

Self perceived satisfaction with dental appearance and desired treatment to improve aesthetics

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ABSTRACT

Objective: To assess the satisfaction with dental appearance, desired treatments to improve dental appearance, and factors that affect satisfaction with dental appearance among a group of Nigerian dental patients.

Methods: The data collection instrument was a modified questionnaire used in a previous study by Tin-Oo et al. It consisted of 3 sections: section 1 elicited information on the socio-demographic characteristics of the participants, section 2 determined level of satisfaction with the general appearance of their teeth and tooth colour, section 3 sought information on desire to undergo treatments to improve the appearance of their teeth as well as the desired treatment.

Data collected was analysed using the IBM Statistical Package for Social Science (SPSS) version 21.0.

Results: Less than half (45.1%) of the respondents were dissatisfied with the general appearance of their teeth. More than half (53.3%) of the respondents were dissatisfied with the colour of their teeth. A few (10.7%) of the respondents felt their teeth were crowded while 24.6% felt their teeth were poorly aligned. Majority (82.8%) wished to undergo treatment to improve the appearance of their teeth. A few (12.9%) of the respondents who desired treatment to improve the appearance of their teeth desired orthodontic treatment for realignment, while 15.8% desired treatment to replace missing teeth. More than half (67.3%) desired tooth whitening procedures to improve the appearance of their teeth.

Conclusion: Tooth shade plays a vital role in self-perceived satisfaction with dental appearance. Tooth whitening was the most desired treatment to improve dental appearance.

Keywords: satisfaction, dental appearance, tooth colour, perceived.

INTRODUCTION

Oral health is not only the absence of oral disease and dysfunction but also includes its influence on a person's social life and dento-facial self-confidence with dental appearance being an integral component of facial beauty.¹ Dental aesthetics is aimed at creating beauty and attraction which ultimately elevates self-esteem of patients and also make patients satisfied with important and socially valued parts of their body.² It is believed that minor discrepancies in dental aesthetics could have a significant effect on perceived oral health related quality of life³⁻⁵ as well as have an impact on social appearance concern.³ Self-perception of dental aesthetics therefore, cannot be underestimated because in rendering aesthetic treatment the

patient receiving the treatment needs to be satisfied with the treatment.^{6,7}

Treatments which improve dental aesthetics have been found to improve quality of life and psychological status.⁸ Patients who have interest in improving their dental appearance have been found to frequently demand for tooth whitening treatments, anterior teeth restoration and orthodontic treatment.⁹ There may be possible differences in aesthetic perception between clinician and patient which could create problems during treatment if not properly recognized.¹⁰ Clinicians must therefore be mindful of their patient's desire to achieve favorable results¹¹ as the overriding importance of psychological implications of dental aesthetics over physiological changes have been demonstrated.¹² Dental professionals have to be aware of the psychological triggers of treatment demands of the patients, the effect of dental appearance in patients' satisfaction, and subsequently the impact of this satisfaction in treatment success.¹³

A United Kingdom report revealed that 28% of adults were dissatisfied with the appearance of their teeth.¹¹ Therefore understanding the prevalence of

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dissatisfaction with the present aesthetics of a population and their desired treatments to improve aesthetics can assist in the development of strategies for intervention designed to improve aesthetics.¹⁴

The aim of this study was to assess the satisfaction with dental appearance, desired treatments to improve dental appearance, and factors that affect satisfaction with dental appearance among a group of Nigerian dental patients.

METHODS

This study was a descriptive cross-sectional study involving 125 consenting adult patients who sort dental care for the first time at the Oral diagnosis clinic of the Dental Centre of the University of Benin Teaching Hospital over a four-month period (August to November 2016). Informed consent was obtained from all the participants before commencement of the study. The data collection instrument was a modified questionnaire used in a previous study by Tin-Oo et al.¹⁵ It consisted of 3 sections: section 1 elicited information on the socio-demographic characteristics of the participants (gender, age, marital status, occupation and highest level of education attained). Section 2 consisted of Lickert-type scale response anchors (very dissatisfied, dissatisfied, unsure, satisfied and very satisfied) to determine level of satisfaction with the general appearance of their teeth and tooth colour as well as self-perceived satisfaction with dental appearance. Section 3 sought information on desire to undergo treatments to improve the appearance of their teeth as well as the desired treatment.

