



IS DISCOLOURATION OF TOOTH A PSYCHOLOGICAL BAGGAGE? WHAT ARE THE CHANCES OF PATIENTS PREFERRING BLEACHING OVER VENEERS - A KAP SURVEY

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ABSTRACT:

INTRODUCTION: Discolouration of teeth among adolescents has psychological effects and decreases their confidence. Teeth are important for good appearance, chewing, and for speech. Abnormally discoloured teeth affect them mentally. **AIM:** The aim of the study is to determine whether discolouration of teeth is psychological baggage. **MATERIALS AND METHODS:** this study involved the discoloration of a tooth and psychological baggage conducted among the general population above the age group of 18 yrs. A well questionnaire comprising 17 questions covering the knowledge, awareness, attitude, perception was framed and administered to the participants through google forms. Survey was conducted among 100 college students. **RESULTS:** In that 49% male population and 51% female population among them surveys have been conducted. The association between groups was assessed by Chi Square test where $p < 0.05$ was considered statistically significant. Our results showed a p value of 0.545 which was statistically not significant. **CONCLUSION:** Awareness camp and preventive measures should be taken to control the psychological baggage of discoloration of teeth for the patients who prefer bleaching over veneers. **KEYWORDS:** Bleaching, Discolouration, Eco friendly, innovative technology, patients, psychological baggage, tooth, veneer.

INTRODUCTION

Noticeable discoloration of teeth has been a psychological baggage in the current social era. Tooth discoloration is one of the reasons patients seek dental care. Discoloration of the tooth can erode the sparkle from a smile. Mechanisms of staining is the main reason behind tooth discoloration which can influence the treatment plan.¹. Main causes of tooth discoloration are classified into intrinsic, extrinsic factors. Extrinsic discolouration factor depends on Dietary chromogens and other elements which deposit on the tooth surface or in the pellicle layer. intrinsic discoloration factor depends on results from systemic or pulpal origin, while internalized stains which enter the dentine through tooth defects such as cracks on the tooth surface ².Posteruptive



factors are pulp necrosis, iatrogenesis and aging, local discoloration caused as a result of trauma, periapical infection, amalgam staining, extraction ³ . Tooth discoloration is the main cause of significant cosmetic problems, when it affects the anterior teeth, which is usually exposed when a patient smiles. Anterior tooth discoloration is one of the reasons for dental treatment ⁴ .

Nowadays more people are preferring treatment for tooth staining and discoloration. Physical appearance and a pleasing smile has influenced the current generation and it is affecting a person mentally and physically ⁵ . Many techniques have been introduced for the treatment of discoloured teeth in that bleaching is one of the most significant non-invasive, conservative techniques. Bleaching technique uses the application of hydrogen peroxide in varying concentration on the topical surface of the tooth. Of which Hydrogen peroxide is said to be the most commonly used bleaching agent as it accelerates the bleaching process⁶. The other treatment option for the management of discoloured teeth is the use of veneers for the esthetic management of discolored teeth.

The veneer has a long term outcome of more than 6.5years.⁷ Ceramic veneers are more used and they are well fabricated from feldspathic or glass ceramic and have good clinical surveillance ⁸ . But the main disadvantage of veneers is that it requires tooth reduction and it's a more invasive treatment option. Our team has extensive knowledge and research experience that has translate into high quality publications ^{9-18 19-22 23-27 28} .Hence, the aim of the study is to determine whether discoloration of the tooth is a psychological baggage and what are the chances of patients preferring bleaching over veneers.

MATERIALS AND METHODOLOGY:

This study involved a well-structured questionnaire comprising 17 questions covering socio demographic, knowledge, attitude, perception was framed, circulated among 100 general population and administered through an online google form link.

In this study setting is a survey and the pros are that it is economical, easy to create, gather larger, quick interpretation, wide reach and cons include the altered response rate, survey fatigue, homogeneous population. The study is approved by the scientific review board of Saveetha dental College, Chennai. A simple random sampling method was done. measures taken for minimising the sampling is based on the internal and external validity, minimizing error in questions and avoiding the leading questions. internal validity is based on risk factors, complication, bleaching among the general population. External validity is based on the awareness, research conclusion and study outcome. output variable is associated with demographic information, social media, output variables are represented using pie charts for each output. Each output variable was collected as ordinal data and the collected data were represented as pie charts and bar graph. A statistical test was done using SPSS software. Statistical test used descriptive analysis and frequency percentage.



RESULTS:

The survey is conducted among the 100 general population above the age of 18 years. A set of 17 questions was created based on knowledge, attitude and perception and the data obtained was analysed and plotted in the form of a pie chart using SPSS Software. The age distribution among the study participants was a maximum 42% who belonged to the age group of 25-35yrs, 24% belong to the age group of 35-45 years ago, 11% belong to the age group of others who are above 18 years (fig-1). Among the participants 49% belonged to male population and 51% belonged to the female population (fig-2). From these 17 questionnaires a statistically significant difference was found.

