



Awareness about Anti-microbial Applications of Ocimum sanctum Herb

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ABSTRACT

Ocimum sanctum happens to be an aromatic shrub belonging to the basil family Lamiaceae. This herb has originated in central India and grown throughout the eastern part of the world. Ocimum sanctum is recommended as a treatment for a wide range of both infectious and non-infectious diseases. This survey was performed for assessing the awareness about antimicrobial applications of Ocimum sanctum herb. A cross-sectional study was done with a self-administered questionnaire with ten questions circulated among 100 dental students. The questionnaire assessed the awareness about Ocimum sanctum therapy in medical applications, their anti-microbial, anti-bacterial, anti-viral, anti-fungal, anti-parasitic and anti-ulcer activity. The responses were recorded and analysed. 83% of the respondents were not aware of anti-microbial applications of Ocimum sanctum therapy. 74% were not aware of anti-bacterial properties of Ocimum sanctum therapy. 85% were not aware of anti-fungal properties of Ocimum sanctum therapy. 69% were not aware of the anti-viral properties of Ocimum sanctum therapy. 73% were not aware of anti-parasitic activity of Ocimum sanctum therapy. 76% were not aware of anti-ulcer activity of Ocimum sanctum. The awareness about the use of Ocimum sanctum therapy in antimicrobial applications is low among dental students. Increased awareness programs and sensitization and continuing dental education programs along with greater importance to the curricular modifications, can further enhance knowledge and awareness about Ocimum sanctum therapy.

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INTRODUCTION

Ocimum sanctum happens to be an aromatic shrub belonging to the basil family Lamiaceae. This herb

has originated in central India and grown throughout the eastern part of the world. Ocimum sanctum is recommended as a treatment for a wide range of both infectious and non-infectious diseases. In Ayurveda, it is revered as an “elixir of life” for both its therapeutic and spiritual properties (Bast *et al.*, 2014; Rani and Bast, 2019).

Ocimum sanctum is attributed with offering brilliance to the appearance, pleasantness to the voice and encouraging excellence, insight, endurance and a quiet, passionate mien. Notwithstanding these wellbeing advancing properties, Ocimum sanctum is suggested as a management for a scope of conditions including tension, hack, asthma, loose bowels, fever, diarrhea, joint pain, eye ailments, otalgia, acid reflux, hiccups, retching, gastric, heart and genitourinary issue, back torment, skin sicknesses, ring-

worm, snake and scorpion sting and malaria (Maha-jan *et al.*, 2013).

Ocimum sanctum has one of a unique mix of pharmacological activities that advance prosperity and strength. As a herb that encourages with the adjustment to stretch and the advancement of homeostasis, isn't generally utilized in Western medication, Western science has uncovered that Ocimum sanctum does to be sure have numerous pharmacological activities that satisfy this reason.

The medicinal properties of Ocimum sanctum have been concentrated in many logical investigations including in vitro, creature and human examinations. These examinations uncover that Ocimum sanctum has a special blend of activities that include: Antimicrobial, mosquito repellent, hostile to diarrheal, against oxidant, hostile to the waterfall, mitigating, chemopreventive, radio-protective, hepato-defensive, neuro-defensive, cardio-defensive, hostile to diabetic, against hypercholesterolemia, against hypertensive, hostile to cancer-causing, pain-relieving, against pyretic, hostile to unfavourably susceptible, immunomodulatory, focal sensory system depressant, memory upgrade, against asthmatic, hostile to tussive, diaphoretic, against the thyroid, against richness, against ulcer, against emetic, against fitful, against joint, adaptogenic, hostile to push, hostile to waterfall, against leukodermal and against coagulant activities (verma *et al.*, 2016; Pattanayak *et al.*, 2010). These pharmacological activities help the body and brain adapt to a wide scope of compound, physical, irresistible and passionate anxieties and reestablish physiological and mental capacity. This survey was performed for assessing the awareness about anti-microbial applications of Ocimum sanctum herb.

MATERIALS AND METHODS

A cross-sectional survey was done with a self-administered questionnaire with ten questions circulated among 100 dental students. The questionnaire assessed the awareness about Ocimum sanctum therapy in medical applications, their antimicrobial properties, antibacterial properties. Antiviral activity, antifungal activity, antiparasitic activity and anti-ulcer activity. The responses were recorded and analysed.

