



CODEN [USA]: IAJPBB

ISSN: 2349-7750

INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES

<http://doi.org/10.5281/zenodo.3264799>

Available online at: <http://www.iajps.com>

Research Article

COMPARISON OF TEACHING & NON-TEACHING DENTISTS FOR DISPARITY IN THE SURGICAL SERVICES

¹Dr Amna Ahmed, ²Dr Alvina Malik, ²Dr Aamna Islam

¹Punjab Dental Hospital, Lahore

²DE Montmorency College of Dentistry, Lahore

Article Received: June 2019

Accepted: June 2019

Published: July 2019

Abstract:

Objective: The aim of this research work is to compare the dentists of the teaching organizations & private practices in the city of Lahore with respect to the preferences to the dental material & selection of the methods by these two groups.

Methodology: This was a transverse research work carried out in Punjab Dental Hospital, Lahore. There were seventy-one & ninety-seven participants in the teaching & non-teaching group respectively. We performed the stratified sampling for the selection of the samples. We obtained the information with the utilization of the well-arranged, self-organized questionnaire containing total ten questions. Chi-square test was in use for the comparison of the different techniques used by the subjects of both group. We checked the reliability of the collected information with the application of the Kappa statistic.

Results: The rate of response in the teaching-group was 94.670% (n: 71 out of total 75) whereas in non-teaching group, response rate was 44.10% (n: 97 out of total 220). The data reliability obtained in this research work considered as good (value of Kappa from 0.530-0.720). There were important disparities between the subjects of the groups about the selection of the restorations for the cavities. Preferences about the utilization of the Rubber Dam, dentine pins, retraction cords use, Inlay Onlay preparations, gold crowns, dentine pins, amalgam bonding, utilization of the bleaching agents for the whitening of the teeth & porcelain-veneers were much different in both groups. Teaching dentists were providing greater services as described above as compared to the non-teaching dentists.

Conclusion: There are important disparities in the choice of the dental materials, preferences & types of the services in dentistry as provided by the subjects of the teaching group as compared to the subjects of non-teaching group.

KEY WORDS: Gold Crowns, Retraction Cords, Kappa Statistics, Questionnaire, Disparity, Dentine Pins.

Corresponding author:

Dr. Amna Ahmed,

Punjab Dental Hospital, Lahore

QR code



Please cite this article in press Sahar Amna Ahmed et al., *Comparison Of Teaching & Non-Teaching Dentists For Disparity In The Surgical Services.*, Indo Am. J. P. Sci, 2019; 06[07].

INTRODUCTION:

The amount of the practitioners in the dental field yet to rise but still they are unable to fulfil the demand of the population. The vacant space is mostly covered by the teaching centers for dentistry. The practices in the teaching centers were undergraduate or postgraduate dental institutions available in the city. There were about ten such institutions in the city with more than 500 hundred active operator in this very city providing the dental care for thousands of people every year. So, we can say that there are two types of dental care in Lahore as dental colleges & private clinics. The availability of the operative or surgical services differ with the setup of the clinic as the professionals of the private clinics have more pressure of time and cost.

On the other hand, the dentists from the teaching group have other responsibilities of teaching and training of the young dentists. This can have impact on their quality & proportion of the provided service. This research work aimed to compare the kinds of the operative services in the dentistry as provided by the teaching & non-teaching professionals in the field of dentistry in the city of Karachi.

METHODOLOGY:

This was a transverse research work carried out in Punjab Dental Hospital, Lahore. Dentists having the registration from PMDC and with one-year internship after their study and they have engagement in the teaching or practice or both were the part of this research work. Retired and dentists with no practice were not the participants of this research work. We collected the name and contact number of the dentists from dental association. We used the stratified aching and practice as two different strata. There were 71 subjects in the teaching group and ninety-seven in the group of practitioners. We took the ethical approval from review board of the Punjab Dental Hospital, Lahore. We also obtained the written consent from all the participants. A well-organized questionnaire was in use regarding material selection, preferences & various methods used in the operative dentistry. There were two parts in the questionnaire: 1st part was dealing with the data about demography and 2nd part contain the questions about the operative dentistry.

