



International Journal of Homoeopathic Sciences

E-ISSN: 2616-4493
P-ISSN: 2616-4485
Impact Factor (RJIF): 5.96
www.homoeopathicjournal.com
IJHS 2025; 9(3): 686-689
Received: 22-05-2025
Accepted: 26-06-2025

Dr. Sushant Kulkarni
HOD, Department of Surgery,
Bharatesh Homoeopathic
Medical College and Hospital,
Belagavi, Karnataka, India

Dr. Pradeepkumar A Patil
HOD, Professor and Pg.
Guide, Department of
Repertory, Bharatesh
Homoeopathic Medical College
and Hospital, Belagavi,
Karnataka, India

Dr. Lingraj B Magdum
Professor and Pg. Guide,
Department of Organon of
Medicine and Homoeopathic
Philosophy, Bharatesh
Homoeopathic Medical College
and Hospital, Belagavi,
Karnataka, India

Corresponding Author:
Dr. Sushant Kulkarni
HOD, Department of Surgery,
Bharatesh Homoeopathic
Medical College and Hospital,
Belagavi, Karnataka, India

Efficacy of *Azadirachta indica* in the prevention of dental caries in school going children

Sushant Kulkarni, Pradeepkumar A Patil and Lingraj B Magdum

DOI: <https://www.doi.org/10.33545/26164485.2025.v9.i3.K.1725>

Abstract

A study on 60 students, from 3rd to 8th standard who were free from dental caries were selected for the study, who were further divided into two groups as case and control using stratified sampling method, where the study group was given the mouth wash with *Azadirachta indica* mother tincture, after the period of 6 months the study showed a positive result where no subject developed dental caries. Detailed analysis is mentioned below.

Aim and Objective: The aim of this study was to assess the efficacy of *Azadirachta indica* in the prevention of dental caries in school going children.

Results: After 6 months it is observed that in group 1 out of 30 numbers (0) students developed dental caries. In group 2 (control group) 3 students (2 males and 1 female) developed dental caries. Hence the prevalence of dental caries in group 1 is 0.00 in both male and female and in group 2 which is control group is 11.76% in male and 7.69% in female.

Keywords: Dental caries, homoeopathic prevention, *Azadirachta indica*

Introduction

Dental caries is an irreversible microbial disease of the teeth, which is characterized by demineralization of the inorganic portion and destruction of the organic substance of the tooth, which leads to cavitation [6]. Dental caries is one of the most prevalent disease in children across the world. If neglected and not treated in time, it not only affects the mastication function of the child but also affects the speech, and also the smile of the child. Which in turn affects the psychosocial environment and the quality of life of the child [7] with prominent symptom of pain and the medical term for toothache is odontalgia [2]. The treatment of dental procedures is comparatively expensive [7]. Whereas homeopathic medications are affordable and safer in children with negligible complications or side effects [1]. With over 3000 plus available medicines [5]. The introduction of homeopathic medicine in dentistry field is especially useful from mild pain due to tooth cavity to chronic conditions [3].

Causes [7]

Dental caries usually is related to multi-factorial etiology. But it is commonly caused by fermentation of simple carbohydrates like sucrose by the oral micro-organisms especially the streptococci and lactobacilli. It begins as small surface roughness or sub surface demineralization and then it progresses to form a cavity followed by pulp involvement and swelling [7].

Clinical Features [7]

The clinical features are grouped under broader term Early Childhood Caries (ECC), which is characterized by:

1. The early stage is identified as chalky opaque surfaces or a distinct whitish streak near the gum line of the maxillary primary incisors.
2. In later stages the teeth usually starts appearing yellow due to collapse of enamel and leading to dentin exposure.
3. There will be increased sensitivity during eating food or drinking cold water.
4. Child may at times complain of food getting stuck in the tooth.
5. In advanced stages there will be tooth destruction up to the level of root with evident pain on chewing and brushing teeth [7].

Materials and Methods

Type of Research-Randomized control study

Sample size- 60

Participants subjects: Students free from dental caries from class 3rd to 8th of Bharatesh English Medium school, Belgaum

Study Period

Study Period- 6 months (period reduced because of covid-19 pandemic restrictions)

Subjects will be followed for 6 months.

Sampling Method- Stratified Random Sampling.

Inclusion Criteria

Students from class 3rd to 8th

Students free from dental caries

Students of both sexes.

Exclusion Criteria

Students under any treatment for any chronic and systemic diseases.

