

“A Study on Application of Prosthodontic Techniques in Private Practice-a Survey”.

Abstract:

Background: Continuing dental education programs can highlight the hazards of shortcuts and stress the importance of prescribed techniques to improve the practitioner's clinical effectiveness and the quality of the treatment rendered to the patients.

Aim: This paper aimed to evaluate application of prosthodontic techniques in private practice. The obtained information & data helped to emphasize strongly the basic prosthodontic principles in the undergraduate teaching curriculum.

Materials and Method: A total of 230 dental practitioners in Kanpur city, Uttar Pradesh, India was included in an internet questionnaire survey which included 15 questions regarding complete

denture, removable partial denture, fixed partial denture and implants. Results: 35.65% respondents selected normal tap water to disinfect the impression, 42.17% used alginate for primary impression, 65.22% used ZnOE for final impression, 57.83% completed the treatment of complete denture fabrication in 5 appointments, 73.04% fabricated acrylic RPD's, 55.65% used Valsalva manoeuvre technique to record PPS, 51.30% never fabricated CAD/CAM dentures, only 39.57% used facebow for orientation jaw relation, only 33.04% used gingival retraction cord before final impression of FPD, 53.04% obtained written consent before starting the procedure, 68.26% used wax to record the interocclusal records, only 29.13% gave temporary/provisional crown, 51.74% fabricated Zirconia for restoration of anterior region, only 45.22% fabricated study models before starting FPD, very few 23.48% of respondents practiced implant dentistry.

Conclusion: Within the limitations of this study author concluded that there are differences between what is taught as accepted prosthodontic practice in undergraduate curriculum and what is actually practiced. However, to further enhance the skills, efforts should be made to encourage and aware the practitioners about the techniques in prosthodontic practice through continuing dental education programs.

Keywords: Complete Denture; Removable Partial Denture; Fixed Partial Denture; Implant; Prosthodontic Techniques; Dental Education; Private Practitioners

Introduction :

Prosthodontics is defined as the branch of dentistry pertaining to the restoration and maintenance of oral function, comfort, appearance and health of the patient by the restoration of the natural teeth and / or replacement of missing teeth with artificial substitutes.[1]

It is that branch of dentistry which is extremely technique sensitive pertaining to the oral rehabilitation of the patient by providing complete dentures, removable partial dentures, fixed partial dentures and various maxillofacial prosthesis by the practitioner. The provision of prosthodontic services is determined by various factors: social & demographic characters, anticipated need for care by patient's symptoms &

esthetic concern.[2] The practitioner should must be knowing about the techniques, biocompatibility and bioacceptability of the material used for the fabrication of prosthesis which has to be implemented on the patient. It is wisely said that “It is more important to preserve what already exists than to replace what is missing”.[3]

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There are various authors and textbooks which describes various techniques for fabrication of complete denture, removable partial denture and fixed partial dentures hence guiding the operator and also helps in providing optimal care to the patients. Various techniques are taught to school dental students in fabrication of the prosthesis.

However the techniques which has been taught or learned are sometimes not carried out as they should be, in other words every dental school and teacher has a unique philosophy of imparting education to the students.

The technique taught by different colleges for the same procedure can vary and the techniques prescribed in the textbooks for one procedure can also have difference of approach.⁴ According to this survey, there are differences between what is taught as accepted prosthodontic practice and what is actually practiced. For this survey the standardized syllabus prescribed by the Dental Council of India (DCI) is taken as the benchmark and we have accepted that all the dental graduates are fully acquainted with the ideal prosthodontic procedures as they have passed from recognized dental colleges.

The main purpose of the survey was to obtain data and information about the practice of prosthodontic techniques by private dental practitioners of Kanpur, to know the problems encountered by the practitioners in various prosthodontic treatments and to compare the techniques prescribed and techniques followed by them.

Constant re-evaluation of current and future programs should be made by all teachers who are responsible for prosthodontic education.

Dental educators are mindful of the technological discrepancies implemented by dental students after beginning private practice.

⁵Students should be convinced of their responsibility to carry out the procedures as taught or that they be trained to recognize variations while at dental school.

In this way, the graduate dentist will be able to approach general practice more convinced than at present that there is a

close relationship between what he was taught and what is beneficial for patients. The data & information from the survey can be used by the IDA (Indian Dental Association) to assist with development of activities to enhance & encourage dentists to consider the specialized procedures of prosthodontics.

