

Knowledge, attitude and practice of dental students, practitioners and specialist on composite shade matching in Al-jouf, KSA

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ABSTRACT

Background: Shade selection is an essential system to give patients an aesthetics renovation that correspondently merges to the patient's current dentition. Moreover, natural teeth are acknowledged to have various shades in their surfaces.

Objective: The aim of the study was to evaluate the awareness of knowledge, attitude and practice about the complications in shade selection and to utilize for improving the quality of training being imparted in the dental school and general practitioners.

Methods and Material: Participants were divided into six Groups: operative dentist and endodontist, 3rd Year students, 4th Year students, 5th Year students, Intern and VI-General practitioners; 20 Questionnaire survey forms were distributed to fill among all the groups.

Results: The results that the highest proportion was 41% for skill factor, knowledge was the second with 26%. Whilst, individual observer was 13.5% and 12.6% for the factor talent. 4.5% for (All) the factors. The lowest proportion was for more than two answers.

Conclusion and Recommendation: The need of flourishing of cosmetic dentistry required to keep with up-to-date information considering all conceivable factors which influence shade selection.

Keywords: Shade selection, Factors, Knowledge

INTRODUCTION

Nowadays, aesthetics has turned into an essential issue, as it appears to characterize one's character. Before, practical needs were the primary thought in dental treatment. Today, with the declining in caries pervasiveness, the concentration has moved toward dental Aesthetics⁽¹⁾.

Furthermore, shade selection is an essential system to give patients an aesthetics renovation that correspondently merges to the patient's current dentition. Moreover, natural teeth are acknowledged to have various shades in their surfaces⁽²⁾.

The determination of teeth with an appropriate shade has been appeared to decidedly impact the patient's aesthetics observation and enhanced prosthesis acceptance⁽³⁾.

The determination of fake teeth shading can be extremely entrusting and denture aesthetics has been characterized as the cosmetic impact created by a dental prosthesis which influences the alluring magnificence, character, attractiveness and self-confidence of the person⁽⁴⁾.

OBJECTIVE

The aim of the study was to evaluate the awareness of knowledge, attitude and practice about the problems in shade selection and to utilize for improving the quality of training being imparted in the dental school and general practitioners.

MATERIALS AND METHODS

This is a cross-sectional of a qualitative approach. Participants were divided into six Groups:

- I- Operative dentist and pedodontist,
- II- 3rd Year students,
- III-4th Year students,
- IV-5th Year students,
- V-Intern
- VI-General Practitioners

20 Questionnaire survey forms were distributed to fill among all the groups. Furthermore, data were collected for two months and one month for statistical analysis. It was done using ANOVA testand results were evaluated respectively.

RESULTS

The present study enrolled 105 candidates, from both gender male (63, %60) and female (42, %40). Age groups were (18-25) %62, (26-35) %35, (36-45) %3 Ages were varied according to the level of education (high school, college, graduated). Table1 illustrates all the information collected of the socio-demographic characteristics of the candidates.

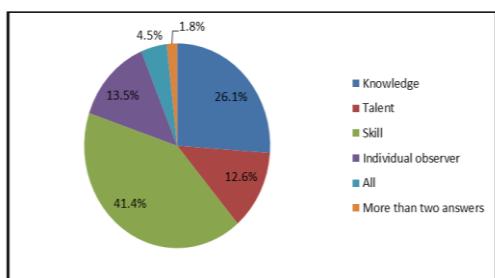
**Figure (1):** The essential factors for shade selection:

Figure 1 indicates the essential factor for data shade selection. The highest proportion was 41% for skill factor, knowledge was the second with 26%. Whilst, individual observer was 13.5% and 12.6% for the factor talent. 4.5% for (All) the factors. The lowest proportion was for more than two answers.

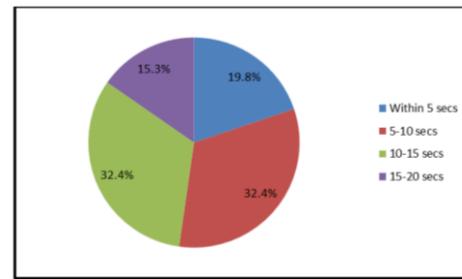
**Figure (2):** Ideal time required for shade selection:

Figure 2 shows the ideal time required for shade selection. Firstly, there was identical proportion for both answers (10-15 secs) and (5-10 secs) 32.4%. Moreover, 19.8% for (within 5 secs) and 15.3% for (15-20 secs).

Table1. Survey questionnaire.

