

## Patients' self reported satisfaction of dental treatments received

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### ABSTRACT

**Objective:** Unfulfilled patients' treatment expectation may influence their judgment of dental care, therefore a commitment to achieving patients' expectations is an important matter for dental care professionals. This study aimed at assessing patients' self reported satisfaction of dental treatment received based on their expectations.

**Methods:** Cross-sectional study of patients attending a Government dental clinic in Jos, Nigeria. Self-administered questionnaire was used for data collection on socio-demographic characteristics, treatments expected by patients. Professional care given to patients was also added for each respondent. Data was analyzed using SPSS version 21.

**Results:** A total of 150 patients participated in this study, 42.0% males and 58.0% females. Ages ranged between 16-65 years. Only 8.0% had correct knowledge of who a dentist is. The major reasons for going to see the dentist were pain 71.3%, cavity 8.7% and check up 4.7%. Treatments expected by patients were check-up 42.0%, extraction 25.3%, prescriptions 11.3% and fillings 8.4%. Of those that expected check up (check up refers to visiting the dental clinic or dentist in order to check the state of the oral cavity to maintain good oral health) and extractions, only 5.0% and 84.4% were treated as expected. Generally there was satisfaction with treatments patients received,  $p=0.001$ . Most (87.9%) of the patients who expected check up and treated otherwise were also satisfied with treatments received.

**Conclusion:** Despite conflicting expectations from patients on what is to be done, there was still satisfaction from the treatments rendered. However, those who believed they came for check-up had no idea of what it entails. Enlightenment on dental health matters may build the right knowledge of dental care.

**Keywords:** Patients, treatments, satisfaction, dental, expectation

### INTRODUCTION

Patient satisfaction with dental care is a major component of the quality of health care and a key to successful dental practice<sup>1,2</sup>. It is the extent to which patients feel that their needs and expectations are being met by the services provided<sup>3</sup>. It is a global trend in healthcare system to include subjective user satisfaction into the evaluation of quality of services provided.<sup>3</sup> Although, there is no universally accepted method of measuring quality of care, there is growing consensus that measuring quality of care should be based at least on patients' satisfaction studies<sup>4</sup>.

Patient expectations of care and attitudes greatly contribute to their satisfaction<sup>5</sup>. Expectations are beliefs about future consequences, which may contribute to an individuals' psychological and physiological change<sup>6</sup>. Medical research had shown that individual's expectation of a drug's effect critically influences its

therapeutic efficacy and that regulatory brain mechanisms differ as a function of expectancy<sup>7</sup>. Also, satisfied patients are more likely to comply with medical treatment and therefore ought to have a better outcome.<sup>4</sup> A study on expectations and perceptions of Greek patients regarding the quality of dental health care showed a statistically significant gap between the desires of the patients and their perceptions.

There seems to be no complete integrated model of expectation that is dynamic, multi-dimensional and able to identify determinants of expectation, alongside socio-cognitive components.<sup>8</sup>

In Western societies, knowledge of oral health and demands for care are increasing<sup>9</sup>. The level of knowledge of patients about oral health is not limited to just having oral health, but an attractive smile as well for their self-esteem<sup>1</sup>. Oral health professionals are therefore exploring better ways of meeting patients' expectations and satisfaction<sup>3</sup>.

Fulfilling patients' treatment needs and expectation may have implications on promotion and maintenance of health. Dental treatment expectations

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among patients may be formed according to their knowledge of oral health. In Nigeria, there is generally low awareness of dental health care and utilization of dental service<sup>10,11</sup>. Evaluation of quality service provided through periodic satisfaction survey is not routine and is at the introductory level in our environment. This may have implication on knowing whether patients' treatment expectations have been met or not. Patients' dissatisfaction with treatment expected may grieve them and prevent compliance with dental care leading to poor oral health condition. It is possible that patients' treatment expectation for their dental problems may not conform to the professionals' treatment plan. However, this does not mean that professionals should go by patients' desires. Measures of expectations and satisfaction have been highlighted which include cost of dental care, availability and distribution of professionals, technical skills, cleanliness of facilities, waiting time, appointment and relationship of staff with patients<sup>12,13,14</sup>. There is no data on measures of satisfaction utilizing data on the actual treatment expected by patients from professionals and their judgment of dental care when they are treated otherwise from their expectations.