Continuing dental education programs in the field which can highlight the hazards of shortcuts and stress the importance of prescribed techniques can help to improve the practitioner's clinical effectiveness and the quality of the treatment rendered to the patients. It may also be necessary to emphasize strongly the basic prosthodontic principles in the undergraduate teaching curriculum.

⁶So, this study was conducted to evaluate the prosthodontic techniques among private practitioners of Kanpur, UP, India and to make them aware about their dental knowledge and need for accurate dental treatment in their lifestyles for the achievement of acceptable results.

Materials & Methods:

- 1) A survey was planned to determine the prosthodontic techniques applied by private dental practitioners of Kanpur city, Uttar Pradesh, India.
- 2) A pre-tested questionnaire proforma containing questions on complete dentures, removable partial dentures, fixed partial dentures fabrication and implant was prepared for the survey. The survey was designed as an internet survey using FOUREYES website in view of COVID-19 Pandemic and the survey form was sent via a popular messaging app and emails to the dentist who were in the list of IDA & are in practice.
- 3) Around 230 samples were taken for survey. All the 230 practitioners responded to the questionnaire. An informed consent was obtained from all the private dental practitioners and they were assured that the information collected will be kept confidential.

Ethical Approval:

Ethical clearance (02/IEC/RDCHRC/2020-21/016) was obtained from the Ethical Committee of Rama Dental

College-Hospital and Research Centre, Kanpur, Uttar Pradesh. The data of dentists in Kanpur city was collected from the Indian Dental Association. Information was collected regarding dental clinics in the city area of Kanpur.

Result:

As presented in table 1 for Q. no. 1 maximum 47.39% respondents selected the choice '2% gluteraldehyde' followed by the choice 'normal tap water' by 35.65%.

For Q.no.2 maximum 52.61% respondents selected the choice 'impression compound' followed by the choice 'alginate' by 42.17%. For Q.no.3 maximum 73.04% respondents selected the choice 'acrylic' followed by the choice 'flexible denture' by 14.78%. For Q.no.4 maximum 65.22% respondents selected the choice 'Zn OE Paste' followed by the choice 'Elastomers' by 21.30%. The significant difference was found in proportion of various choice selections among the respondents (p<0.001) for questions 1 to 4. In table 2, for Q.no. 5, maximum 57.83% respondents selected the choice '5 appointments' followed by the choice '3 appointments' 35.65%.

For Q.no.6 maximum 55.65% respondents selected the choice 'Valsalva maneuver' followed by the choice 'fluid wax' 16.96%. For Q. no.7 maximum 51.30% respondents selected the choice 'never' followed by the choice 'rare' by 16.96%. The significant difference was found in proportion of various choice selections among the respondents (p<0.001) for questions 5 to 7.

For Q.no.8 maximum 33.04% respondents selected the choice 'rare' followed by the choice 'often' by 27.83%.

The significant difference was found in proportion of various choice selections among the respondents (p=0.002). In table 3, for Q. no.9, maximum 39.57% respondents selected the choice 'always' followed by the choice 'never' by 22.61%.

For Q.no. 10, maximum 53.04% respondents selected the choice 'always' followed by the choice 'often' by 19.13%. For the Q.no.11, maximum 68.26% respondents selected the choice 'wax' followed by the choice 'polyether bite

registration paste' by 15.22%. For Q.no.12, maximum 41.74% respondents selected the choice 'often' followed by the choice 'always' by 29.13%. The significant difference was found in proportion of various choice selections among the respondents (p<0.001) for questions 9 to 12. In table 4, for the Q.no.13, maximum 51.74% respondents selected the choice 'zirconia' followed by the choice 'porcelain' by 20.87%. For the Q.no.14, maximum 45.22% respondents selected the choice 'always' followed by the choice 'often' by 25.65%. The significant difference was found in proportion of various choice selections among the respondents (p<0.001) for question 13 & 14. For the Q.no.15, maximum 28.70% respondents selected the choice 'never' followed by the choice 'often' by 26.52%. However no significant difference was found in proportion of various choice selections among the respondents (p=0.230).

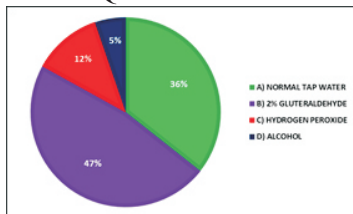
Table 1-Showing detailed description of the result from question 1 to 4.

