

## Journal of Advanced Medical and Dental Sciences Research

@Society of Scientific Research and Studies

NLM ID: 101716117

Journal home page: [www.jamdsr.com](http://www.jamdsr.com)

doi: 10.21276/jamdsr

Index Copernicus value = 85.10

(e) ISSN Online: 2321-9599;

(p) ISSN Print: 2348-6805

## Original Research

### Mouthwash Use in General Population of Mississauga, Ontario, Canada

Harpuneet Kaur<sup>1</sup>, Poornima Sharma<sup>2</sup>

<sup>1</sup>Associate dentist at ARORA DENTAL DOCTORS, Kharar, SAS Nagar, Punjab, India;

<sup>2</sup>Former BDS graduate, National Dental College & Hospital, Derabassi, Mohali, Punjab, India

#### ABSTRACT:

**Background:** Practising good oral hygiene is very significant to prevent various ailments in our body. Methods adopted for adequate oral hygiene is brushing and flossing alongwith mouth rinses regularly as prescribed by the dentist. Using mouthwashes prevents and cures various diseases such as halitosis, gingivitis and periodontal issues. **Methods:** The questionnaire was prepared and asked verbally in the Square One Mall located in Mississauga. The selection of the participants were arbitrary in respect to age, sex and education. This study includes only those responders who uses mouthwashes. **Results:** Majority of the participants were females. The maximum number of respondents uses mouth washes that are not prescribed by dentist and do not look for ADA seal while purchasing the mouth rinses. Factors like price and brand are the most influencing factors while buying the mouthwashes. The participants reported cavities and plaque in their oral cavity. Most of the people brush their teeth twice a day and floss every few days. **Conclusion:** Mouthwash use in general population is associated with various determinants like Age, Sex, Education and Health. Mouthwashes have various properties like it is antiplaque and antigingivitis and thus helps to reduce gum diseases. Factors like price, size, brand, health benefits influences the choice of buyer .

**Key words:** Mouthwash, oral hygiene, plaque.

**Received:** 02/05/2020

**Modified:** 20/05/2020

**Accepted :** 15/06/2020

**Corresponding Author:** Dr. Harpuneet Kaur, Associate dentist at ARORA DENTAL DOCTORS, Kharar, SAS Nagar, Punjab, India

**This article may be cited as:** Kaur, Sharma P. A Mouthwash Use in General Population of Mississauga, Ontario, Canada. J Adv Med Dent Scie Res 2020;8(7):6-11.

#### INTRODUCTION

Oral hygiene plays a very important role in preventing number of diseases. Improper oral hygiene can cause various oral diseases such as gum and periodontal diseases and systemic diseases. Hence, everyone should be educated about the importance of oral hygiene<sup>[1]</sup>. Oral diseases such as caries can be prevented by adapting the proper oral hygiene methods.<sup>[2]</sup> Oral hygiene can be maintained by various methods such as brushing the teeth , flossing and by using mouthwashes .Brushes are available as manual and powered ,but there is no statistical significant difference between the both types of brushes. Thus, both powered and manual brushes equally remove plaque and reduce gingivitis<sup>[3]</sup>.

Flossing is the other very important part of oral hygiene and therefore, should be done to prevent diseases like periodontitis<sup>[4]</sup>. Mouthwashes is a complement to brushing and flossing and cannot be considered as substitute<sup>[5]</sup>. Mouthwashes usage prevents various diseases such as gum diseases<sup>[6]</sup>. Always consult your dentist before using a mouthwash to ensure that there are no other health issues affecting to your oral hygiene<sup>[7]</sup>. For the safety and effectiveness of the mouthwash, ADA seal should be checked<sup>[7]</sup>. Brands such as Crest ProHealth Rinses contains 0.7% cetylpyridinium chloride which helps in more oral microbial reduction than rinses containing phenol or glycerine/ triclosan to which listerine and colgate

belongs respectively.<sup>[8]</sup>It is upto the consumer to decide what he or she rates most highly in the mouth rinses while buying.