Then we assessed the data from the questionnaire. SPSS V. 19 was in use for the analysis of the collected information. Averages & SD were in use for the representation of the quantitative variables. We measured the responses of the subjects on nominal scale.

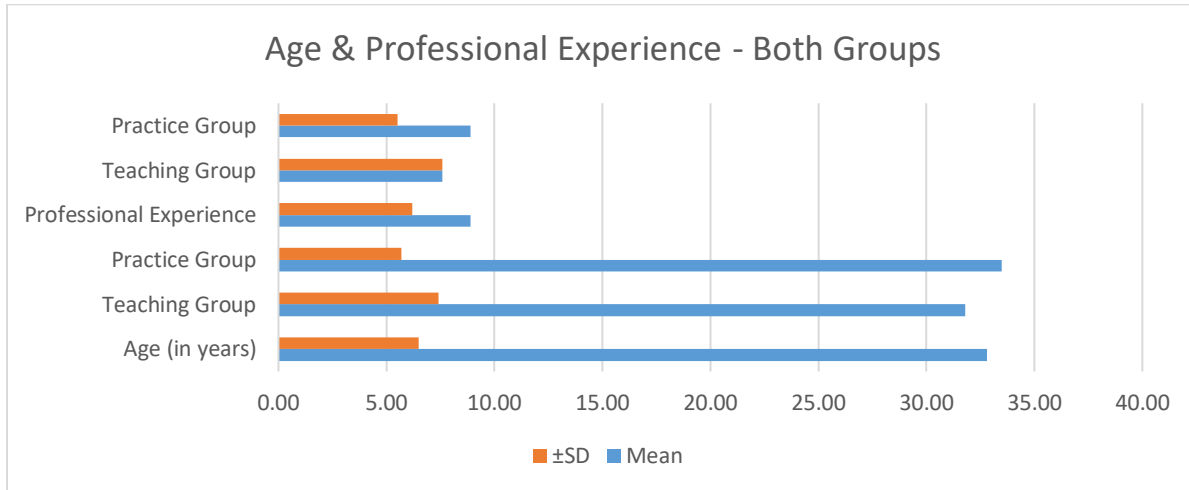
We applied the T test for the comparison of the different continuous variables as age & experience. Chi-square methods was in use to compare the different pattern among the subjects of both groups. For the comparison of the responses of ordinal scale, Mann Whitney test was in use. P-value of < 0.010 was the significant. Kappa statistics was in use for the evaluation of the agreement among responses in the stat and the recurring questions.

RESULTS:

