

**Patient Satisfaction with Oral Health Care Services Provided by
University of Dental Medicine, Yangon**

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Quality of Oral Health Care (OHC) services has received increasing attention in recent years. Little is known about patient satisfaction in quality of it in Myanmar context. Its success can be generally assessed by the level of patient satisfaction in the variety of clinical setting, for instance, private clinics as well as in teaching dental university. This study aimed to determine the level satisfaction of patients after visiting the University of Dental Medicine, Yangon (UDMY). A total of 207 patients visiting five clinical departments of UDMY were investigated from October to December, 2017. A questionnaire covering to assess the demographic data, patient-dentist interaction, technical competency, administrative efficiency and clinic set up environment was used for face- to- face interview. The data were analyzed by descriptive methods followed by inferential method. Out of 207 patients, 41.5% were male and 58.5% were female. The overall patient satisfaction score was 76.3% which showed high level of satisfaction on oral health care services provided by UDMY. The least satisfied item was prolonged waiting time to have an appointment in administrative domain while the most satisfied item was that dentist had been friendly in patient-dentist interaction domain. Over 40 year old group patients were more satisfied with oral health care services ($p=0.013$). Married patients had higher satisfaction with patient-dentist interaction ($p=0.014$). This study showed a positive response to the care of patients at the UDMY. Further researches as well as periodic review studies have to be carried out for improvement and utilization of oral health care services in Myanmar.

Keywords: Patient satisfaction, Oral health care services, University of Dental Medicine

INTRODUCTION

Patient satisfaction with oral health care services has recently received increasing attention. Increasing patient satisfaction requires oral health care services to be patient-oriented and complied with standard and efficient protocols.¹ Patient satisfaction is a patient-focused indicator of health care services. To improve the quality of dental services, regular evaluation and feedback is essential. The quality of health care may be defined as a composite of patient satisfaction and treatment outcomes.²

Patient satisfaction is influenced by various factors such as the nature, behavior, communication skill and personality of dental health care provider.³ Satisfaction can be defined as the extent of an individual's experience compared with his or her expectation.⁴ Fulfillment of patient expectation and demands with positive

assurance, good response to patient as well as resolve confusions and doubts of the patient provide better satisfaction and result in a future return of the patients to receive subsequent good quality of treatment.⁵ Dental complaints made by patients may cause a great deal of anxiety and stress among dental care providers. Dissatisfaction and complaints may result in patients changing their dentist, which might have ramifications in terms of the family and friends' perceptions of the dental practice.⁶ Dental clinics in teaching university usually strive to find a balance between meeting the needs of patients and students. Patient satisfaction with the dental care they received is crucial because it will influence their pattern for service utilization. It has been shown that patients who were more

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satisfied with dental care had better compliance, less problems with their appointments, low level of anxiety, pain and perception.⁶ In spite of the difficulty in scheduling appointments and extended clinical sittings, dental school cater to a huge number of the population due to the lower costs of treatment and perceived sense of high quality care. Thus, it is imperative to inculcate high standards of professional conduct among dental students.

There is a saying; the success of an oral health service can be assessed by the degree of satisfaction of its patients. Instruments such as structured questionnaires which measure the patient response to dental treatment are helpful in assessing the patient satisfaction with regard to dental care provided. Several studies have reported on patient satisfaction after seeking dental treatment from dental training centers. However, studies regarding the patient satisfaction with comprehensive dental care provided by teaching university, like University of Dental Medicine are scarce.⁷ This study aimed to evaluate the levels of satisfaction regarding the quality of oral health care service among patients at University of Dental Medicine, Yangon.

MATERIALS AND METHODS

A cross-sectional study was conducted in five clinical departments of UDMY as follows: Department of Oral and Maxillofacial Surgery, Department of Oral Medicine, Department of Conservative Dentistry, Department of Periodontology and Department of Prosthodontics within three-month period from October to December, 2017. Department of Pediatric Dentistry, Orthodontics, and Preventive and Community Dentistry were excluded because of the nature of the department and treatment provided.

A questionnaire consisting of 26 questions was used to collect the information from both female and male aged above 20 years who were willing to participate in the study. Informed consent was taken from the patients who were eligible to the study. Data were collected during face-to-face interview of the patient in their last visit to the clinical departments of UDMY after ensuring that they had received the full dental care to be finalized. The modified questionnaire was based on Mahrous and Hifnawy (2012) questionnaire, to measure the criteria affecting

patient satisfaction. In this study, the questionnaire was divided into two main parts.⁶ The first part contained questions related to the socio-demographic data such as age, gender and education about the patients. The second part was designed to measure the patient's perception and expectation. It consisted of three main sections: administrative efficiency and clinic setup/environment (7 items); patient-dentist interaction (5 items) and technical competency (6 items). The questionnaire was set in the Myanmar and English with a 5-point Likert response scale ranging from 5 (strongly agree) to 1 (strongly disagree). The 5-point scale was later transformed during data analysis to a 3-point response scale ranging from 3 (agree) to 1 (disagree), with 2 corresponding to "uncertain". Mixture of positive and negative statements was set to ensure that there was no standard format for answering. The questionnaire was validated and pretested prior to data collection. The data was collected during face-to-face interview by the trained interviewers.

