ABSTRACT

Background: Tooth color is the most common factor that every patient demands for the dental treatment. An aesthetically pleasing smile depends on color, size, shape, tooth position, superior lip position, and visibility of teeth and quantity of gingival exposition. The importance for maintaining/perceiving the natural color of the teeth increased than before among patients especially among women. Dental professionals play a major role in providing esthetic smile among patients. Aim: The aim of the study was to evaluate the perception of young women on the color of teeth. Objectives: The objective of the study was to analyze the knowledge and perception about the color of teeth and awareness on teeth whitening procedures among young women. Materials and Methods: This study utilizes a questionnaire to check the perception about the color of teeth among young women. 100 volunteers were selected to participate in the study and the questionnaire was distributed through survey planet link. Data collection and statistical analysis were done. Results: The result of this study shows that 75% of the participants were satisfied with their color of teeth and 35% of that was very satisfied with the appearance of their teeth. 73% felt that whiter teeth are more aesthetically pleasing and aware about the term bleaching before; 79% of participants felt that it is possible to whiten the patient’s teeth by the dentist. Only 45% felt that bleaching is the application of acidic substances to remove stains on the tooth surface, only 7% of the participant’s undergone bleaching procedure before. 71% were more interested to know more about bleaching and other methods of tooth whitening procedure and 60% of the participants had an opinion that the expected outcome of bleaching procedure would be naturally white and good appearance. Conclusion: Although most of the study participants were satisfied with their color of teeth, the knowledge regarding bleaching procedure among young women is very less. Hence, more awareness should be created among the general public to enhance esthetic smile and confidence.

KEY WORDS: Color, Dental professionals, Perception, Smile, Women

INTRODUCTION

Patient’s perception about an esthetic smile is based on the only color of teeth. However, an esthetically pleasing smile depends on color, size, shape, tooth position, superior lip position, and visibility of teeth and quantity of gingival exposition. Nowadays, patient demands have been increased toward esthetic dentistry. The most common perception of the patient toward dentistry is to achieve natural teeth color in prosthesis to get a good smile. The human eye is very efficient in detecting small differences on the color of two objects but this efficiency changes with external light conditions, experience, age, and the human eye fatigue. Hence, young adults have more concern toward color of teeth. Tooth color perception is a complex phenomenon that might be influenced by many factors that include light conditions, optical properties of teeth, visual experiences of the viewer, differences of dentistry specialty, gender, and age. Most commonly, tooth color plays an important role during prosthetic replacements. The dentist has the responsibility to provide a prosthesis which is similar to the natural tooth color. Dentists will select the shades of the prosthetic teeth using the color guide scale.

Tooth discoloration is of two types; they are intrinsic and extrinsic discoloration; intrinsic discoloration develops at the time of tooth formation and extrinsic discoloration develops after the tooth formation.
Intrinsic staining is caused by drugs such as tetracycline, high levels of fluoride, and exposure to certain metals during tooth formation. These intrinsic stains are non-responsive to abrasives and home use bleaching agents. Whereas certain foods such as tea, coffee, and tar products from tobacco and certain occupational exposure to metals cause extrinsic stains and many times, these stains are responsive to home use of bleaching agent. Recent advancement in restorative dentistry has increased the opportunities for both patients and clinicians to provide the best non-invasive treatment for better esthetics through conservative and economical approaches. Tooth bleaching is a boon to the development in restorative and esthetic dentistry. Recent advancement under the professional supervisions and proper examination and diagnosis has increased its usage for teeth whitening. However, in the past, its side effects and less conservative techniques had restricted its use and acceptability among patients.

An esthetically good looking smile depends on the color, size, shape, tooth position, superior lip position, visibility of teeth and quantity of gingival exposition. Although each factor is to be considered individually, to create a harmonic and symmetric entity all the components need act together which produces the final esthetical effect.

Several factors determine color of the tooth, the light source characteristics that are based on the way in which the object reflects transmit or absorb the light waves the color of the object is determined; hence, light source characteristics play an important role in the final result called color.

Tooth color determination by visual mean is considered highly individual specific. Color determination is done from an adequate color choice usually which is available in a series of artificial teeth provided by the manufacturer in the way of color scale. The colors are selected according to the proximity between the scale and the natural tooth. Studies have been reported that there is existence of color difference between the scale and the final color of the restored product. This difference in color may be a source of problems to the dentist, once it is presumable that the resulted restoration is not considered clinically acceptable.

The human eye is very efficient in detecting small differences on the color of two objects. However, despite this efficiency, some variables can interfere the detection of small changes such as that of external light conditions, experience, age, and the human eye fatigue. The color characteristics visually evaluated are also limited besides, standardized verbal means for communication. With the use of subjective methods such as visual mean for color choice and the observation that it may not be reliable, objective methods were created to choose the color which include the spectrophotometers, colorimeters, or techniques of analysis of images with the help of software. Spectrophotometers are very much advantageous in color determination, because the color reading is objective, repeatable, and quantifiable, and obtained faster. However, this method is not usually applied due to the cost of equipment and the inconvenient of handling.

Tooth shade is one of the most significant factors affecting esthetics. It is a general misconception in people that white bright teeth are more attractive than yellow teeth. In past studies mainly focus on dental patients rather than general public, thus limiting their generalizability of results to the wider population. With growth in the field of restorative dentistry, many techniques have become economical and cost effective for both developed and developing countries and one of such technique is tooth bleaching. Nowadays, tooth bleaching becomes cost effective and conservative with added advantages of long-term functionality and effectiveness. Hence, this study mainly deals with the sample population belonging to general public rather than those visiting dentist and also to have an idea on awareness about the perception of color of teeth among young women.