**MATERIALS AND METHODS**

This survey was conducted in Square One Mall , which is the largest shopping centre in Ontario and the second largest shopping centre in Canada, after the West Edmonton Mall between December 10,2019 to January 18,2020.

Questionnaire =The questionnaire was prepared and it consisted of 10 questions [Table 1 ].

<p>Table 1( QUESTIONAIRE USED IN SURVEY)</p> <p>1)AGE</p> <p>2) SEX= Male/Female</p> <p>3)EDUCATION</p> <p>a)High School b)Graduate c)Post graduate d) Masters</p> <p>4)MOUTHWASH PRECRIPTION ?</p> <p>a) Prescribed by Dentist b) Self</p> <p>5)DO YOU LOOK FOR ADA SEAL WHILE BUYING THE MOUTHWASH?</p> <p>a) Yes b) No</p> <p>6)WHICH MOUTHWASH BRAND DO YOU USE ?</p> <p>a)Colgate b)Listerene c)Crest d) other</p> <p>7)DO YOU HAVE ANY OF THESE ?</p> <p>a) Cavities b) Plaque c)Gum disease d)Tooth sensitivity</p> <p>8)TOOTH BRUSHING FRQUENCY ?</p> <p>a)Never b)Once a day c)Twice a day</p> <p>9)FLOSSING FREQUENCY?</p> <p>a)Never b)Once every few days c)Daily</p> <p>10)WHICH ONE OF THE FOLLOWING IS THE DECIDING FACTOR FOR YOU TO DECIDE THE MPUTHWASH BRAND ?</p> <p>a)Price b)Health Benefit c)Brand d)Size e)Promotion</p>
--

**Data Collection:** The questions were asked verbally and their responses were recorded on the spot. The participants were selected randomly in the Mall.

**Statistical analysis:** The data was transferred to the microsoft excel and was analysed using the microsoft excel tools only

**RESULTS:**

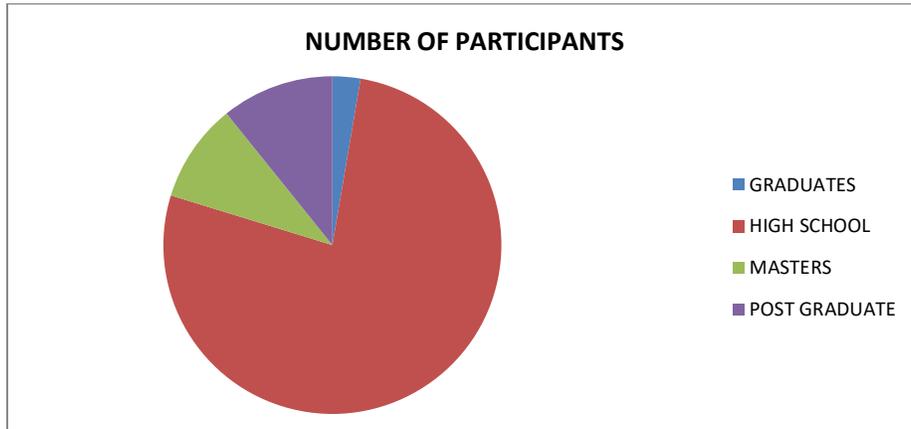
**1) AGE AND SEX**

Total of 434 participants were asked questions verbally in the Square One Mall, located in Mississauga , Canada, out of which 13.36% were not interested in answering questions. The questions were asked to people who use mouthwashes. The age group who participated in this study was from 14-67 years. People of age 14 to 23 participated the most out of all the age groups as depicted in the table below.51.8 % of females and 48.1% of males answered the questions.

