

# Patients` Satisfaction with the Dental Services among the Adult Patients Visiting a Teaching Dental Hospital in Kathmandu, Nepal

Sukriti Sharma,<sup>1\*</sup> Bishnu Ghimire,<sup>2</sup> Anju Khapung,<sup>3</sup> Dikshya Sharma,<sup>4</sup> Sujata Nyaupane<sup>4</sup>

<sup>1</sup>Prosthodontics and Dentofacial Prosthesis, Nepal Medical College, Kathmandu, Nepal.

<sup>2</sup>Oral and Maxillofacial Surgery, Nepal Medical College, Kathmandu, Nepal.

<sup>3</sup>Community and Public Health Dentistry, Nepal Medical College, Kathmandu, Nepal.

<sup>4</sup>One Health Research and Training Center, Kathmandu, Nepal.

## ABSTRACT

**Introduction:** Patient satisfaction is seen as an essential element in the assessment of the quality of healthcare. Patient/Client satisfaction is an attitude – a person’s general orientation towards a total experience of health care. As the healthcare industry shifts towards a consumer-oriented approach in the delivery of care, feedback from patients/clients can influence the whole quality improvement agenda and provide an opportunity for organizational learning and development. This study aimed to assess patient satisfaction with dental services among adult patients visiting a teaching dental hospital in Kathmandu.

**Methods:** A cross-sectional study was conducted among 125 patients at the College of Dental Sciences and Hospital (CODSH), Nepal Medical College (NMC), Attarkhel, Jorpati, a tertiary hospital in Nepal. A valid 28-item dental satisfaction tool was used in the study, three were excluded to match the Nepalese context. The questionnaire consists of four domains namely context, content, outcome, and cost of dental health services. The research questionnaires were handed out to the five respective departments. The responses for all these domains were expressed on 5 points Likert scale and a mean score was calculated. The data was analyzed to SPSS version 16.

**Results:** There was a high level of satisfaction among patients receiving dental services with a mean score of  $4.09 \pm 0.57$  out of five domains.

**Conclusions:** The patients showed a higher level of satisfaction in all four domains of the satisfaction questionnaire irrespective of age, sex, literacy, income, and the number of visits.

**Keywords:** *Dental services; Teaching hospital; Patient satisfaction.*

## INTRODUCTION

Patient/Client satisfaction is an attitude – a person’s general orientation towards a total experience of health care.<sup>1</sup> As the healthcare industry shifts towards a consumer-oriented approach in the delivery of care,<sup>2</sup> feedback from patients/clients can influence the whole quality improvement agenda and provide an opportunity

for organizational learning and development.<sup>1</sup> Despite the fact that numerous research on patient satisfaction with general healthcare has been carried out in Nepal, the details on dental health services are few. Additionally, oral health services differ from other health services not just in terms of treatment processes but also in terms of the social and professional environment.<sup>3</sup> Patients' satisfaction with prior dental care is particularly crucial

\*Correspondence: [sukriti.sharma00@gmail.com](mailto:sukriti.sharma00@gmail.com)

Prosthodontics, and Dentofacial Prosthesis,  
Nepal Medical College

because it will affect how frequently they use services.<sup>4,5</sup>

In view of this situation, a cross-sectional survey was carried out to put a figure on patient satisfaction with dental services among adult patients visiting a teaching dental hospital in Kathmandu.

## METHODS

The quantitative observational, cross-sectional study was conducted among 125 aged above 18 years patients at the College of Dental Sciences and Hospital (CODSH), Nepal Medical College (NMC), Attarkhel, Jorpati, a tertiary hospital in Nepal. The ethical approval was taken from the Institutional Research Committee (IRC) of Nepal Medical Colleges as well as permission and a completion letter were obtained from the managing director of the College of Dental Science and Hospital-NMC for the conduction of this study. At the time of data collection, research questionnaires were distributed only after obtaining informed consent from participants to ensure their rights, and those unwilling to participate below the age of 18 years, patients suffering from a chronic debilitating medical condition and cognitive impairment, and also, patients who had already undergone treatment and had interviewed in any one of the department were excluded from the study. Participants were free to answer with full authority for the exclusion during any period of data collection. Confidentiality was established by keeping the participants' identities while collecting and entering data.