Data collected was analysed using the IBM Statistical Package for Social Science (SPSS) version 21.0. The collated data was subjected to descriptive analysis in the form of frequencies, percentages, cross tabulations, mean and standard deviation. Chi square was used to determine association between variables with p set at = 0.05.

RESULTS

A total of 125 questionnaires were administered, 122 were returned giving a response rate of 97.6%. The respondents' age ranged from 14 to 80 years with a mean age of 33.11 ± 14.3 with those aged 25-40 years accounting for 43.5%. There was a slight female preponderance with a male female ratio of 1:1.1. Majority (77.9%) of the respondents had attained tertiary education with 48.4% being dependents and

59% single (Table 1).

Less than half (45.1%) of the respondents were dissatisfied with the general appearance of their teeth. More than half (53.3%) of the respondents were dissatisfied with the colour of their teeth. There was statistically significant association between satisfaction with general appearance of the teeth and satisfaction with tooth colour ($p < 0.0001$). A higher proportion (69.1%) of those dissatisfied with their general dental appearance were also dissatisfied with their tooth colour, while more than half (56.9%) of those satisfied with the general appearance of their teeth were satisfied with the colour of their teeth.

However there was no statistically significant association between satisfaction with general appearance of teeth and sociodemographic characteristics of the respondents (Table 2).

More of the respondents who were dependents were dissatisfied with the colour of their teeth and this was statistically significant ($p = 0.007$). Single respondents tended to be more dissatisfied with the colour of their teeth and this was statistically significant ($p = 0.002$).

Table 3 showed a statistically significant association between age group of the respondents and satisfaction with tooth colour with satisfaction increasing with age ($p = 0.001$).

A few (10.7%) of the respondents felt their teeth were crowded while 24.6% felt their teeth were poorly aligned. Self-assessed report of protruding teeth was reported by 10.7% of the respondents. Less than a fifth (19.7%) of the respondents were of the opinion they had dental caries in their anterior teeth. A few (7.4%) claimed to have non aesthetic fillings in their anterior teeth. Less than a quarter (21.3%) of the respondents reported they had fractured teeth.

Majority (82.8%) wished to undergo treatment to improve the appearance of their teeth. There was a statistically significant association between gender and desire to undergo treatment to improve teeth appearance with a higher proportion of females expressing such desires ($p = 0.003$) (Table 4).

A few (12.9%) of the respondents who desired treatment to improve the appearance of their teeth desired orthodontic treatment for realignment, while 15.8% desired treatment to replace missing teeth. More than half (67.3%) desired tooth whitening procedures to improve the appearance of their teeth. Only 5.0% desired to create midline diastema while 5.9% and 14.9% desired to cover up their teeth with crowns and to have tooth coloured fillings

respectively.

There was increased desire for tooth whitening procedures with decreasing age and this was statistically significant ($p=0.01$). In like manner, there

was increased desire to replace missing teeth among respondents aged 41 to 65 years and this was statistically significant ($p=0.001$). There was statistically significant association between marital

status and desire to have tooth whitening procedures with a higher proportion of single respondents desiring it.

