



AWARENESS OF POLISHING PROCEDURE AMONG UNDERGRADUATE DENTAL STUDENTS

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ABSTRACT The routine oral hygiene procedure comprises oral prophylaxis followed by polishing. Polishing helps to smoothen the tooth surface thereby producing an lustrous and glossy surface. With nearly 30,000 students graduating from dental schools across India every year they form the backbone of future dentistry across the nation and the globe. The knowledge about polishing procedure among dental students is not widely recorded and it's the need of the hour to ensure that the student's present knowledge level to be recorded and if any unawareness present should be eliminated through proper training. This study was designed to record the current status on awareness of polishing among the dental students. An 20 point questionnaire was formulated and the responses were recorded. The resultant data are tabulated and conclusions were drawn.

KEYWORDS : Dental Polishing ; Knowledge ; BDS ;

INTRODUCTION:

The first thing which comes to our mind about a person is their smile. Smile is compromised of many factors but the major two are the teeth and the gingiva. Gingival health is maintained with proper oral hygiene procedure. The routine oral hygiene procedure comprises oral prophylaxis followed by polishing. Polishing helps to smoothen the tooth surface thereby producing an lustrous and glossy surface^[2]. Stains on the surface of the tooth caused due to extrinsic factors are removed with the help of polishing. The American Academy of Periodontology defines Polishing as "the removal of plaque, calculus and stains from the exposed and unexposed surfaces of the teeth by scaling and polishing as a preventive measure for the control of local irritational factors"^[1]. Patients generally prefer polishing to be done as they feel it whitens the tooth and gives them the traditional "Hollywood smile".

With nearly 30,000 students graduating from dental schools across India every year^[3] they form the backbone of future dentistry across the nation and the globe. The knowledge about polishing procedure among dental students is not widely recorded and it's the need of the hour to ensure that the student's present knowledge level to be recorded and if any unawareness present should be eliminated through proper training. This study was designed to record the current status on awareness of polishing among the dental students. This study will set as a forerunner for further research in this area.

MATERIALS AND METHODOLOGY:

An informative 20 point questionnaire(Annexure 1) specific to the investigation was formulated to record all the necessary relevant particulars.

Sample size: An total number of 400 samples were recorded among them 60 samples didn't fall into the inclusive criteria hence eliminated.

Inclusive criteria: Students in the clinical year of Undergraduate course(BDS) were included in the study.

Exclusion criteria: Students in the preclinical year of BDS and post graduate students.

Method of collection of sample:

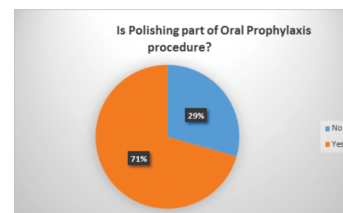
Upon obtaining approval from the institutional ethical committee board, the participants were informed about the study and their consent was obtained. Beside the direct enquiry of obtaining information, e-questionnaire was formulated with the help of Google forms and they were circulated through email and social media with a

view to ascertain the awareness level of polishing procedure among dental students.

The data thus collected were tabulated and certain conclusions were drawn.

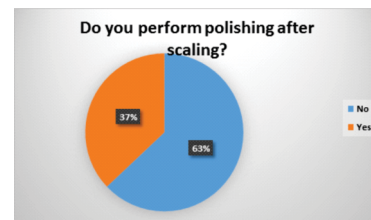
RESULTS:

Total number of responses received was 400, among them 340 samples fell into the inclusive criteria.



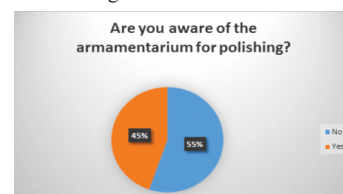
(Fig 01)

79% of the participants agreed that polishing is part of the oral prophylaxis procedure



(Fig 02)

63% of the study population revealed that they perform polishing after scaling while the remaining didn't.

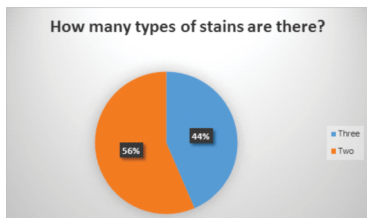


(Fig 03)

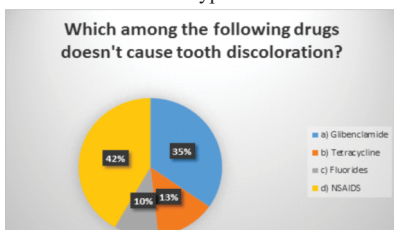
55% of the participants were aware of the armamentarium



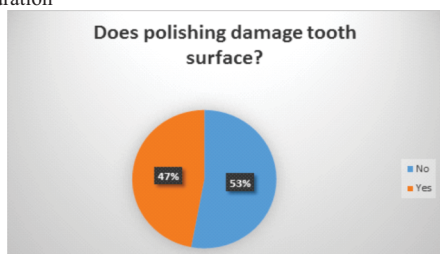
(Fig 04)
43% chose xylitol products as not an polishing agent