Every case will be followed for a minimum period of 6 months. Students were selected according to inclusive criteria. Samples were divided into two groups using randomization. Group no.1 (study group) was given the mouth wash with *Azadirachta indica* mother tincture. Group no.2 was the control group. Mouth wash given to Group no.1 was prepared in the following way:

10 drops of *Azadirachta indica* were added to 30 ml of tap water and students were instructed to rinse the mouth for 30 seconds. The procedure was repeated twice a week for 6 months.

Group no.2 followed the same procedure with only tap

water without any additions. Procedure was explained to the parents and guardians and written consent was obtained.

The results are based on Oral examination every month by a Dentist. The results were categorized into following groups based on above criteria.

- Dental caries developed
- No dental caries developed.

Results after 6 months

Table 1: Group 1 (Study group)

Number of students selected for study	30	
	Male	Female
	17	13
Number of students who developed dental caries after 6 months	0	
	Male	Female
	0	0

Table 2: Group 2 (Control Group)

Number of students selected for study	30	
	Male	Female
	17	13
Number of students who developed dental caries after 6 months	3	
	Male	Female
	2	1

Table 3: Base level group's analysis

Particular		Group		Total
		Group 1	Group 2	
Gender	Male	17 (57)	17 (57)	30
	Female	13 (43)	13 (43)	30
Total		30 (100)	30 (100)	60

In brackets percentage is mentioned

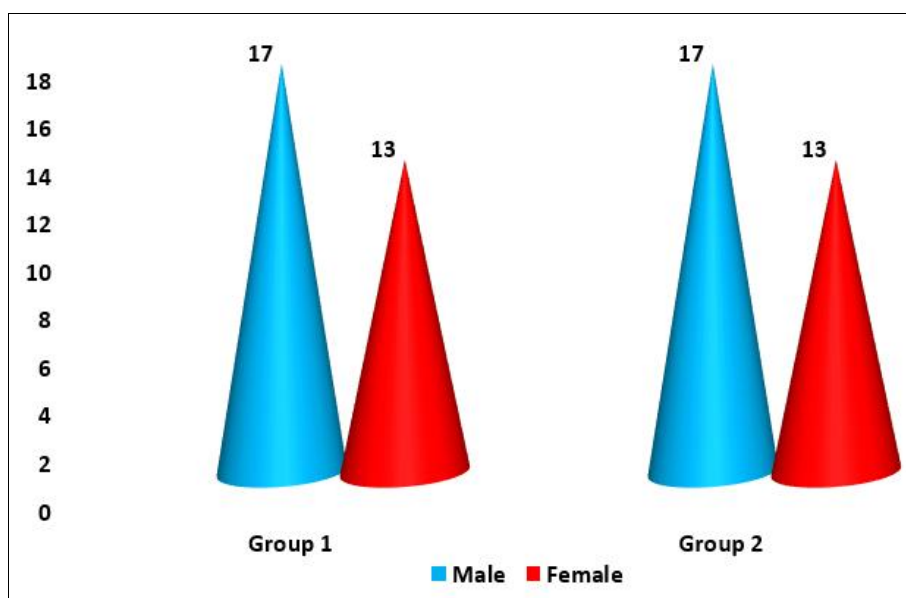


Fig 1: Gender distribution across group

Table 4: Prevalence Rate Analysis after one month

Status of Dental Caries	Group 1		Group 2	
	Male	Female	Male	Female
No. of students at base level without caries [day 1]	17	13	17	13
No. of students who developed dental caries after 1 month	0	0	0	0
Prevalence rate of dental caries after 6 months	0%	0%	0%	0%

From the above table it is observed that in both the groups no students developed dental caries after 1 month.

Table 5: Prevalence Rate Analysis after two months

Status of Dental Caries	Group 1		Group 2	
	Male	Female	Male	Female
No. of students at base level without caries [day 1]	17	13	17	13
No. of students who developed dental caries after 2 months	0	0	1	0
Prevalence rate of dental caries after 6 months	0%	0%	5.88%	0%

From the above table it is observed that in group 2 one male student developed dental caries after 2 months

Table 6: Prevalence Rate Analysis after three months

Status of Dental Caries	Group 1		Group 2	
	Male	Female	Male	Female
No. of students at base level without caries [day 1]	17	13	17	13
No. of students who developed dental caries after 3 months	0	0	1	0
Prevalence rate of dental caries after 6 months	0%	0%	5.88%	0%

From the above table it is observed that in both the groups no students developed dental caries after 3 months but one student developed caries in 2nd month recorded as it for reference.

Table 7: Prevalence Rate Analysis after four months

Status of Dental Caries	Group 1		Group 2	
	Male	Female	Male	Female
No. of students at base level without caries [day 1]	17	13	17	13
No. of students who developed dental caries after 4 months	0	0	1	0
Prevalence rate of dental caries after 6 months	0%	0%	5.88%	0%

From the above table it is observed that in both the groups no students developed dental caries after 4 months but one student developed caries in 2nd month recorded as it for reference.