Table 1: Sociodemographic distribution

Characteristics	Frequency(n)	Percent (%)
Gender		
Male	59	48.4
Female	63	51.6
Level of Education		
Primary	7	5.7
Secondary	20	16.4
Tertiary	95	77.9
Marital Status		
Single	72	59
Married	50	41
Occupation		
Professional/skilled	49	40.2
Semiskilled/unskilled	14	11.5
Dependents	59	48.4
Age groups		
<25 years	49	40.2
25 - 40 years	53	43.4
41 - 65 years	20	16.4
Total	122	100.0

Table 2: Association between sociodemographic characteristics and satisfaction with general appearance

Characteristics	Dissatisfied n(%)	Unsure n(%)	Satisfied n(%)	Total n(%)
Gender				P=0.10
Male	30(50.8)	10(16.9)	19(32.2)	59(100.0)
Female	25(39.7)	6(9.5)	32(50.8)	63(100.0)
Age group				P=0.24
<25 years	25(51.0)	7(14.3)	17(34.7)	49(100.0)
25 - 40 years	21(39.6)	9(17.0)	23(43.4)	53(100.0)
41 - 65 years	9(45.0)	0(0.0)	11(55.0)	20(100.0)
Education				P=0.23
Primary	3(42.9)	0(0.0)	4(57.1)	7(100.0)
Secondary	13(65.0)	1(5.0)	6(30.0)	20(100.0)
Tertiary	39(41.1)	15(15.8)	41(43.2)	95(100.0)
Occupation				P=0.82
Professional/skilled	20(40.3)	6(12.2)	23(46.9)	49(100.0)
Semiskilled/unskilled	7(50.0)	1(7.1)	6(42.9)	14(100.0)
Dependents	28(47.5)	9(15.3)	22(37.3)	59(100.0)
Marital Status				P=0.20
Single	34(47.2)	12(16.7)	26(36.1)	72(100.0)
Married	21(42.0)	4(8.0)	25(50.0)	50(100.0)

Table 3: Association between sociodemographic and satisfaction with tooth colour.

Characteristics	Dissatisfied n(%)	Unsure n(%)	Satisfied n(%)	Total n(%)
Gender				P=0.10
Male	37(62.7)	7(11.9)	15(25.4)	59(100.0)
Female	28(44.4)	8(12.7)	27(42.9)	63(100.0)
Age group				P=0.001
<25 years	35(71.4)	7(14.3)	7(34.7)	49(100.0)
25 - 40 years	24(45.3)	7(13.2)	22(41.5)	53(100.0)
41 - 65 years	6(30.0)	1(5.0)	13(65.0)	20(100.0)
Education				P=0.32
Primary	2(28.6)	2(28.6)	3(42.9)	7(100.0)
Secondary	8(40.0)	3(15.0)	9(45.0)	20(100.0)
Tertiary	55(57.9)	10(10.5)	30(31.6)	95(100.0)
Occupation				P=0.007
Professional/skilled	25(51.0)	4(8.2)	20(40.8)	49(100.0)
Semiskilled/unskilled	2(14.3)	3(21.4)	9(64.3)	14(100.0)
Dependents	38(64.4)	8(13.6)	13(22.0)	59(100.0)
Marital Status				P=0.002
Single	47(65.3)	9(12.5)	16(22.2)	26(52.0)
Married	18(36.0)	6(12.0)	26(52.0)	52(100.0)

Table 4: Association between socio demographic characteristics and desire to undergo treatment to improve teeth appearance

Characteristics	Desire to undergo treatment		Total n(%)
	Yes n(%)	No n(%)	
Gender			P=0.003
Male	55(93.2)	4(6.8)	59(100.0)
Female	46(73.0)	17(27.0)	63(100.0)
Age group			P=0.91
<25 years	41(83.7)	8(16.3)	49(100.0)
25 - 40 years	43(81.1)	10(13.2)	53(100.0)
41 - 65 years	17(85.0)	3(15.0)	20(100.0)
Level of Education			P=0.70
Primary	2(71.4)	2(28.6)	7(100.0)
Secondary	17(85.0)	3(15.0)	20(100.0)
Tertiary	79(83.2)	16(16.8)	95(100.0)
Occupation			P=0.76
Professional/skilled	42(85.7)	7(14.3)	49(100.0)
Semiskilled/unskilled	11(78.6)	3(21.4)	14(100.0)
Dependents	48(81.4)	11(18.6)	59(100.0)
Marital Status			P=0.43
Single	58(80.6)	14(19.4)	72(100.0)
Married	43(86.0)	7(14.0)	50(100.0)
Total	101(82.8)	21(17.2)	122(100.0)