Knowledge based questions:

A question, Is discolouration of tooth a psychological baggage was asked, for which 59% responded by saying yes and 41% said no, question 2 included the possible reasons for the cause of tooth discolouration, 28% said it cause due to tobacco, 19% said that it cause due to consuming food, 14% said it cause to other things, and majority 39% said that it cause due to consumption of beverage. For this question in the (fig-4) psychological effect due to tooth discolouration, in this majority 45% said that it prevents smiling, 28% said that it prevents answering the questions, and 27% said that it prevents interaction with the people. In this question it explains about the awareness of tooth bleaching, in this majority 56% were aware about the bleaching of teeth and 44% of the population were not aware of tooth bleaching. In this the question the graph represents the factors of whitening depends, in that majority 39% said that it depends on tooth size, 18% said that it depends upon the fluctuation of irradiation, 14% said that it depends on the ph of bleaching agent and 29% said that it depends on all the above factor.

Attitude based questions:

For the question people fear of eating food due to tooth discolouration, in that 57% said that they are fear of eating food due to tooth discolouration, 43% said no that they are not fear of tooth discolouration, in the (Fig- 5) graph represents the people who think that bleaching of tooth cause side effects, in that 46% said that it cause side effects, and majority 54% said no it does not cause side effect. The (fig- 6) graph represents the percentage of people who feel about tooth discoloration, in that 54% said that they feel about the tooth discoloration, 46% of the population doesn't feel or think about the tooth discoloration. The question represents the percentage of prevention methods of tooth discoloration, in this majority 47% said that it can be prevented by oral heath, 34% said that it can be prevented by habits and 19% said that it can be prevented by eating lifestyle. In the question can dental restoration such as crown or veneer be bleached, in that majority 52% said yes it can be bleached and 48% said that it cannot be bleached. In the (fig-8) represents the percentage of whitening of natural teeth, the procedure can be done at home, in that 64% said yes it can be done and 36% said it cannot be done.



Practice based questions:

From this question, last visit to the doctor for what purpose, 38% said that due to cosmetic purposes, 36% said due to pain, 11% said due to regular dental checkup and 15% said due to all the purposes (fig-3). In (fig- 7) represents the appearance felt by tooth discoloration, in that 52% said yes they feel appearance affected, and 48% said no they don't feel appearance affected. In this it represents the prevention of tooth discoloration, in that 40% said that by avoiding staining, 30% applied a whitening agent, 19% said cleaning daily, 11% said other causes. In this question it represents the time taken for whitening procedure in that 53% said that it takes 30-60 min, 30% said that it takes 1 hr and 17% said that it takes 2 hrs.

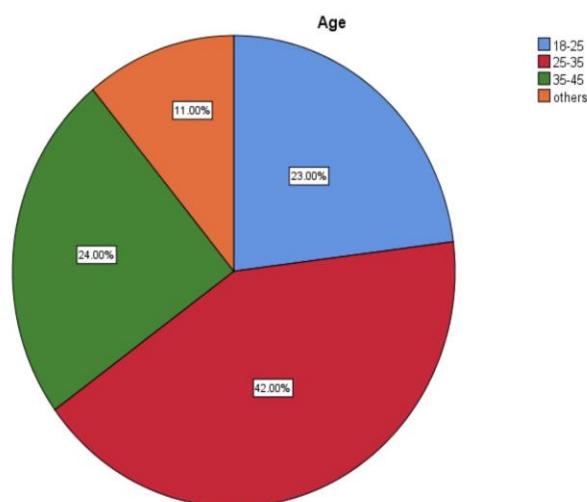


FIGURE:1

Pie chart represents the percentage distribution of age among the participants. 23% of participants who had responded were belong to the age group of 18-25 yrs (blue), 42% were 25-35yrs (red) and 24% were belong to 35-45 yrs (green) and 11% were belong to other age group (orange).

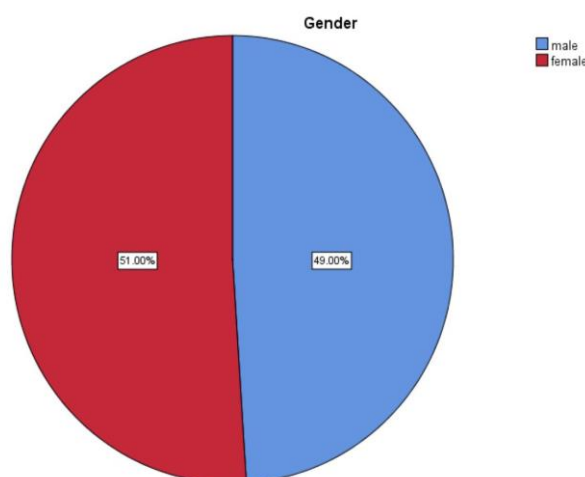


FIGURE: 2



Pie Chart represents the percentage distribution of gender among the participants. 49% of participants who had responded were male(blue) and 51% were female (red).

