

## **Original Research Article**

### SELF RATING OF SATISFACTION WITH DENTAL APPEARANCE OF A GROUP OF NIGERIAN DOCTORS AND NURSES

Running Title: Health professionals self-perception of dental aesthetics

#### **ABSTRACT**

**Introduction:** A pleasant dental appearance translates to a pleasant smile. The need for aesthetic dental changes is very often self-perceived and can have a large effect on individuals' self-confidence and their overall quality of life. There is paucity of such data among healthcare professionals particularly doctors and nurses thus the aim of this study is to assess the self-satisfaction of doctors and nurses with their dental aesthetics.

**Materials and methods:** This was a self-administered questionnaire-based descriptive cross-sectional study carried out among medical doctors and nurses in University of Port Harcourt Teaching Hospital, Port Harcourt, Rivers State.

**Results:** A total of seventy-nine doctors and nurses participated in this study. Majority of the nurses were females (39,83.0%) whilst majority of doctors were males (21, 65.6%). More than half of the participants were single (45,57.0%). About half of the participants (44,55.7%) believed that their teeth were healthy and well-arranged. and were satisfied with the appearance of their teeth (47,59.5%).

**Conclusion:** Female participants expressed greater dissatisfaction with their dental aesthetics. Those aged 31–40-years were the most satisfied with their dental aesthetics.

**Keywords:** Dental aesthetics, self-perception, medical doctors, nurses, Nigeria

## **Introduction**

A pleasant dental appearance translates to a pleasant smile.[1] This is very important worldwide and furthermore increases self-esteem and aids success in both the personal and professional lives of individuals.[2] Dental aesthetics are particularly important because a pleasant smile is a great asset in today's world. Moreover, perception of beauty may be largely formed by the perceptions of others and even the media which often projects beautiful and handsome individuals with perfect smiles as confident and successful people.[3,4]

The need for aesthetic dental changes is very often self-perceived and can have a large effect on individuals' self-confidence and their overall quality of life.[3] Research has also shown an association between self-perceived need and individuals psychosocial wellbeing which is an essential part of good health.[5,6] Compromised dental aesthetics has also been found to be a predictor of lack of self-confidence, poor oral health and poor quality of life. [7,8]

With the inception of patient-centered orthodontic care, information about self-perception of dental appearance is becoming increasingly important in planning and executing orthodontic treatment as it determines the uptake of services.[9,10] This is particularly important in our environment where the awareness of orthodontics is still very low, treatment is regarded as expensive and most health care treatments are paid for "out of pocket". [11,12]

Similar research has been carried out previously among orthodontic patients as well as the general population [13-16] however there is paucity of such data among healthcare professionals particularly **medical doctors and nurses** who work with patients daily. These **healthcare** professionals also work in close physical proximity with the orthodontists and should have good knowledge about the services that they offer. Thus, we thought it expedient to assess the self-satisfaction of **medical doctors and nurses** with their dental aesthetics in order to increase **their**

awareness and subsequent uptake of orthodontic services among health personnel in our establishment.

## **Materials and Methods**

This was a questionnaire-based descriptive cross-sectional study carried out among 79 medical doctors and nurses in University of Port Harcourt Teaching Hospital, Port Harcourt, Rivers State. The questionnaire was adapted from a previous study [17] and comprised of two sections, Section A elicited the socio-demographic information of the participants, whilst Section B elicited information about their satisfaction with their dental aesthetics.

Ethical approval was sought and obtained from the Research and Ethics Committee of the Hospital prior to commencing the study. A total of 102 questionnaires were randomly distributed to all consenting medical doctors and nurses during working hours in the General out-patient, Paediatric and Ear Nose and Throat Departments and collected same day. There was a 78% response rate.

STROBE checklist was used to analyse and report data. Data was then collated on a computer and analysed using IBM Statistical Package for Social Sciences for Windows (SPSS) version 25.0. (Armonk, NY: IBM Corp). The results were presented using frequencies and percentages for categorical variables and means and standard deviations for continuous variables. Chi-square was used to test association between variables. Statistical significance was determined at 95% confidence interval with p value set at  $\leq 0.05$ .

