

**Basic oral health knowledge and awareness among medical students of Punjab  
Institute Of Medical Sciences, Jalandhar - A Cross Sectional Survey**

**Abstract****Background :**

A healthy mouth enables not only nutrition of the physical body, but also enhances social interaction and promotes self-esteem and feelings of well-being. The burden of periodontal diseases is comparatively higher in developing countries. Oral hygiene behaviour and seeking oral health care depend on a number of factors.

**Aim:**

To assess the oral health knowledge, attitude and practice amongst the medical students .

**Material and method:**

A self structured ,pre-validated questionnaire consisting of 15 close ended questions was given to 300 medical students ( 2nd and 3rd year) of Punjab Institute of Medical Sciences, Jalandhar. It was carried out to assess the knowledge of oral health and oral hygiene among the medical students.

**Results:**

The results showed good oral health knowledge among medical students. Most participants were aware of the importance of good oral hygiene practices, particularly daily tooth brushing and its technique.

**Conclusion:**

Knowledge of oral health is a fundamental prerequisite for healthy behaviour

**Key Words:** Knowledge, Oral health, Medical practitioners, Medical Students

**Introduction:**

According to WHO, health has been defined as 'a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity' (1948). [1]

For the field of dentistry, this new perspective on health suggested that the ultimate goal of dental care, namely good oral health, should no longer merely be seen as the absence of caries or periodontal disease; a patient's mental and social well-being should be considered as well. [2]

Dental caries ,gingivitis, and bad breath are the major public health problems and the dental plaque is the main etiological factor in the causation of periodontal disease. [3,4]

Oral hygiene behavior and seeking oral health care depend on a number of factors. Keeping this in mind, WHO has strongly recommended the integration of oral health promotion into general health care for creating awareness among people regarding this fact. [5] The regular and proper mechanical method of cleaning of teeth, the periodic dental checkup are important practices in preventing the oral diseases and they also encourage the maintenance of good oral hygiene. [6]

The medical students are far more likely to encounter underserved and vulnerable populations than dental students. They should have optimal knowledge regarding oral health so that they can provide the required oral health education and guide or refer to a dental surgeon as and when required. [7,8] The today's students will provide health services in the future and will be responsible for public oral health education, it is important to study their oral health knowledge, attitude, and practice. [9]

#### Methods:

After IEC approval a cross-sectional questionnaire based survey was carried out amongst 300 Medical students (2nd and 3rd year) of Punjab Institute of Medical Sciences, Jalandhar, in Punjab. A self-structured, pre-validated questionnaire consisting of 15 close-ended questions was given to the participants. All the responses were analysed and results were depicted with bar graphs and figures.

Results : Depicted with figures and graphs

#### Discussion

##### Oral Health Prevention

Dental caries, gingivitis and bad breath are the major public health problems and the dental plaque is the main etiological factor in the causation of periodontal disease. For removal of dental plaque, the regular and proper mechanical method of cleaning of teeth is indisputably the easiest and most effective measure to prevent periodontal diseases. [10,11,12] The effective plaque removal depends, not only on the type of toothbrush used but also, on the proper brushing technique because uncontrolled tooth brushing in prevention of dental caries has always been questioned. [13,14,15] Brushing and flossing are practices to maintain good dental health, along with regular dental visits [16].

In the present study, 93% of participants used tooth brush and tooth paste as cleaning aids (Graph-1) which is comparable with studies done by Kumar H and Tadin et al who observed it in 99.33% and 85.7% of respondents respectively [9,17]. It was also noted that out of 54% (Fig -1) who were aware about flossing ,only 37%(Fig-2) were knowing about its correct technique.The similar study conducted by Mabithashri noted that 46.59% of the medical students had the habit of using dental floss .[18] The study done by Tadin et al observed that only 26.7% of students were using the dental floss[17]

In the present study 92% of participants were using the vertical, horizontal and circular motion for brushing. (Graph-2) In the study done by Mabithashri it was noted that 68.18% of medical students were brushing their teeth in circular motion. 17.05% and 14.77% were brushing in vertical and horizontal direction respectively. [18]