**MATERIALS AND METHODS**

This study used a questionnaire to check and evaluate the perception of color of teeth and knowledge about teeth whitening procedures among young women. 100 young women participants were selected from general public to participate in the study. The questionnaire contains 15 questions to access the perception regarding tooth color and bleaching procedures and the questionnaire was distributed through survey planet web link. Data collection and statistical analysis were done.

**RESULTS**

The result of this study shows that 75% of the participants were satisfied with their color of teeth. 35% of women were very satisfied with the appearance of their teeth and 27% have few concerns about their appearance of teeth. 32% of the participants felt that their color of teeth is white and 65% of the participants felt that their color of teeth is yellowish white and 3% felt that their color of teeth is yellow. 73% felt that whiter teeth are more esthetically pleasing. 79% of participants felt that it is possible to whiten the patient’s teeth by the dentist. 73% of the participants were aware of the term bleaching before. Only 45% felt that bleaching is application of acidic
substances to remove stains on tooth surface, 17% felt that it is application of tooth colored material onto the tooth surface, 7% participants opinion about bleaching was covering the front surface of the tooth with crowns, 8% young women felt that it was use of burs to scratch off the stains and 23% of women were unaware about bleaching. Only 7% of the participant’s undergone bleaching procedure before. For an imaginary question regarding discolored teeth, only 47% stated that they will undergo bleaching procedure if they had discolored teeth. Regarding the forms of bleaching, 45% of the participants were aware about dentist in-office procedure, 22% were aware about night guard bleaching, 4% were aware about off the counter products, and 29% were unaware about the forms of bleaching. 77% of the participants were felt that tooth sensitivity is the most common side effects of bleaching, 9% of the participants felt that vomiting would be the side effect of bleaching, 4% felt that stomach ache would be the side effect of bleaching, and 10% of the participants felt that gum bleeding would be the side effect of bleaching. 71% were more interested to know more about bleaching and other methods of tooth whitening procedure. 60% of the participants had an opinion that the expected outcome of bleaching procedure would be naturally white and good appearance, 22% felt that the results would be too white and they appear unnatural and 18% felt that there will be not much difference from the original appearance. 53% of the participants thought that the individuals with discolored teeth have no concern about their teeth, 32% felt that they have a poor appearance but its natural nothing to be done and 15% felt that they should seek tooth whitening procedures. 33% of the participants got information about tooth whitening procedures from books/web/journals, 34% of the participants got information from family and friends, 4% got information from posters/advertisements, 7% got information from TV/Radio, and 22% participants got information from health professionals [Graphs 1-4].

DISCUSSION

According to this study, the result shows that 75% of the participants were satisfied with their color of teeth and 35% of that was very satisfied with the appearance of their teeth. 73% felt that whiter teeth are more esthetically pleasing and aware about the term bleaching before; 79% of participants felt that it is possible to whiten the patient’s teeth by the dentist. Only 45% felt that bleaching is the application of acidic substances to remove stains on the tooth surface, only 7% of the participant’s undergone bleaching procedure before. For an imaginary question regarding discolored teeth, only 47% stated that they will undergo bleaching procedure if they had discolored teeth. Regarding the forms of bleaching, 45% of the participants were
aware of dentist in-office procedure and 77% of the participants were felt that tooth sensitivity is the most common side effects of bleaching. 71% were more interested to know more about bleaching and other methods of tooth whitening procedure and 60% of the participants had an opinion that the expected outcome of bleaching procedure would be naturally white and good appearance. Among 100 participants, 53% of the participants thought that individuals with discolored teeth have no concern about their teeth. 34% of the participants got information from family and friends.

According to a study by nona conducted in Saudi Arabia suggested that 67.4% were not satisfied with their color of teeth[16] and in a study by Wisniewski in Malaysia (56.2%)[16] and tin-oo in Poland (61%).[17] 40% of the participants had good knowledge about teeth whitening in Saudi Arabia.[16] According to this study, only 25% were not satisfied with their color of teeth and 53% of the participants had good knowledge about teeth whitening. Research carried out in dental health centers in Klang Valley, Malaysia in 2005, revealed that among the 200 respondents interviewed, 75.5% have some knowledge about bleaching.[18] According to a study, the main source of information came from advertisements on electronic media such as television and radio (65.5%).[19] According to this study, only 7% got information about bleaching from TV and radio. According to a study, around 77.7% of the study participants reported their willingness to undergo teeth bleaching in near future and 76.6% of the study participants reported that they will recommend teeth bleaching to their family and friends.[20] According to this study, only 47% reported their willingness to undergo teeth bleaching in the near future and only 34% got information about bleaching from family and friends. According to a study, females are more interested in their appearance than male and seem to be more concerned about dental appearance and are more critical in their judgment toward dental esthetics.[20][21] and another study states that female gender was also found as an important predictor factor for tooth bleaching.[16]

CONCLUSION

Although most of the study participants were satisfied with their color and appearance of teeth, the knowledge regarding bleaching procedure and aesthetic concern among young women is very less. Although they were mostly aware of the term bleaching, the exact technique performed in a dental chair was least known to the participants. Hence, more awareness should be created among the general public to enhance esthetic smile and confidence. Most of the participants got information regarding bleaching through family and friends due to lack of proper web information. Hence, more research should be performed in this area of interest.

REFERENCES


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