## Results

A total of seventy-nine doctors and nurses participated in this study. Majority of the nurses were females (39,83.0%) whilst majority of doctors were males (21, 65.6%). More than half of the participants were single (45,57.0%). Table 1

**Table 1. Sociodemographic characteristics of participants**

Variable	Gender		Total n/%
	Male n/%	Female n/%	
<b>Age/years</b>			
21-30	10 (12.7)	15 (19.0)	25 (31.6)
31-40	18 (22.8)	22 (27.8)	40 (50.6)
41-50	1(1.3)	11 (13.9)	12 (15.2)
>50	0 (0.0)	2 (2.6)	2 (2.5)
<b>Marital status</b>			
<b>Single</b>	15 (51.7)	30 (60.0)	45 (57.0)
<b>Married</b>	14 (48.3)	20 (40.0)	34 (43.0)
<b>Designation</b>			
<b>Doctor</b>	21 (65.6)	11 (34.4)	32 (40.5)
<b>Nurse</b>	8 (17.0)	39 (83.0)	47 (59.5)
<b>Total</b>	29 (36.7)	50 (63.3)	79 (100.0)

About half of the participants (44,55.7%) believed that their teeth were healthy and well-arranged and were satisfied with the appearance of their teeth (47,59.5%); there were more females than males in this category. Whilst 7(8.9%) female participants did not like the appearance of their teeth “at all” only 2 (2.5%) felt “bad” about it as seen in (Fig 1) The participants satisfaction with their dental aesthetics and function versus gender is displayed in Table 2.

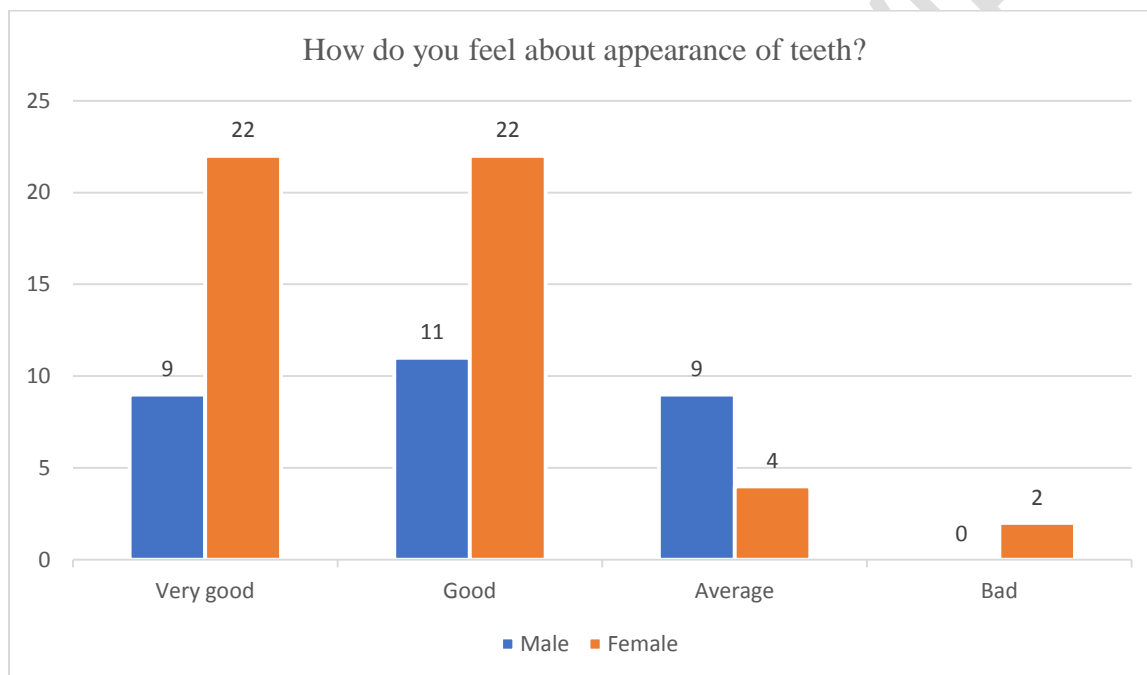


Fig 1. Participants assessment of the appearance of their teeth.