Age group	Females	Males	Total
14-23	95	83	178
24-33	63	58	121
34-43	19	24	43
44-53	9	8	17
54-63	6	8	14
64-73	3	0	3
Grand total	195	181	376

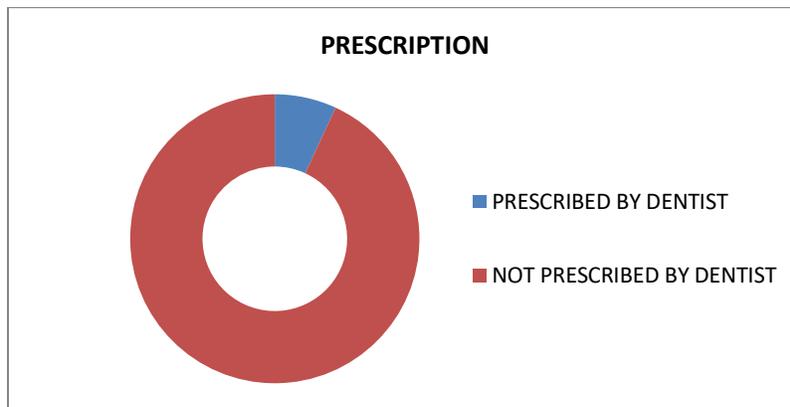
## 2) QUALIFICATION

Out of all the responders, 62.7% studied till high school, 20.7% were graduates, 8.7% were postgraduates, and 7.7% were master's degree holders.

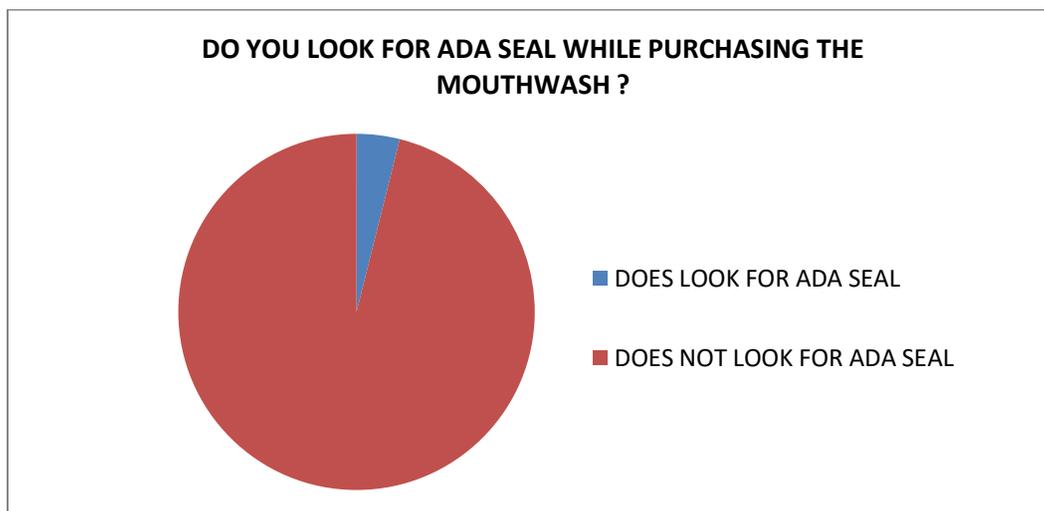


## 3) PRESCRIPTION

93% of people use mouthwash not prescribed by the dentist, whereas 6.9% uses the brand mouthwash prescribed by the dentist.

