

Orthodontic Patient Satisfaction Analysis on Service and Quality in Private Dental College

Running title: Orthodontic Patient Satisfaction Analysis on Service and Quality in Private Dental College

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Abstract: ***Background:** A major component of quality of health care is patient satisfaction. Patient satisfaction is multifaceted and a very challenging outcome to define. Patient expectations of care and attitudes greatly contribute to the satisfaction; other psychosocial factors, including facilities and treatments services are also known to contribute to the various patient satisfaction levels. **Aim:** To measure patient satisfaction about facilities, services and treatments offered by a dental hospital in India. **Materials and Methods:** Self administrated questionnaire was distributed to outpatients reporting to the dental hospital for treatment. The questionnaire consisted of 4 questions that included information about their satisfaction with the facilities, services and treatment received in the hospital. **Results:** About 75% of patients felt that the cost of dental hygiene services were reasonable, 85% of the patients were satisfied with the cleanliness of the clinic area, 80% of the patients said that it was easy to make an appointment, 85% of patients felt that the dentist was professional, courteous and polite. **Conclusion:** The majority of the patients were satisfied with the facilities, services and treatment received at hospital except for facilities such as water supply and scheduling appointments with patient convenience.*

Keywords: patient satisfaction, orthodontics, private dental college, service, quality

1. Introduction

In this present generation, people are more concerned about their dental health and quality of dental treatment that are being provided. Around the world, general public usually depend on dental health care institutions to resolve them from their from major and minor dental issues. Analysis of patient satisfaction levels based on quality and the service provided in any health care institution is a very important parameter to know the performance level of the health care system. Therefore feedback from patient is an important factor to assess the quality of services they provide. Satisfaction level of a patient and the success of the treatment are closely linked. Studies have shown that most of the patients were satisfied when their needs and demands were fulfilled but a few patients were not satisfied when their needs and demands were not fulfilled The five basic factors that affect the satisfaction level among the dental patients are: 1) Quality of dental treatment provided, 2) Behavior of dentist and hospital staff, 3) Cost of treatment, 4) Infrastructure and 5) Facilities provided.[1] Within every healthcare system there are many highly trained and enthusiastic people working at every level to improve health care of the patients. It has been shown that patients who were more satisfied with health care had a better compliance.[2] The real task is to build and run health care systems that is economical and responds to patients needs and demands in a best possible way. Studies conducted in the past to assess satisfaction level among dental patients have largely focused on dental visits in general. Unfortunately very little work has been done to evaluate level of satisfaction based on quality and services of treatment among Orthodontic patients.[3] The objective of

this study was to assess level of satisfaction based on quality and services among patients undergoing Orthodontic treatment. It also aimed at Evaluation of hospital care and Recommendation to improve the quality of care.[4]

2. Methodology

A descriptive study was carried out in Saveetha Dental College. A questionnaire containing 17 questions was used for data collection. All the question were designed in such a way that they were easy to follow and were understandable. The questions addressed four main categories; 1) Appointment facilities, 2) Behavior of dentist and staff, 3) Quality, efficiency and cost the treatment, were included in this study. The questionnaire was distributed to the patients at the end of their orthodontic session. The questionnaire is as follows:

3. Statistical Analysis

The collected data were analysed with IBM.SPSS statistics software 23.0 Version.To describe about the data descriptive statistics frequency analysis, percentage analysis were used for categorical variables and the mean & S.D were used for continuous variables. To find the significance between the variables the Chi-Square test was used. In the above statistical tool the probability value .05 is considered as significant level.

Tabulation:

Descriptive Statistics

Table 1: Distribution of Gender According to the Different Age Groups:

Age	No. of Males (n)	Percentage (%)	No. Of Females (n)	Percentage (%)	Total (n)	Percentage(%)
12-18yrs	24	24.75	18	17.49	42	21
19-25yrs	12	12.37	30	29.12	42	21
>=25yrs	61	62.88	55	53.39	116	58
TOTAL= 103	97	100	103	100	200	100

Table 2: Cross Tabulation of Patients Age with Various Factors that Can Affect Satisfaction Level among Orthodontic Patients

Options	Satisfaction Levels Related To Age groups:12-18 YRS	Satisfaction Levels Related To Age groups:19-25YRS	Satisfaction Levels Related To Age groups: > =25	Total N=200	Chi -Square p- VALUE
Easy to make appointment.	85.70%	66.70%	82.80%	80%	0.048
No delay in appointment	85.70%	66.70%	72.40%	74%	0.115
Treatment completed efficiently	47.60%	57.10%	69%	62%	0.039
Clinic area was neat and clean	71.40%	95.20%	86.20%	85%	0.008
Equipment and instruments were presentable	61.90%	57.10%	69%	65%	0.347
Temperature was presentable	61.90%	57.10%	67.20%	64%	0.48
Lighting in clinic was fine	81%	57.10%	53.40%	60%	0.007
Number of seats in waiting area are enough	47.60%	61.90%	48.30%	51%	0.282
Dentist was professional, courteous and polite	95.20%	76.20%	84.50%	85%	0.049
Dental assistant was courteous and polite	52.40%	76.20%	70.70%	68%	0.041
Receptionist was courteous, helpful and polite	57.10%	85.70%	77.60%	75%	0.006
Cost was explained prior to the treatment	57.10%	85.70%	70.70%	71%	0.015
Cost of the treatment is fair	66.70%	85.70%	74.10%	75%	0.124
Quality of the treatment was good	71.40%	66.70%	74.10%	72%	0.65
Treatment completed to your satisfaction	66.70%	61.90%	65.50%	65%	0.886
You plan to remain patient at our practice	76.20%	76.20%	67.20%	71%	0.388
Satisfied with services provided by ortho dept.	81%	81%	86.20%	84%	0.606