**Table 2. Crosstabulation of satisfaction with dental aesthetics and function with the gender of participants**

Variables	Gender		Total N/%	p
	Male N/%	Female N/%		
<b>Teeth healthy and well arranged?</b>				0.394
Yes	14 (17.7)	30 (38.0)	44 (55.7)	
No	10 (12.7)	16 (20.3)	26 (32.9)	
Do not know	5 (6.3)	4 (5.1)	9 (11.4)	
<b>Satisfied with appearance of teeth?</b>				0.251
Yes	15 (19.0)	32 (40.5)	47 (59.5)	
No	9 (11.4)	15 (19.0)	24 (30.4)	
Do not know	5 (6.3)	3 (3.8)	8 (10.1)	
<b>Do people comment that your teeth are beautiful?</b>				0.449
Not at all	10 (12.7)	24 (30.4)	34 (43.0)	
Sometimes	17 (21.5)	22 (27.8)	39 (49.4)	
All the time	2 (2.5)	4 (5.1)	6 (7.6)	
<b>Do you avoid smiling?</b>				0.279
Not at all	23 (29.1)	35 (44.3)	58 (73.4)	
Sometimes	6 (7.6)	11(13.9)	17 (21.5)	
All the time	0 (0.0)	4 (5.1)	4 (5.1)	
<b>Do you cover mouth when smiling?</b>				0.244
Not at all	23 (29.1)	39 (49.4)	62 (78.5)	
Sometimes	6 (7.6)	7 (8.9)	13 (16.5)	
All the time	0 (0.0)	4 (5.1)	4 (5.1)	
<b>Do you like your teeth?</b>				0.114
Very much	9 (11.4)	24 (30.4)	33 (41.8)	
Much	18 (22.8)	19 (24.1)	37 (46.8)	
Not at all	2 (2.5)	7 (8.9)	9 (11.4)	
<b>How do you feel about appearance of teeth?</b>				0.045*
Very good	9 (11.4)	22 (27.8)	31(39.2)	
Good	11(13.9)	22 (27.8)	33 (41.8)	
Average	9 (11.4)	4 (5.1)	13 (16.5)	
Bad	0 (0.0)	2 (2.5)	2 (2.5)	
<b>Do you have problems chewing or speaking?</b>				0.839
Yes	3 (3.8)	6 (7.6)	9 (11.4)	
No	24 (30.4)	42 (53.2)	66 (83.5)	
Do not know	2 (2.5)	2 (2.5)	4 (5.1)	
<b>Total</b>	<b>29 (36.7)</b>	<b>50 (63.3)</b>	<b>79 (100.0)</b>	

Participants between the ages of 31- 40 years old were overall more satisfied with their dental aesthetics than other age groups as seen in Table 3.

Table 3. Satisfaction with dental aesthetics and function versus age of participants

Variable	Age/years				Total n/%	p
	21-30 n/%	31-40 n/%	41-50 n/%	>50 n/%		
<b>Teeth healthy and well arranged?</b>						0.379
Yes	12(15.2)	23(29.1)	9(11.4)	0(0.0)	44(55.7)	
No	8(10.2)	13(16.5)	3(3.8)	2(2.6)	26(32.9)	
Do not know	5(6.3)	4(5.1)	0(0.0)	0(0.0)	9(11.4)	
<b>Satisfied with appearance of teeth?</b>						0.815
Yes	13(16.5)	25(31.6)	8(10.1)	1(1.3)	47(59.5)	
No	9(11.4)	11(13.9)	3(3.8)	1(1.3)	24(30.4)	
Do not know	3(3.8)	4(5.1)	1(1.3)	0(0.0)	8(10.1)	
<b>People tease you about your teeth?</b>						0.974
Not at all	18(22.8)	29(36.7)	9(11.4)	2(2.6)	58(73.4)	
Sometimes	7(8.9)	9(11.4)	3(3.8)	0(0.0)	19(24.1)	
All the time	0(0.0)	2(2.5)	0(0.0)	0(0.0)	2(2.5)	
<b>Avoid smiling?</b>						0.006*
Not at all	18(22.8)	31(39.2)	8(10.1)	1(1.3)	58(73.4)	
Sometimes	6(7.6)	7(8.9)	3(3.8)	1(1.3)	17(21.5)	
All the time	1(1.3)	2(2.5)	1(1.3)	0(0.0)	4(5.1)	
<b>Cover mouth when smiling?</b>						0.342
Not at all	19(24.1)	33(41.8)	9(11.4)	1(1.3)	62(78.5)	
Sometimes	5(6.4)	5(6.3)	2(2.5)	1(1.3)	13(16.5)	
All the time	1(1.3)	2(2.5)	1(1.3)	0(0.0)	4(5.1)	
<b>Like your teeth?</b>						0.930
Very much	10(12.7)	17(21.5)	5(6.3)	1(1.3)	33(41.8)	
Much	13(16.5)	18(22.8)	5(6.3)	1(1.3)	37(46.8)	
Not at all	2(2.5)	5(6.3)	2(2.5)	0(0.0)	9(11.4)	
<b>Feel about appearance of teeth?</b>						0.988
Very good	9(11.4)	16(20.3)	5(6.3)	1(1.3)	31(39.2)	
Good	10(12.7)	17(21.5)	5(6.3)	1(1.3)	33(41.8)	
Average	5(6.3)	6(7.6)	2(2.5)	0(0.0)	13(16.5)	
Bad	1(1.3)	1(1.3)	0(0.0)	0(0.0)	2(2.5)	
<b>Problems chewing or speaking</b>						0.291
Yes	4(5.1)	4(5.1)	0(0.0)	1(1.3)	9(11.4)	
No	19(24.1)	34(43.0)	12(15.2)	0(0.0)	66(83.5)	
Do not know	2(2.5)	2(2.5)	0(0.0)	0(0.0)	4(5.1)	
<b>Total</b>	<b>25(31.6)</b>	<b>40(50.6)</b>	<b>12(15.2)</b>	<b>1(1.3)</b>	<b>79(100.0)</b>	

