

SATISFACTION LEVEL AMONG PATIENTS ATTENDING THE DENTAL OUT-PATIENT DEPARTMENT TOWARD RENDERED DENTAL HEALTH SERVICES

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Abstract

Background: Patient satisfaction with dental care is an important aspect of the quality of care both in dental hospitals and academic institutions. This study highlighted the area of patients' satisfaction level at institutional level with available treatment facilities. The objective of the study was to assess the patients' satisfaction level attending at the dental out-patient department toward dental health services rendered at an academic institution.

Materials and methods: This cross-sectional type of observational study was conducted in Dental Unit, Chattogram Medical College, Chattogram from January 2018- June 2018. All together 100 physically and mentally sound adult patients (Visited more than once) who gave consent were interviewed throughout the process at out-patients department using 7-item closed ended questionnaire which included socio-demographic details, appointment schedule, technical competency of dental services, hospital administrative efficiency, hospital set-up environment, dentist-patient interaction and cost-effectiveness by using "Likert Scale". The data were analyzed using Statistical Package for Social

Science (SPSS version 20) which converted to descriptive and inferential statistics and chi square test also done to see the association.

Results: Among 100 adult patients 46% were male, 54% were female, 38% belonged to 26-40 years age group and 9% were over 55 years. Patients with less than graduate or bachelor degree were more satisfied with dental health services ($p=0.000$) on the mean satisfaction measures by educational level and mean satisfaction score by educational level, on treatment offered was not painful was 2.16 .800 and mean score of satisfaction on dental instruments used were sterilized was 2.48 1.078. Satisfaction with the dentists' performances showed 34% female were very satisfied regarding offered treatment was not painful, followed by dental assistance services 35% female respondents were very satisfied on dental staff's friendliness. Hospital setup and administrative efficiency were followed respectively. On the other hand, 17% male respondents were very satisfied with cost of the treatment. **Conclusion:** Nevertheless, majority of the patients were satisfied with Dentist-Patient interaction, technical competency, hospital setup and environment, hospital administrative efficiency and cost effectiveness of dental services with additional room of improvements with hospital setup and environment are needed.

Key words

Patients' satisfaction; Dental health service.

Introduction

Satisfaction is usually a broad term in qualitative perspective. It is easy to understand but difficult to define, however patient satisfaction has been defined by Kegan -the patient satisfaction reflect the total experience of health care. Satisfaction involves intellectual, emotional, psychological factor and previous experience, expectation of the patient. Again Kotler defined satisfaction as a person's feeling of pleasure or disappointment

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resulting from comparing a product's perceived performance or outcome, in relation to his or her expectations¹. And success of an oral health service can be assessed by the degree of satisfaction of its patients. Satisfaction depends on persons attitude towards the facility, meeting up with the expectations with psychosocial factors. Since, the health care industry is undergoing a rapid transformation to meet the ever-increasing needs and demands of its patient population so, selection of dental clinics or dental hospitals for their treatment is based on accessibility, convenience and affordability. As a result, hospitals are shifting from viewing patients as uneducated and with little health care choice, to recognise that the educated consumer has many service demands and health care choices available¹⁻³. Quality of health sector is now-a-days a burning issue in the developing country. Consumers need to be better informed about what is good and bad for their health, why not all of their expectations can be met, and that they have rights which all providers should respect⁴⁻⁵. In order to ensure the quality of dental services the WHO recommended dentist-to-population ratio is 1:7500, whereas in India, dentist-to-population ratio was 1:300,000 in the 1960's, which stands at 1:10,000 today⁴. As a result, sometimes it is hard to meet up with patients' satisfaction. While most dental clinics help to solve the dental problems of patients, dental teaching hospital and allied hospitals are preferred choice for comprehensive dental treatments due to their reputation, affordability and professional competency of the clinicians⁶. Fulfilment of patients expectation and demands as well as positive assurance, good responses to patient can resolve confusions and doubts of the patient. It provides better satisfaction and result in a future return of the patients to receive subsequent good quality of treatment.

The role of dental specialists is important to improve the quality of dental service and to increase patients' satisfaction level, willingness to use the service once again, and to refer the service to others⁵. As a teaching institution, dental hospitals alongside with colleges usually strive to find a balance between meeting the needs of both patients and students. So sometimes patients are dissatisfied due to unable to understand the explanation of treatment option provided by dental students.