DISCUSSION

Various factors have been reported to affect dental appearance and these include tooth colour, shape, position, quality of restoration, general arrangement of the dentition especially the anterior teeth,^{2,4,5,9,11,15-18} presence of fractured anterior teeth,⁵ shape of the dental arch⁴ as well as individual and cultural factors.¹⁹ Prevalence of self-perceived dissatisfaction with general dental appearance observed in this study was similar to that of a previous study in Serbia,²⁰ higher than a US study¹¹ and a previous Nigerian study.²¹ This difference may be due to variations in self-perception and subjective evaluation of dental appearance and aesthetics.²⁰ Prevalence of dissatisfaction with tooth shade was similar to reports obtained from Turkey⁴ and China.²²

Tooth colour is a critical factor that influences satisfaction with smile appearance¹¹ and is also a major factor with regard to dental aesthetics.⁹ It is the most common smile component causing dissatisfaction among subjects.¹ This was observed in this study as

more than half of the respondents who were dissatisfied with their general dental appearance were also dissatisfied with the colour of their teeth.

Socio-demographic factors such as gender, age and educational level have been shown to have an impact on an individual's perception of dental aesthetics.¹⁹ It was observed that majority of the respondents who were dissatisfied with the colour of their teeth were dependents and single respondents who were mainly students in tertiary institutions. This becomes important as the younger age groups tend to pay more attention to their appearance²³ unlike the older age group who are indifferent about their dental appearance.

Poor tooth alignment and crowding were among the most common malocclusion traits reported in the literature.^{24,25} However, the findings of this study is similar to a previous study by Algamdi¹³ and showed that only a few of the respondents felt their teeth were crowded and others felt their teeth were poorly aligned and therefore needed orthodontic treatment.

This may be a reflection of the low level of awareness of malocclusion on patient perceived satisfaction of facial appearance.¹³

Only a few respondents claimed to have dental caries or non-aesthetic filling on the anterior teeth. The anterior teeth play a crucial role in dental appearance especially when a person smiles or speaks, part of the anterior teeth is displayed and this becomes unsightly when the teeth are carious or have a non-aesthetic anterior filling with possible great impact on satisfaction with appearance.

Women tend to be more concerned about their appearance than men because their appearance is central to how they are evaluated by others and their physical appearance is more important for their dating success than is true of men.²⁶ Females have been found to be more critical when judging their dental appearance^{27,28} hence, they may desire treatment to improve their appearance, but in this study it was observed that more males desired treatments to improve their appearance.

Tooth whitening was the most prevalent treatment desired to improve dental appearance with the younger age group being predominant a finding similar to that by Algamdi.¹³ This lends credence to the fact that satisfaction with tooth colour strongly impacts on satisfaction with dental appearance.⁵

Missing teeth have been found to be predominant among the elderly, as periodontal diseases increase with age, hence the increased desire by this group of respondents to replace missing teeth. Replacement of missing teeth tends to improve dental aesthetics as well as facial appearance.

LIMITATION OF THE STUDY

This study was carried out among patients who presented for treatment at the oral diagnosis unit and not among the general public.

It was also conducted in the south-south geopolitical region of the country and may not be representative of the entire geopolitical regions.

CONCLUSION

Tooth shade plays a vital role in self-perceived satisfaction with dental appearance. Tooth whitening was the most desired treatment to improve dental appearance. This was found to be prevalent among the younger age group.

Recommendation: Further studies should be carried out among non-patients and other geopolitical

regions to validate and expand the body of knowledge.

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