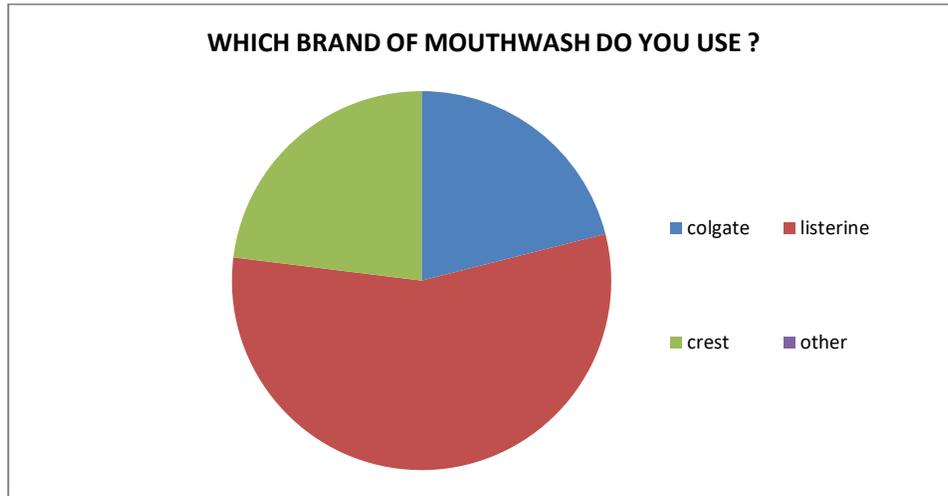


4) DO YOU LOOK FOR ADA SEAL WHILE PURCHASING THE MOUTHWASH? 96% of the total does not look for the ADA seal, while 3.9% do look for the ADA seal



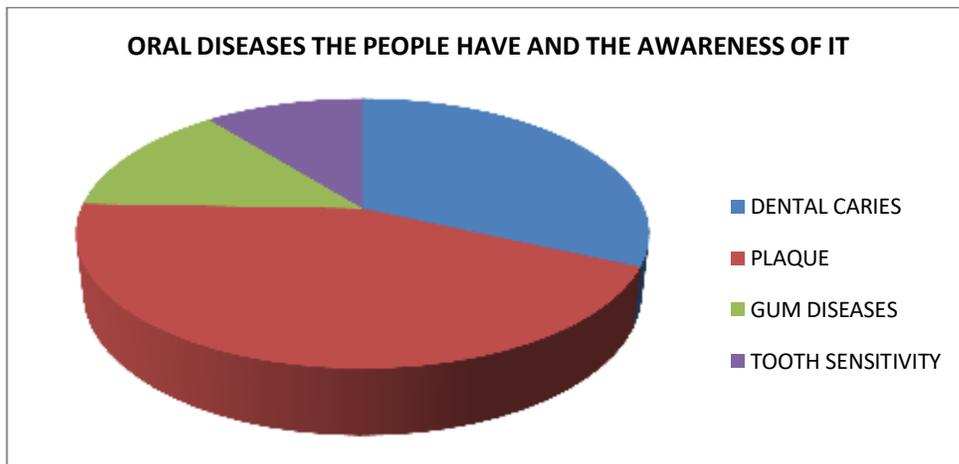
**5) WHICH BRAND OF MOUTHWASH DO YOU USE ?**

21% , 55.8%, 23%, uses colgate, listerene and crest brand respectively .