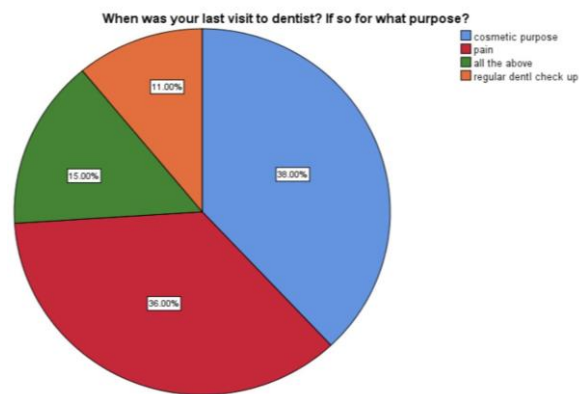


FIGURE:3

Pie charts represent the percentage of distribution of participants visiting the dentist. Among that 38% visit the dentist for cosmetic purposes(blue), 36% pain (red), 15% all the above(green) and 11% due to regular dental check up(orange).

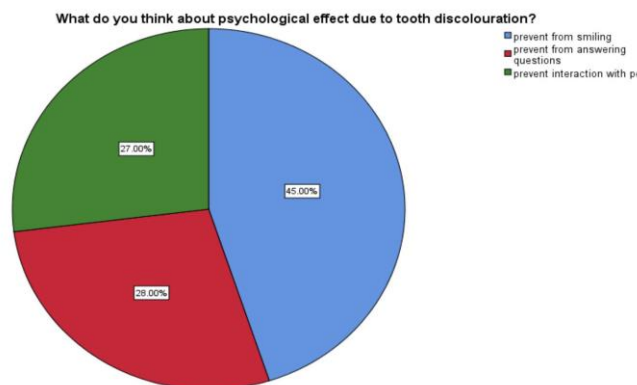


FIGURE:4

Pie chart represents the percentage distribution of psychological effect due to tooth discolouration. 45% said that it prevented them from smiling(blue), 28% said that it prevented them from answering the questions(red) and 27% said that it prevented interaction with the people(green).

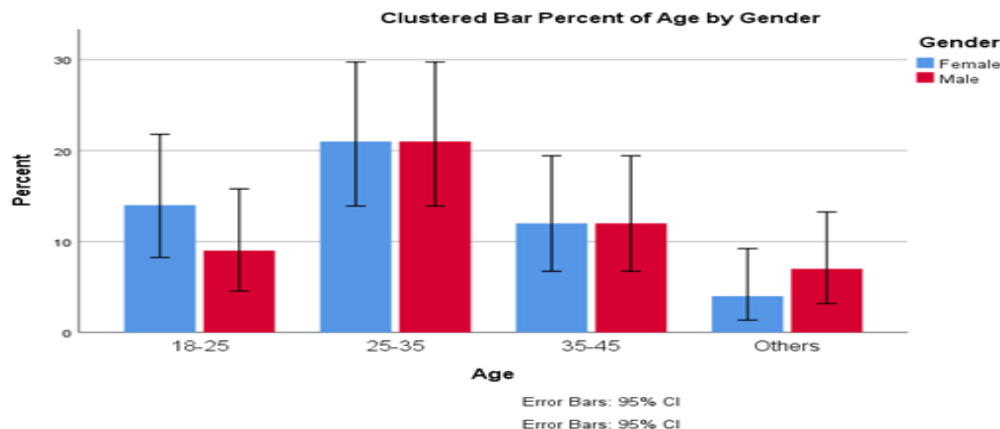


Figure: 7 Bar chart represents the association between age and gender. X- axis represents the age group and Y axis represents the no.of responses. The blue colour represents male population, and the red colour denotes the female population. Most of them belong to the age group 25-35 yrs(21%). Hence male and females between 25-35 yrs were more aware, through an analysis it is found to be statistically not significant.(p-value= 0.601, df value= 3 , chi square value= 1.866) (p>0.05 statistically significant).