Question 1: Responses of the Question Item: Which material you use to disinfect the impression?		
OPTION	NUMBER	PERCENTAGE
A) NORMAL TAP WATER	82	35.65%
B) 2% GLUTERALDEHYDE	109	47.39%
C) HYDROGEN PEROXIDE	27	11.74%
D) ALCOHOL	12	5.22%
Total	230	100.00%
Chi sq=108.75, p<0.001	-	-
Question 2: Responses of the Question Item: Which impression material you use for primary impression in complete denture?		
OPTION	NUMBER	PERCENTAGE
A) IMPRESSION COMPOUND	121	52.61%
B) ALGINATE	97	42.17%
C) PUTTY	11	4.78%
D) OTHER	1	0.43%
Total	230	100.00%
Chi sq=190.38, p<0.001	-	-
Question 3: Responses of the Question Item: Which type of removable partial denture you fabricate?		
OPTION	NUMBER	PERCENTAGE
A) ACRYLIC	168	73.04%
B) CAST PARTIAL DENTURE	22	9.57%
C) FLEXIBLE DENTURE (NYLON DERIVED)	34	14.78%
D) NONE	6	2.61%
Total	230	100.00%
Chi sq=290.00, p<0.001	-	-
Question 4: Responses of the Question Item: Which material do you use for making the final impression in complete denture?		
OPTION	NUMBER	PERCENTAGE
A) GYPSUM	9	3.91%
B) ALGINATE	22	9.57%
C) Zn OE PASTE	150	65.22%
D) ELASTOMERS	49	21.30%
Total	230	100.00%
Chi sq=212.29, p<0.001	-	-

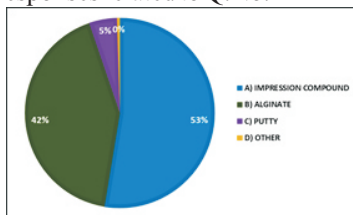
Table 2-Showing detailed description of the result from question 5 to 8.

Question 5: Responses of the Question Item: In how many appointments you deliver the complete denture to the patient?		
OPTION	NUMBER	PERCENTAGE
A) 1 APPOINTMENT	6	2.61%
B) 3 APPOINTMENTS	82	35.65%
C) 5 APPOINTMENTS	133	57.83%
D) MORE THAN 5 APPOINTMENTS	9	3.91%
Total	230	100.00%
Chi sq=212.29, p<0.001	-	-
Question 6: Responses of the Question Item: Which technique you use to record the posterior palatal seal?		
OPTION	NUMBER	PERCENTAGE
A) FLUID WAX	39	16.96%
B) ARBITRARY SCRAPING	38	16.52%
C) VALSALVA MANEUVER	128	55.65%
D) NONE	25	10.87%
Total	230	100.00%
Chi sq=117.37, p<0.001	-	-
Question 7: Responses of the Question Item: Do you fabricate complete dentures using CAD/CAM technology?		
OPTION	NUMBER	PERCENTAGE
A) ALWAYS	19	8.26%
B) RARE	75	32.61%
C) NEVER	118	51.30%
D) UNAWARE OF THE TECHNOLOGY	18	7.83%
Total	230	100.00%
Chi sq=121.90, p<0.001	-	-
Question 8: Responses of the Question Item: Do you use retraction cord for gingival retraction before making the final impression for FPD?		
OPTION	NUMBER	PERCENTAGE
A) ALWAYS	45	19.57%
B)OFTEN	64	27.83%
C) RARE	76	33.04%
D) NEVER	45	19.57%
Total	230	100.00%
Chi sq=12.12, p=0.002	-	-

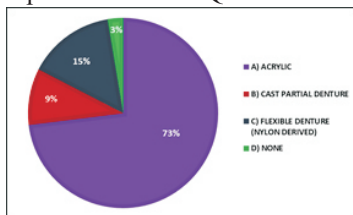
GRAPHICAL PRESENTATION OF ALL THE QUESTIONNAIRE