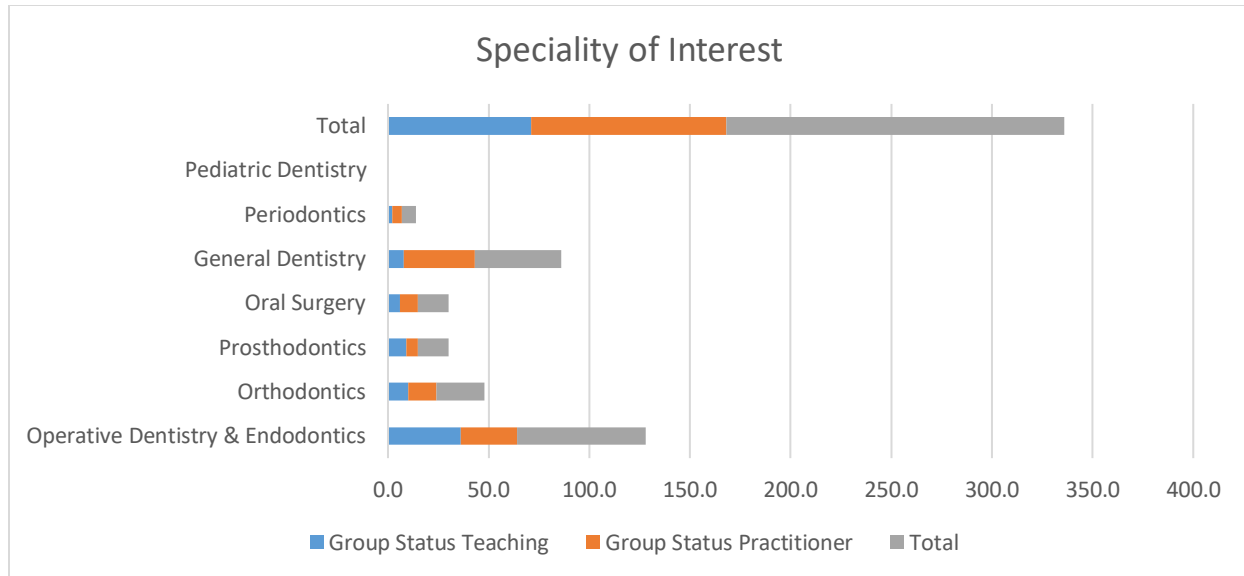
There were total one hundred and sixty-eight participants in this research work out of these 42.30% (n: 71) subjects were academic dentists whereas 57.70% (n: 97) were the non-teaching practitioners. Approximately 30 in the teaching group & 40 in the practitioner group were from female gender. The rate of response in the group of teaching was 94.60 whereas response rate in the group of practitioners was 44.10%. The age and the experience in this profession was comparable among the subjects of both groups. Both groups were available with significant disparities about their interest in the field of specialization. Subjects of both groups stated the amalgam as their material of selection for Class-1 & Class-2 restoration in case of the molars as well as premolars. However, members of both groups preferred composite in the preparation of the premolars Class-1. In class-5 dentist of teaching group chose composite whereas majority of the practitioners were in favor of the Glass ionomer. Subjects of both groups were infrequently using the rubber dam, inlays & onlays. There was much inclination among practitioners towards the application of dentine pins & placement of the gold crowns whereas dentist of teaching group stated the common utilization of the retraction cord, amalgam bonding & management of the topical anesthetic. Data reliability as obtained by this research work was from the range of acceptable to good (65.0% to 72.0%).

Table 1: Descriptive Statistics & Comparison of Age and Professional Experience

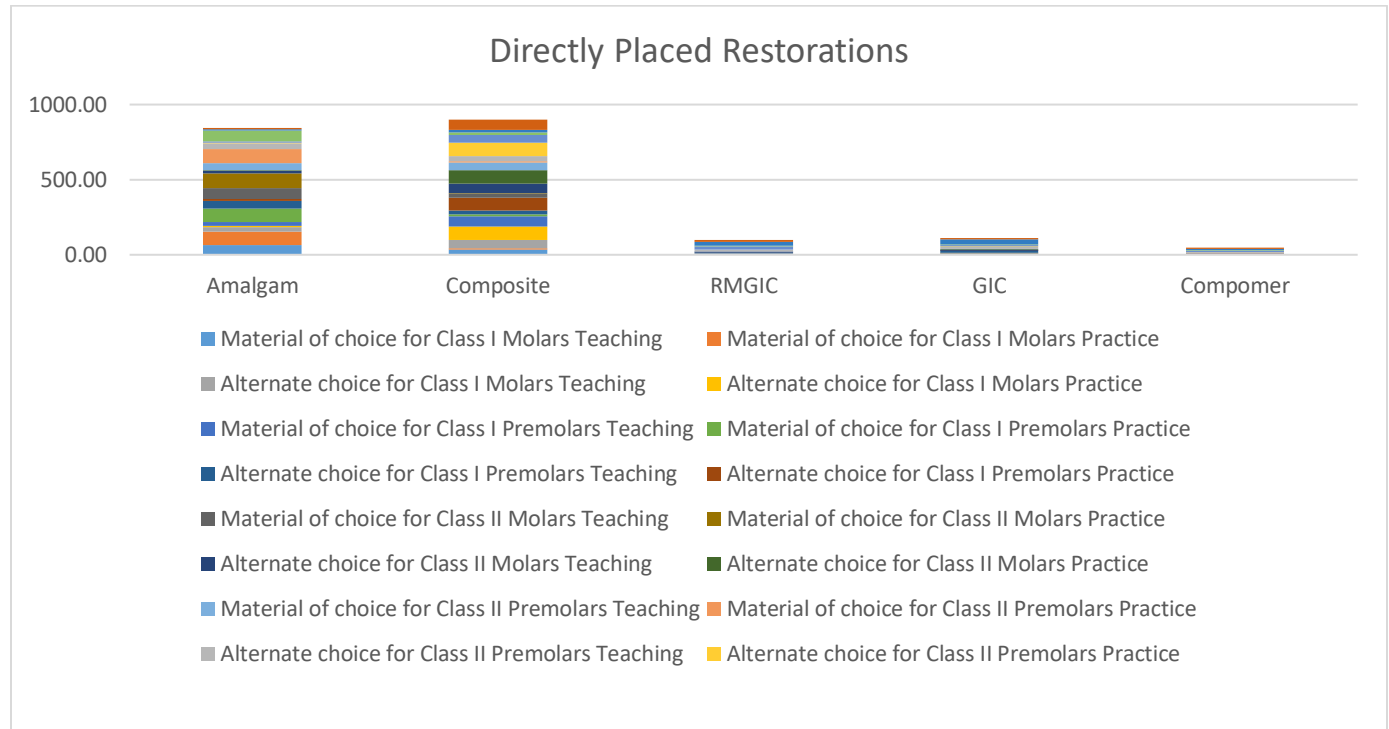
Variables	Mean	±SD	p-value
Age (in years)	32.80	6.50	0.100
Teaching Group	31.80	7.40	
Practice Group	33.50	5.70	
Professional Experience	8.90	6.20	0.070
Teaching Group	7.60	7.60	
Practice Group	8.90	5.50	