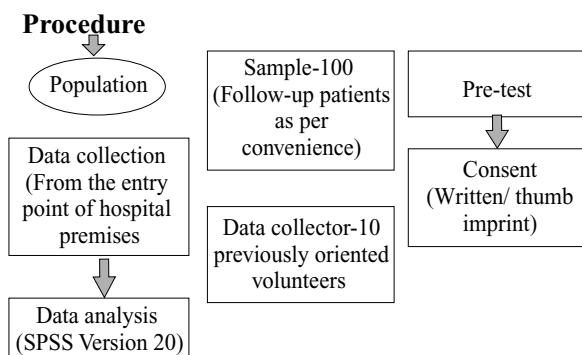
Patient satisfaction with dental care is an important aspect of the quality of care and will influence the future utilization of service³. On the other hand, cost of the dental services are more expensive in dental clinics compared to the academic institutions. Dental appointments are almost always fully booked and the usual waiting time to get an appointment for treatment depends on each patient's case. Patients with acute problems can, however, make an emergency appointment and are seen on the same day. Dentist-patient interactions during a consultation, including cognitive and emotional aspects, have been demonstrated to affect patient compliance with clinical advice and follow-up visits⁷. As satisfaction is a multidimensional concept and it influences compliance, and better compliance means healthier (And less costly) patients in the long term, then perhaps the most effective way to improve compliance for younger patients is to increase their general satisfaction with the dental practice⁶. The objective of the study was to assess the patients' satisfaction level attending at the dental out-patient department toward dental health services rendered at an academic institution. Furthermore, to assess the patients' satisfaction with dental health care services regarding behavioural factor on the basis of dentist-patient interaction, regarding service related factor on the basis of appointment schedule, technical competency, hospital administrative efficiency, regarding environment related factor on the basis of hospital setup and regarding cost related factor on the basis of cost.

Materials and methods

A cross-sectional type of observational study was conducted in January 2018 in Dental Unit, Chattogram Medical College, Chattogram. All together 100 adult patients interviewed. Inclusion criteria were age of 18 years and above, who had visited the hospital at the time of the study, visited more than once and patients who were willing to participate in the study. On the contrary accompanying visitors, with patients, first time patients, <18 years of age patients, mentally challenged and physically handicapped patients and patients who did not give consent to participate in the study were excluded. Convenience sampling technique was followed for the resource (Time, availability manpower and financial) constraints and presumed higher response rate with convenience sampling technique. The research

instrument is self-administered questionnaire, divided into two parts, developed by systematic literature review. The first part of the questionnaire contained questions relating to socio-demographic information about the patients, the second part was designed to measure the patients' perception, satisfaction and expectation in terms of doctor-patient interaction, technical competency, clinical setup or environment and cost effectiveness. The questionnaire was designed in English and translated into national language, Bengali and then again translated back into English to ensure that the meaning of the questions stayed the same. In order to scoring the answers a unipolar "Likert Scale" was used to complete the questionnaire. A pilot study was conducted on 10 patients (Not included as study subjects) to pre-test the data collecting methods and the questionnaire; some of the sentences were rephrased after the pilot study. Reliability of questionnaire was tested using Cronbach's Alpha test and it measured the internal consistency of set of variables. And reliability of questionnaire scale was found coefficient of 0.74 or higher indicated good to excellent internal consistency as recommended by George and Mallery⁸. Also criterion validity of the questionnaire was evaluated by the research experts. And then the final questionnaire was administered to the target sample through previously oriented data collectors (Intern doctors) on site. This research protocol was approved by the ethical committee of Chattogram Medical College.

After taking consent, the participants were invited to complete a questionnaire and their opinion about the wording of that version was recorded. The patients were interviewed at the entry point of the hospital premises as the waiting time is usually prolong. The data was collected by 10 previously oriented volunteers. The responses of participants were analyzed on a Likert Scale and the scale was coded as 1= extremely satisfied, 2= very satisfied, 3= moderately satisfied, 4= partially satisfied, 5= not satisfied.



