

An Analysis of Patient Satisfaction, Quality and Treatment Approach with Dental Services among Students, Interns and Junior Residents in a Tertiary Health Care Center.

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I. Introduction

Patients require regular oral examination to detect, diagnose and to treat pathology if any found: in order to alleviate discomfort and to normalize the physiological oral status(1). It is imperative for dentists to maintain high standard of professional etiquette in order to successfully accomplish his vocation(2). Patients grievance is to be addressed and annulled to his contentment to maintain his appreciation as a professional and to sustain the statuesque as a good serving dentist in the society. This verily justifies the statement that; patient turn over in a clinic is directly proportional to the treatment approach of the dentist. Treatment approach is an amalgamation of different aspects: it includes his competence, communication, management skill and also the professional acumen gained through experience (3,4). Regular self appraisal is a key hypothesis to access and ameliorate our mistakes so as to improve skill set. A constant self evaluation of patient satisfaction regarding the service rendered is the crux for a successful and sustainable clinical practice(5). Many a time, patients necessity may defer from the ideal treatment plan suggested by doctor due to various reasons like: time constrains, financial inadequacy, limited understanding or phobia regarding the treatment. Hence, patient's opinion should be taken into cognizance to initiate a holistic approach; in order to render a conducive and satisfactory healthcare dispensation. In academic institutions, dental clinics usually strive to strike a balance between satisfying patients needs juxtaposed with the skill set of students. Patients' satisfaction with regard to the service they receive is crucial because it invariably influences the pattern of service utilization(6, 7). It has been shown that patients who are more pleased with dental care; has better compliance, fewer unattended appointments, less anxiety and pain perception during treatment(2). Hence this study is aimed to evaluate patient satisfaction following dental treatment provided by final year dental students, interns and postgraduate students, at the college of dentistry. Our objectives is to evaluate and compare the level of patient satisfaction on treatment provided by final year dental students, interns and postgraduate students and to access the competence, communication skill and management efficiency in treatment approach of final year dental students, interns and postgraduate students and to compare these parameters amongst the three study groups.

II. Material and methods

A minimum sample size is calculated based on 79.5% expected frequency of satisfaction among patients attending a dental college(2). The minimum sample size required is found to be 133. 150 samples are taken with dental students, interns and postgraduate students with 50 participants in each. A random sampling technique over a six-month study period is employed starting over; from 1st January till the end of June 31st, 2018. Respondents are interviewed, once dental service is delivered. Patients of age group ranging from 18-65yrs, who obliged to participate, give an informed consent and able to understand and answer the questions are chosen to part take in the study. Clearance from the Institutional Ethics Committee of the Govt Dental College, Kottayam (Order No: D/164/2012/DCK) is obtained before initiating the proceedings.

Statistical analysis

The data is coded and keyed into the Statistical Package for the Social Sciences software version 19 (SPSS Inc., Chicago, IL). Descriptive analysis followed by inferential statistics is done. Percentage mean and standard deviations are calculated for qualitative and quantitative data. Chi-square test (X²) or Fisher's exact test performed to statistically analyze qualitative data. One-way ANOVA is performed to identify statistical differences in satisfaction scores. A P-value of 0.05 is considered significant.

III. Results

Table-1 Demographic details of study participants

		Frequency	Percent
Gender	Male	80	53.3
	Female	70	46.7
Socio economic status	APL	78	52.0
	BPL	72	48.0
Residence	Urban	31	20.7
	Rural	118	78.7
Students	UG	50	33.3
	Interns	50	33.3
	Post Graduate	50	33.3
Education	Primary school	13	8.7
	High school	64	42.7
	Graduate	50	33.3
	Post graduate	23	15.3
Age	18-31	50	33.3
	31-40	34	22.7
	41-50	25	16.7
	51-60	15	10.0
	60-65	23	15.3

There is equal distribution of operators among the three groups: undergraduates (50), interns (50) and post graduates (50) (Table-1). There is no significant difference in demographic distribution of study participants among the three study groups.