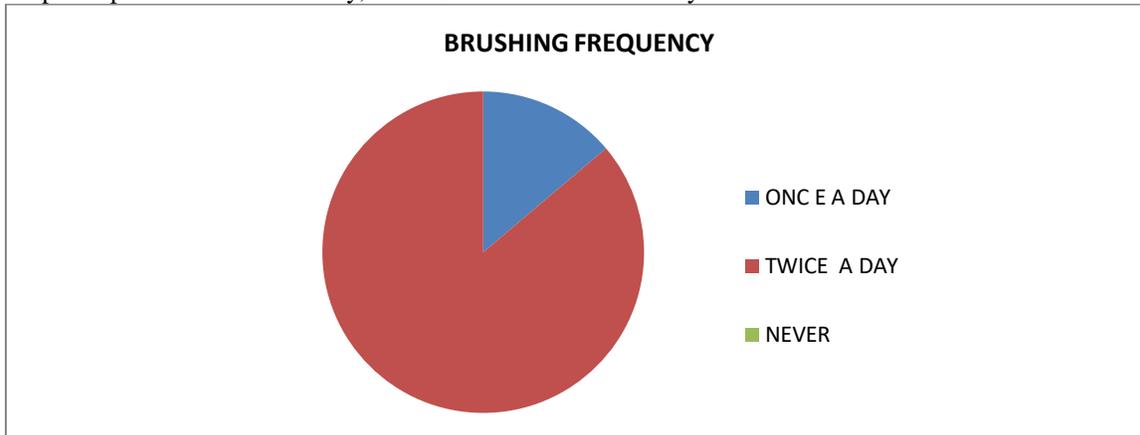
**6) ORAL DISEASES THE PEOPLE HAVE AND THE AWARENESS OF IT**

207 participants were having cavities , 285 people said they go to dentist for the removal of plaque every 6 months,89 people said they suffer from gum diseases , 70 people were having tooth sensitivity .



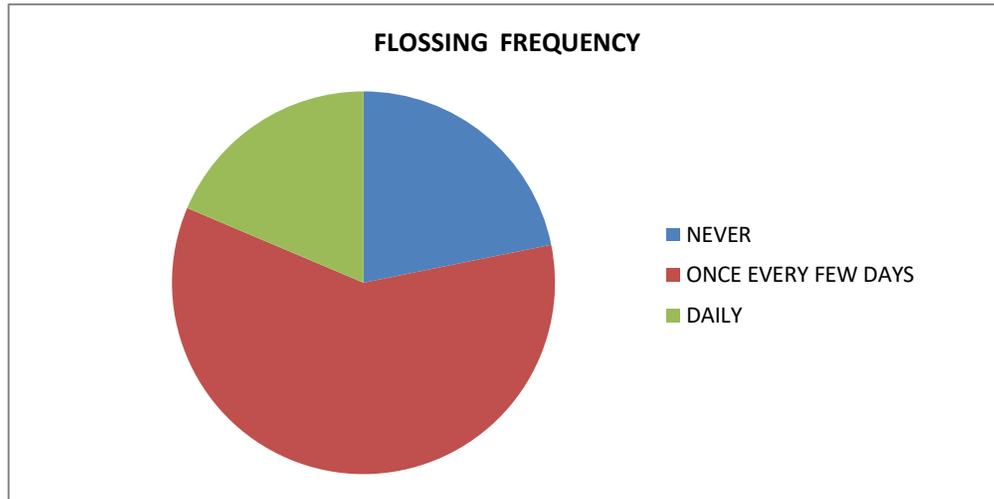
**7) TOOTH BRUSHING FREQUENCY**

86% of participants brush twice a day, and 13.8% brushes once a day.