Results

A total of 100 adult patients were interviewed on the month of May, 2018. All data were checked, coded, verified and analyzed by using SPSS version 20. The result revealed the patients' satisfaction level with dental health services regarding behavioral factor on the basis of dentist-patient interaction, regarding service related factor on the basis of appointment schedule, technical competency, hospital administrative efficiency, regarding environment related factor on the basis of hospital setup and regarding cost related factor on the basis of cost efficiency. Among 100 respondents 46% were male and 54% were female and 38% were belong to 26-40 years of age group, 29% were 18-25 years of age and only 9% were over 55 years of age. Study findings also revealed that 26% of the respondents were graduate, 21% were in H.S.C level, 25% were in primary level and only 3% respondents were verified as illiterate. In relation to the educational background of the respondents 33% were housewives, 26% were service holder (23% service holders were male), 19% were students (19.6% were male students) and only 9% were businessman. Based on the occupation 64% of the respondents' family income were 10,000-20,000 BDT, 23% of the respondents' family income were 21,000-30,000 BDT and 13% respondents' family income were over 30,000 BDT. Patients' satisfaction level with dental health services regarding cost-effectiveness part out of 100 respondents 16% were extremely satisfied, 29% were very satisfied with cost of the treatment and 3% were not satisfied with the cost of the treatment.

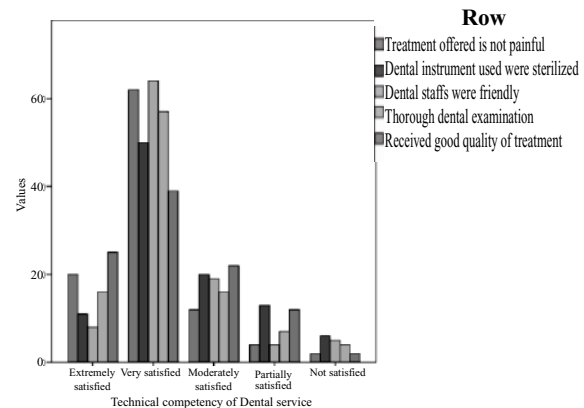


Fig 1 : Patients' satisfaction regarding technical competency of dental service

Fig-1 revealed the study findings that among 100 respondents 25% were extremely satisfied with receiving good quality of treatment, 62% were very satisfied that offered treatment was not painful and only 6% were not satisfied with sterilization of dental instruments used during treatment procedure.

Table I : Patients' satisfaction on Dentist- Patients interaction

Dentist-patients interaction	Extremely satisfied	Very satisfied	Moderately satisfied	Partially satisfied	Not satisfied
Dental staff did not talk with each other while providing treatment	17.0%	71.0%	7.0%	4.0%	1.0%
Dentist was friendly	42.0%	47.0%	9.0%	2.0%	0.0%
Dentist explained the procedures before start of treatment	23.0%	54.0%	11.0%	9.0%	3.0%
Dentist gave advices after treatment	27.0%	49.0%	14.0%	6.0%	4.0%
Dentist facial's expression was cheerful with a smile	36.0%	57.0%	6.0%	1.0%	0.0%
Dentist did not criticize oral condition or compared others	23.0%	70.0%	7.0%	0.0%	0.0%
Dentist did not ask personal question during offering care	34.0%	61.0%	5.0%	0.0%	0.0%
Do not oblige to receive dental care by a student	28.0%	54.0%	10.0%	7.0%	1.0%

Table I indicated out of 100 respondents 42% were extremely satisfied that dentist was friendly, 49% were very satisfied that dentist gave advice after treatment, 54% were very satisfied that they did not oblige to receive dental care by a student and 70% of the respondents were very satisfied that dentist did not criticize oral condition or compared with others. And according to chi square test there was a significant association between gender and dentist facial's expression was cheerful at the level of 5% significant level.

Table II: Patients' satisfaction on Hospital administrative efficiency

Hospital administrative efficiency	Extremely satisfied	Very satisfied	Moderately satisfied	Partially satisfied	Not satisfied
Working hours of the hospital were suitable for me	14.0%	44.0%	21.0%	18.0%	3.0%
Did not wait for long time to have an appointment	8.0%	47.0%	17.0%	15.0%	13.0%
Short waiting time to get the treatment	6.0%	48.0%	19.0%	15.0%	12.0%
Complete dental treatment	18.0%	43.0%	19.0%	13.0%	7.0%

Table II indicated out of 100 respondents 47% were very satisfied that they did not have to wait long time to have an appointment, 44% were very satisfied on working hours of hospital and 18% were extremely satisfied that they received a complete dental treatment.