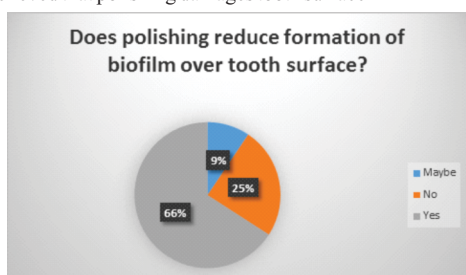
(Fig 05)
56% chose that there are two main types of stains



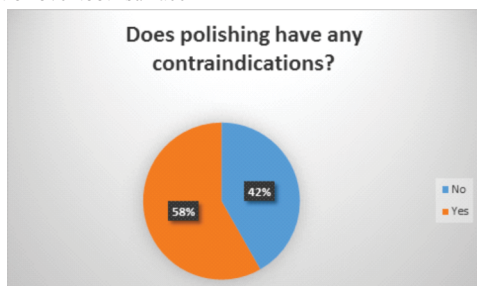
(Fig 06)
42% correctly chose NSAIDS as the drug that doesn't cause tooth discoloration



(Fig 07)
47% believed that polishing damages tooth surface



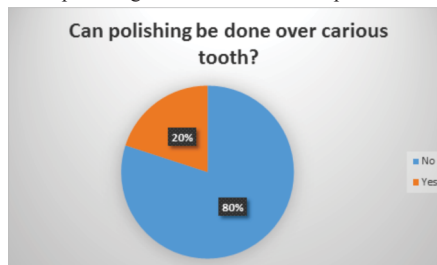
(Fig 08)
66% of the participants agreed that polishing reduces biofilm formation over tooth surface



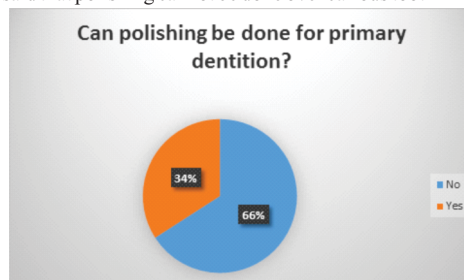
(Fig 09)
58% said that polishing has contraindications



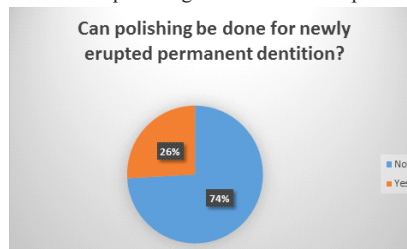
(Fig 10)
84% said that polishing cannot be done over exposed dentin



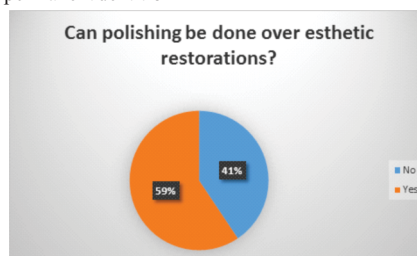
(Fig 11)
80% said that polishing cannot be done over carious tooth



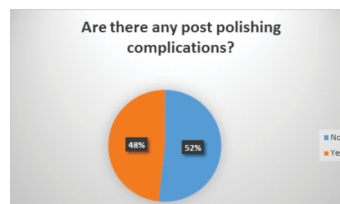
(Fig 12)
66% percent said that polishing cannot be done for primary dentition



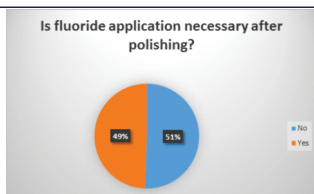
(Fig 13)
74% participants believed that polishing cannot be done over newly erupted permanent dentition



(Fig 14)
59% study population said that polishing can be done over esthetic restorations

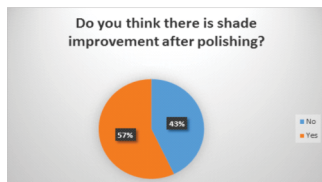


(Fig 15)
48% participants said that there are no post polishing complications



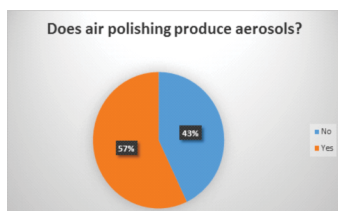
(Fig 16)

51% participants said that fluoride application is not necessary after polishing



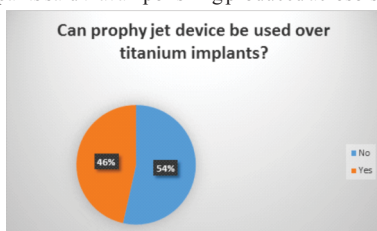
(Fig 17)