The duration and frequency of toothbrushing are known to produce the strongest effect on plaque removal and should be emphasized in dental health education [19]

Graph-3 is showing that 61% of the respondents were taking one minute for brushing and 11% were taking two minutes for that . The 24 % medical students were taking 30 seconds only which was very less time for proper cleaning of teeth. But there were a few respondents[4%]who brushed for more than five minutes. In another study it was observed that 71% of respondents brushed their teeth for two to three minutes and only 2.5% did so for more than five minutes.[17]

Coming to the frequency ,65% of the students in the present study answered that they brushed their teeth after every meal.(Graph -4) In another study it was noted that 41.3% brushed their teeth once a day, 10.5% of them brushed twice a day and 1.3% of them brushed more than twice daily [20] The study done by Tadin et al noted that 85.7% of respondents were brushing several times a day [17]

It is being reported that an individual's preference and perception in selection of a manual toothbrush were determined by his or her financial situation, education, personality, and attitude to the oral health.[21]

In the present study ,when the students were asked about choice of brushes,41% were after the brand followed by 38% who considered the texture of bristles, 11% selected the brushes by their design and only 10% were taking money into account.(Graph -5) But in another study selection of toothbrushes based on brand, texture of bristles and cost was seen in 20.3%, 6.9% ,37.6% respectively.[22]

The American Dental Association recommends changing of toothbrush every 3–4 months depending on the fraying of the toothbrush bristles. Abraham *et al* stated that the medical or the dental practitioners were well aware of the toothbrush contamination by microorganisms.They were clear about changing their toothbrush in a span of 2–3 months.[23]

But in present study the majority (70%)(Fig -3 ) was changing the toothbrush after 6 months wheres it was only 27% who changed the brush after 3 months. Tadin etal noticed good response of 59.7% and 12.7% who changed their brush every 3 months and every 6 months respectively. [17] 19%of the study participants got their dental check up regularly. (Fig -4)When asked about for not getting their routine dental check up, 42% gave “fear of pain” as the reason .(Fig -5)The fear of pain is one of the reasons why people would not want to visit a dentist was observed in various study [24,25,26]. But in another study done on medical doctors, medical students and nurses it was noticed that only 4% of participants would not want to visit the dentists for fear of pain, as the study was conducted on medical professionals who would have used self medication to control pain.But they gave other reasons of busy work schedule (44%) and absence of dental complaint (47%)for not visiting the dental clinic regularly[27].

Scaling and polishing removes deposits such as plaque and calculus (tartar) from tooth surfaces. It is also known as prophylaxis, professional mechanical plaque removal or periodontal instrumentation.[28] But in the present study ,62% never got their teeth cleaned. There were percentages who got their teeth cleaned twice a year and once a year i.e 27% and 11 % respectively. (Graph -6)

For controlling the mouth odour 51% preferred plain water for rinsing , 33% were using mouthwash and 16% were rinsing with salty water. (Graph -7).In another study done on medical students, it was noticed that only 19% were using the mouthwash for oral hygiene .[9]

### **Dietary Habits:**

Nowadays, the people are conscious about their general and oral health. Soft drinks have many potential health problems, including dental caries and enamel erosion [29]. In the present study, occasional intake of soft drinks was seen 68% respondents and there were 23% of the subjects who never consumed the soft drinks. (Graph-8) Consumption of junk food 2-3 days a week was noted in 70% of the respondents and 2% were the respondents who did not take the junk food at all. (Graph -9) Globalization and urbanization have led to wide availability of low-cost junk foods at stores, within a 5 min walk. [30] In another study 60.8% respondents agreed that sports drinks and energy drinks can damage the tooth surface and cause erosion. [17]

When it comes to health-related issues Medical students are considered as well-informed and well-educated group of adolescents. [31] But various studies conducted in the past have shown that although medical students had a greater knowledge of health issues related to diet, lifestyle and exercise, their practices were not very different from those of non-medical students. [32,33]

### **Conclusion:**

Knowledge of oral health is a fundamental prerequisite for healthy behaviour, which allows an individual to take measures to protect their own health. In general, the results showed good oral health knowledge among medical students. Most participants were aware of the importance of good oral hygiene practices, particularly daily tooth brushing and its technique. Medical students of today are the doctors of tomorrow and since their practice serve as example for their patients. Secondly oral health motivation programme can be included in medical curriculum which will help in bridging the gap between medical and dental profession because in Indian population medical doctors are the primary caregivers to the regional population.