Table III: Mean satisfaction measures by education level

Mean satisfaction measures by education level	n	Mean	Std. Deviation	p
Received reminder each of my appointment				
primary	25	2.52	.823	.014
S.S.C	23	2.30	1.105	
H.S.C	21	2.52	.873	
Graduate	26	2.46	1.208	
others	2	4.50	.707	
illiterate	3	2.00	.000	
Total	100	2.48	1.030	
Treatment offered is not painful				
primary	25	2.16	.800	.017
S.S.C	23	2.09	1.083	
H.S.C	21	2.05	.590	
Graduate	26	2.00	.800	
others	2	2.00	.000	
illiterate	3	1.67	.577	
Total	100	2.06	.814	
Dental instrument used were sterilized				
primary	25	2.44	.768	.017
S.S.C	23	2.09	.996	
H.S.C	21	2.48	1.078	
Graduate	26	2.96	1.183	
others	2	3.50	.707	
illiterate	3	2.67	1.155	
Total	100	2.53	1.049	

Comfortable waiting area	primary	25	2.84	.987	.026
	S.S.C	23	3.43	.945	
	H.S.C	21	3.33	1.065	
	Graduate	26	3.69	.928	
	others	2	3.50	.707	
	illiterate	3	3.00	.000	
	Total	100	3.32	.994	

Table III indicated patients with less than graduate or bachelor degree were more satisfied with dental health services ($p=0.000$). And the mean satisfaction score by educational level, on treatment offered was not painful was $2.16\pm.800$ and mean score of satisfaction on dental instruments used were sterilized was 2.48 ± 1.078 .

Table IV : Overall satisfaction based on gender

		Gender of the respondents	
		Male	Female
Appointment secretary was polite and helpful	Extremely satisfied	5.0%	8.0%
	Very satisfied	24.0%	33.0%
	Voderately satisfied	12.0%	6.0%
	Partially satisfied	4.0%	3.0%
	Not satisfied	1.0%	4.0%
Treatment offered is not painful	Extremely satisfied	8.0%	12.0%
	Very satisfied	28.0%	34.0%
	Moderately satisfied	8.0%	4.0%
	Partially satisfied	2.0%	2.0%
	Not satisfied	0.0%	2.0%
Dental staffs were friendly	Extremely satisfied	5.0%	3.0%
	Very satisfied	29.0%	35.0%
	Moderately satisfied	10.0%	9.0%
	Partially satisfied	1.0%	3.0%
	Not satisfied	1.0%	4.0%
Received good quality of treatment	Extremely satisfied	8.0%	17.0%
	Very satisfied	18.0%	21.0%
	Moderately satisfied	13.0%	9.0%
	Partially satisfied	5.0%	7.0%
	Not satisfied	2.0%	0.0%
Dentist was friendly	Extremely satisfied	18.0%	24.0%
	Very satisfied	23.0%	24.0%
	Moderately satisfied	5.0%	4.0%
	Partially satisfied	0.0%	2.0%
	Not satisfied	0.0%	0.0%
Satisfaction level with cost of the treatment	Extremely satisfied	8.0%	8.0%
	Very satisfied	17.0%	12.0%
	Moderately satisfied	13.0%	23.0%
	Partially satisfied	6.0%	10.0%
	Not satisfied	2.0%	1.0%

Table IV indicated among 100 respondents female were more satisfied with dental services than male yet, internal differences were observed. Satisfaction with the dentists' performances was highest, 34% female were very satisfied regarding offered treatment was not painful, followed by dental assistance services 35% female respondents were very satisfied on dental staff's friendliness. Hospital setup and administrative efficiency were followed respectively. On the other hand, 17% male respondents were very satisfied with cost of the treatment.

Discussion

Quality with care is the new "theme" of the modern health care delivery services. This study was conducted to assess the patients' satisfaction level attending at the dental out-patient department toward dental health services rendered at Dental Unit, Chattogram Medical College. Moreover, this study was attempted to quantify the dental health services of the patients upon follow up and to correlate it with their levels of satisfaction. The present study findings revealed that out of 100 respondents 46% were male and 54% were female; 38% belonged to 26-40 years of age group, 29% to 8-25 years and only 9% over 55 years. Similarly, previous study conducted in King Saud University, Riyadh, Saudi Arabia revealed that the age of the participating patients is 19-72years⁹. Not only dental treatment requirements vary between age groups but also in their educational and satisfaction level. For instance, present study findings revealed that respondents with less than graduate or bachelor degree were more satisfied with dental health services ($p=0.000$).