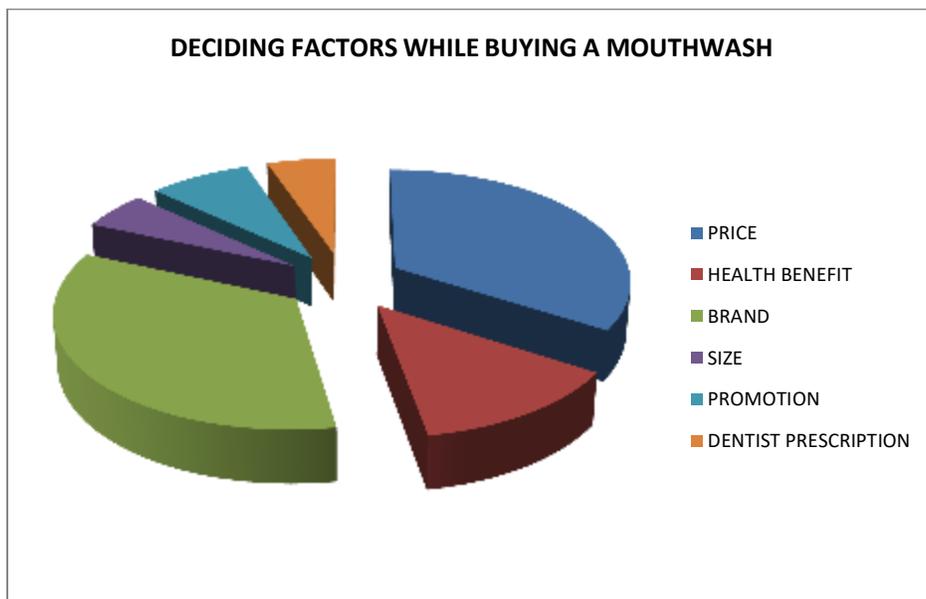
### 8) FLOSSING FREQUENCY

21.8% never flossed, 59.5% of individuals flosses once every few days and 18.6% floss daily .



### 9) DECIDING FACTOR FOR BUYING A MOUTHWASH ?

168 participants consider price while buying a mouthwash. 65, 169, 26, 39 are influenced by the health benefits a mouthwash presents, brand, size of the mouthwash bottle, promotion respectively while buying a mouthwash. However, 26 participants buy the mouthwash that is being prescribed by the dentist only.



### DISCUSSION

In this study, the use of mouthwashes decreases with advancing age which is in agreement with the result of research by Macfarlane TV<sup>[9]</sup>. Females (51.8 %) use the mouthwashes more than males (48.1%), according to this survey and it is consistent with the results of research by Winn et al<sup>[10]</sup>. There are different kinds of mouthwashes in the market such as antiseptic, plaque-inhibiting or preventive products. Majority of the participants (93%) in this survey use mouthwash

without consulting their dentists. Only 6.9% of the participants consult their dentist for which type of mouthwash they should go. According to the Pharmaceutical Journal article by Wilson. N, the patients should get advice from their dentist on which mouthwash is better for them to use<sup>[11]</sup>. Only 3.9% of responders look for ADA seal while purchasing the mouthrinses, whereas 96% of the responders do not look for ADA seal. ADA Seal for antimicrobial mouthrinses indicates that the Product data have

successfully undergone an intensive, nonbiased safety and efficacy review and is safe to use as directed<sup>[12]</sup>. Results of this survey shows that the people of Mississauga prefer Listerene brand over the other brands. As per the article in Business Insider , by John.S., Listerine is the best mouthwash overall and is ADA accepted and is clinically proven to have the ability to kill off germs that contribute to plaque buildup, bad breath and gum diseases<sup>[13]</sup>. In this research, the presence of dental caries, gum diseases , plaque and tooth sensitivity was demonstrated to be related to pattern of mouthwash use, which is supported in research by Farah .et al<sup>[14]</sup>, which states that mouthwashes has antiplaque and antigingivitis properties.86 % of candidates brushes twice a day and 13.6% of candidates responded that they brushes once a day, whereas 21.8% never flossed,59.5% of individuals flosses once every few days and 18.6% floss daily .According to survey by Arora.V, Brushing and flossing daily in adjuvant rinses helps to prevent the development of plaque<sup>[15]</sup>. There are various factors that participants looked for while buying the mouthwashes , but price and brand is the most deciding factor chosen by the respondents while purchasing .

## CONCLUSION

Mouthwash use in general population is associated with various determinants like Age, Sex, Education and Health. There is a need for educating the people regarding the importance of looking ADA seal while buying any dental products. It is important to know what kind of mouthwash is essential for the person to use , and if somebody is in doubt and does not know , then dentist must be consulted . Brushing and flossing should be done every day along with Mouthrinses to prevent oral diseases . Mouthwashes has various properties like it is antiplaque and antigingivitis and thus helps to reduce gum diseases. Factors like price, size, brand, health benefits influences the choice of buyer.