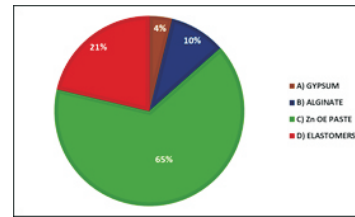
Graph no. 1-Responses related to Q.No.1



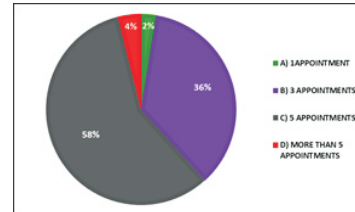
Graph no.2-Responses related to Q.No.2



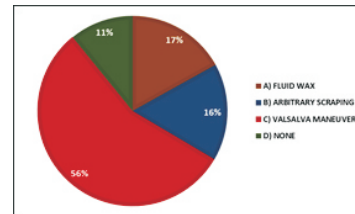
Graph no.3-Responses related to Q.No.3



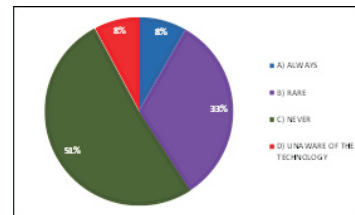
Graph no.4-Responses related to Q.No.4



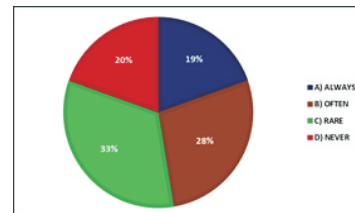
Graph no.5-Responses related to Q.No.5



Graph no.6-Responses related to Q.No.6



Graph no.7-Responses related to Q.No.7



Graph no. 8-Responses related to Q.No.8

Table 3-Showing detailed description of the result from question 9 to 12.

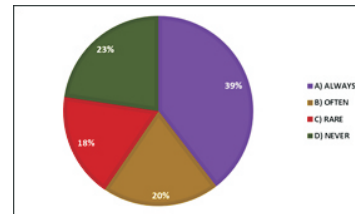
Question 9: Responses of the Question Item: Do you use the face-bow for orientation jaw relation?		
OPTION	NUMBER	PERCENTAGE
A) ALWAYS	91	39.57%
B)OFTEN	46	20.00%
C) RARE	41	17.83%
D) NEVER	52	22.61%
Total	230	100.00%
Chi sq=27.09, p<0.001	-	-
Question 10: Responses of the Question Item: Do you obtain written consent from the patients before starting the procedure?		

OPTION	NUMBER	PERCENTAGE
A) ALWAYS	122	53.04%
B)OFTEN	44	19.13%
C) RARE	42	18.26%
D) NEVER	22	9.57%
Total	230	100.00%
Chi sq=101.62, p<0.001	-	-
Question 11: Responses of the Question Item: Which type of material do you choose for interocclusal record?		
OPTION	NUMBER	PERCENTAGE
A) WAX	157	68.26%
B) POLYETHER BITE REGISTRATION PASTE	35	15.22%
C) POLYVINYLSILOXAME BITE REGISTRATION PASTE	29	12.61%
D) ANY OTHER(PLEASE SPECIFY)	9	3.91%
Total	230	100.00%
Chi sq=236.02, p<0.001	-	-
Question 12: Responses of the Question Item: Do you give provisional or temporary crown or bridge after finishing the preparation?		
OPTION	NUMBER	PERCENTAGE
A)ALWAYS	67	29.13%
B)OFTEN	96	41.74%
C) RARE	42	18.26%
D) NEVER	25	10.87%
Total	230	100.00%
chi sq=49.90, p<0.001	-	-

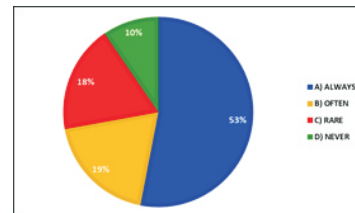
Table 4-Showing detailed description of the result from question 13 to 15.