57% participants expressed that there is shade improvement after polishing



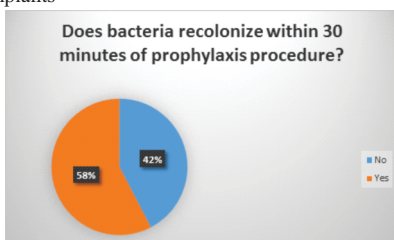
(Fig 18)

57% participants said that air polishing produced aerosols



(Fig 19)

54% participants expressed that prophylaxis device cannot be used over titanium implants



(Fig 20)

58% study population agreed that bacteria recolonize within 30 minutes of the prophylaxis procedure

DISCUSSION:

An absolute majority(79%) of the students do know that polishing is part of the oral prophylaxis procedure^[1](Fig 01) implicating that there is an wide theoretical base on this aspect and their practical coincidence has to be found. Even though an minority of the study population(37%) state that they do not perform polishing after scaling(Fig 02),revealing that there is an gap between the theory and practice of polishing procedure. When questioned about the armamentarium an mixed response was received (Fig 03) divulging that there is no clarity among the participants on the exact nature of instruments used for polishing. The participants chose xylitol products as not an polishing agent but it is one among the most widely used polishing paste^[4] (Fig 04).Participants were aware that there are mainly two types of stains viz., extrinsic and intrinsic as majority(56%) told that there were two types of stains(Fig 05). Drugs being one of the agents of tooth discoloration especially drugs such as tetracycline, participants were asked about the drug that doesn't cause discoloration of tooth(Fig 06) surprisingly 13% chose tetracycline whereas majority(42%) chose the correct NSAIDS^[5]. Improper or inadequate

polishing has found to be causing more damage^[4] than good to the tooth but the participants answered the other way on majority(Fig 07). Proper polishing has always been found to have significantly reduce the biofilm formation over the tooth surface^[6] and majority of the participants agree with it(Fig 08). With regard to any procedure polishing also does have contraindications^[4] and the participants agree with the same(Fig 09). Exposed dentin^[7,8] being one of such contraindication majority of the participants accept that they don't do polishing over it(Fig 10). Dental caries^[7,8] being one of the commonest oral disease is also a contraindication for polishing and its also correctly chosen by the samples(Fig 11).An 34% samples say that polishing can be done for primary dentition^[7,8] (Fig 12) and an 26% samples say that polishing can be done over newly erupted permanent tooth^[7,8] (Fig 13) but both are contraindicated as they would not be fully mineralized and it can lead to dental exposure. 59% of samples reveal that polishing can be done over esthetic restorations^[7,8] (Fig 14) but it is also an contraindication as there is an high chance of surface damage caused by the polishing instruments. Upon asking about the post polishing complications^[9] majority of the participants believe that there is no complication(Fig 15) but conditions such as post polishing sensitivity, abrasion, etc^[2]. Ideally fluoride application after polishing is necessary as the surface enamel formation takes at least three months^[4] after polishing but the participants gave mixed response on fluoride application post polishing(Fig 16). 57% participants think that there is shade improvement post prophylaxis(Fig 17) but ideally the results are better and more prominent with bleaching than polishing^[10]. Participants are aware of the health hazard of aerosols production when air polishing is used^[11] (Fig 18) and the operator has to take adequate precautions before the start of procedure in order to reduce the infection control by pre-procedural rinsing of the system. With an wide increase in use of implants over the last decade this question was put forth to evaluate the knowledge on implant surface cleaning with devices such as prophyljet^[7,8,12], majority of the participants were not aware and felt that it cannot be used over the implant surface (Fig 19).Finally when the participants were asked upon the knowledge on recolonization of bacteria and formation of biofilm over the tooth surface within 30 minutes they do agree that there is biofilm formation^[4](Fig 20),salivary pellicle tend to form over the tooth surface within 30 minutes and those adsorbed protein layers not only act as lubricant in order to serve as protection against attrition and abrasion, they also inhibit demineralization by acting as perm selective membrane. They also serve as an reservoir for various agents that promote remineralization but the duration of which is unclear^[13].

CONCLUSION:

The basic objective when the study was designed was to find out the awareness level of polishing procedure among the dental students with an unbiased approach. With the frequent update of curriculum and regular CDE programs students have an constant information with the technologies and techniques around them. Even though there are so many literatures and texts on the importance of polishing after prophylaxis its practical implication is still doubtful. The knowledge gap between when to and when not to do polishing does exist among the student community. Proper pharmacological knowledge on the drugs causing tooth discoloration has to be frequently updated with the help of literatures. With increased use of implants in tooth replacement protocols students do need to update themselves with the knowledge of maintenance of implants. Furthermore frequent programs have to be conducted in order to ensure that an practical approach is taken by the students to learn and perform the ideal polishing technique hence the tooth and gingiva stays healthy for a longer period. This was a primitive study conducted among a small number of student community, further studies on this sector will be helpful to get better information thereby understand the exact situation across the globe.

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