## REFERENCES

1. Kapoor Daljit, Gill Sanjeet, Singh Arshdeep, Kaur Inderpreet, Kapoor Pooja .Oral hygiene awareness and practice amongst patients visiting the Department of Periodontology at a Dental College and Hospital in North India. 2014; 5(2): 64–68. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4184328/>)
2. Bjertness Espen. The importance of oral hygiene on variation in dental caries in adults. 02 Jul 2009 (<https://www.tandfonline.com/doi/abs/10.3109/00016359109005893> )
3. Vibhute Akshay, Vandana K.L.. The effectiveness of manual versus powered toothbrushes for plaque removal and gingival health: A meta-analysis, 2012 Apr-Jun; 16(2): 156–160

- (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3459492/>)
4. Cepada M. Soledad, Weinstein Rachel, Blacketer Clair, Lynch Michael .C. Association of flossing/inter-dental cleaning and periodontitis in adults. *J Clin Periodontol.* 2017 Sep; 44(9): 866–871. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5601277/>)
5. Imran Muhammad, Shahid Rehman , Iashari Dur Mohammed . Is Tooth Brushing Alone Sufficient? A Clinical Study Evaluating How Oral Hygiene is Improved with the Usage of Oral Rinse and Dental Flossing Along Conventional Tooth Brushing *P J M H S Vol. 13, NO. 3, JUL – SEP 2019*
6. Davis R.M. .Rinses to Control Plaque and Gingivitis . 1992 Aug;42(4 Suppl 1):276-80. (<https://pubmed.ncbi.nlm.nih.gov/1399045/> )
7. Bhat Sudha, Pharm M, Ph.R. Mouthwash. Jun 20, 2018 (<https://www.medindia.net/patients/lifestyleandwellness/mouthwash.htm>)
8. Akande O.O , Alada A.R.A., Aderinokun G.A., Ige. A. O. Efficacy Of Different Brands Of Mouth Rinses On Oral Bacterial Load Count In Healthy Adults. *Vol. 7 (2004); 125 – 128 ISSN 1119 – 5096*
9. Macfarlane Tatiana V. , Kaweck Michal M. i, Cunningham Claudia , Bovaird Iain , Morgan Rochelle , Rhodes Kirstin , Watkins Ray. Mouthwash Use in General Population: Results from Adult Dental Health Survey in Grampian, Scotland. 2010 Oct-Dec; 1(4): e2. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3886070/>)
10. Winn D M , Diehl S R , Brown L M , Harty L C , Bravo-Otero E , Jr J F Fraumeni , Kleinman D V , Hayes R B . Mouthwash in the Etiology of Oral Cancer in Puerto Rico. 2001 ;12(5):419-29. (<https://pubmed.ncbi.nlm.nih.gov/11545457/>)
11. Wilson Narin, Patel Rakhee, Gallagher Jennifer, Chapple Iain. Question from practice: How to select the right mouthwash. 1 FEB 2014 (<https://www.pharmaceutical-journal.com/cpd-and-learning/learning-article/question-from-practice-how-to-select-the-right-mouthwash/11133479.article?firstPass=false>)
12. DePaola Louis G., DDS, MS and Spolarich Ann Eshenaur, RDH, PhD. Safety and Efficacy of Antimicrobial Mouthrinses in Clinical Practice. *Journal of Dental Hygiene*, Vol. 81, No. 5, October 2007
13. John Steven. The best mouthwash you can buy. May 17, 2019, 19:33 IST (<https://www.businessinsider.in/science/health/the-best-mouthwash-you-can-buy/articleshow/69376996.cms> )
14. Farah Camile S, McIntosh Lidija, McCullough Michael J. Mouthwashes. 1 December 2009 (<https://www.nps.org.au/australian-prescriber/articles/mouthwashes> )
15. Arora Vikram , Tangade Pradeep , T.L Ravishankar., Tirth Amit , Pal Sumit, and Tandon Vaibhav . Efficacy of Dental Floss and Chlorhexidine Mouth Rinse as an Adjunct to Toothbrushing in Removing Plaque and Gingival Inflammation – A Three Way Cross Over Trial. 2014 Oct; 8(10): ZC01–ZC04. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4253254/>)