

# ABSTRACT

**Introduction:** Ethnobotanical practices are widely known and are reported worldwide. Many known drugs in the pharmaceutical market find its origin in traditionally practiced plants. As pregnancy and postpartum recovery are key physiological changes in a woman's life, herbal drugs and relevant products are popular among parturient. India with enormous social and cultural diversity, presents an important research area to document and validate the traditional practices being used by women citizens.

**Objectives:** With objectives of documentation and validation of traditional practices in Indian women during their antenatal and postpartum period, this study carried out. Further, testing of herbal product in an animal model was also being done.

**Methodology:** After approval from Institutional Ethical committee for Human Research, in a cross-sectional study, 387 mothers were interviewed using semi-structured questionnaire at Vadodara, Gujarat, India. Demographic details, their knowledge about herbal drugs usage, attitude, and types of traditional practices were documented. In a prospective study, 38 pregnant women were recruited and divided into unexposed, exposed group 1 (using *Methi-laddu*) and exposed group 2 (using *Batrisu vasanu*) according to their herbal drug usage. All women were prospectively monitored for outcomes like mother and child health using clinical proforma upto three months postpartum. From Gujarat, 16 *Batrisu vasanu* samples were surveyed and analyzed for its botanical and biochemical contents. In Animal studies, approved from Institutional Animal Ethics Committee, three groups (control, treated 1 and treated 2) were tested for clinical parameters after dosing with *Batrisu vasanu*. Physical parameters of animals as well as hematological and serological tests were performed.

**Results:** Out of 387 mothers recruited for study, 13.96% women were found not using any herbal or traditional practices. Further, 7.49% had shown either negative or neutral attitude towards herbal drug usage. Among those who used herbal medicines, 83.18% women were very satisfied with using it. They reported total 62 plants belonging to 60 genera and 41 plant families being used for various purposes throughout maternity period. They also reported 24 traditional practices used for their antenatal and postpartum requirements. For prospective

study, 36.8% unexposed, 18.4% exposed group 1 and 44.7% exposed group 2 participants were recruited. Their antenatal and postpartum clinical details were analyzed. The weight velocity and growth velocity of the child were significantly higher for child in exposed groups compared to unexposed group. All surveyed batrisu vasanu products were found to have high diversity in herbal ingredients. While studying their total phenol, flavonoid and antioxidant properties, the samples showed good potential. Further, animals dosed with different concentration of Batrisu vasanu (treated 1 and 2) in diet were found to have significantly lower body weight and Food efficiency ratio (FER), but higher fecal content compared to control. In hematology, White blood cells were higher while leukocytes were significantly lower in control. Serological testing confirmed the declined levels of triglycerides, LDL and total cholesterol in treated groups.

**Conclusion:** The present study confirms that herbal drugs are widely used by Indian women during antenatal and postpartum months. They practice it for variety of purposes with high satisfaction level. Clinical side-effects of herbal drugs usage were found neutral on majority of parameters. However, its effect on child health was positive. Animal studies shows that the Batrisu vasanu can be used as a safe nutraceutical product during postpartum period.

**Key words:** Traditional practices, Herbal drugs, Batrisu vasanu, Methi-laddu, Antenatal, Postpartum, Indian women, Body weight, Hormones, Ethnobotany