

# AWARENESS OF MEDICINAL APPLICATIONS OF RICE BRAN OIL AMONG DENTAL STUDENTS

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## Abstract

*In the process of polishing rice, a specific vegetable oil high in antioxidant is generated first from outermost surface of rice designated Rice Bran Oil (RBO).a Experiments across the world have verified the anti lipedemic activity owing to the presence of special nutritional supplement in this oil recognized as oryzanol or tocotrienols. Raw rice bran product is usually made up of glycerides phospho and glycolipids as well as free fatty acids.The purpose of this survey was for assessing the awareness of medicinal applications of Rice bran oil among dental students.A cross sectional study was performed with a self-administered questionnaire with 10 queries circulated among 100 dental students. The questionnaire assessed the awareness about Rice bran oil therapy in medical applications ,their anti lipedemic properties, anti oxidant applications, hormone regulatin applications and immune enhancement activity.The responses were recorded and analysed.94% of the respondents were not aware of medicinal applications of Rice bran oiltherapy. 87% were not aware of anti lipedemic properties of Rice bran oiltherapy. 85% were not aware of anti oxidant properties of Rice bran oiltherapy.84% were not aware of armone regulation properties of Rice bran oiltherapy. 89% were not aware of immune enhancements properties of Rice bran oiltherapy.The awareness about the use of Rice bran oil therapy in medical 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 Rice bran oil therapy.*

**Keywords:** Awareness, rice bran oil, dental students

## Introduction

In the process of polishing rice, a specific vegetable oil high in antioxidant is generated first from outermost surface of rice designated Rice Bran Oil (RBO).a Experiments across the world have verified the anti lipedemic activity owing to the presence of special nutritional supplement in this oil recognized as oryzanol or tocotrienols. Raw rice bran product is usually made up of glycerides phospho and glycolipids as well as free

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fatty acids, free unsaturated fats and waxes are likewise present in less amount. RBO is broadly utilized as premium consumable oil in the greater part of the Asian nations (Hu et al., 1996; Nayik et al., 2015; Saunders, 1985).(Hussain & Singh, 2015)(Prabhakar & Venkatesh, 1986)

RBO is a great source of vitamins, especially bioactive compounds oryzanols, tocopherols and tocotrienols, that also contribute to larger oxidative reliability as well as a lengthier time period of broad utilization than most other digestible oils. Even though implied by current investigations, the oxidative safety of RBO is 2.5-multiple times higher than those of groundnut oil. RBO is also a suitable high in monounsaturated good cholesterol and it has been successful in reducing LDL by 7-10 percent (Weststrate & Meijer, 1998). The high smoking point (213C) prevents a monosaturated fat breakdown at elevated temperatures that keeps its cancer prevention agent stable. Rice Bran Oil also contains a special phytochemical called oryzanol.

Oryzanol is recognized because of its cholesterol-decreasing properties by rising bile outflow (Ha et al . , 2005). This also helps to minimize triglycerides and increases the proportion of high cholesterol to moderate cholesterol (HDL / LDL) which again is important for the well-being of the heart (Rukmini, 1988). Rice Bran Oil has an appropriate unsaturated fat account as proposed by the World Health Organization (WHO). American heart affiliation's (AHA), the National Institute of Nutrition (NIN) and the Indian Council of Medical Research (ICMR)Gamma-oryzanol, tocotrienol, tocopherol, squalene and various phytosterols in rice bran oil also have high anti-free radical potential anticancer agents. Experiments have shown that gamma oryzanol is often more persuasive than tocopherols in mitochondrial oxidation (Rukmini, 1987).The purpose of this survey was for assessing the awareness of medicinal applications of Rice bran oil among dental students.

## **Materials and method**

A cross sectional study was performed with a self-administered questionnaire with 10 queries circulated among 100 dental students. The questionnaire assessed the awareness about Rice bran oil therapy in medical applications ,their anti lipedemic properties, anti oxidant applications, hormone regulatin applications and immune enhancement activity.The responses were recorded and analysed.

