

WHITE TEETH FEVER: DENTIST PERCEPTION AND ATTITUDE IN RIYADH, SAUDI ARABIA

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ABSTRACT

Objectives: The demand for white teeth is widespread among patients seeking aesthetic treatment; therefore, the purpose of this study was to investigate dentist's preference in tooth shade recommendation for patients and dentist perception and attitude toward patient needs.

Methods: Due to the greater anonymity of the web-based survey, which allowed higher self-disclosure of respondents, a web-based questionnaire of 24 close-ended questions, investigated dentist's preference in tooth shade recommendation, and dentist perception and attitude with patients' tooth shade preference were spread via social networks and emails to target dentists among Riyadh, Saudi Arabia. Targeted dentists were specialists/consultants and postgraduate residents of Restorative Dentistry, Prosthodontics, or Advanced Education in General Dentistry and general practitioners working in academic hospitals, government hospitals, or private sector. Data were collected and analyzed with the Statistical Package for Social Sciences to produce descriptive and cross-tabulation statistics.

Results: Among the 329 respondents, 94% of participants noticed an increased demand for lighter tooth color, and 61% tended to match patients' unrealistic tooth color requests ($P < 0.05$). In the participants' opinion, BL2 was the commonly requested shade by patients while restoring all anterior teeth (36%). Accordingly, BL2 was the commonly selected shade by participants for patients with high cosmetic demands (33%). However, A1 was the commonly selected shade by participants for patients with average cosmetic demands (35%).

Conclusions: Dentists tended to meet the increased patient needs toward lighter tooth shade and have selected lighter tooth shades for average cosmetic demands patients and have selected whiter tooth shade for the patients' high cosmetic demands.

Key words: Aesthetic Dentistry; White teeth; Restoration shade.

Introduction

The widespread perception of white teeth as an ideal representation of dental appearance was affected by several socio-cultural and individual factors.^{1,2} Dietary factors, gingival recession surrounding the tooth, and prolonged action of local use drugs and devices in inflammatory periodontal disease therapy will affect the tooth color and appearance.³⁻⁶ A harmony between the selected restoration shade and the patient's age, gender, and skin tone is mandatory. The patient's aesthetic desires and expectations can trouble the process of shade selection since most patients perceived tooth shade as the most compelling element of dental attractiveness.⁷⁻¹³

The pressure of mass media and social judgment created an illusion that correlated lighter teeth to a greater positive appraisal of socioeconomic competence and intellectual abilities,¹⁴ which affected patients' self-image satisfaction, caused some psychological diseases and behavioral outcomes like seeking cosmetic interventions.^{15,16} Tooth color darkens with time caused by multiple factors like the ever-decreasing thickness of enamel due to natural tooth

wear,¹⁷⁻¹⁹ and cosmetic treatment was not pursued to deny aging and was not either limited to gain successful aging, but was mainly pursued by patients to control the emotional representation of aging.^{20,21} Therefore, this study aimed to investigate dentist preference in tooth shade recommendation for patients' and dentists' perception and attitude towards patients' aesthetic demands.

Methodology

Due to the greater anonymity of the web-based survey, which allowed higher self-disclosure of respondents,²² a web-based survey was conducted in this study. The questionnaire consisted of 24 close-ended items, investigating dentist preference in tooth shade recommendation for patients, and dentist perception and attitude with patients' tooth shade preference were shared via social networks and emails to targeted dentists in Riyadh City, Saudi Arabia.

The study participants must be Riyadh city residents and currently practicing cosmetic dentistry for a minimum of two years of experience. Targeted dentists were

specialists/consultants and postgraduate residents of Restorative dentistry (Resto), Prosthodontics (Prostho), or Advanced Education in General Dentistry (AGED), and general practitioners (GPs) working in academic hospitals, government hospitals, or private sector. A pilot study of 12 per group was conducted to validate the questionnaire and standardize the study. A total of 402 responses were received, and 329 responses were included due to incomplete information. All the collected data were analyzed with Statistical Package for Social Sciences (SPSS) version 24 (SPSS Inc. Chicago, IL, USA) to obtain descriptive, cross-tabulation statistics and apply Pearson’s chi-square test. A value of $p < 0.05$ was considered significant for all the statistical purposes.

Results

The results included 329 responses of which 34.0% were Resto/Prostho/AEGD specialists/consultants, 26.7% were Resto/Prostho/AEGD postgraduate residents, and 39.2% were GPs. **Table 1** shows the demographic characteristics of participants.

Items	n	%	
Age (Years)	≤ 30	158	48%
	31 - 45	155	47%
	> 45	16	5%
Gender	Male	154	47%
	Female	175	53%
Level of practice	GP	129	39%
	Postgraduate Resident (Resto, Prostho, AGED)	88	27%
	Specialist/Consultant (Resto, Prostho, AGED)	112	34%
Employer	Academic Hospital	100	30%
	Government Hospital	108	33%
	Private Hospital/Clinic	121	37%

Table 1: Participants' demographic characteristics

Table 2 shows participants’ perception and attitude with patients’ complaints and tooth shade preference. Although 85% of participants reported that they educated their patients about the importance of natural tooth appearance. Regarding tooth appearance tooth color shade is the most common complaint faced by participants (89%). Also, 94% of participants noticed an increased demand for lighter tooth color, and 61% of them tended to match the patient’s unrealistic tooth color requests ($P < 0.05$).

