



## KNOWLEDGE AND AWARENESS OF PROBIOTICS AMONG THE DENTAL STUDENTS IN THODUPUZHA-A QUESTIONNAIRE STUDY "

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### ABSTRACT

**INTRODUCTION :** Probiotics can be defined as living microbes, or as food ingredients containing living microbes, that beneficially influence the health of the host. The use of probiotic is said to be an imperative aspect in dentistry in prevention and treatment of caries, periodontal disease etc.

**AIM :** This study aims to assess the knowledge and awareness of probiotics among dental students.

**METHODS :** A total of 60 students from third year, final year and interns were surveyed regarding the knowledge of probiotics. A well structured and administered questionnaire including 12 questions was used to elicit the responses. The study was conducted during 2018-19. Statistical analysis was done using descriptive statistics.

**RESULT :** In this research majority of participants are third years. Study reveals 66% of participants are aware of the term probiotics and 75% of them agree probiotics are safe.

**CONCLUSION :** It was reported that 83% of students were aware about the role of probiotics in improving the health, and majority of them willing to have it if it is recommended by professionals.

**KEYWORDS :** Probiotics, live micro organisms, dental students

### INTRODUCTION

Probiotics are the subject of intense and widespread research in food and nutritional science. The term probiotic, is derived from the Greek language, meaning "for life". It was first used by Lilly and Stillwell in 1965 and described probiotics as "substances secreted by one microorganism which stimulates the growth of another" and thus was contrasted with the term antibiotic.<sup>1</sup> Probiotics can be defined as living microbes, or as food ingredients containing living microbes, that beneficially influence the health of the host when used in adequate numbers.<sup>2</sup> A probiotic can be a single bacterial strain or it may be a consortium as well. It can be in powder, liquid, gel, paste, granules forms or available in the form of capsules, sachets, etc.<sup>3</sup> Different types of probiotic bacteria are added to a variety of food such as milk products and fermented foods of plant origin.<sup>4</sup> The use of probiotic is said to be an imperative aspect in dentistry also ever since the oral infections play pivotal role among the other infections in humans. The most commonly used strains belong to the genera lactobacillus and bifidobacterium, generally that are commonly found in the oral cavity, including caries lesions.<sup>5</sup> Use of beneficial bacteria, the probiotics, which stimulate health – promoting indigenous flora and reverting back the change.<sup>6</sup>

Undoubtedly, the above clinical evidences have proved the health benefits of probiotics in prevention and treatment of caries, periodontal diseases, halitosis, and other oral diseases.

Hence, in this study it is intended to evaluate the knowledge and awareness of probiotics among dental students.

There is not much information available in the literature regarding knowledge of probiotics among dental students in Kerala. Hence we

aimed to assess knowledge of probiotics among dental students of AI Azhar Dental College.

A study was conducted to know the knowledge and awareness of probiotics among dental students of AI-Azhar dental college Thodupuzha, Kerala. Students of all the departments were considered. Ethical approval was obtained from the institutional review board. Informed written consent was obtained.

Data collection was done by distributing questionnaire among the students studying in third, final year and interns.

The questionnaire included 12 questions to evaluate the knowledge and awareness of probiotics among students.

Total scores and scores for each category were obtained by summing the response codes in those categories. Demographic information regarding gender, age, year of undergraduate study were also obtained.

The individual response thus obtained were then compiled, processed, analysed.

The respondents were asked if they were familiar with the term probiotic and their level of knowledge. The knowledge questions consist of 12 closed ended questions to assess the knowledge about probiotic and their health benefits.

After answering the knowledge questions, they were given a brief introduction of probiotics including the definition, its use and mode of action; and then asked if they accept the science of probiotic i.e

the use of live organisms in the management of medical conditions. This was used to evaluate their perception of probiotics. Statistical analysis was done using descriptive statistics.