## **Results**

94% of the respondents were not aware of medicinal applications of Rice bran oil therapy (Fig 1). 87% were not aware of anti lipedemic properties of Rice bran oil therapy (Fig 2). 85% were not aware of anti oxidant properties of Rice bran oil therapy (Fig 3).84% were not aware of hormone regulation properties of Rice bran oil therapy (Fig 4). 89% were not aware of immune enhancements properties of Rice bran oil therapy(Fig 5).

Fig 1: Awareness on medicinal applications of Rice bran therapy

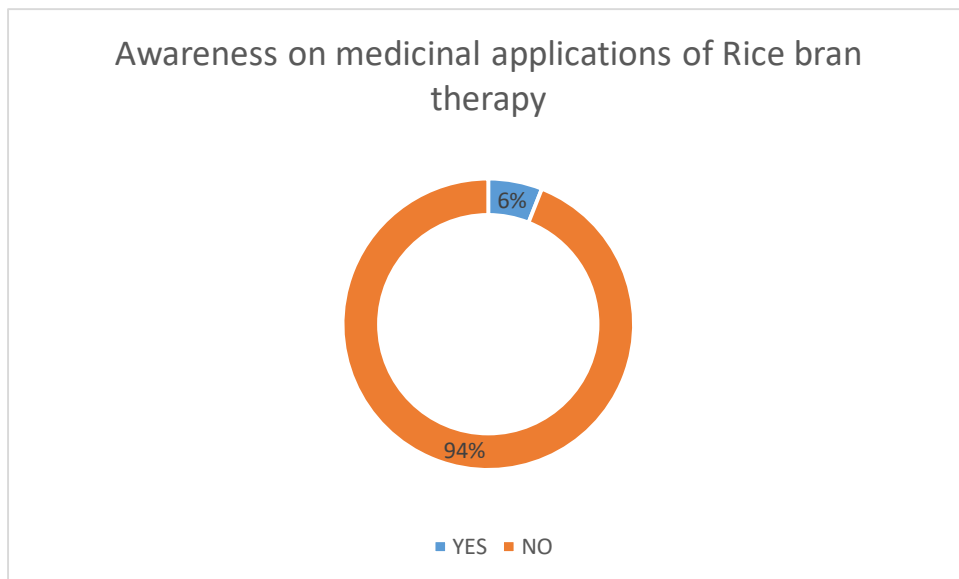


Fig 2: Awareness on anti lipidaemic properties of Rice bran therapy

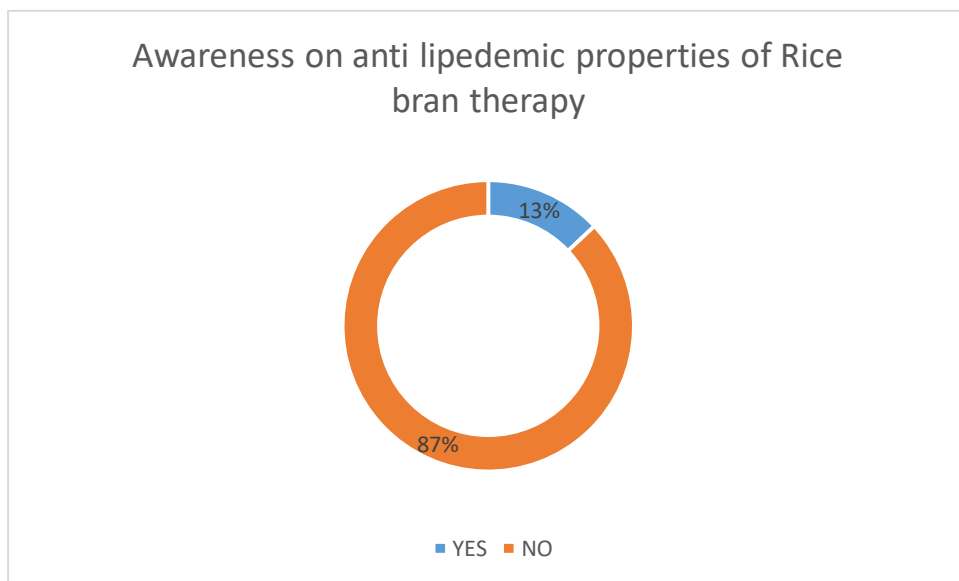


Fig 3: Awareness on anti oxidant properties of Rice bran therapy

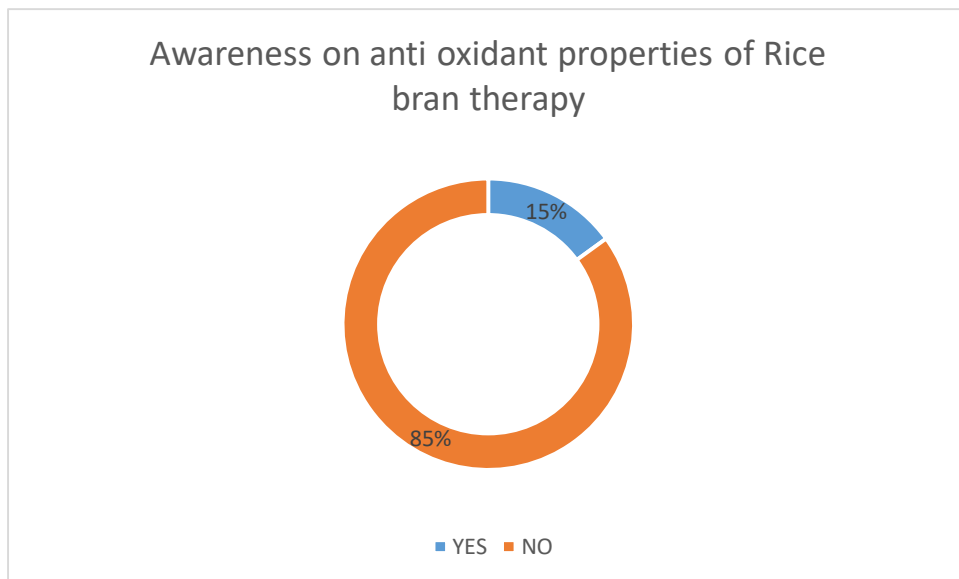


Fig 4: Awareness on hormone enhancement properties of Rice bran therapy

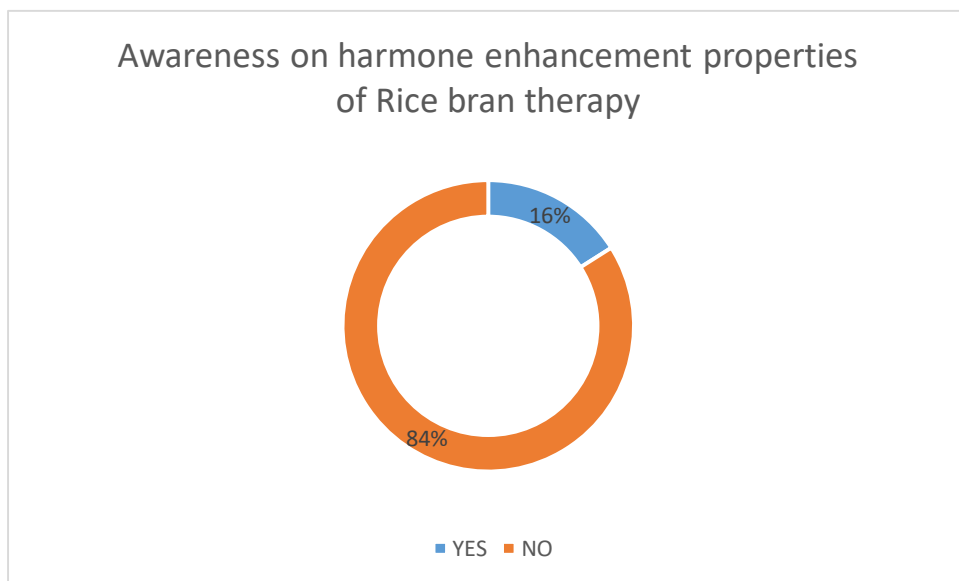
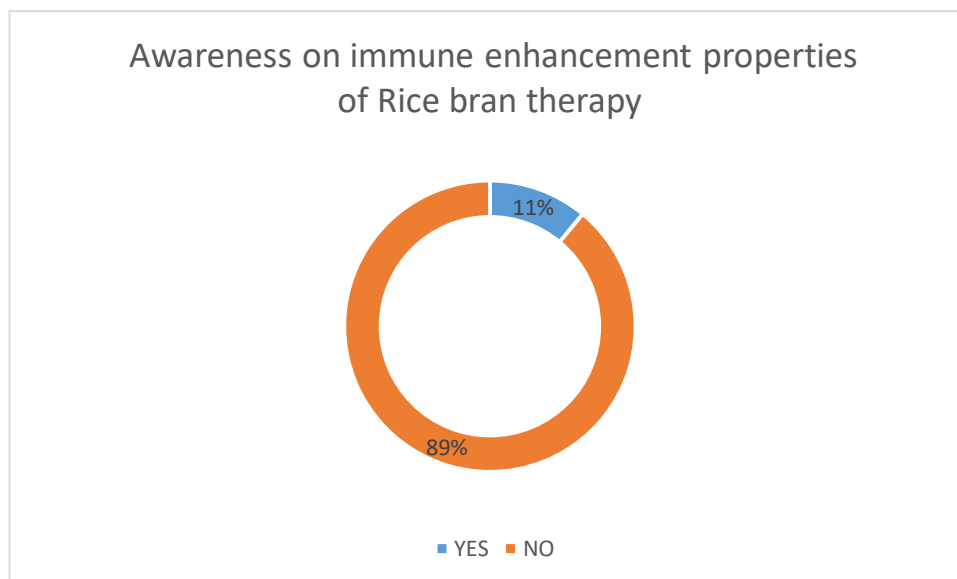


Fig 5: Awareness on immune enhancement properties of Rice bran therapy