For the calculation of sample size, the non-probability, convenience sampling technique was used. The sample size was calculated by using the formula,<sup>6</sup>

$$n = Z^2 S^2 / d^2$$

where

n = sample size

Z = 1.96 at a 95% confidence interval

S = 0.46 (Standard Deviation of satisfaction score of males taken from a study<sup>7</sup>)

d = estimated effect size = 0.212<sup>6</sup>

Keeping these values, the sample size calculated was 18. Further keeping a response rate of 80%, the sample size was 22.5 which was approximately 25. due to the study sites i.e, 5 dental departments, the total sample size calculated was 125.

The data was collected using the interview technique The research questionnaires were handed out to the faculties/ dental surgeons/ interns in each of the five respective departments and the patients were interviewed upon the completion of each dental treatment. For the data collection tool, the questionnaire was divided into two

sections. The first one was sociodemographic variables which included information regarding age, gender, family income, education of the patient and of the head of the family, occupation of the patient and of the head of the family, ethnicity, and religion. The variables of family income, education, and occupation of the head of the family were used to access the socioeconomic status according to Kuppaswamy's Socioeconomic Status Scale in the context of Nepal.<sup>8</sup> Second section was a pre-designed questionnaire related to patients' satisfaction with dental care adopted from the 31-item dental satisfaction questionnaire developed by the Australian Institute of Health and Welfare Dental Statistics and Research Unit, University of Adelaide, Australia.<sup>6</sup> The questionnaire regarding dental satisfaction consists of 4 domains: Context domain with 12 questions, content domain with 9 questions, outcome domain with 6 questions, and cost domain with 4 questions. Three items namely item 11 (preferred professional) of the context domain, item 21 (no untreated problem) of the outcome domain, and item 31 (financial protection) of the cost domain were excluded to match the Nepalese context. The responses for all these domains were expressed on 5 points Likert scale,<sup>9</sup> each point was given a score: strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5). The scores were summed up and a mean score was calculated for each question in each domain.

The information gathered was entered into Microsoft Excel version 2013, which was entered systematically. The data was then imported to SPSS (Statistical Package for Social Science) version 16, where it was statistically analyzed. Finally, the quantitative information was presented in the form of a table. Various descriptive statistics like frequency, and percentage.

## RESULTS

Out of 125 participants, more than three-fifths (63.2%) were female. Over one-third (35.2%) were aged between 18-24 years. Similarly, nearly half of the participants (49.6%) were unmarried. Regarding the educational status of participants, more than a quarter (28%) had completed graduate or postgraduate level, followed by Intermediate or Post high school diploma level (22.4%), High school certificate (19.2%) where one-tenth of the participants had completed Primary school and same proportion was illiterate (10.4%). Likewise, slightly more than a fifth (22.4%) of the participants reported that their head of the household had completed graduate or postgraduate level, followed by a Middle school certificate (16.8%) and Intermediate or Post high school diploma level (16%).

**Table 1. Distribution of sociodemographic characteristics of study participants**

Variables		n (%)
Gender	Male	46(36.8%)
	Female	79(63.2%)
Age group (years)	18-24 years	44(35.2%)
	25-44 years	42(33.6%)
	45-64 years	26(20.8%)
	65 years and above	13(10.4%)
Marital status	Unmarried	62(49.6%)
	Married	56(44.8%)
	Widowed	7(5.6%)
Education	Professional or Honors	1(0.8%)
	Graduate or Postgraduate	35(28%)
	Intermediate of Post high school diploma	28(22.4%)
	High school certificate	24(19.2%)
	Middle school certificate	11(8.8%)
	Primary School or Literate	13(10.4%)
	Illiterate	13(10.4%)
Education of the Head of the family	Professional or Honors	10(8%)
	Graduate or Postgraduate	28(22.4%)
	Intermediate of Post high school diploma	20(16%)
	High school certificate	19(15.2%)
	Middle school certificate	21(16.8%)
	Primary School or Literate	13(10.4%)
	Illiterate	14(11.2%)