Items	n	%	
Do you inform your patients regarding the importance of natural tooth appearance?	Yes	279	85%
	No	50	15%
Are you comfortable treating advanced cosmetic challenges?	Yes	231	70%
	No	98	30%
Among patients who have the most concerns with dental appearance?	Male	0	0%
	Female	185	56%
	No difference	144	44%
What is the most common complaint you faced Regarding tooth appearance?	Tooth color (Shade)	294	89%
	Tooth shape (Form)	11	3%
	Tooth size	9	3%
	Tooth position (Alignment)	15	5%
Have you noticed recently an increase in patient demands for lighter tooth color?	Yes	309	94%
	No	20	6%
During shade selection, do the patient’s demands affect your decision?	Yes	306	93%
	No	23	7%
How do you manage a patient with unrealistic tooth color demands?	Do what is ideal for the patient	87	26%
	Match the patient demands	197	60%
	Refer the patient	45	14%
How often do you involve dental technicians in shade selection?	a. Never involve dental technician in shade selection	132	40%
	b. Always involves dental technician in shade selection	42	13%
	c. Occasionally involve dental technician in shade selection in challenging cases or high demands patient	41	12.5%
	d. Occasionally involve dental technician in shade selection by sending supplemental photos, videos, etc.	40	12%
	c and d	74	22.5%
	What is the most common complaint you face regarding the restoration shade after cementation or on the recall visit?	Restorations are darker than expected	133
Restorations are lighter than expected	184	58%	
Are you satisfied with your cosmetic cases’ outcome?	Yes	292	89%
	No	37	11%

Table 2: Participants’ perception and attitude with patients’ tooth shade preference

According to participants’ opinion, BL2 was the commonest (36%) requested shade by patients with high cosmetic demands while restoring all anterior teeth; consequently,

BL2 was the commonest (33%) selected shade by participants for patients with high cosmetic demands while restoring all anterior teeth followed by B1 (15%). Moreover, A1 was the commonest (35%) selected shade by participants for patients with average cosmetic demands while restoring all anterior teeth. For average cosmetic demands patients, the commonly selected shade by participated specialists/consultants was A1 (42%) followed by BL4 (29.5%), the commonly selected shade by participated postgraduate residents were A1 (47.7%) followed by B1 (35.2%), and the commonly selected shade by participated GPs was BL2 (32.6%) followed by A1 (20.2%) ($P < 0.001$). For high cosmetic demand patients, the commonly selected shade by participated specialists/consultants was BL2 (28.6%) followed by BL3 (26.8%), the commonly selected shade by participated postgraduate residents was B1 (26.1%) followed by BL4 (18.2%), and the commonly selected shade by participated GPs was BL2 (48.8%) followed by BL1 (20.9%) ($P < 0.001$). In worth mentioning, 62% of participants who commonly selected shade A1 for average cosmetic demands patients reported that the most common complaint they faced regarding restorations shade after cementation or recall visit restorations was darker than expected ($P < 0.001$). On the other hand, 48% of participants who commonly selected shade BL2 for high cosmetic demands patients reported that the most common complaint they faced regarding restorations shade after cementation or on the recall visit was restorations were lighter than expected ($P < 0.001$) (Table 3).

Items	n	%	
In your practice, what is the most common shade requested by patients while restoring all anterior teeth? (Please select one shade)	A1	42	13%
	A2	28	9%
	B1	30	9%
	B2	2	1%
	BL1	87	26%
	BL2	120	36%
	BL3	17	5%
	BL4	3	1%
In your practice, what is the most common shade you select for the patient with average cosmetic demands while restoring all anterior teeth? (Please select one shade)	A1	115	35%
	A2	51	16%
	B1	40	12%
	B2	0	0%
	BL1	12	4%
	BL2	49	15%
	BL3	11	3%
	BL4	46	14%
In your practice, what is the most common shade you select for a patient with high cosmetic demands while restoring all anterior teeth? (Please select one shade)	A1	42	13%
	A2	30	9%
	B1	48	15%
	B2	0	0%
	BL1	27	8%
	BL2	110	33%
	BL3	42	13%
	BL4	30	9%

Table 3: Patients' restoration shade request in participants' opinion and participants' preference in restoration shade selection

Discussion

This overall increased demand for pearly white teeth created pressure on practitioners to whether give it or not. More than half of participants (60%) in the current study preferred to match the patients' aesthetic demands, which can be justified that dental patients are more influential in their interaction,¹¹ and they may believe in having the right to direct the treatment since they mostly visit dentists on their free will and can stop coming if not satisfied.^{10,11} Dental patients are demanding, and the usual prevailing idea was the female patients have the most concerns with dental appearance, but a surprisingly large number of participants believed male and female patients had equal aesthetic concerns (44%). However, it was observed that more men were seeking aesthetic procedures to embrace the youthful appearance.¹⁶ The surprising irony was that many participants (48%) who selected bleach shades for high demands complained about whiter restorations than their expectations. Thus, it is essential to consider fabricating mock-ups to minimize patients' post cementation complaints and guide them to select more natural shades.⁹

Conclusion

Within this study's limitation, dentists tended to meet the increased patient needs toward lighter tooth shade and selected lighter tooth shades for the average cosmetic demands patients and have selected whiter tooth shade for the high cosmetic demands patients.

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