Question 13: Responses of the Question Item: Which type of crown you advice for anterior region in patient mouth?		
OPTION	NUMBER	PERCENTAGE
A) EMAX CROWN(LITHIUM DISILICATE)	41	17.83%
B) ZIRCONIA	119	51.74%
C)PORCELAIN	48	20.87%
D) PORCELAIN FUSED TO METAL	22	9.57%
Total	230	100.00%
Chi sq=98.00, p<0.001	-	-
Question 14: Responses of the Question Item: Do you prefer study models before commencing fixed prosthodontic treatment?		
OPTION	NUMBER	PERCENTAGE
A) ALWAYS	104	45.22%
B) OFTEN	59	25.65%
C) RARE	55	23.91%
D) NEVER	12	5.22%
Total	230	100.00%
Chi sq=73.76, p<0.001	-	-
Question 15: Responses of the Question Item: Do you practice implant dentistry in your clinic?		
OPTION	NUMBER	PERCENTAGE
A) ALWAYS	54	23.48%
B) OFTEN	61	26.52%
C) RARE	49	21.30%
D) NEVER	66	28.70%
Total	230	100.00%
Chi sq=2.94, p=0.230	-	-

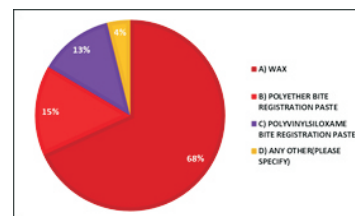
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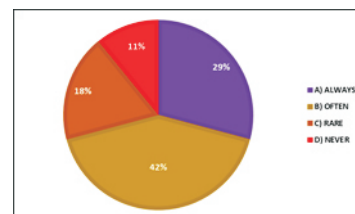
Graph no.9-Responses related to Q.No.9



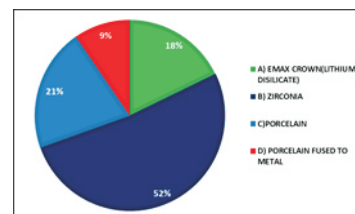
Graph no.10-Responses related to Q.No.10



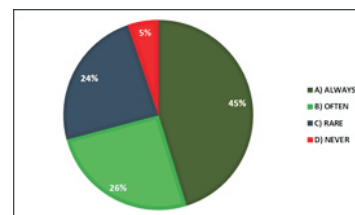
no.11-Responses related toQ.No.11



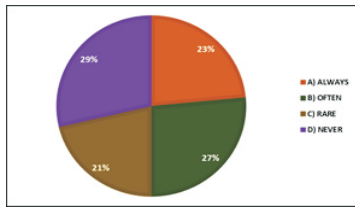
Graph no.12-Responses related to Q.No.12



Graph no.13-Responses related to Q.No.13



Graph no.14-Responses related to Q.No.14



Graph no.15-Responses related to Q.No.15

Table 5: Distribution of Respondents according to the Best Choices

Item	Best Responses		95% LCL (lower confidence limit)	95% UCL (upper confidence limit)
	No.	%		
MATERIAL USE TO DISINFECT	82	35.65	29.46	41.84
MATERIAL USE FOR PRIMARY IMPRESSION	97	42.17	35.79	48.56
TYPE OF REMOVABLE PARTIAL DENTURE	22	9.57	5.76	13.37
MATERIAL USE FOR MAKING FINAL IMPRESSION	22	9.57	5.76	13.37
.APPOINTMENTS TO DELIVER THE COMPLETE DENTURE	133	57.83	51.44	64.21
TECHNIQUE USE TO RECORD THE POSTERIOR PALATAL SEAL	128	55.65	49.23	62.07
FABRICATE COMPLETE DENTURES USING CAD/CAM TECHNOLOGY	19	8.26	4.70	11.82
USE RETRACTION CORD FOR GINGIVAL RETRACTION	45	19.57	14.44	24.69
USE THE FACE-BOW FOR ORIENTATION JAW RELATION	91	39.57	33.25	45.88
OBTAIN WRITTEN CONSENT FROM THE PATIENTS	122	53.04	46.59	59.49
TYPE OF MATERIAL CHOOSE FOR INTEROCCLUSAL RECORD	157	68.26	62.25	74.28
GIVE PROVISIONAL CROWN/BRIDGE AFTER FINISHING	67	29.13	23.26	35.00
TYPE OF CROWN ADVICE FOR ANTERIOR REGION	41	17.83	12.88	22.77
PREFER STUDY MODELS BEFORE COMMENCING FIXED PROSTHODONTIC TREATMENT	104	45.22	38.79	51.65
PRACTICE IMPLANT DENTISTRY IN CLINIC	54	23.48	18.00	28.96

Graph 16- Showing best responses for the questionnaire by the practitioners.