Regarding the context dimension of dental care services, one-third of the participants (32.8%) strongly agreed that distance to the dental clinic location was not so far. Half of the participants (50.4%) agreed that it was easy to get an appointment. Similarly, a higher proportion of the participants agreed on the items about quick

appointments and short waiting times, 46.4% and 38.4% respectively. Likewise, 47% of the participants reported having attractive waiting rooms and modern equipment in the dental clinics, on the other hand, half of the participants (50.4%) strongly agreed that there was friendly clinical staff in the dental clinics.

**Table 2. Distribution of responses of study participants regarding satisfaction variable by CONTEXT dimensions**

Context	Items	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Clinic location/ appointments	Distance to the hospital not so far	16(12.8%)	14(11.2%)	10(8%)	44(35.2%)	41(32.8%)
	Travel to the hospital is easy	9(7.2%)	17(13.6%)	13(10.4%)	45(36%)	41(32.8%)
	Easy to get an appointment	4(3.2%)	3(2.4%)	10(8%)	63(50.4%)	45(36%)
Waiting time	Quick appointment	4(3.2%)	7(5.6%)	19(15.2%)	58(46.4%)	37(29.6%)
	Short waiting time	5(4%)	11(8.8%)	22(17.6%)	48(38.4%)	39(31.2%)

Context	Items	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Dental clinic/ surgery facilities	Attractive waiting room	16(12.8%)	15(12%)	21(16.8%)	59(47.2%)	14(11.2%)
	Instruments well equipped	2(1.6%)	13(10.4%)	26(20.8%)	68(54.4%)	16(12.8%)
	Modern equipment	4(3.2%)	13(10.4%)	35(28%)	59(47.2%)	14(11.2%)
Clinic staff	Friendly staff	2(1.6%)	1(0.8%)	7(5.6%)	52(41.6%)	63(50.4%)
Dental professional	Impersonal professional	2(1.6%)	13(10.4%)	12(9.6%)	43(34.4%)	55(44%)
	Same professional	7(5.6%)	18(14.4%)	11(8.8%)	39(31.2%)	50(40%)

More than half of the participants gave an “agree” response with items related to the content domain of the questionnaire. Similarly, almost half of the surveyed participants were strongly satisfied with the communication domain regarding service satisfaction,

where, explained need (47.2%), thorough examination (48%), answered questions (48.8%), explained options (49.6%), and explained treatment (48%). Moreover, half of the participants were strongly satisfied with the care provided by dental clinics.

**Table 3. Distribution of responses of study participants regarding satisfaction variable by CONTENT dimensions**

Content	Items	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Communication	Explained need	3(2.4%)	4(3.2%)	9(7.2%)	50(40%)	59(47.2%)
	Thorough examination	2(1.6%)	-	6(4.8%)	57(45.6%)	60(48%)
	Answered questions	-	2(1.6%)	4(3.2%)	58(46.4%)	61(48.8%)
	Explained options	-	2(1.6%)	7(5.6%)	54(43.2%)	62(49.6%)
	Explained treatment	-	3(2.4%)	9(7.2%)	53(42.4%)	60(48%)
Services provided	Satisfied with care	-	2(1.6%)	14(11.2%)	47(37.6%)	62(49.6%)
	Appropriate care	-	2(1.6%)	10(8%)	52(41.6%)	61(48.8%)
Dental clinic/ surgery facilities	No unexpected pain	3(2.4%)	6(4.8%)	8(6.4%)	53(42.4%)	55(44%)

Table 4 represents the satisfaction of the respondents by outcome dimensions. More than two-fifths (44.8%) of the participants strongly agreed that their problems were fixed as a service result and nearly half (47.2%) strongly agreed about their improved dental health. whereas, nearly half (44.8%) of the participants agreed

that they expected improvements in terms of speed. Two out of five (39.2%) of the participants strongly agreed that they were confident of care. Similarly, 48% of the participants strongly agreed that the received advice was good in terms of the usefulness of the information.

