al., 2012). The study period spanned between June to December, 2015. Interviews were conducted in Xhosa, the local language of the informants and were facilitated by a local field assistant who is fluent in both Xhosa and English. The interviews included questions that targeted the names of various stomach diseases/disorders, the local names of the medicinal plants, the plant parts used, life form, the method of preparation and the mode of administration of the herbal remedy. Validation of the medicinal use of a plant species was made only when the answers of two or more respondents coincided to the same usage of the same part of the plant, irrespective of the preparation method (Martínez and Barboza, 2010). Specific questions concerning the informants' perceived efficacy of medicinal plants in the management of stomach ailments were asked to the respondents: The

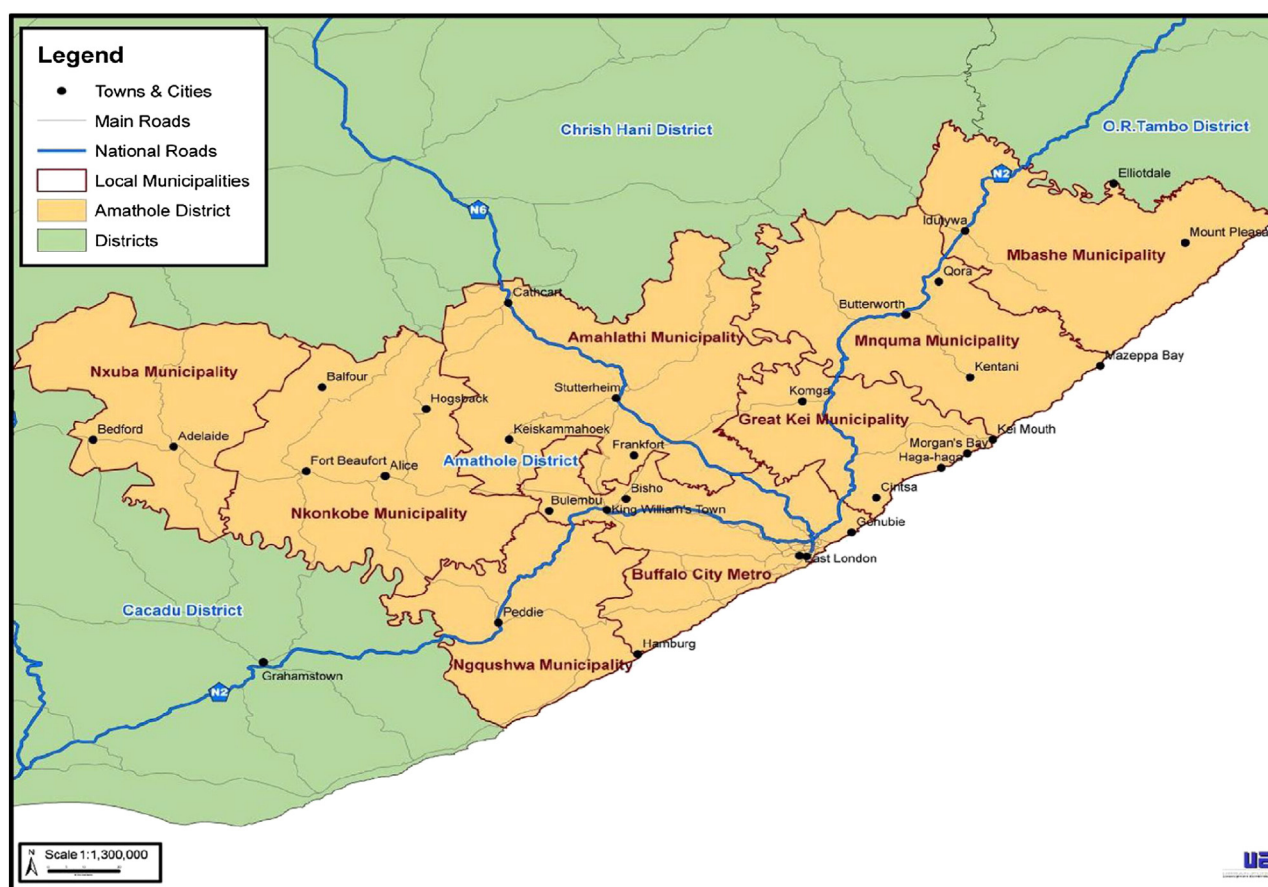


Fig. 1. Map of Amathole District Municipality. (Source: Otang et al., 2015.)

Download English Version:

<https://daneshyari.com/en/article/4520079>

Download Persian Version:

<https://daneshyari.com/article/4520079>

[Daneshyari.com](https://daneshyari.com)