Questions	Results %
Shade guide do you use commonly for composite shade selection	
A] According to availability of shade guide	69.4%
B] Only supplied by the company manufacturing that composite material	22.5%
C] None	8.1%
If shade of tooth is not matching with the shade guide, you make a custom shade guide by mixing two or more available shades	
A] YES	52.3%
B] NO	30.6%
C] No knowledge about this	17.1%
Selection of the shade according to age/ gender of the patient	
A] Yes	74.8%
B] No	25.2%
The most common shade you use in your practice	
A] A1	26.1%
B] A2	12.6%
C] B1	41.4%
D] B2	13.5%
E] Combinations of color if so (what are the colors you use?)	4.5%
Method of isolation do prefer while doing shade matching for anterior restoration	
A] Rubber Dam Isolation	41.4%
B] Cotton rolls and Absorbent wafers	45.9%
C] Teflon Tape	3.6%
D] Evacuator system & saliva ejector	7.2%
Method you prefer during shade selection	
A] Visual (manual)	56.8%
B] Instrumental (mechanical)	19.8%
C] Combination of both	23.4%
If manual, type of light would you do shade selection	
A] Dental Light	32.4%
B] Fluorescent light	5.4%
C] Natural daylight (If so what time do u prefer?)	21.6%
D] Natural and Dental Light	19.8%
E] Natural Light and fluorescent light	6.3%
D] Without light focus	14.4%
According to you which is the best time for shade selection-	
A] Morning time	48.6%
B] Afternoon time	17.1%
C] Day light from north	11.7%
D] Don't follow a particular time for shade selection	22.5%
How many times do you check the shade before deciding the final shade	
A] Only once	36%
B] 2 times	44.1%
C] More than 2 times	19.8%
Distance you keep between the patient's teeth and observer's eye during shade selection	
A] Less than 1 feet	27.9%
B] Between 1-2 feet	43.2%
C] 3 feet	12.6%
D] More than 3 feet	16.2%
Part of tooth would you prefer for the shade selection	
A] Incisal 1/3rd	7.2%
B] Middle 1/3rd	25.2%
C] Cervical 1/3rd	7.2%
D] All surfaces of the tooth	60.4%

DISCUSSION

Our study focused on the degree of the knowledge and practice of dental student on an important issue which the composite shade matching. In esthetic dentistry, shade selection is most important to give natural appearance to the tooth⁽⁵⁾. Many factors are responsible. Figure 1 indicates the essential factor for data shade selection. the highest proportion was 41% for skill factor, knowledge was the second with 26%. Whilst, individual observer was 13.5% and 12.6% for the factor talent. 4.5% for (All) the factors. The lowest proportion was for more than two answers. Here in our study the highest rate goes to Skill in comparison with other study that that individual observer 49.1% has the highest rate⁽⁶⁾.

Besides, color is one of the most significant factors of esthetic dentistry bearing in mind various factors such as form and intensity of the light foundation, time of day and year, angle of incidence, and patient's age, and sex gender⁽⁵⁾. Base on that, our results corresponded with the fact that gender and age affected the shade selection with proportion of 74.8% which approximate other study result (82.5%)⁽⁶⁾.

Moving on the Shade guide used commonly for composite shade selection, the highest proportion was 69.4% for the availability of shade guide and 22.5% for the supplied company manufacturing that composite material. The common she used in practice is B1 with highest rate of 41.4%. Our study results are not in agreement with those that showed that A1 have the uppermost proportion 66.2%. Other factor that affects the shade selection is the light , yet is the most ignored one. In our results, dental light has the uppermost proportion to be used in shade selection 32.4%. Therefore, quality of light is the most significant factor in shade taking practice⁽⁶⁾.

Additionally, participants were asked about the methods used during shade selection, the highest rate goes to visual (manual)56.8%, instrumental (mechanical) 19.8% and 23.4% for the choice (combination of both). Other study conducted for the visual method with proportion of 59.6% approximately with our current study⁽⁶⁾. Although, 45.9% of the candidates used Cotton rolls and Absorbent wafers, 41.4% for Rubber dam

isolation, 7.2% for Evacuator system & saliva ejector, yet only 3.6% for Teflon Tape. It is important to mention that in shade selection; these are used for the conservative esthetic renovations which are perhaps the most significant part⁽⁷⁾. On the other hand, other study has revealed that 22.8% of people used as rubber dam isolation whereas 36.8% of them favored the use of cotton rolls and absorbing points, yet 15.8% of them frequently use Teflon tape⁽⁶⁾.

When we consider the ideal time required for shade selection, there was identical proportion for both answers (10-15 secs) and (5-10 secs) 32.4%. Moreover, 19.8% for (within 5 secs) and 15.3% for (15-20 secs).

Moreover, our candidates attempted that (morning time) is the best time for shade selection with proportion of 48.6% and 44.1% for checking the shade before deciding the final shade 2 times. If we ever talk about the distance between the patient's teeth and observer's eye during shade selection, participants chose Between 1-2 feet 43.2%. All surfaces of the tooth are the preferred part for them with proportion of 60.4%.

RECOMMENDATION AND CONCLUSION

Color or shade which is of paramount importance should not be ignored as there is an increasing awareness and demand for esthetics by the patient. The topic of shade selection should be given due importance in the dental teaching practice and continued education programs should be arranged. Indeed, due to the flourishing of cosmetic dentistry, dental schools do not perform acceptable training regarding color education⁽⁸⁻⁹⁾. It is obligatory to perform adequate training programs as well as intensifying communication to reach to the satisfaction outcomes of shade matching. Besides, dentists should keep with up-to-date information considering all conceivable factors which influence shade selection.

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