**Table 4. Distribution of responses of study participants regarding satisfaction variable by OUTCOME dimensions**

Outcome	Items	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Service results	Problems were fixed	3(2.4%)	18(14.4%)	8(6.4%)	40(32%)	56(44.8%)
	Improved dental health	-	5(4%)	10(8%)	51(40.8%)	59(47.2%)
Speed	Expected improvement	-	6(4.8%)	14(11.2%)	56(44.8%)	49(39.2%)

Outcome	Items	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Value	Confident of care	-	4(3.2%)	22(17.6%)	49(39.2%)	50(40%)
	No better care	1(0.8%)	21(16.8%)	24(19.2%)	31(24.8%)	48(38.4%)
Usefulness of information	Good advice	-	1(0.8%)	12(9.6%)	52(41.6%)	60(48%)

Regarding the cost dimensions, nearly half (47.2%) of the participants strongly agreed that unnecessary cost was avoided during the treatment, also 42.4% of

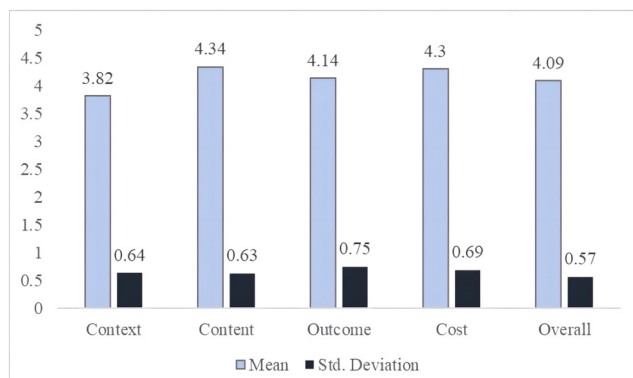
the participants strongly agreed that service cost was affordable.

**Table 5. Distribution of responses of study participants regarding satisfaction variable by COST dimensions**

Cost Dimension	Items	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
Communication and justification	Explained cost	1(0.8%)	3(2.4%)	10(8%)	51(40.8%)	60(48%)
	Avoid unnecessary costs	-	1(0.8%)	11(8.8%)	54(43.2%)	59(47.2%)
Affordability	Cost affordable	1(0.8%)	4(3.2%)	15(12%)	52(41.6%)	53(42.4%)

**Mean of each component from different Dimension**

Figure 1 shows that the average satisfaction scores towards all the four domains of the patients were more than 4. The overall mean satisfaction score of all the patients from the dental Services among the Adult Patients Visiting a Teaching Dental Hospital in Kathmandu was  $4.09 \pm 0.57$ .



**Figure 1. Domain-wise average satisfaction scores among the patients attending a dental service**

**DISCUSSION**

The patients’ satisfaction with the dental services was conducted to put a figure on patient satisfaction with dental services among adult patients visiting a teaching dental hospital in Kathmandu. In the current study, the mean satisfaction score of all the participants receiving services from a teaching dental hospital in Kathmandu was  $4.09 \pm 0.57$  which is high. Similarly, the mean satisfaction score of all the patients receiving services from the five dental departments of NMCTH was  $4.24 \pm 0.04$ , showing a high level of satisfaction among patients attending teaching colleges in Nepal, Saudi Arabia, and

India.<sup>10,11,12</sup>

Regarding the context dimension, one-third of the participants (32.8%) strongly agreed that the distance to the dental clinic location was not far. Most participants, 50.4%, agreed that scheduling an appointment was simple. On the other hand, half of the participants (50.4%) strongly agreed that there was friendly clinical personnel in the dental clinics. Similarly, in the context dimension, a study conducted in a similar context reported the highest level of satisfaction in an easy location, distance, and friendly staff.<sup>10</sup>

Similarly, 47% of the participants reported having nice waiting rooms and current equipment at the dental clinics. In contrast, studies done in India<sup>13</sup> and Saudi Arabia<sup>14</sup> show that a higher proportion of patients expressed dissatisfaction in the context of the waiting room for visitors. Regarding the content domain, more than half of the participants gave an “agree” response with items related to the content domain of the questionnaire. Similarly, almost half of the surveyed participants were strongly satisfied with the communication domain regarding service satisfaction. Moreover, half of the participants were strongly satisfied with the care provided by dental clinics.