**Table 2: Speciality of Interest with Respect to Group Status**

Speciality of Interest	Group Status		Total	p value
	Teaching	Practitioner		
Operative Dentistry & Endodontics	36.0	28.0	64.0	0.0030
Orthodontics	10.0	14.0	24.0	
Prosthodontics	9.0	6.0	15.0	
Oral Surgery	6.0	9.0	15.0	
General Dentistry	8.0	35.0	43.0	
Periodontics	2.0	5.0	7.0	
Paediatric Dentistry	0.0	0.0	0.0	
Total	71.0	97.0	168.0	

**Table 3: Comparison of Dentists Regarding Directly Placed Restorations (n=168)**

Clinical Situation	Group	Amalgam	Composite	RMGIC	GIC	Compomer	p value
Material of choice for Class I Molars	Teaching	63.40	35.20	1.4	-	-	<0.001
	Practice	91.80	7.20	1	-	-	
Alternative for Class I Molars	Teaching	28.20	54.90	5.6	8.5	2.8	<0.001
	Practice	8.20	89.70	0	2	0	
Material of choice for Class I Premolars	Teaching	28.20	70.40	-	1.4	-	<0.001
	Practice	89.70	10.30	-	0	-	
Alternative for Class I Premolars	Teaching	50.70	25.40	4.2	12.7	7	<0.001
	Practice	9.30	88.70	0	2.1	0	
Material of choice for Class II Molars	Teaching	74.60	25.40	-	-	-	<0.001
	Practice	95.90	4.10	-	-	-	
Alternative for Class II Molars	Teaching	19.70	60.60	11.3	8.5	-	<0.001
	Practice	4.10	91.80	0	4.1	-	
Material of choice for Class II Premolars	Teaching	46.50	52.10	-	-	1.4	<0.001
	Practice	92.80	6.20	-	-	1	
Alternative for Class II Premolars	Teaching	38.00	33.80	9.9	14.1	4.2	<0.001
	Practice	4.10	90.70	0	4.1	1	
Material of choice for Class V Molars	Teaching	8.50	52.10	22.5	7	9.9	<0.001
	Practice	74.20	14.40	5.2	4.1	2.1	
Alternative for Class V Molars	Teaching	9.90	19.70	23.9	35.2	11.3	<0.001
	Practice	6.20	67.00	14.4	7.2	5.2	