This study assessed patients' treatment expectations from dentists and their judgment of the care they receive based on what they expected. This might help to know the patients' perspective in terms of actual treatment expectations, address their misconceptions and establish or build patients' confidence in the professional decisions of their dental care.

## MATERIALS AND METHODS

This was a cross-sectional study on adult patients

**Table 1:** Demographic variables of study participants

Demographic variables	Frequency (n=150)	Percentage (%)
<b>Sex</b>		
Male	63	42.0
Female	87	58.0
<b>Age group (years)</b>		
16-20	24	37.3
21-30	64	31.3
31-40	24	15.1
41-50	19	12.7
51-60	3	2.0
>60	2	1.3
<b>Educational level</b>		
Low (informal, primary & secondary education)	31	20.7
High (tertiary education)	115	76.7
No response	4	2.7

attending a Government dental clinic for routine care. An adult according to this study refers to patients 16 years and above. A purposive sampling of patients who came to the clinic during the period (2014) of study was used. Patients were informed about the study and those willing to participate were given a self-administered questionnaire which they completed at the clinic's reception before any contact with the dentist. Questionnaire consisted of two sections. The first focused on demographic information, knowledge of who a dentist is, and reasons for visiting the dentist, treatments expectation and treatments given. The second section of the questionnaire collected information on satisfaction which was judged by the patients on the rank of satisfied, very satisfied and not satisfied. Patients responded to the questionnaire twice on the same day of their visit. They filled the first section of the questionnaire and thereafter went to see the dentist for their treatments. The same questionnaire was given back to them to complete the second section.

Data was analyzed using SPSS version 21 and Chi-square statistical test was applied at 0.05% significance level.

## RESULTS

A total of 150 questionnaires were analyzed, more females (56.0%) were involved. Ages ranged between 16-65 years. Most of the patients (76.8%) had high level of education comprising of tertiary education (post secondary schooling). Only 3.0% of the patients knew who a dentist is. Table 1 summarizes other demographic characteristics of the respondents.

**Who is a dentist?**

Correct response	12	8.0
Incorrect response	138	92.0

Most patients (71.3%) visited the dental clinic only when they have pain and their treatments expectations were mostly check-up (2.0%) and extraction (25.3%) (Table 2)

**Table 2: Reasons for visiting the dentist and treatment expected**

Variables	Frequency	Percentage (%)
<b>Reasons for visiting the dentist</b>		
Pain	107	71.3
Cavity	13	8.7
Clearing	13	8.7
Check-up	7	4.7
Others	7	4.7
No response	3	2.0
Total	150	100.0
<b>Treatment expected by patients</b>		
Check-up	63	42.0
Extraction	38	25.3
Fillings	11	7.3
Prescription	19	12.7
No response	19	12.7
Total	150	100.0

**Table 3: Treatment received with regard to expectation**

Treatment expected (n=105)	Treatment given (n,%)					p value
	Check-up	Extraction	Filling	Scaling & Polishing	Prescription	
check up (67)	3 (5.0)	23(38.3)	14(23.5)	19(30.0)	2(7.3)	0.007
Extraction (21)	0(0.0)	27(89.1)	3(9.7)	1(3.2)	0(0.0)	0.007
Filling (8)	0(0.0)	0(0.0)	5(50)	3(37.5)	1(12.5)	1.000
Prescription (16)	0(0.0)	5(31.3)	1(6.3)	8(50.0)	4(25.0)	0.090

**Table 4: Satisfaction with treatment received by sampled population across gender and educational level**

Treatment Received	Level of satisfaction				p values
	Very satisfied(%)	Satisfied(%)	Not satisfied(%)	Non response	
<b>Check-up</b>					
As expected	7(66.7)	1(33.3)	0(0.0)	0(0.0)	0.011
Otherwise	5(8.1)	45(87.9)	7(10.0)	0(0.0)	
<b>Extraction</b>					
As expected	5(18.5)	30(74.1)	2(7.9)	0(0.0)	0.502
Otherwise	2(44.4)	3(33.3)	0(0.0)	0(0.0)	
<b>Filling</b>					
As expected	2(66.7)	1(33.3)	0(0.0)	0(0.0)	0.083
Otherwise	0(0.0)	3(100.0)	0(0.0)	0(0.0)	
<b>Prescription</b>					
As expected	0(0.0)	1(100.0)	0(0.0)	0(0.0)	0.565