In the case of the outcome, patients were very confident about the care provided and also showed the highest level of satisfaction with the usefulness of the information.<sup>10</sup> Regarding the cost dimensions, nearly half (47.2%) of the participants strongly agreed that unnecessary cost was avoided during the treatment, also 42.4% of the participants strongly agreed that the service cost them was affordable, which is similar to study findings from an NMCTH and teaching dental hospital in India.<sup>10,13</sup>

## CONCLUSIONS

The patients were satisfied with the dental services provided by the Teaching Dental Hospital in Kathmandu in all four domains of the satisfaction questionnaire. The findings of the study will help to improve high-quality services and patient-centered dental services to the patients in the College of Dental Sciences and Hospital (CODSH), Nepal Medical College (NMC), Attarkhel, Jorpati, a tertiary hospital in Nepal.

## ACKNOWLEDGEMENT

Not applicable

## CONFLICT OF INTEREST

None

## FUNDING

This study was funded with the author's own contributions.

## REFERENCES

1. Health Boards Executive (HeBE). Measurement of patient satisfaction guidelines: health strategy implementation project 2003. Ireland: The Irish Health Repository; 2003.
2. Stoeckle JD. From Service to Commodity: Corporization, Competition, Commodification, and Customer Culture Transforms Health Care. *Croat Med J.* 2000;41:141-3.
3. Sagtani A, Sagtani RA, Sherpa Y. Satisfaction from Oral Health Services among Patients Attending a Teaching Dental Hospital in Nepal. *J Nepal Dent Assoc.* 2018;18:5-12.
4. Murray BP, Wiese HJ. Satisfaction with care and the utilization of dental services at a neighborhood health center. *J Pub Health Dent.* 1975;35:170-6.
5. Firestein SK. Patient anxiety and dental practice. *J Am Dent Assoc.* 1976;93:1180-7
6. Stewart JF, Spencer AJ. Dental Satisfaction Survey. Adelaide, Australia: AIHW Dental Statistics and Research Unit. 2002. 124p.
7. Sagtani A, Sagtani RA, Sherpa Y. Satisfaction from Oral Health Services among Patients Attending a Teaching Dental Hospital in Nepal. *J Nepal Dent Assoc.* 2018;18:5-12.
8. Joshi SK, Acharya K. Modification of Kuppuswamy's Socioeconomic Status Scale in the Context of Nepal, 2019. *Kathmandu Univ Med J.* 2019;17:1-2.
9. Rensis L. A Technique for the Measurement of Attitudes. *Arch Psychol.* 1932;140:1-55.
10. Sagtani A, Sagtani RA, Sherpa Y, Rijal T, Bhattarai P, Pant N. Satisfaction from Oral Health Services among Patients Attending a Teaching Dental Hospital in Nepal.
11. Mahrous MS, Hifnawy T. Patient satisfaction from dental services provided by College of Dentistry, Taibah University, Saudi Arabia. *J Taibah University Med Sci.* 2012;7(2):104-9.
12. Patel JY. A study on evaluation of patient satisfaction with dental health care services. *International Journal of Scientific and Research Publications.* 2014 Aug;4(8):1-4.
13. Nagappan N, Joseph J. Patient satisfaction with the dental services offered by a dental hospital in India. *J Indian Assoc Public Health Dent.* 2014;12(4):297-301.
14. Awliya WY. Patient satisfaction with the dental services provided by the Dental College of King Saud University. *Saudi Dent J.* 2003 Jan;15(1):11-6.