**Table 4: Comparison Regarding Operative Dentistry Clinical Procedures (n=168)**

Clinical Activity	Group Status	Never	Rarely	Selected Patients	Frequent	p value
Use of Rubber Dam	Teaching	23.9	43.7	28.2	4.2	<0.001
	Practice	63.9	23.7	0	12.4	
Inlays and Onlays in practice	Teaching	42.3	18.3	32.4	7	<0.001
	Practice	49.5	48.5	2.1	0	
Gold Crowns in practice	Teaching	90.1	4.2	4.2	1.4	<0.001
	Practice	77.3	22.7	0	0	
Dentine pins in practice	Teaching	25.4	32.4	38	4.2	<0.001
	Practice	53.6	42.3	4.1	0	
Amalgam Boding in practice	Teaching	56.3	18.3	16.9	8.5	<0.001
	Practice	90.7	7.2	1	1	
Topical anaesthesia in practice	Teaching	0	19.7	49.3	31	<0.001
	Practice	38.1	39.2	21.6	1	
Retraction cords in practice	Teaching	18.3	43.7	0	38	<0.001
	Practice	48.5	45.4	1	5.2	

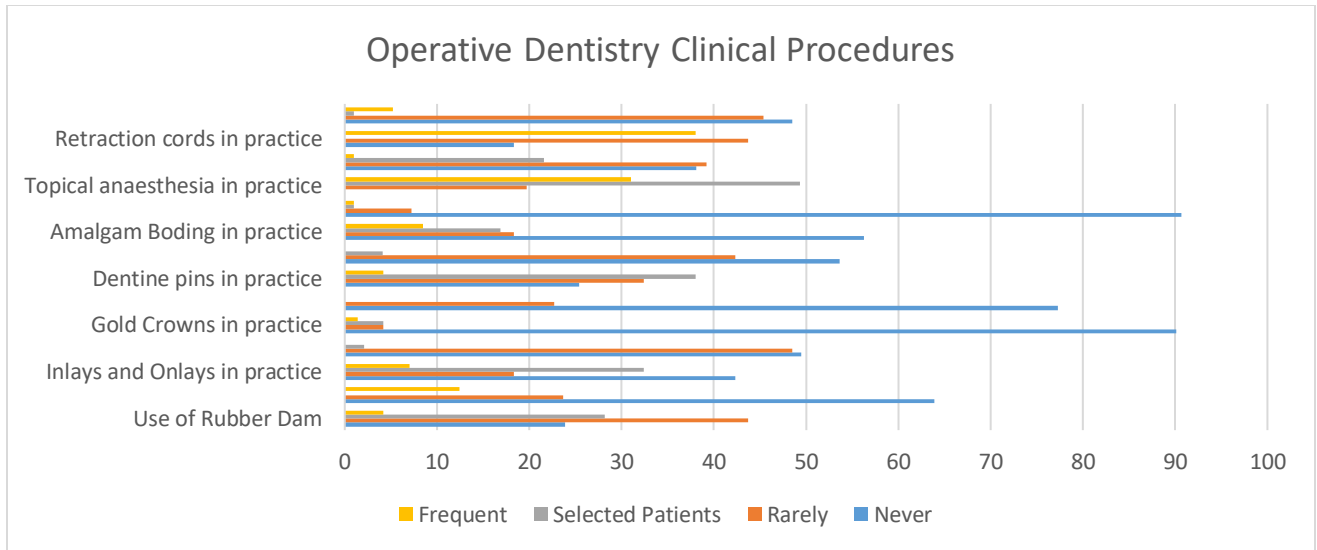


Table 5: Comparison of Teaching and Non -Teaching dentists, Reasons for Not Employing Clinical Procedures

Clinical Activity	Group	It's time consuming	I don't like it	Patients don't like it	It's expensive	Offers no advantage over others	I am not trained in it	My lab is not good at it	Chi Sq. p-value
Reasons for not using Rubber Dam	Teaching	50.70	15.50	8.50	4.20	-	21.10	-	<0.001
	Practice	42.30	45.40	2.10	1.00	-	9.30	-	
Reasons for not using Inlays and Onlays	Teaching	19.70	15.50	8.50	-	16.90	-	39.40	<0.001
	Practice	42.30	38.10	4.10	-	10.30	-	5.20	
Reasons for not using Gold Crowns	Teaching	-	18.60	10.00	37.10	12.90	-	21.40	<0.001
	Practice	-	17.50	1.00	66.00	10.30	-	5.20	
Reasons for not using Dentine pins	Teaching	16.20	23.50	5.90	-	39.70	14.70	-	<0.001
	Practice	16.50	59.80	3.10	-	12.40	8.20	-	
Reasons for not using Amalgam Boding	Teaching	16.90	18.50	7.70	29.20	-	27.70	-	<0.001
	Practice	40.60	39.60	1.00	9.40	-	9.40	-	
Reasons for not using Topical anaesthesia	Teaching	0	24.50	28.60	-	44.90	42.10	-	<0.001
	Practice	21.90	41.70	3.10	-	32.30	1.00	-	
Reasons for not using Retraction cords	Teaching	6.80	15.90	13.60	-	34.10	29.50	-	<0.001
	Practice	6.50	48.90	10.90	-	29.30	4.30	-	