Statistical analysis

The data were coded and keyed into Statistical Package for the Social Science (SPSS) software version 19. Descriptive analysis followed by inferential statistics was done. Percentages, means, and SD were calculated for qualitative and quantitative data. Chi-square test was performed to statistically analyze qualitative data. The p value of <0.05 was considered as significant.

Ethical consideration

The Ethic and Research Committee of the University of Dental Medicine, Yangon approved this study.

RESULTS

Overall ranking of factors related to satisfaction was done by calculating the mean percentage of agreement regarding the different disciplines of satisfaction among the study group. The overall patient satisfaction score was 76.3% which showed a high level of satisfaction (Table 1). Total number of patients who participated in the study was 207 of whom 86(41.5%) were male and 121(58.5%) were female. The age range was from 20 to 80 years and majority of them (43.5%) were between 20 and 40 years. Nearly half of the patients (48.3%) were married

and 41.5% were single. Most patients (46.4%) received university level of education. Among dental patients, 76.3% had previous dental experience and 48.8% had received the dental treatment at UDMY (Table 2).

Table 1. Patient satisfaction scores on three of domains evaluation questions at University of Dental Medicine, Yangon

Patient Satisfaction Domain	Level of score		Range of scores (min to max)	Mean score
	High score	Low score		
	n(%)	n(%)		
Patient satisfaction with administrative efficiency and clinic setup environment	138(66.7)	69(33.3)	6 to 16	11.95
Patient satisfaction on patient-dentist interaction	134(64.7)	73(35.3)	4 to 12	6.84
Patient satisfaction with technical competency	123(59.4)	84(40.6)	5 to 15	8.94
Patient satisfaction with overall total score	158(76.3)	49(23.7)	34 to 45	43.14

Table 2. Overall patient satisfaction and their socio-demographic characteristics

Socio-demographic characteristics	Overall patient satisfaction score		Statistical test
	High score	Low score	
	n(%)	n(%)	Chiquare test
Age group			
<40	71(44.9)	32(65.3)	$X^2=6.207$ $p=0.013^*$
>=40	87(55.1)	17(34.7)	
Sex			
Male	61(38.6)	25(51)	$X^2=2.373$ $p=0.123$
Female	97(61.4)	24(49)	
Occupation			
Working	102(64.6)	36(73.5)	$X^2=1.337$ $p=0.248$
Non working	56(35.4)	13(26.5)	
Education			
No education	8(5.1)	7(14.3)	$X^2=6.446$ $p=0.092$
Primary to middle school	29(18.4)	13(26.5)	
High school to university	121(76.6)	41(83.7)	
Marital status			
Single	65(41.1)	30(61.2)	$X^2=4.038$ $p=0.257$
Married	83(52.5)	17(34.7)	
Others	8(5.1)	2(4.1)	
History of previous dental visit			
Yes	118(74.7)	40(81.6)	$X^2=1.00$ $p=0.317$
No	40(25.3)	9(18.4)	
Type of dental clinic last visited			
UDMY	78(49.4)	23(46.9)	$X^2=0.484$ $p=0.785$
Others	50(31.6)	18(36.7)	
No history of treatment with dentist	30(19.0)	8(16.3)	

Chi-square test, *p value of <0.05 was regarded as statistically significant

Patient satisfaction was measured according to three disciplines: administrative efficiency and clinic setup environment, patient-dentist interaction and technical competency. It was noticed that the majority of patients were satisfied with administrative and clinic set up environment domain (66.7%) and 98.6% of interviewed patients agreed on the item about waiting room area had been comfortable and clean. About 98% of patients also felt convenient to come and visit UDMY and working hours of the clinic were suitable. However, 44% of them complained of prolonged waiting time to have an appointment. In patient-dentist interaction domain, all of participants agreed on fact that dentist had been friendly with them. In technical competency domain, 86.5% of patients felt pain had been subsided after treatment and 87.4% reported that they had received dental treatment that had met their expectation (Table 3).