## Discussion

Rice bran oil fills in as a significant practical food and has numerous wellbeing benefit. The nearness of squalene along with tocotrienols in rice bran oil aids in skin mellowing and skin fix. The RBO additionally ensures against hurtful UV beams, thus are utilized in sun screens. Upgrades the resistant framework Being a rich wellspring of gamma oryzanol and different phytosterols, RBO has end up being powerful in improving insusceptible framework action, consequently shielding the body from illness. RBO is utilized in sport supplements for weight lifters and competitors for muscle advancement. Forestalls malignancy The high cancer prevention agent movement of RBO is because of the nearness of gamma oryzanol with ferulic corrosive like structure (Ha et al., 2005). Oryzanol controls the malignant growth causing free radicals along these lines diminishing disease hazard.

Vitamin E occurring in RBO helps improve the neurological functioning and balance of hormone production. In hypothyroid stess, gamma oryzanol has been shown to be wonderful in the reduction of thyroid stimulating hormone (TSH). Gamma oryzanol also has been active in the reduction of menopausal symptoms problems in women.

Despite the fact that RBO is novel consumable oil with various medical advantages yet it has a significant burden which can exceed its advantages. The nonappearance of omega-3-unsaturated fats is the main serious issue worried about RBO. In spite of the fact that RBO lessens cholesterol level yet the nearness of high abundance of omega-6-unsaturated fats could be impeding to health.(Ali & Devarajan, 2017; Ha et al., 2005; Tsuji et al., 2000)

High utilization of omega-6-unsaturated fats may increase both breast malignancy and prostate disease. Rice bran itself may be intense in arsenic, and this is another amount of concern that requires further investigation.

Similarly, there are scarcely any interactions of RBO, such as nausea, tothing, stomach discomfort. RBO has also been shown to reduce blood calcium throughout the body, that is a well-being problem for patients with hypocalcemia..(Singanusong & Garba, 2019; Wang, 2019)

### Conclusion

The awareness about the usage of Rice bran oil therapy in medical 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 Rice bran oil therapy.

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