Otherwise	2 (23.0)	9 (73.2)	0 (0.0)	0(0.0)	
Sampled population	23 (15.3)	100 (66.7)	3 (3.3)	79(14.7)	0 (0.0)
Sex					
Male	9 (17.0)	73 (81.1)	1 (1.8)	0(0.0)	0 (0.0)
Female	14 (18.7)	77 (76.0)	4 (7.3)	0(0.0)	
Educational level					
Low	3 (13.0)	31 (84.0)	1 (4.0)	0(0.0)	0 (0.0)
High	19 (19.9)	77 (77.8)	3 (3.0)	0(0.0)	

Table 3 summarizes the proportions of treatments given to patients with respect to what they were expecting from the Dental clinic. In all, the studied population had statistically significant high level of satisfaction with the services rendered at the Dental clinic (Table 4). No statistically significant difference was found between satisfaction and gender or educational level ( $p > 0.05$ , Table 4).

## DISCUSSION

This study showed a low knowledge of who a dentist is among the respondents. Most of them visited the dentist because of pain. This attitude of visiting the dentist only when there is pain may be connected to lack of knowledge of what a dentist is and the roles of a dentist.

Treatments expected by the patients were mostly check-ups and extraction. Check up is a comprehensive examination to ascertain the state of the oral cavity for the maintenance of good oral health. Health information is provided during check up and potential problems may be detected which the patient may not be aware of unless the problem is fully established with evidence of pain. Unhealthy lifestyle habits may also be corrected during check up. Check up is important in the prevention of disease occurrence and pain. Extraction being one of the most expected treatments highlights the work of the dentist as perceived by the volunteers to be that of "teeth removal". This is confirmed by the respondents' concept of who a dentist is, a "teeth remover" although, about 12% of the patients claimed they expected regular check-ups, and most of them were given curative and restorative treatments while only 3.0% actually received check-ups. This indicates ignorance among the patients as to what dental check-up entails. In a study from Japan seeking to assess the correlation between patient satisfaction and dental credibility in regular dental check-ups, there was awareness of dental check-up among the patients with the mean percentage of patients reporting for regular check-ups up to 60%. Poor knowledge of dental check-up may result in negative attitudes towards

regular dental visits. Oral health care required for dental check up is not likely to be the same with that required for curative and restorative care or for treatment to relief pain. Regular check-up is a preventive dental visit that helps in the early detection and treatment of oral diseases. Check-up is important to ensure good health and prevent exposure to any risk<sup>18</sup>. There is need to clarify what dental check up is, its implications and need to patients and the entire population.

A study on patients' expectation for oral health care<sup>19</sup> showed high expectations of oral health care by patients which was not limited to curative and restorative care but also cosmetic care<sup>19</sup>. Most patients visit the dental clinic when they are in pain as observed in this study, only few visited for check-up, but their treatments expectation conflicted with reasons for visiting the dentist. Most of them expected check-up as treatment apart from check up on appreciable number of patients expected extractions and to receive pain prescriptions as treatment for their dental problems. This showed a lack of understanding of oral health care among the patients restricting it to tooth removal and prescriptions alone.

As expected, treatments given to patients were at the dental clinic, but necessarily based on patients' expectations. Despite this, patients expressed satisfaction with treatment rendered possibly because of alleviation of pain as most of them came because of pain. Though, a study on patients' assessment of treatment satisfaction<sup>20</sup> showed that some factors within the patients influence reports about satisfaction with treatment such as age, educational level, gender and personal preferences<sup>20</sup>. This study showed no significant differences between the level of satisfaction among patients with respect to their gender and educational levels. This may be as a result of the level of oral health awareness in these environments. Studies have shown high treatments expectations among patients as a result of good knowledge of oral health and esthetics<sup>21,22</sup>.