Table 3. Patient satisfaction with administrative efficiency and clinic setup environment, patient-dentist interaction, and technical competency domains

Domains and their descriptions	Agree n(%)	Neutral n(%)	Disagree n(%)
Administrative efficiency and clinic setup environment			
Convenient to come and visit UDMY	203(98.1)	3(1.4)	1(0.5)
Prolonged waiting time to have an appointment	91(44.0)	17(8.2)	99(47.8)
Waiting room area was comfortable & clean	204(98.6)	2(1.0)	1(0.5)
Treatment area & dental chairs were clean & hygienic	202(97.6)	4(1.9)	1(0.5)
Working hours of the clinic were suitable	203(98.1)	4(1.9)	-
Easy to make appointment	173(83.6)	22(10.6)	12(5.8)
Patient-dentist interaction			
Dentist was friendly	207(100)	-	-
Dentist explained the procedure before starting treatment	202(97.6)	1(0.5)	4(1.9)
Dentist concerned with patient's questions and worries	201(97.1)	6(2.9)	-
Effective in handling patient's complaints	191(92.3)	15(7.2)	1(0.5)
Patient satisfaction with technical competency			
Dentist examined the patient thoroughly	202(97.6)	5(2.4)	-
I received good quality treatment	197(95.2)	10(4.8)	-
Dental instruments used were sterilized	193(93.2)	14(6.8)	-
Pain was subsided after treatment	179(86.5)	26(12.6)	2(1.0)
I received dental treatment that met my expectation	181(87.4)	22(10.6)	4(1.9)

Table 4. Patient satisfaction on patient-dentist interaction domain and their socio-demographic characteristics

Socio-demographic characteristics	Patient satisfaction on patient-dentist interaction		Statistical test
	High score	Low score	Chi-square test
	n(%)	n(%)	
Age group			
<40	58(43.3)	45(61.6)	$\chi^2=6.372$
≥ 40	76(56.7)	28(38.4)	$p=0.012^*$
Sex			
Male	50(37.3)	36(49.3)	$\chi^2=2.803$
Female	84(62.7)	37(50.7)	$p=0.094$
Occupation			
Working	91(67.9)	47(64.4)	$\chi^2=0.265$
Non working	43(32.1)	26(35.6)	$p=0.607$
Education			
No education	7(5.2)	2(2.7)	
Primary to middle school	23(17.2)	13(17.8)	$\chi^2=0.702$
High school to university	104(77.6)	58(79.5)	$p=0.704$
Marital status			
Single	53(39.6)	42(57.5)	$\chi^2=10.664$
Married	69(51.5)	31(42.5)	$p=0.014^*$
Others	12(9.0)	0(0)	
History of previous dental visit			
Yes	104(77.6)	54(74.0)	$\chi^2=0.346$
No	30(22.4)	19(26.0)	$p=0.556$
Type of dental clinic last visited			
UDMY	63(47.0)	38(52.1)	
Others	45(33.6)	23(31.5)	$\chi^2=0.534$
No history of treatment with dentist	26(19.4)	12(16.4)	$p=0.766$

Chi-square test, *p value of <0.05 was regarded as statistically significant.

The mean score of patient satisfaction with the patient-dentist interaction was significantly lower in single individuals rather than married patients ($p=0.014$). The minimum level of satisfaction was reported by the patients who received high school to university level of education (79.5%). There was a significant correlation between the age of patients and patient-dentist interaction ($p=0.012$) (Table 4).

DISCUSSION

Based on the results of this study, most patients had high satisfaction with oral health care services (76.3%). Although this was considered high, it was still lower than those reported by Bedi, *et al.*⁸ (89%) and Mahrous & Hifnawy (79.5%)⁶ but better than the satisfaction response reported by Othamn & Razak (61.7%)⁹ and Habib, *et al.*⁷ (68.67%). There was very limited study on patient satisfaction with oral health care services and this is the first study related to patient satisfaction in dental care services in Myanmar.

In this study, age of the patient was significantly related to overall patient satisfaction. The patients in older age group (>40 years) were more satisfied with oral health care services than those in younger age group. Some studies showed no association between age of the participants and their satisfaction scores.^{2, 7} This reflects the nature of Myanmar culture as more people from old age group have peaceful mind and concept related to the religious matter and younger age group have more demanding nature.

Regarding the administrative efficiency and clinic setup environment domain, the least satisfied item was from prolonged waiting time to have an appointment which seemed to be the main reason for patient dissatisfaction in UDMY. This was in concordance with several studies reporting that waiting time was the least satisfactory issue.^{7, 10} Dissatisfaction with waiting time in the clinic revealed an important problem that needed to be resolved, possibly through limiting the number of patients to reduce the waiting time.¹¹ Alternatively, implementation of online registration system in every clinical department of the University may be effective. However, this might face the other technical problems because patients as well as receptionists need to be familiar with the technical issue. The most satisfied item in this domain was waiting room area had been comfortable and clean (98.6%) which was higher than the studies reported by Nagappan & John (91.3%) and Mahrous & Hifnawy (72.2%).^{6, 12} Thus, waiting area and clinic setting are acceptable in the patients' opinion and the University has a responsibility to maintain the current situation and make improvement whenever possible.