**Conflict of Interest - Nil**

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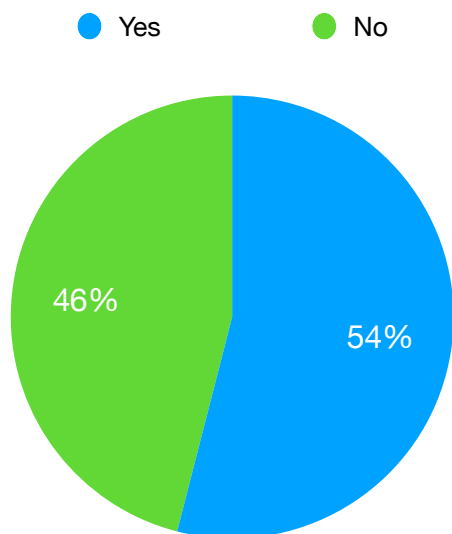
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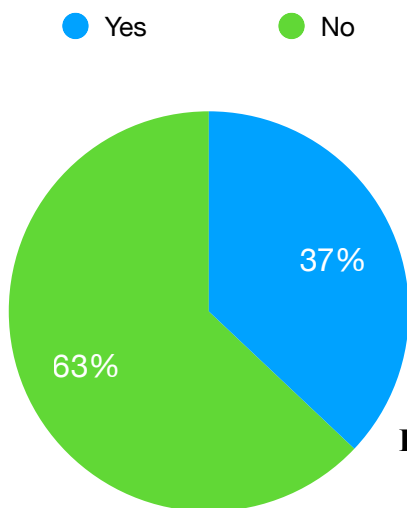


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**FIGURES**

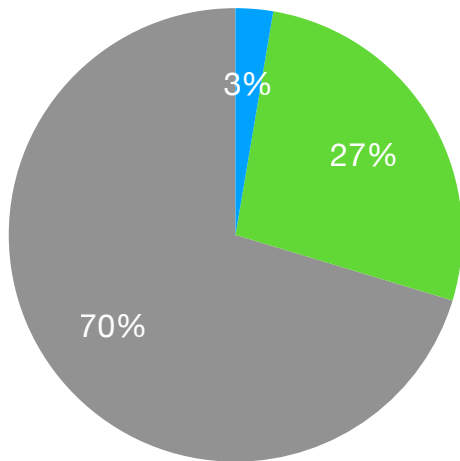


**Fig 1. Do You know about dental flossing ?**



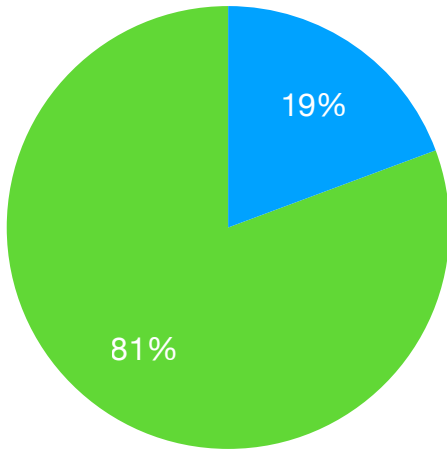
**Fig -2 Do you know the correct technique of dental flossing?**

● After 2 months    ● After 3 months    ● After 6 months



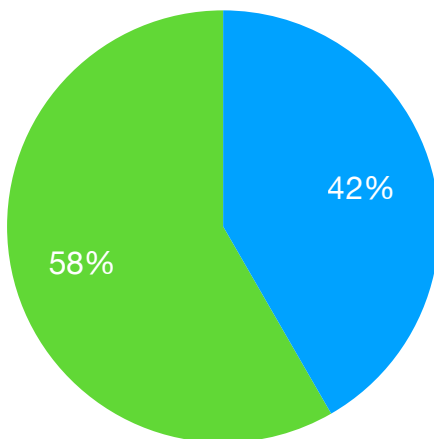
**Fig-3 After how many months you change the brush?**