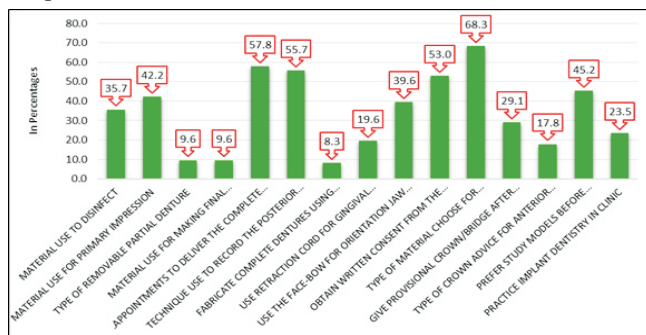


Table –6: Overall Conclusive Result

Overall	
% Best Choices	34.32
95% LCL	14.07
95% UCL	24.25

On an average around 34.2% (with 14.07% - 24.25% expected range) respondents were doing best practices.

Discussion:

Dentistry is an art and science and obviously it is flawed which is more significant, i.e. whether it is art or science. As indicated by Dental Council of India schedule for perceived dental universities in India, students in their undergraduate level spend over 30% of their scholastic vocation in the improvement of prosthodontics, gazing from the first year to final year learning the different parts of prosthodontics. Despite the fact that hypothetically they study prosthodontics in general, clinically they are prepared with removable prosthodontics for example ordinary removable complete denture and removable acrylic partial dentures. There is contrast between the accompanying of prosthodontic methods in dental colleges when compared with the private practice. What is educated as acknowledged prosthodontic practice and what is really practiced. It is observed that new dental graduates are often over confident and that this often leads to compromised, quick techniques that produce undesirable results. In this survey based study various question regarding the prosthodontic techniques were asked by the private practitioners of Kanpur, UP.For Q No.1, significant difference was found in proportion of various choice selections among the respondents (p<0.001).However studies conducted by various authors was not in accordance with our result. In Neda Al-Kaisy et al2study, 72 dentists (49.4%) wash the impressions with water, 43 (59.7%) followed this with disinfectant.In Paul Hyde et al.4study, 49% do not disinfect& 51% disinfect their impression,For Q No.2, significant difference was found in proportion of various choice selections among the respondents (p<0.001). However studies conducted by various authors was not in accordance with our result. Studies conducted by Mamta Mehra et al.7 showed that 88% used irreversible hydrocolloid to take preliminary impression and only 12% of respondents used modeling plastic impression compound, In Neda Al-Kaisy et al.2study for preliminary impression material used was a combination of heavy body and lightbody of PVS was 38.4%, irreversible hydrocolloid 37.6% and impression compound 32.8% followed by heavy body material which was used only by 20.8% of dentists. 8.8% used impression compound with irreversible hydrocolloid wash.

For QNo.3, significant difference was found in proportion of various choice selections among the respondents ($p < 0.001$). However studies conducted by various authors was not in accordance with our result. In Nithin Kumar Sonnahalli et al.8 study, 62.42% preferred flexible dentures, whereas prosthodontists preferred CPDs 62.84%, in G Singh et al.1 study 480 (71.1%) did only acrylic partial denture, 10 (1.5%) did exclusive cast partial denture and 185 (27.4%) did both acrylic partial denture and cast partial denture. For Q No.4, significant difference was found in proportion of various choice selections among the respondents ($p < 0.001$). However studies conducted by various authors was not in accordance with our result. In Vinay R. Kakatkar et al.9 study 73 % use ZnOe or non-eugenol paste, 19 % use light body elastomer, 8 % used "alginate" to make final impressions, in Amar Bhochohibhoya et al.10 study, 73.3% used ZOE, 11.7% polyvinylsiloxane, 11.7% polyether impression material and polysulphide impression, in Mamta Mehra et al.7 study final impression materials used were: PVS (42%), polysulphide (32%), irreversible hydrocolloid (13%), zinc oxide eugenol (8%), polyether (3%) and impression plaster (2%), In Cynthia S. Petrie et al.11 study for final impressions, 10 (1%) irreversible hydrocolloid (alginate), 317 (34%) polysulfide, 343 (36%) polyvinylsiloxane and 151 (16%) polyether.