Table- 2 COMPETENCE, COMMUNICATION AND MANAGEMENT SKILLS

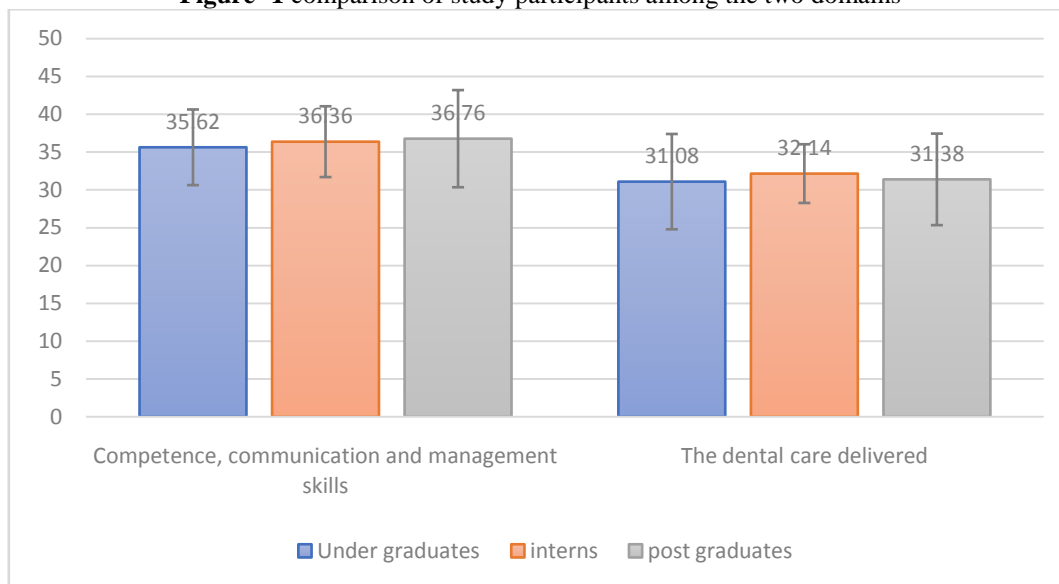
Questionnaire	Under graduates		Interns		Post graduates		P-value
	Mean	SD	Mean	SD	Mean	SD	
1. Did the operator detail you the Complete Treatment Plan ahead of the procedure?	4.42	0.95	4.24	1.188	4.38	1.008	0.343
2. Were you given opportunity to raise questions?	4.72	0.757	4.68	0.819	4.4	1.069	0.231
3. Before commencement of treatment, did he/she take your permission?	4.56	0.837	4.36	1.005	4.32	1.019	0.654
4. Does the operator look competent and skilful in his/her work?	4.7	0.707	4.64	0.776	4.54	0.93	0.234
5. Did the operator complete most of the treatment by oneself?	4.54	0.994	4.5	0.931	4.55	0.891	0.876
6. How about the mannerism during the treatment; was it respectful and did you feel comfortable?	4.58	0.906	4.62	0.635	4.44	0.929	0.213
7. Was communication; caring and polite?	4.8	0.639	4.9	0.303	4.6	0.926	0.113
8. Does the operator's communication with the dental assistant and other staff members look satisfactory?	4.44	1.072	4.42	1.108	4.48	0.789	0.234

Table 3-THE DENTAL CARE DELIVERED

Questionnaire	Under graduates		Interns		Post graduates		P-value
	Mean	SD	Mean	SD	Mean	SD	
1. Did they take your personal requests into consideration for treatment plan and appointment timing?	4.24	1.041	4.28	0.882	4.31	1.158	0.543
2. Do you feel that the cross infection control measures taken are appropriate?	4.38	1.086	4.5	0.909	4.32	1.203	0.232
3. Are you satisfied with the quality of the treatment you received and does it seemed to be good?	4.52	1.035	4.74	0.664	4.56	0.907	0.123
4. How about the overall time taken for treatment; was it optimum?	4.42	1.012	4.68	0.653	4.48	0.909	0.546
5. Were you given detailing regarding post treatment oral hygiene and follow up measures?	4.58	1.126	4.76	0.555	4.56	0.929	0.767
6. Are you satisfied with the treatment provided at the college of dentistry as a whole?	4.56	0.929	4.76	0.657	4.58	1.012	0.454
7. Would you recommend the treatment of Government Dental College to your kith & kin?	4.46	1.014	4.42	1.012	4.28	1.144	0.343

Information on competence, communication, management skills and the dental care delivered is recorded and compared among the three study groups (Table-2,3). There is no significant difference in all the 15 questions among undergraduates, interns and post graduate students. However, the mean response of patients among all the 15 questions is above 4 indicating a more than satisfactory response from the patients.

Figure -1 comparison of study participants among the two domains



In competence, communication and management skills, it is found that post graduates has the highest score (36.76) and under graduates the least (35.62) and there is no significant difference ($p=0.452$) between the groups (Figure-1). Upon collation of data regarding proficiency in dental care delivered; interns scored the highest (32.14) and under graduates the least (31.08) and there is no significant difference ($p=0.125$) between the groups.

Table-4

	Groups	Mean	Std. Deviation	P-value
Competence, communication and management skills	Male	35.43	5.837	0.045*
	Female	37.19	4.737	
The dental care delivered	Male	30.88	5.586	0.154
	Female	32.07	5.382	

*significant at the 0.05 level.

Comparing all the demographic variables, the only parameter that shows any significant difference in the two is; gender (table-4). In competence, communication and management skills, there is a significant difference ($p=0.045$) between gender, with females giving a better score (37.49) compared to male counterparts (35.44). In the dental care delivered, there is no significant difference ($p < 0.154$) in score between the groups.

IV. Discussion

Due to enhanced educational status and meteoric development in the technology; public awareness regarding social, economical, political and health has augmented substantially. Patients supposition regarding health care strategy has increased so much so that, he will not settle for something less than perfect. Advancement of professional skills and quintessential medical ethical practise is emphatically crucial to meet the higher expectations of patients (8, 9). A pragmatic approach is inevitable, since patient care has been catapulted to such a realm that the most sophisticated and technologically advanced treatment is amenable and accessible today. Compromising or satisfying with immediately available amenities is an anathema in the society. Current strategy is to procure the best available service: dentistry is no exception to this golden rule.