Present study findings also showed that 26% of the respondents were graduate whereas only 3% were illiterate attended at out-patient department at CMC, Dental Unite. Also, most of the graduates were service holders and belong to income group 10,000-20,000BDT.

On the basis of Dentist-Patients interaction, present study findings showed that out of 100 respondents 42% were extremely satisfied with the friendly nature of the dentist, almost 70% were very satisfied that dentist did not criticize oral condition or compared with others. Present study also showed 54% were very satisfied that they were not oblige to receive dental treatment by a student. About 54% were very satisfied that dentist explained the procedure prior to the treatment and 36% were extremely satisfied about dentist's cheerful facial expression.

And according to chi square test there was a strong relationship between gender and dentist facial's expression was cheerful at the level of 5% significant level.

Likely, similar study findings conducted in Rajasthan, India, shows (64.3%) of the respondent states that dentist facial's expression is cheerful with smile and (69.7%) states that dentist explain the procedure before start of the treatment¹¹. Appropriate communication is one of the key elements expected to be achieved patient satisfaction and motivated them to proceed for their treatment. Provision of good dental treatment requires knowledge and technical skills in addition to the ability to communicate effectively with patients. Over and above the actual dental treatment, effective two way communication, handling emotional sensitivity of patients⁹.

Consecutively, patients' satisfaction based on hospital administrative efficiency present study findings indicated out of 100 respondents 47% were very satisfied that they did not have to wait long time to have an appointment, 48% were very satisfied to get short waiting time for treatment 44% were very satisfied on working hours of hospital and 18% were extremely satisfied that they received a complete dental treatment.

Meanwhile, present study findings expressed patients' mean satisfaction score by educational level was, patients with less than graduate or bachelor degree were more satisfied with dental health services ($p=0.000$). And the mean score of satisfaction by educational level on treatment offered was not painful was $2.16 \pm .800$ and mean score of satisfaction on dental instruments used were sterilized was 2.48 ± 1.078 .

Patients' overall satisfaction means gross satisfaction from appointment schedule to technical competency to hospital administrative efficiency to hospital setup and environment to cost effectiveness. And present study findings showed the patients' overall satisfaction on the basis of gender. Although there is no significant differences observed between the satisfaction score and background variables (Sex and age) of the patients in the previous study conducted in Ajman University, United Arab Emirates⁵. Cost of the treatment showed more male satisfaction rate, this was due to financial solvency. Most of the female respondents of the present study were housewives so, they find cost of the treatment slightly higher in comparison with the male respondents who were either service holders or businessmen.

Conclusion

As long as our patients are unhappy about the explanation of treatment options, ease of rendering dental health care, the importance of establishing social relationship and verbal communication should be strongly emphasized. Hence, it could be concluded that overall patients' satisfaction from the present study based on gender, female respondents were more satisfied than male respondents except in cost of the treatment. Satisfaction with the dentists' performances showed 34% female were very satisfied regarding offered treatment was not painful, followed by dental assistance services 35% female respondents were very satisfied on dental staff's friendliness. Hospital setup and administrative efficiency were followed respectively. On the other hand, 17% male respondents were very satisfied with cost of the treatment. Mean satisfaction score by educational level was also observed. For instance, patients' mean satisfaction score by educational level was, patients with less than graduate or bachelor degree were more satisfied with dental health services ($p=0.000$). And the mean score of satisfaction by educational level on treatment offered was not painful was $2.16 \pm .800$ and mean score of satisfaction on dental instruments used were sterilized was 2.48 ± 1.078 .

Recommendation

Evaluation of patients' satisfaction should be part and parcel for ensuring quality dental health services followed by measures to reduce or eliminate any source of dissatisfaction.

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Contribution of Authors

FA-Conception, design, acquisition of data drafting and final approval.

AH-Design, drafting and final approval.

ARMM-Acquisition of data, critical revision and final approval.

MAH-Interpretation of data, critical revision and final approval.

MMUS-Analysis, drafting and final approval.

MAPC-Data analysis, critical revision and final approval.

Disclosure

All the authors declared no conflict of interest.

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