● Yes    ● No



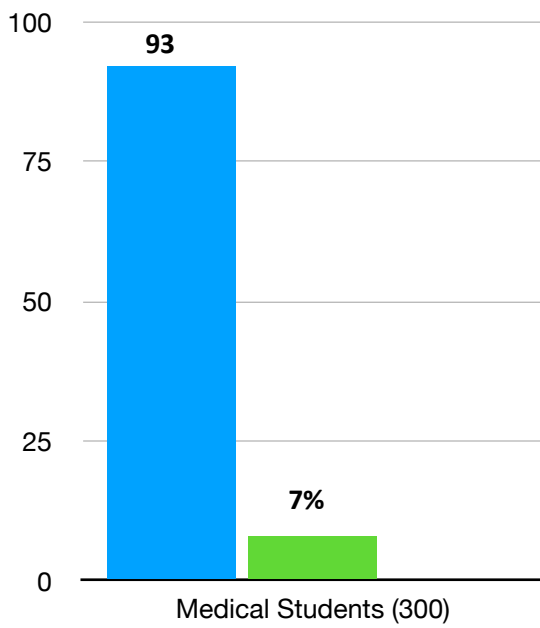
**Fig-4 Do you visit dentist for periodic dental check up?**

● Fear of Pain    ● No dental complaint



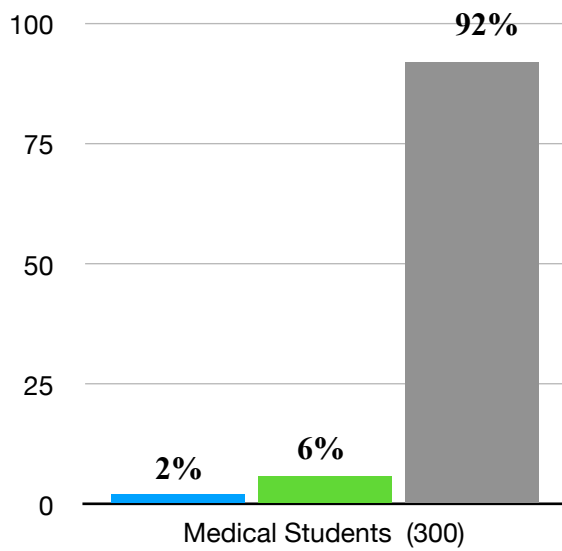
**Fig -5 Why would you not want to visit a dentist ?**