Table 8: Prevalence Rate Analysis after five months

Status of Dental Caries	Group 1		Group 2	
	Male	Female	Male	Female
No. of students at base level without caries [day 1]	17	13	17	13
No. of students who developed dental caries after 5 months	0	0	1	0
Prevalence rate of dental caries after 6 months	0%	0%	5.88%	0%

From the above table it is observed that in both the groups no students developed dental caries after 5 months but one student developed caries in 2nd month recorded as it for reference.

Table 9: Prevalence Rate Analysis after six months

Status of Dental Caries	Group 1		Group 2	
	Male	Female	Male	Female
No. of students at base level without caries [day 1]	17	13	17	13
No. of students who developed dental caries after 6 months	0	0	2	1
Prevalence rate of dental caries after 6 months	0%	0%	11.76%	7.69%

From the above table it is observed that in group 2; totally two male students and one female student developed dental caries after 6 months of the study observations

Result

Detailed analysis of results.

From Fig no. 1 to Fig no.10

- It is observed that in both the groups no students developed dental caries after 1 month
- It is observed that in group 2 one male student developed dental caries after 2 months
- It is observed that in both the groups no students developed dental caries after 3 months but one student developed caries in 2nd month recorded as it for reference.
- It is observed that in both the groups no students developed dental caries after 4 months but one student

developed caries in 2nd month recorded as it for reference.

- It is observed that in both the groups no students developed dental caries after 5 months but one student developed caries in 2nd month recorded as it for reference.
- It is observed that in group 2; totally two male students and one female student developed dental caries after 6 months of the study observations

Conclusion

As Homoeopathic medicines are well known for its gentle and permanent cure, it is also known for its preventive abilities. The motto of our study was to provide evidence based result by studying the efficacy of *Azadirachta indica* in the Prevention of Dental Caries, in order to do so a group of 60 students from class 3rd to 8th who are free from dental

caries were selected from Bharatesh English medium high school. And were divided into two groups, the study group received the mouth wash with *Azadirachta indica* mother tincture, and was followed up for 6 months straight, it was observed that at the end of 6 months 3 subjects from group 2 developed caries but the subjects of group one did not develop caries.

Acknowledgement

This study was supported by a research grant from the research wing of Rajiv Gandhi university of health sciences (RGUHS), Karnataka, India.

Conflict of Interest

Not available.

Financial Support

Not available.

References

1. Kardanpour G, Rezaee M. Homeopathy in Dentistry and Oral Medicine: A review. Google; 2016 [cited 2025 Aug 1]. Available from: <https://www.google.com/search?q=Homeopathy+in+Dentistry+and+Oral+Medicine%3A+A+review+Ghazal+Kardanpour1+Mostafa+Rezaee>
2. Team Homeopathy 360. Dental Care and Homoeopathy - homeopathy360. homeopathy360; 2017 [cited 2025 Aug 1]. Available from: <https://www.homeopathy360.com/dental-care-and-homoeopathy/>
3. Awareness of dental students on the role of homeopathic remedies as a risk factor in the etiology of tooth decay. [cited 2025 Aug 1]. Available from: https://www.ijbamr.com/assets/images/issues/pdf/QLb66M_MnqILf_6GI0KA_3XAU5H_163924.pdf
4. Singh J, Katariya M, Gupta A, Mitra R, Sirdesai A, Bandyopadhyay P. Assessment of homeopathic ingredients based dentifrice on caries causing bacteria: In-vitro. Int J Homoeopathic Sci. 2023 Apr 1;7(2):14–7. doi:10.33545/26164485.2023.v7.i2a.804
5. Kardanpour G, Rezaee M, Golkari A, Lavaee F. Homeopathy in Dentistry and Oral Medicine: A review. Shahid Beheshti Univ Dent J. 2016 Dec 15;34(4):263–73. doi:10.22037/jds.v34i4.24643
6. Alekar AP, Chaudhari GD. Oral Health Status Of Children Between 10-13 Years In Urban Area.
7. Google Scholar. Google; 2025 [cited 2025 Aug 1]. Available from: https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Dental+Caries%3A+A+Disease+Which+Needs+Attention++Vijay+Prakash+Mathur1+%26Jatinder+Kaur+Dhillon2&btnG=

How to Cite This Article

Kulkarni S, Patil PA, Magdum LB. Efficacy of *Azadirachta indica* in the prevention of dental caries in school going children. International Journal of Homoeopathic Sciences. 2025; 9(3): 686-689.

Creative Commons (CC) License

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0) License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.