4. Results

A total of 200 patients was taken into account, from which 51% were found to be females whereas 49% were found to be males. Mean age of the sample was 29.2 ± 12.0 . Maximum numbers of patients were from the age group of 25years and above (58%) followed by age groups of 12-18 and 19-25 which share an equal percentage of the number of patients (21%). Professional, courteous and polite behavior of the dentists had shown the highest percentage of satisfaction level i.e. 85%. 80% of the patients who participated in this study agreed to the fact that it was very easy to make an appointment in this private college. Majority (85%) of the patients agreed that the clinic was clean, quality and the service of the treatment provided was very good with respect to the seats in the waiting area, only 51% of the people were satisfied and agreed to the fact that the number of seats were enough, whereas others felt the need of better and more seating arrangement. In the study conducted, the mean percentage of satisfaction level among orthodontic patients among all the four categories was found to be 71% while 84% of the people were satisfied with the overall services of the orthodontics department, demonstrating a very good level of satisfaction among the orthodontics patients. Females showed higher satisfaction levels than males in all the different categories. Pearson Chi test revealed that association between patients age and factors like behavior of the dentist professionals ($p=0.049$), cost ($p=0.015$) and neatness of clinic area ($p=0.008$) were found to be statistically significant with p value less than 0.05.

5. Discussion

In any health care institution, the satisfaction level of patient in terms of quality and the service provided is very important. This study has been conducted to analyze the patient satisfaction levels on service and quality in Saveetha dental college. Results of the conducted study showed that 85% of the orthodontic patients were happy with the behavior of the dentist which was lesser compared to a study conducted by Mohamed Saad Mahrous in Taibah University, where 98.1% of the patients were happy with the behavior of the dentist and said that the dentist was friendly with them.[5] 75% of the patients found the dental receptionist to be polite, courteous and helpful. Patient and dentist bonding is the most essential and important factor that influences satisfaction level among Patients judge dentist based on the dentist's attitude and behavior with them. The dentist should always keep a track of the patients needs and never do anything without informing and taking their consent. Studies conducted around the world reported that as a result of courteous and polite behavior of these dental professionals, profound changes were not only seen in oral health care routines of these patients but it also changed patients attitude towards their own oral health.

The dentist should always follow the dental ethics and guidelines layed down and never violate them. The dentist should always keep his clinic, instruments and his surroundings sterile. Maintaining sterility is very important and essential in any dental practice. The patient may lose his confidence about the surgery or treatment if sterility is not maintained. 85% of the people were happy with the cleanliness of the clinic which is a little lesser when compared to a study conducted by Shahrani I in King Khalid

University, where 89.3% of the people were satisfied by the reception and work environment.[6] About 65% of the people were happy with the cleanliness of the equipment which was lesser when compared to a study conducted by Dr. N. Nagappan in a dental college in India where 88.5% of the patients said that the equipments were neat and presentable.[7]

Cost is a key factor from patient's perspective. If the cost is high, it causes hindrance to the patient from entering that particular health institution. Results of the conducted study showed that 75% of the patients from the orthodontic department of Saveetha dental college found the cost to be affordable. 71% of the patients said that the cost of the treatment had been explained to them before the treatment.

Waiting for a long time in the dental clinics and number of seats not enough in the waiting area is the main reason of disappointment and despair in any dental institution. Waiting for a long time just to get an appointment is also one of the main reasons for patient's dissatisfaction. Results of the study conducted showed that 80% of the people agreed that it was easy to make an appointment. Only 51% of the people were happy with number of seats present, which had the least amount of satisfaction rate. Due to proper appointment system and time management techniques used helped to minimize the waiting time, which is the reason 74% of the patients stated that they were seen on time without any delays in their treatment appointment which was higher when compared to a study conducted by Hayadur Sur in Turkey where only 41.8% reported satisfaction with waiting time. [8] But only 62% of the people agreed on the fact that their treatment was completed in a timely manner which is lesser when compared to a study conducted by Javid Y Patel where he evaluated patients satisfaction with health care services, where 71% of the patients said that their treatment was completed in a timely manner.[9] Results of the conducted study showed that the female patients had a higher level of satisfaction based on the quality and treatment among them than the males. The high satisfaction rates among females may be due to many reasons like more exposure to dental treatment and the treatment carried out according to their own demands.

In the study conducted, the mean percentage of satisfaction level among orthodontic patients among all the four categories was found to be 71% while 84% of the people were satisfied with the overall services of the orthodontics department which was higher when compared to a study conducted by Dr. Benita in a Comprehensive clinic in a private dental college where only 72% of the patients were satisfied with the overall services provided by the comprehensive dental clinic[10], demonstrating a very good level of satisfaction among the orthodontics patients.

6. Conclusion

Mean percentage of satisfaction among Orthodontic patients in all four categories was found to be 71%. Female patients showed higher satisfaction level in all categories than male patients. Satisfaction rate was highest among the age group of 25 years and above.

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