Though, the data collection tool consisted more of structured questions restricting patients' expressions,

Generally, the patients were satisfied with the care they received through their treatments expectations showed some level of ignorance of oral health care. There was a misconception about dental check ups among the patients. This has implication on follow up treatments, regular visits and oral health status. Therefore efforts to meeting patients' expectation and satisfaction should not be limited to solving an aspect of oral health challenge such as availability and fair distribution of professionals and facilities only. There is also need to consider patients' perspective such as lack of awareness and knowledge of oral health care. Neglecting this may deter a successful dental practice which can hinder oral disease prevention, maintenance of good oral health and reduced quality of life. In conclusion, patients visit the dentist more for curative and restorative purposes than preventive care. Three quarter visited because of pain and close to half of our respondents expected check up as treatment. General check up is required for regular dental visit which is recommended twice a year for everyone in order to prevent oral diseases and maintain good oral health. Therefore the need for re-emphasis on check up, what it is and regular visit to the dentist will help patients to know that visiting the dentist for check up is not when you are in pain.

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#### REFERENCES

- Nagappan N, John J. Patients' satisfaction with the dental services offered by dental Hospital in India. *J Indian Assoc Public Health Dent* 2014; 12: 297-301.
- Douglas CW, Sheets CG. Patients' expectation for oral health care in the 21<sup>st</sup> century. *The Journal of American Dental Association*. 2000; 131: 36-75.
- Iliyasu Z, Abubaka IS, Lawan UM, Gajida AU. Patients' satisfaction obtained from Aminu Kano Teaching Hospital, Kano, Northern Nigeria. *Niger J Clinical Pract* 2010; 13:371-378.
- Asadi Lari M, Tamburini M, Gray D. Patients' needs, satisfaction, and health related quality of life: towards a comprehensive model. *Health and Quality of Life Outcomes*. 2004; 2: 1-32.
- Yeo J, Lang H, Xiao L, McGrath C, Matthews N. Patients' expectations to dental implants: a systematic review of the literature. *Health and Quality of Life Outcomes*. 2014; 12:153-159.
- Ringel U, Wanigasekera V, Wiedt K R, et al. The effect of treatment expectation in drug efficacy. *Sci Transl Med*. 2011; 3:70, 7-14.
- Anastasios K, Mando K, Demetria H, Vassilis P. Expectations and perceptions of Greek patients regarding the quality of dental health care. *International Journal for Quality in Health Care*. 2001; 409-416.
- Bialosky JE, Bishop MD, Cleland JA. Individual expectation: an overlooked but pertinent factor in the treatment of individuals' experiencing musculoskeletal pain. *PTJ*. 2010; vol.80:9, 1345-1355.
- Dent J, Armstrong D, DeLaney B, Moayyedi P, Talley N J, Vakil N. Patient assessment of treatment satisfaction: methods and practical issues. *BMC Gut*, 2004;53:14.
- Olusile AO. Improving low awareness and inadequate access to oral health care in Nigeria. The role of dentists, the government and non-governmental agencies. *Nig. Medical Journal*, 2010; 51: 3, 134-136.
- Bamidele CT, Bada TA, Bamidele FO, Ogunbodele TO. Dental care utilization and satisfaction of residential university students. *Libyan J Med*. 2008; 3:3, 140-143.
- Priya H, Bharathi MP, Acharya S, Bhat M, Kumar M. Factors affecting dental satisfaction among Indian undergraduate dental students. *Inter. J. Dental Clinics*. 2011; 3(1):8-13.
- Chaffin JC, Moss D, Brehm B. Patient satisfaction in US Army dental treatment facilities. *Army Med Department J* 2009; 10-13.
- Know your teeth. Academic of General Dentistry. <http://www.knowyourteeth.com/info/bites>. 2015
- Tamaki Y, Nomura Y, Nishikawara T, et al. Correlation between patient satisfaction and dental clinic credibility in regular dental check-ups in Japan. *J Oral Sci*. 2015; 47: 2: 97-103.
- Tia-Do M, Suddki N, Hassan N. Factors influencing patient satisfaction with dental appearance and treatment they desire to improve aesthetics. *BMC Oral Health*. 2011; 11: 61472-6831.
- Redmond N, Baer HJ, Clark CR, Lipsitz S. Sources of health information related to preventive health behaviors in a national study. *Am J Prev Med*. 2010; 36 (6): 620-627.