■ Toothbrush and Tooth paste   ■ Toothbrush,Toothpaste and floss   ■ Floss only

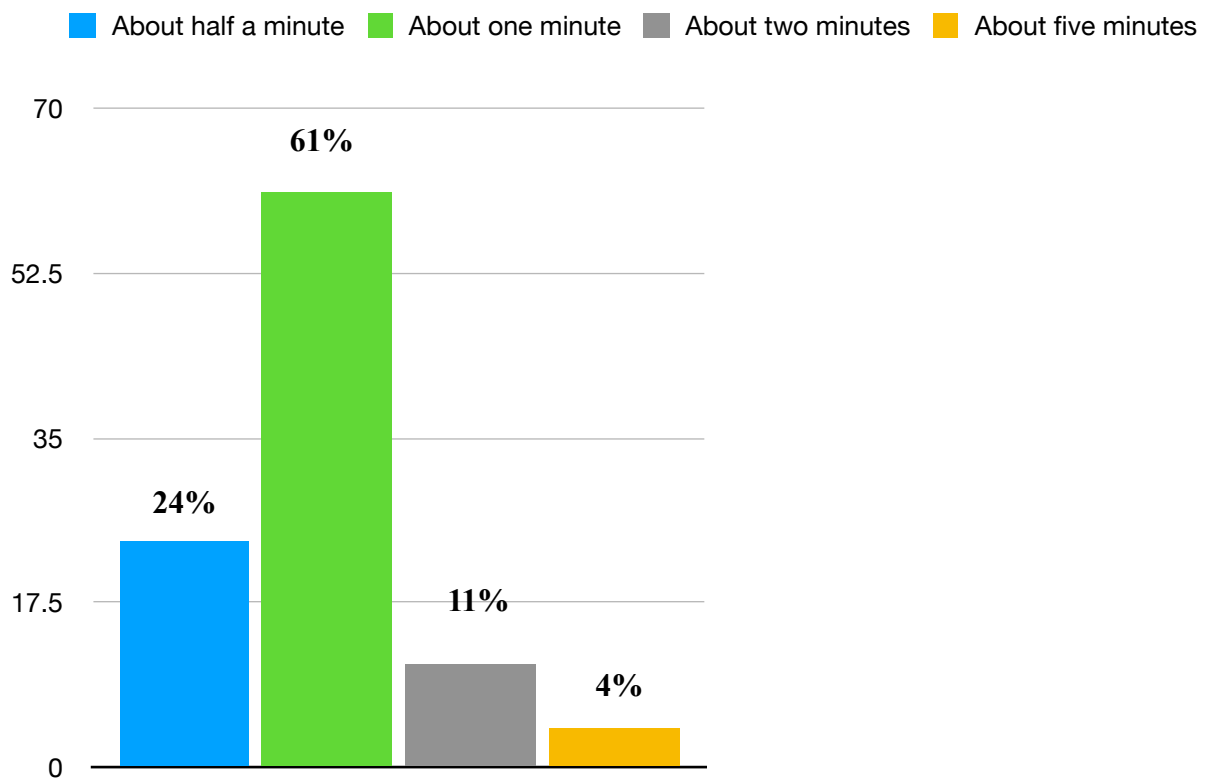


**Graph-1 What do you use to clean your teeth ?**

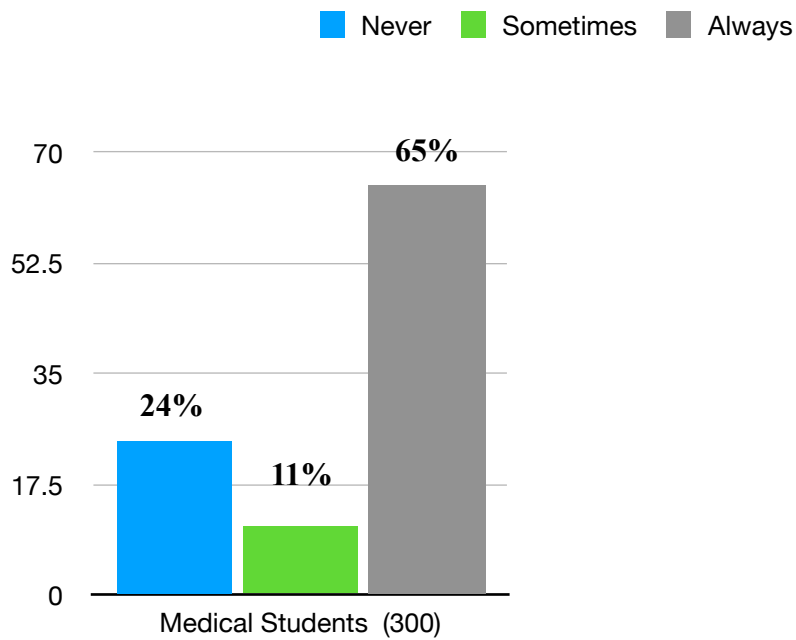
■ Vertical motion   ■ Vertical and Horizontal motion   ■ Vertical,Horizontal and Circular motion