Assessment with regard to knowledge and utilization of equipment ergonomics among interns and postgraduate student's categorically cited that post graduate students are erudite in this prospect than interns (10). Though post graduate student's performance is meritorious; nevertheless even they need training, CDE programmes, formulation of ergonomic interpolation, resource guidelines and constant monitoring alike interns for the furtherance of their base line skills with regard to dental treatment.

In order to deliver a treatment pattern that elicit patient gratification, the dentist himself needs to be content in his domain of professionalism apart from the finite academic prowess (11). A data collation regarding the professional satisfaction in final year students and interns in 3 colleges :Nagpur revealed a statistics that only 38% are thoroughly satisfied with the academics. Majority of participants in other group are contemplating on life changing policy they need to pursue for future. Albeit the distancing of students from the core discipline, they should be encouraged to actively evolve in the studies to invigorate the passion for curriculum. This postulation is inevitable, since patient satisfaction is a direct objective of operator's passion for profession

Interns are presumed to be the champions in undergraduate level; for the stress free time period helps them to put in practise the skill they acquired during the academic year's .However their competence, communication and administrative potential can be calibrated during this tenure. A study in Taiwan amongst the interns corroborates this supposition (12).

In the current study it is found that analytically there is no significant disparity amongst the study groups, barring a marginal doubt of benefit from patients being treated by interns. This probably authenticates the fact that, internship is a period where the clinical acuity is refurbished and it is a nonchalant time period: both of this could have steered cleared a way for better patient appreciation on comparison with other study group.

Socio-demographic data suggests that the core patient pool that accounted treatment in Conservative & Endodontics Department, Government Dental College, Kottayam during the study period; are from rural area (79%), of age group 18-33yrs (34%) ,with high school education (43%), with a relatively equal male- female and APL -BPL ratio (table 1). Notwithstanding ladies appreciation for the courteous mannerisms of operators marginally succeeded to that of male participants in the survey (table 4) .This data appropriates the reality that majoritarian participants of survey are frontier dwellers of young age with secondary school level education (Kerala is a state with 100% literacy rate). Therefore unlike scholarly oldster urbanite, they may not clamour for elite, explicit treatments that are expensive.

Analysis of assertive skills (competence, communication and managerial skills) categorically vouches that, all three operator groups are equally virtuous (table 2). Taking the data into consideration it is presumed that the operators were caring, polite and respectful with the patients and clinical fraternity. The computation of statistics assured that dentists were co-cordial in explaining the treatment plan ahead of the procedure, clarified doubts and took nod from the patient ahead of resuming the treatment in a proficient and skilful manner (Figure-1).

The perusal of survey document regarding the essentiality of dental care provided by the three study group postulates that all the study groups are equally good (table 3). Patient's ratified satisfaction with regard to cross -infection control strategy, their requests were conceded ahead of charting appointment schedule and verily pronounced that justifiable treatment was provided in an optimum time frame .Post operative care and maintenance was elaborated uncondensed; subtly creating a sense of care and concern for the patient. The statistics suggest that patients have high regard for the treatment availed at the Government Dental College, Kottayam and are willing to recommend it to their near and dear ones (table 4). Nonetheless as speculated; final year student's attainment was reasonably low, though not remarkable when equated with seniors.

Patients' satisfaction regarding dentist's treatment policy has been explored far and wide in many Colleges of Dentistry in various countries. Repositories of calibrated data's have endorsed that majority of patients frequenting the academic institutional clinics were in their thirties or forties (mean age in this study was 32.85 ± 15.84). The most cited reason for appreciating the service in these clinics is attributed to perception of high quality treatment and concern for the patient's gratification. However some other studies corroborate the impression that a subsidised pay plan is the key conception that magnetize patients to educational institutions.

V. Conclusion

Human perception regarding lives necessity and luxury has changed drastically. This has made its mark in the health care scenario too. Along with the expertise skill set, advanced techniques and sophisticated equipments a holistic approach needs to be initiated for patients well being and this theorem is sacrosanct in the professional arena. It is highly imperative to introduce a system where patient needs are tackled on a multi planar platform. On to different rungs of this scale; operator's communication, management and technical expertise can be staked .A conglomerate of all these facets need to be deliberated while attending a patient. The patient should be detailed about the treatment plan in an unambiguous and unabridged manner so as to negate even an iota of doubt he/she is hording; so as to thoroughly appreciate the services rendered. Any person entering an office will be delighted if his needs are addressed appropriately and managed meticulously by resourceful and accomplished person; the same applies to dental patients also. Taking this fact into cognisance, it is imperative to make necessary alteration in the service rendered hitherto; for the betterment of patients.

Dental practitioners should also remain vigilant with respect to the human and psychological concern of a patient so as to provide an integrated service. It is customary that we all make random mistakes and over the course of time it is presumed to be exact. Self appraisal is a notion that makes us aware of our lapses, creates a

platform that prepares us for thorough introspection and gives opportunity to delve into our lapses. Hence it is an active manifesto for self improvement; which we should meticulously pursue for the betterment of our service to society as a dentist..

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