Using Ordinal Regression, there was no difference between the levels of satisfaction of the doctors and nurses with their dental appearance. Nurses were found to be 1.101 times more likely to be satisfied with their appearance ( $p=0.832$ ). Similar results were observed in responses to whether they cover their mouths when smiling (Odds ratio:1.448,  $p=0.513$ ), and whether they avoid smiling because of their dental aesthetics (Odds ratio:1.188,  $p=0.740$ ).

## Discussion

The self-perception of dental aesthetics has become an increasingly important factor in orthodontic treatment. The subjective evaluation of dental appearance and aesthetics provides a basis for evaluation of treatment success and ultimate patient satisfaction.[10] The traditional normative orthodontic treatment need assessed by the orthodontist is limited in scope and usually does not evaluate all the individuals perception or even satisfaction with their dental appearance.[18,19] In this study which assessed this parameter among medical doctors and nurses in a tertiary hospital in South-South Nigeria who unlike majority of the general public have access to and may be able to afford orthodontic services most participants appeared to be satisfied with their dental aesthetics; however those that were not satisfied had not sought orthodontic treatment. This may be due to ignorance, cost of available services or apathy. This situation has been found to compare with other studies.[20,21]

Perception of dental aesthetics is influenced by a number of factors which includes the tooth alignment of an individual and the opinion of as well as teasing or comments about their teeth from others.[22] In this study, these factors seemed to play a role in the overall satisfaction of their aesthetics as most participants claimed that people commented about the beauty of their teeth sometimes and that they did not cover their mouths when smiling which is an indication that they like the arrangement of their teeth. These opinions are comparable to other studies carried out among other populations.[1,3] However, this could also be an indication of the low awareness of malocclusion in our environment.

Gender differences in our study indicated that female participants on the whole were less satisfied with their dental aesthetics than males as has been documented in other studies [10,14,18,19] This could be attributed to the fact that women are more self-critical and conscious of their appearances than men and place a lot of premium on the concept of beauty for the achievement of self-esteem.[23]

Age wise, the group aged 31-40 years old who are referred to as “upwardly mobile” in the market place were also the most satisfied with their dental aesthetics. This may be due to the fact that at this age top priorities are various careers, businesses and families thus they may not be mindful of the arrangement of their teeth.

Self-perceived dental aesthetics has also been associated with other parameters like sense of coherence (SOC) which promotes health and quality of life. SOC is “a discrete attribute that protects the individual against the consequences of stress and helps to explain how some people have more ability to manage the adversities of life, identify and mobilize resources to resolve problems effectively and to promote health and quality of life” [24] A higher SOC was associated with those who perceived their dental aesthetics positively.[24]

### **Conclusion**

In conclusion, there were significant gender differences among our participants with the female participants expressing greater dissatisfaction with their dental aesthetics. Also, the health professionals in the 31–40-year group were the most satisfied with their dental aesthetics.

### **Limitations**

The self-perceived need of participants was not compared with their normative treatment need because data was collected during working hours. This would have allowed for comparison and a more detailed assessment of participants awareness of malocclusion. We recommend that this be done in future studies of this population.

**COMPETING INTERESTS DISCLAIMER:**

**Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.**

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