RESULTS

83% of the respondents were not aware of antimicrobial applications of Ocimum sanctum therapy (Figure 1). 74% were not aware of anti-bacterial

properties of Ocimum sanctum therapy (Figure 2). 85% were not aware of anti-fungal properties of Ocimum sanctum therapy (Figure 3). 69% were not aware of the anti-viral properties of Ocimum sanctum therapy (Figure 4). 73% were not aware of anti-parasitic activity Ocimum sanctum therapy (Figure 5). 76% were not aware of anti-ulcer activity of Ocimum sanctum. (Figure 6).

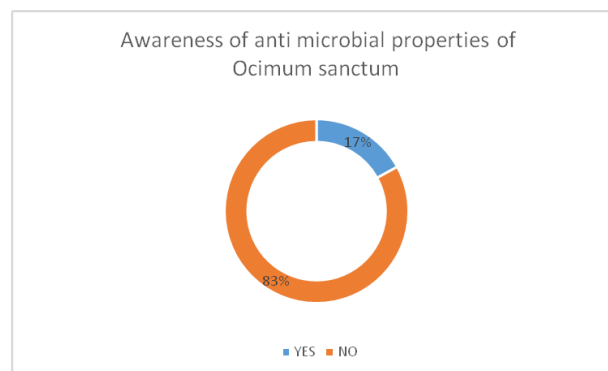


Figure 1: Awareness of antimicrobial properties of Ocimum sanctum

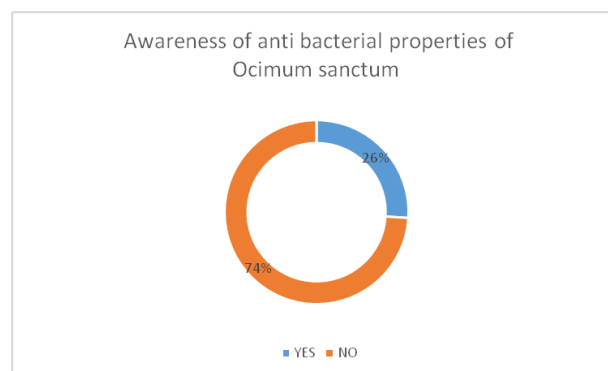


Figure 2: Awareness of antibacterial properties of Ocimum sanctum

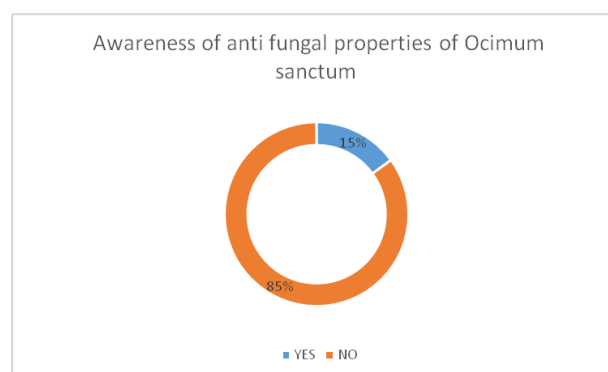


Figure 3: Awareness of antifungal properties of Ocimum sanctum

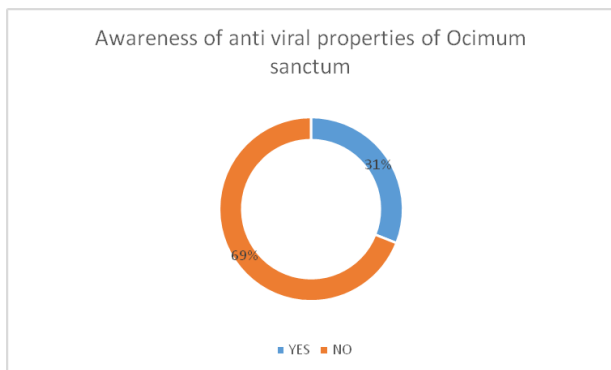


Figure 4: Awareness of antiviral properties of Ocimum sanctum

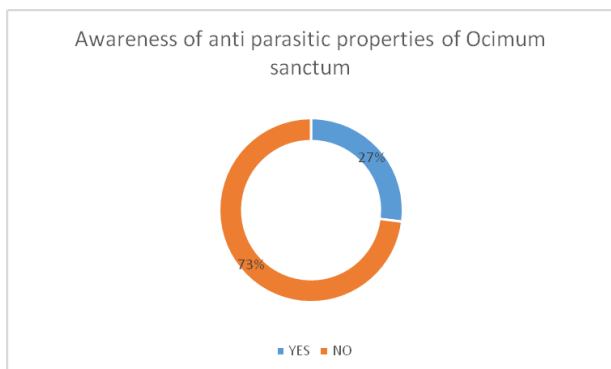


Figure 5: Awareness of anti-parasitic properties of Ocimum sanctum

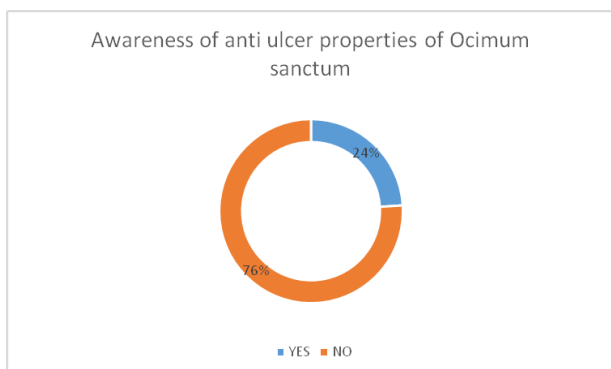


Figure 6: Awareness of anti-ulcer properties of Ocimum sanctum

DISCUSSION

Present day investigations have uncovered that *Ocimum sanctum* possesses antiviral anti-bacterial, and as well as anti-parasitic movement that incorporates action unfavourable to numerous pathogens liable for human illness. *Ocimum sanctum* has additionally been postulated to support guards against infections by upgrading resistant reactions in humans. While no human preliminaries have been apportioned, there is substantial proof that *Ocimum sanctum* may aid in the management of various human bacterial infectious pathosis involving

the urinary tract, skin and wound contaminations, typhoid, cholera, resistant tuberculosis, gonorrhoea, skin ulcers, herpes simplex, leishmaniasis, various pneumonias and parasitic diseases, dengue, jungle fever and filariasis (Mediratta *et al.*, 2002; Singh *et al.*, 1996).