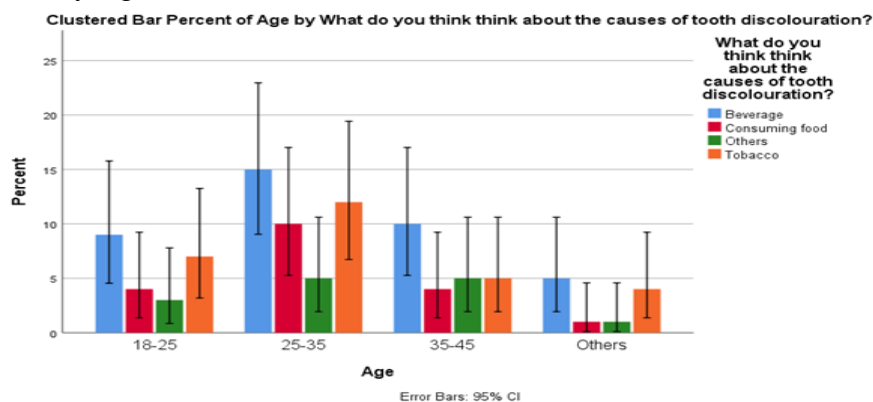


Figure: 8 Bar chart represents the association between age and discoloration of a tooth is psychological baggage. X- axis represents the age group and Y axis represents the no.of responses. In that blue colour represents people who said yes to the discoloration of a tooth psychological baggage, and red colour denotes who said no to the discoloration of a tooth psychological baggage. In this 25% belong to the age group 25-35 yrs who reported that discolouration of the tooth is psychological baggage. Through an analysis it is found to be statistically significant.(p-value= 0.429, df value= 6 , chi square value=5.946) (p>0.05 statistically significant).

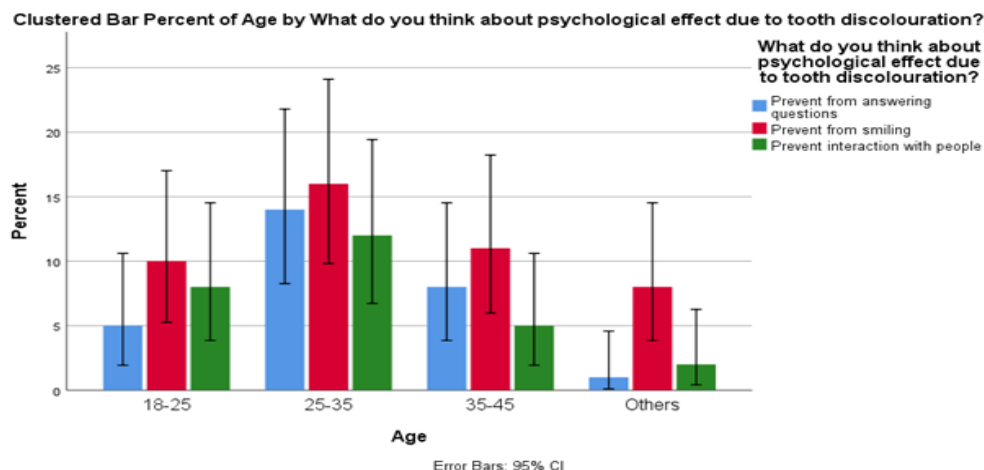


Figure: 9 Bar chart represents the association between gender and psychological effect due to tooth discoloration. X- axis represents the gender and Y-axis represents the no.of responses. 28% of females thought that psychological effects would prevent them from smiling. Majority of females were more aware about the effect of tooth discoloration(blue) than male, through a chi square analysis it was found to be statistically significant. Blue colour denotes prevention from smiling, red colour denotes preventing from answering the questions, green colour represents preventing interaction with the people. (p-value=0.429,df value=6 chi square value- 5.946) (p>0.05 statistically significant).

DISCUSSION:

Tooth discoloration induced by coloured food substance is a common problem which is reported in regular dental practice²⁹. In the previous article the author compares that about 97 percent of patients with teeth, stained through aging, inherent discoloration, brown fluorosis or trauma experienced darkening of tooth, as did 75 percent with tetracycline-stained teeth.³⁰ Considering tooth whitening home remedies, the age range between 23 and 57 years had tried out teeth whitening treatments at home. Considering postoperative complications 46% of the population said that it causes side effects and the remaining 54% said that bleaching of teeth does not cause any side effects. This was in accordance with the previous study which reported Sixty-six percent of the population experienced side effects³¹.

In conclusion, the results of this study demonstrated That vital bleaching was broadly preferred over veneers for vital teeth. Patient mindset influenced the choices for vital tooth bleaching treatment. 64% said that they had done teeth whitening procedures at home and 36% of the population said that they have not tried any whitening procedures at home³².

LIMITATIONS

Reduced sample size, unequal distribution of cases and geographic constraints were the limitations of this study.



FUTURE SCOPE

Large sample size and expansion of geographic area can yield better, accurate results for the study.

CONCLUSION:

From this survey we conclude that awareness about the discoloration of teeth is less among the population. Large populations remain unaware and they think that tooth discoloration is psychological baggage. Hence periodic awareness camps should be conducted from time to time to increase the awareness on the treatment modalities available for the management of discoloured teeth.

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CONFLICT OF INTEREST: Nil

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