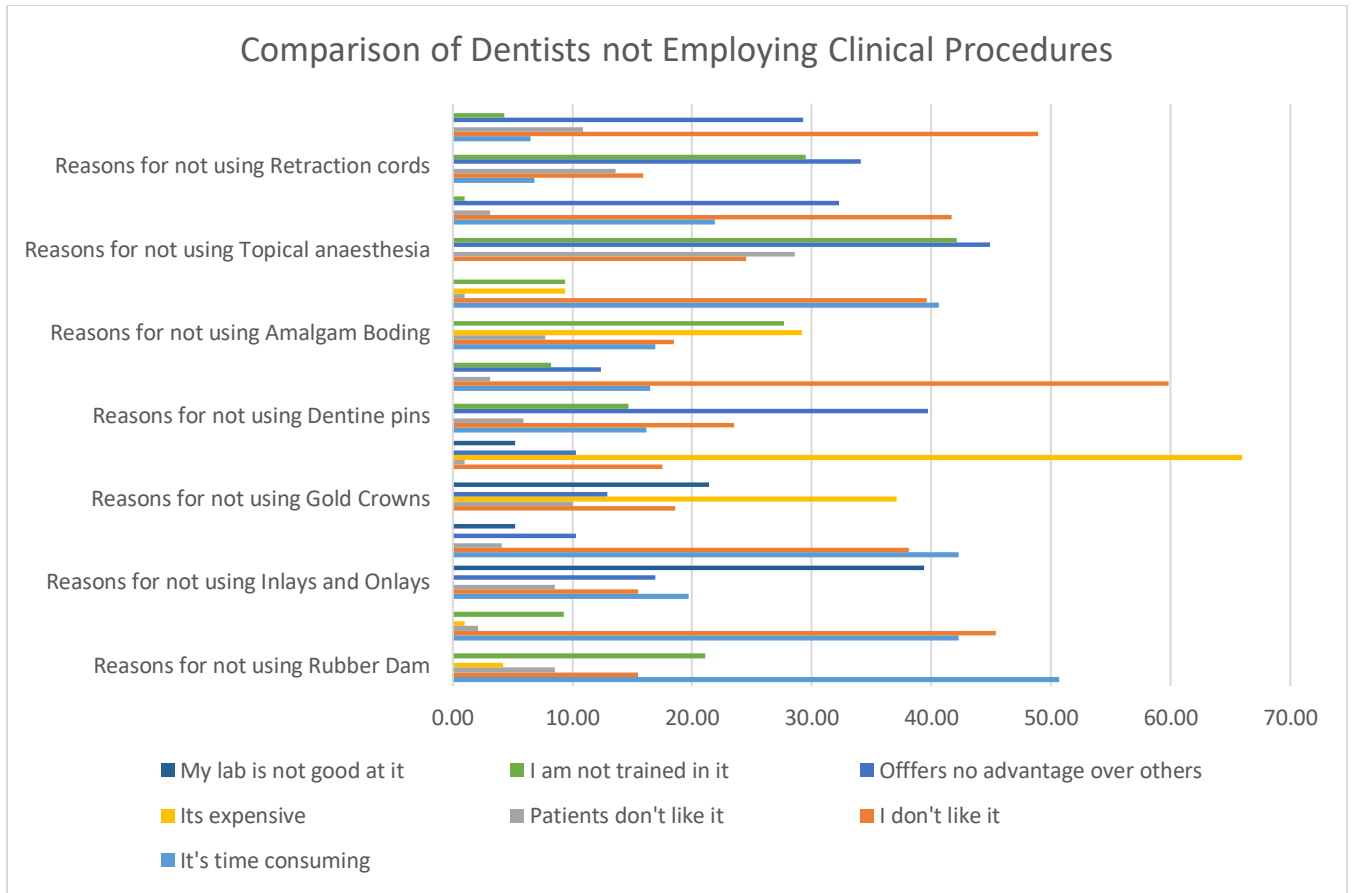
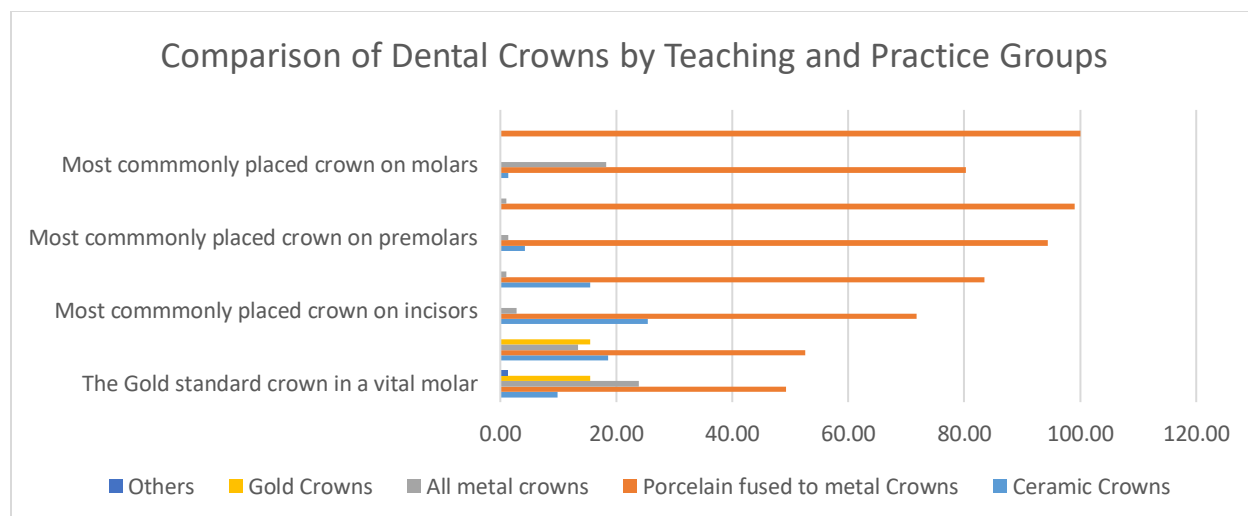


