



Medicinal plants used in the management of infertility and erectile dysfunction: a quantitative ethnobotanical survey in the Zinder Region, Niger.

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ABSTRACT

Objective : This study aimed to document medicinal plants used in the traditional management of infertility and erectile dysfunction in the Zinder Region of Niger and to assess their relative ethnobotanical importance using quantitative indices.

Methodology and Results : A descriptive cross-sectional ethnobotanical survey was conducted between April and July 2024 among 40 traditional practitioners across five administrative areas of the Zinder Region. Semi-structured interviews in Hausa were used to collect data, and the relative importance of plant species was evaluated using citation frequency (CF), use value (UV), and informant consensus factor (ICF). In total, 69 plant species were documented: 35 for infertility, 48 for erectile dysfunction, with 14 species shared between both indications. Practitioners reported 30 distinct infertility recipes and 51 for erectile dysfunction. Infertility remedies showed moderate consensus (ICF = 0.521), with Apocynaceae the most represented family (18.8%) and *Euphorbia hirta* L. the leading species (UV = 0.150). Erectile dysfunction remedies demonstrated higher consensus (ICF = 0.724), dominated by Rubiaceae (25.7%), with *Gardenia erubescens* most prominent (UV = 0.575). Oral administration was predominant for both conditions (93–94%), with powders the main dosage form (63–75%). In erectile dysfunction remedies, roots (48%) and bark (15.65%) were the most frequently used plant parts.

Conclusion and Application of results : The traditional pharmacopoeia of the Zinder region constitutes a rich and diverse therapeutic resource for reproductive health disorders. Species with high UV and ICF values (*Gardenia erubescens* (Golden Gardenia), *Euphorbia hirta* (Asthma Weed), *Glossonema boveanum* (Desert Rose), and *Fadogia agrestis* (Black Aphrodisiac) should be prioritized for phytochemical, pharmacological, toxicological and safety investigations. The frequent use of underground organs highlights the need for sustainable harvesting and conservation strategies.

Keywords: infertility; erectile dysfunction; medicinal plants; Zinder; Niger.