Ocimum sanctum has additionally been demonstrated to be dynamic against numerous creature pathogens, and this has prompted *Ocimum sanctum* being utilized in creature raising to decrease diseases in bovines, birds, sheep, fish and silkworms. *Ocimum sanctum*'s action against water and food-borne pathogens further recommend that it very well may be utilized in the safeguarding of food and for water purification and also as hand sanitizer (Kumar *et al.*, 2013).

Ocimum sanctum's broad-spectrum function, which incorporates action against *Streptococcus mutans*, pathogen liable for tooth decay, further recommends that it very well may be utilized as a mouth wash for controlling awful halitosis, gum disease and mouth ulcers. This has been affirmed in clinical preliminaries that have shown that flushing with *Ocimum sanctum* is as successful as 0.2% Chlorhexidine and as well as Listerine in lessening the levels of *Streptococcus mutans* and that mouthwash that incorporates *Ocimum sanctum* is preferred for its taste and convenience (Agarwal and Nagesh, 2011; Ahmed *et al.*, 2017; Kumar *et al.*, 2013).

Ocimum sanctum's interesting blend of antibacterial, anti-inflammatory, analgesics and antioxidant activity, additionally makes it helpful in wound mending. This is bolstered by exploratory proof that has demonstrated that *Ocimum sanctum* effectuates wound healing. *Ocimum sanctum* has anti-ulcer and ulcer-recuperating action that has been seen in a wide range of animal models. This anti-ulcer action is attributed to different mechanisms including the repression of hostile factors, for example, corrosive pepsin emission and lipid peroxidation and the melioration of much discharge and life span of the alimentary mucosal cells (Goel *et al.*, 2010; Sharma and Kumar, 2011).

CONCLUSION

Awareness about the usage of *Ocimum sanctum* therapy in antimicrobial applications is low among dental students. Increased awareness programs and sensitization and continuing dental education programs along with greater importance to the curricular modifications, can further enhance knowledge and awareness about *Ocimum sanctum* therapy.

Conflict of interest

The authors declare that they have no conflict of interest for this study.

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