Table 6: Comparison of Teaching and Non-Teaching dentists regarding Crowns

Clinical Situation	Group	Ceramic Crowns	Porcelain fused to metal Crowns	All metal crowns	Gold Crowns	Others	P value
The Gold standard crown in a vital molar	Teaching	9.90	49.30	23.90	15.50	1.40	0.173
	Practice	18.60	52.60	13.40	15.50	0	
Most commonly placed crown on incisors	Teaching	25.40	71.80	2.80	-	-	0.174
	Practice	15.50	83.50	1.00	-	-	
Most commonly placed crown on premolars	Teaching	4.20	94.40	1.40	-	-	0.109
	Practice	0	99.00	1.00	-	-	
Most commonly placed crown on molars	Teaching	1.40	80.30	18.30	-	-	<0.001
	Practice	0	100.00	0	-	-	



DISCUSSION

There was similar age and experience in their profession in the subjects of both groups as mentioned in Table-1 but there was much variation in the clinical interests in the members of both groups. Both types of dentist chose general dentistry, surgical dentistry & endodontics as interest areas. The very least interested field were the pediatric dentistry & periodontics. The most common reason the lack of the interest was deficiency of the related institutes as well as faculties in that region [1, 2]. There were noteworthy disparities between the subjects of both study groups for taking their decisions for straight restoration in Class -1 & class-2 preparations of cavity. The preferred material in case of the private practitioners was amalgam but they selected the composite resins as substitutes.