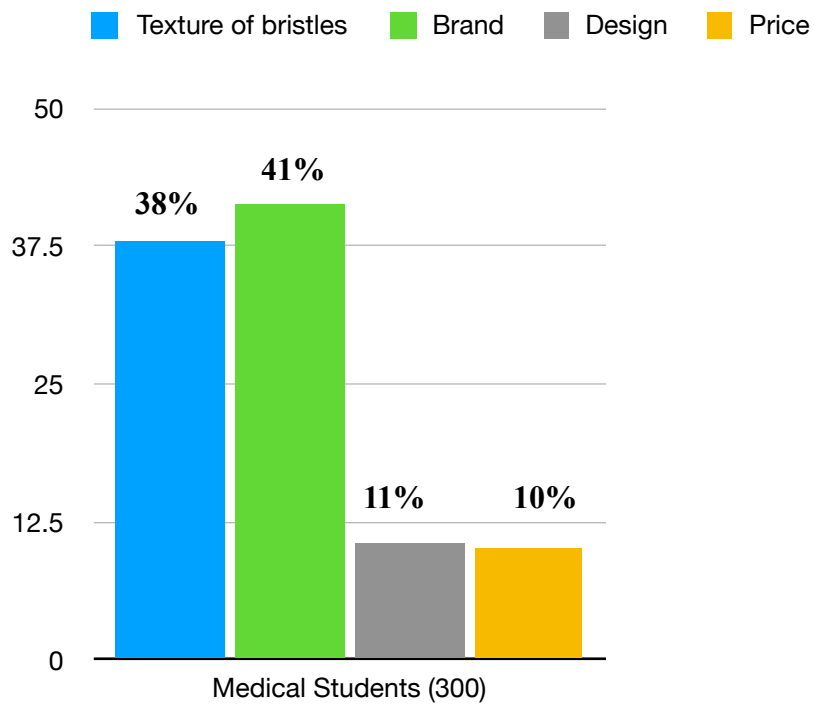
**Graph -2 Technique used while brushing teeth**



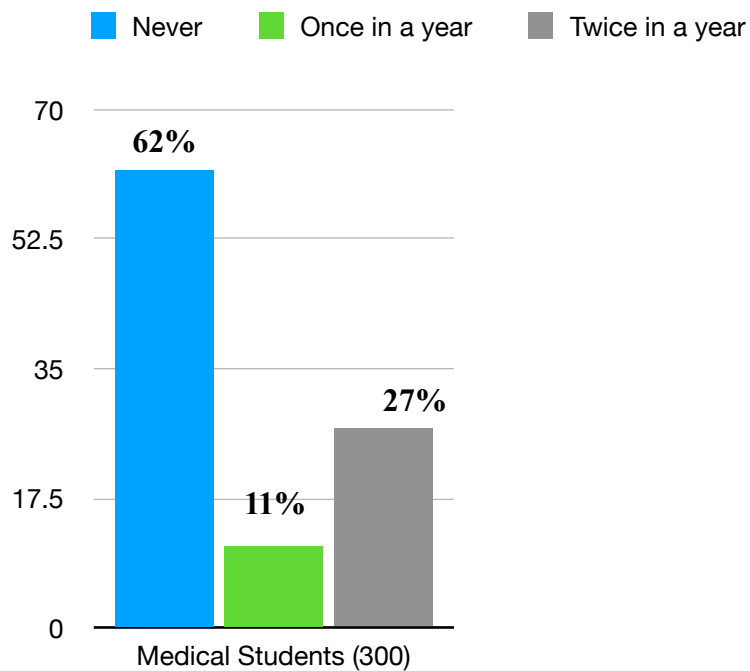
**Graph-3 Time taken for brushing the teeth?**