## RESULT

S. No	Questions	Respondence No.	Response %
1.	Gender Female Male	41 19	68 32
2.	Designation 3rd year 4th year Intern	40 7 13	67 11 22
3.	Are you aware of the term probiotics? Yes No	40 20	67 33
4.	What you think are the constituents of probiotics? Live microorganism Synthesized drugs Natural plant products Don't know	40 3 4 13	67 5 7 21
5.	Do you think probiotics improve your health? Yes No	50 10	83 17
6.	Would you try a probiotic product if it were recommended by a health professional? Yes No	51 9	85 15
7.	Do you think probiotics are safe? Yes No	45 15	75 25
8.	Why do you consume probiotics food products? Increase my well being Strengthen the immune system Improve gastrointestinal function No specific reason I do not consume probiotic food products.	4 15 18 12 11	7 25 30 20 18
9.	Identify food sources of probiotics. Milk Yogurt Both Don't know	8 13 20 19	13 22 33 32
10.	How did you obtain information about probiotics? Doctors Friends / relatives Social media Internet	18 14 11 17	30 23 18 28
11.	Have you used probiotics as a therapeutic drug for? Gastrointestinal condition Autoimmune condition Respiratory condition I have never consumed probiotics as a therapeutic drug.	12 12 2 34	20 20 3 57
12.	In dentistry, Are you aware of the use of probiotics in the prevention of caries/periodontal disease? Yes No	27 33	45 55

The research includes 68.3% of females & 31.7% of males. In this research, majority of the participants are third years. The study reveals 66% of participants are aware of the term probiotics. Sixty six percentage of the participants agree that live organisms are the main constituents of probiotics. Eighty three percentage (83%) of the participants of the study agree probiotics improve the health. Eighty five percentage (85%) of the participants are willing to have probiotics if it is recommended by a health professional. Seventy five percentage (75%) of the participants agree probiotics are safe. Fifty six percentage (56%) of the participants have never consumed probiotic as a therapeutic drug.

## DISCUSSION

The present study assess knowledge and awareness of probiotics among dental students. The results showed that maximum number of participants (67%) were aware of the role of probiotics. Similarly in a study conducted among the dental students of Chennai 80.5% were aware of the term probiotics.<sup>6</sup> This clearly shows that participants have a basic knowledge on probiotics. Regarding the constituents of probiotics 67% of the respondents have chosen live microorganisms are the constituents of probiotics. On the other hand, in the present study 67% have chosen live microorganisms as the constituents of probiotics and the result showed that 83% of the respondents were aware that probiotics improve their health. Similarly study conducted among population of Rio only 45% were aware that probiotics improve health.<sup>9</sup>

There are about 85% of the participants were willing to try probiotics if it were recommended by a health professional. This shows that the participants are willing to try something new upon recommendation from their physician. A previous study<sup>7</sup> has also shown that there was a significant number of the participants agreed that they would try a probiotic product if it were recommended by a health professional, 41.5%.<sup>7</sup> And our current results are in agreement with this report. When asked about the reason for consuming probiotics they have chosen the option to improve gastrointestinal condition (30%) and it is in contrast with another study shown that majority of respondents chosen the option increase immune function as their answer.<sup>7</sup> Regarding the source of probiotics 33% of the respondents have chosen both milk and yogurt. A study which was conducted among Nigerian clinician regarding their knowledge on probiotics, 45.1% of the respondents indicated a preference for yogurt as a form of probiotic.<sup>8</sup>

## CONCLUSION

Present study revealed that 83% of the dental students were aware about the role of probiotics in improving the health. Majority of the participants were willing to try probiotics if it were recommended by a health care professional.

There is no doubt that we will witness a significant increase in the role of probiotics in nutrition & medicine over the next decade & while their application in the prevention & treatment of various disorders should be considered by medical professionals & promoted by the food industry

## LIMITATIONS

1. This research was limited to students of one particular college, it is not known whether trends found reflect local attitudes or are more widespread. Therefore further studies involving larger sample over a wide geographic area can be carried out to facilitate the generalisability of the findings.

2. The cross sectional design does not allow for assessment of knowledge and awareness of probiotics.

## RECOMMENDATIONS

1. The regulatory status of probiotics as a component in food should be established on an international level.

2. Further advanced studies on probiotics as drugs should be

enhanced.

3. Conducting continuous dental and medical education programmes and conferences pertaining to probiotics.

4. A multi center study may reflect a better picture about the knowledge level

If these improvements are introduced, hopefully knowledge and awareness on probiotics among dental students will be improved helping them to be more successful as students and, eventually, as dentists.

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