Favored restorative for the dentists of academic group was amalgam but they were available with broad choice for the substitutes. They chose GIC & RMGIC as well as composites. In the same manner, most important disparities were available in Class-5 scenario as well. There was an agreement between our findings with the results of Burke et. There are some strengths as well as limitations of this research work. The professional of the academic institutions and private practitioners, both were the part of current research work, thus it gives the data from both sides. The relatively adverse rate of response rate from non-teaching group (48.250%) appears not good but the investigation showed that they were too much busy and they were present with low interest to fill the questionnaire completely in the duration of their working hours. There was a response rate of 26.30% in the research work of Haj Ali [14] in United State of America, A Mjor [15] discovered rate of response as 51.0% whereas Forss [16] got a response rate of about

53.60% from the professionals in the same research works.

So, it is very common for the case of practitioners to give very low rate of response. The response rate of 44.0 of this research work was not bad. No response rate from some practitioners have the ability to impact the findings of the research work. As compared to the practitioner group, the subjects of the teaching group showed a great compliance (94.0%) to give the response to questionnaires probably the familiarization with the activities of the research and they showed more willingness to participate.

CONCLUSIONS:

There are much important disparities between the subjects of teaching & non-teaching groups about the surgical dentistry. The utilization of various techniques as rubber dam, retraction cord, gold crowns & amalgam adhesives were not much acceptable for both subjects of both groups.

REFERENCES:

1. Burke FJ, McHugh S, Randall RC, Meyers IA, Pitt J, Hall AC. Direct restorative materials use in Australia in 2002. *Aust Dent J.* 2004; 49:185-191.
2. Lynch CD, McConnell RJ. Attitudes and use of rubber dam by Irish general dental practitioners. *Int Endod J.* 2007; 40:427-432.
3. Gilmour AS, Evans P, Addy LD. Attitudes of general dental practitioners in the UK to the use of composite materials in posterior teeth. *Br Dent J.* 2007; 202: E32.
4. Milsom KM, Tickle M, Blinkhorn A. The prescription and relative outcomes of different materials used in general dental practice in the North West region of England to restore the primary dentition. *J Dent.* 2002; 30: 77-82.

5. Mjor IA, Shen C, Eliasson ST, Richter S. Placement and replacement of restorations in general dental practice in Iceland. *Oper Dent*. 2002; 27:117-123.
6. Forss H, Widström E. Factors influencing the selection of restorative materials in dental care in Finland. *J Dent* 1996; 24:257-262.
7. Guelmann M, Mjor IA. Materials and techniques for restoration of primary molars by pediatric dentists in Florida. *Pediatr Dent*. 2002; 24:326-331.
8. Tran LA, Messer LB. Clinicians' choices of restorative materials for children. *Aust Dent J*. 2003; 48: 221-232.
9. Khan FR, Mahmud S, Rahman M. The need of Paediatric dentistry specialists in Pakistan. *J Coll Physicians Surg Pak* 2013;23: 305-307.
10. Haj-Ali R, Walker MP, Williams K. Survey of general dentists regarding posterior restorations, selection criteria, and associated clinical problems. *Gen Dent*. 2005; 53:369-375.
11. Khan FR, Mahmud S, Rahman M. Pediatric dentistry training for dentists in Pakistan. *J Pak Dent Assoc* 2013; 22:03-08.
12. Swigonski NL, Yoder KM, Maupome G, Ofner S. Dental providers' attitudes regarding the application of fluoride varnish by pediatric health care providers. *J Public Health Dent* 2009; 69:242-247.
13. Folke BD, Walton JL, Feigal RJ. Occlusal sealant success over ten years in a private practice: comparing longevity of sealants placed by dentists, hygienists, and assistants. *Pediatr Dent*. 2004; 26:426-432.
14. Burke FJ, McHugh S, Hall AC, Randall RC, Widstrom E, Forss H. Amalgam and composite use in UK general dental practice in 2001. *Br Dent J*. 2003; 194:613-618.
15. Threlfall AG, Pilkington L, Milsom KM, Blinkhorn AS, Tickle M. General dental practitioners' views on the use of stainless steel crowns to restore primary molars *Br Dent J*. 2005;199: 453-455
16. Schorer-Jensma MA, Veerkamp JS. A comparison of paediatric dentists' and general dental practitioners' care patterns in paediatric dental care. *Eur Arch Paediatr Dent*. 2010; 11:93-96.