**Graph -4 Do you normally brush your teeth after your meal ?**

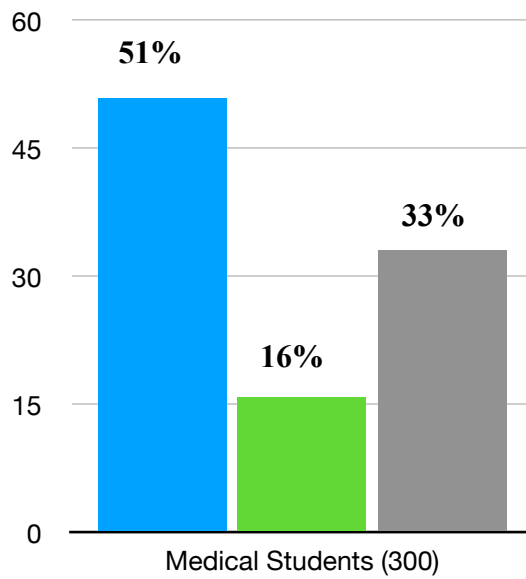


**Graph 5-What is your choice for brushes ?**



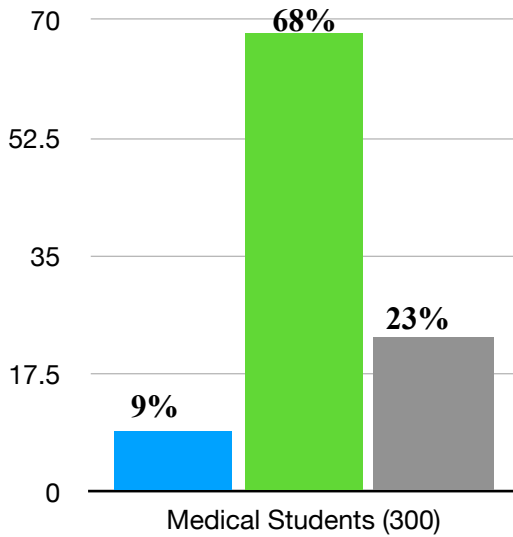
**Graph 6-How often do you get your teeth clean by dentist ?**

Regular rinse with water   Rinsing with salty water   Using Mouthwash

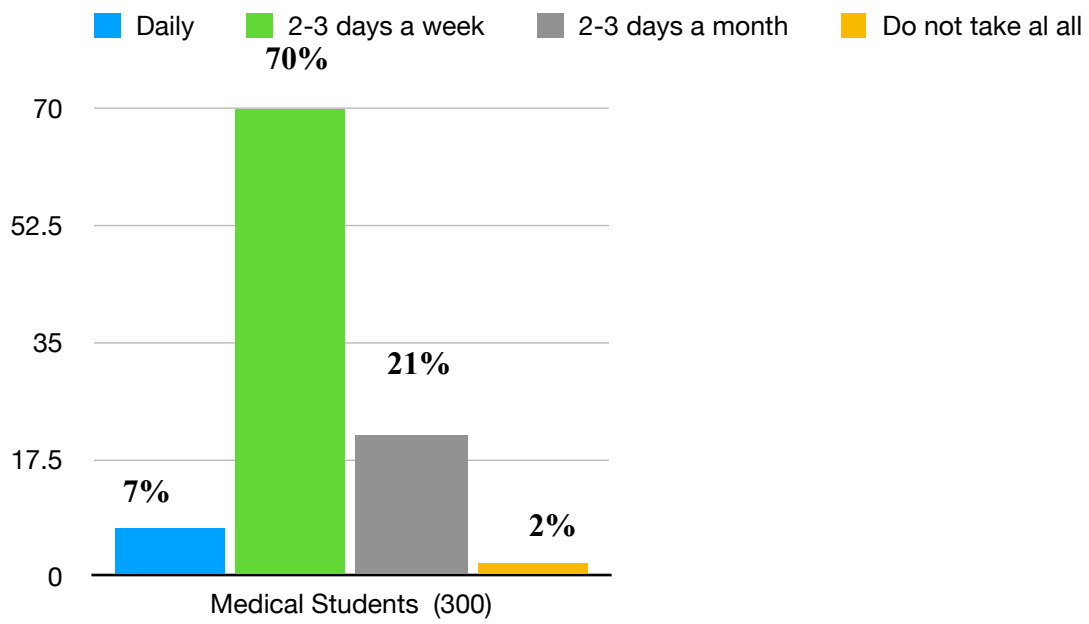


**Graph 7- How do you control your mouth order?**

Everyday   Occasionally   Never



**Graph 8- How often you consume soft drinks ?**



**Graph 9- How often you take the junk food?**