Results from patient-dentist interaction domain gave complete satisfaction with that dentists had been friendly with the patients which was the most satisfied item in this domain. The result was higher than those of some studies.^{3, 12} This might be a good point for patient to become compliance and utilization of oral health care services. Most patients were in agreement with the fact that dentist had explained the procedure before starting treatment. The result differed from the study conducted by Lee, *et al.*¹³ in which interns were less capable of explaining the complete treatment plan in detail. Another study conducted by Patel found that the reason for dissatisfaction was communication related to explanation of treatment given by dentist.³

The mean score of patient satisfaction in single individuals was significantly lower than that in married patients ($p < 0.05$). This was in accordance with the study conducted by Lee, *et al.*¹³ This point was noteworthy because it indicated that marital status of the patients must be considered during treatment: unmarried patients exhibited higher expectations.

In the present study, 93.2% of patients gave good score on the fact that dental instruments used had been sterilized. The score was higher than those in some studies which showed 88.5% and 87%, respectively.^{4, 12} The two items stating pain had been subsided after treatment and the patients had received dental treatment that met their expectation gave lower score than any other items in technical competency domain. There was a statistically significant association between history of previous dental visit and their satisfaction on technical competency. Those who had already had previous dental treatment gave low score in this domain. This highlighted that the training to the dental students should be stressed on clinical skills and holistic care.¹³

The results from the current study indicated that the majority of patients were satisfied with oral health care provided by University of Dental Medicine, Yangon. However, long waiting time demanded top priority to enhance the service quality and need to be managed. Regular evaluation of patient satisfaction is recommended to do by the organization or the hospitals by conducting such survey for the purpose of continuous development there by reducing and eliminating any source of dissatisfaction.

Competing interests

The authors declare that they have no competing interests.

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REFERENCES

1. Chang WJ & Chang YH. Patient satisfaction analysis: Identifying key drivers and enhancing

- service quality of dental care. *Journal of Dental Sciences* 2013; 8(3): 239-247.
2. Miri SS, Nejad MM & Soltani P. Evaluation of patient satisfaction with dental services at Kermanshah Dental Faculty in Iran. *Journal of Pioneering Medical Sciences* 2016; 6(3): 89-92.
3. Patel JY. A study on evaluation of patient satisfaction with dental health care services. *International Journal of Scientific and Research Publications* 2014; 4(8): 1-4.
4. Madan Kumar PD & Zahra F. Factors affecting patient satisfaction among those attending an Outpatient Department in Chennai City India. *Journal of Indian Association of Public Health Dentistry* 2008; 6(12): 15-19.
5. Lliffe S, Wilcock J, Manthorpe J, Moriarty J, Cornes M, Clough R, *et al.* Can clinicians benefit from patient satisfaction surveys? Evaluating the NSF for older people, 2005-2006. *Journal of the Royal Society of Medicine* 2008; 101(12): 598-604.
6. Mahrous MS & Hifnawy T. Patient satisfaction from dental services provided by the College of Dentistry, Taibah University, Saudi Arabia. *Journal of Taibah University Medical Sciences* 2012; 7(2): 104-109.
7. Habib SR, Ramalingam S & Al Beladi A. Patient's satisfaction with the dental care provided by dental students. *Journal of Ayub Medical College Abbottabad* 2014; 26(3): 353-356.
8. Bedi R, Gulati N & McGrath C. A study of satisfaction with dental services among adults in the United Kingdom. *British Dental Journal* 2005; 198(7): 433-437.
9. Othman N & Razak IA. Satisfaction with school dental service provided by mobile dental squads. *Asia Pacific Journal of Public Health* 2010; 22(4): 415-425.
10. Feine JS, Awad MA & Lund JP. Rejoinder to Bradley: Patient preferences and clinical trial design and interpretation: Appreciation and critique of a paper by Feine, Awad & Lund. *Community Dentistry and Oral Epidemiology* 1999; 27(2): 89-92.
11. Sur H, Hayran O, Yildirim C & Mumcu G. Patient satisfaction in dental outpatient clinics in Turkey. *Croatian Medical Journal* 2004; 45(5): 651-654.
12. Nagappan N & John J. Patient's satisfaction with the dental services offered by a dental hospital in India. *Journal of Indian Association of Public Health Dentistry* 2014; 12(4): 297-301.
13. Lee KT, Chen CM, Huang ST, Wu YM, Lee HE, Hsu KJ, *et al.* Patient satisfaction with the quality of dental treatment provided by interns. *Journal of Dental Sciences* 2013; 8(2): 177-183.