For Q No.6, significant difference was found in proportion of various choice selections among the respondents ($p < 0.001$). However studies conducted by various authors was not in accordance with our result. In G Singh et al.1 study 84.2% recorded posterior palatal seal with physiological method, arbitrary scraping of casts was done by 6% practitioners and valsalva maneuver by 4.4% and sucking finger method was followed by 1.4% practitioners. For Q No.7, significant difference was found in proportion of various choice selections among the respondents ($p < 0.001$). In Monica A. Fernandez et al.12 study on the incorporation of CAD/CAM denture fabrication technique into the post-or predoctoral curriculum? Only 12.1% of department chairs reported using CAD/CAM technology in the predoctoral curriculum; compared to 52.4% of postdoctoral programs which was not in accordance with our result. For Q No.8, significant difference was found in proportion of various choice selections among the respondents ($p = 0.002$). However studies conducted by various authors was in accordance with our result. Some

studies conducted by various authors revealed differences to this study. In Gurminder Singh et al.6 results of the study showed that 492 i.e 73.43% practitioners out of 670 did gingival retraction before crown preparation. In Sumitha N. Ahmed et al.13 study, 92% used gingival displacement cords, while 20.2% used a soft tissue laser and 32% used electrosurgery as an adjunct. For Q No.9, significant difference was found in proportion of various choice selections among the respondents ($p < 0.001$). However studies conducted by various authors was not in accordance with our result. In Arturo J. Mendez et al.14 study only 2% of the survey populational ways used facebow and 37% never did, in Johnette J. Shelley et al.15 study only 8% of the work authorizations requesting a fully balanced setup were accompanied with a facebow orientation or came articulated on an instrument. In Sandra Sagar et al.16 study, 92% do not use face bow. In G. Swetha et al.[17] study 32% of prosthodontists are seldom using facebow for complete denture fabrication. Among that, 95.2% of them are using arbitrary facebow. 43% do not think facebow is necessary for complete denture fabrication, 55% of them report that facebow transfer in complete denture fabrication is time consuming. For Q No.10, significant difference was found in proportion of various choice selections among the respondents ($p < 0.001$). However studies conducted by various authors was not in accordance with our result. In Vivek V Gupta et al.18 study, more than 65% of the dentists had knowledge about both types of informed consent and 52.6% were not sure whether to take consent for disabled child or not. 48% were not previously taking consent from patient. Most of them were not taking signatures for the verbal consent; and 48.1% were taking the consent prior to doing the surgical procedure. For Q No.11, significant difference was found in proportion of various choice selections among the respondents ($p < 0.001$). However studies conducted by various authors was not in accordance with our result. In study conducted by Kavita Maru et al.19 results showed that most commonly used interocclusal recording material was wax (54.6%) and polyvinylsiloxane (3.1%) and zinc oxide eugenol and acrylic resin (1%) were the least used material and 40.2% practitioners use all types of record materials, Aryaf Alhoumaidan et al.20 results showed that 9 (3.1%) never and 12 (4.1%) rarely took bite registration while majority of respondents 242 (83.4%) always took bite registration for multiple teeth replacements. 179 (61.7%) participants used wax for bite registration, 72 (24.8%) used wax and silicon while 39 (13.4%) used silicone alone.

For Q No.12,14, significant difference was found in proportion of various choice selections among the respondents ($p < 0.001$). However studies conducted by various authors was not in accordance with our result. Studies conducted by Aryaf Alhoumaidan et al.20 results showed that 132 (45.5%) practitioners always gave provisional restoration while 6 (2.1%) of female practitioners never give provisional crown and bridges. 108 (37.2%) of participants fabricated study models before commencing fixed prosthodontic treatment and 84 (29%) of them rarely fabricated it and 86 (29.7%) of participants often fabricate study models and 12 (4.1%) of participants starts treatment without study models. For Q No.15, no significant difference was found in proportion of various choice selections among the respondents ($p = 0.230$). The result of the study showed that maximum 28.70% dentist selected the choice 'never' for practicing implant dentistry in clinic followed by the choice 'often', as chosen by 26.52% respondents. However studies conducted by various authors was not in accordance with our result. Studies conducted by Nithin Kumar Sonnahalli et al.8 showed that 49.01% of dentists (197/402 preferred implants to rehabilitate partially edentulous patients. GDPs mostly preferred RPDs (71.87% [23/32]) and FPDs (57.22% [99/173]) and prosthodontists mostly preferred implants (60.91% [120/197]). Ramona Schweyen et al.[21] study showed that, 107 (51.4%) participants had no prior experience of implant placement, and 42 participants (20.2%) had inserted more than 500 implants over the course of their career.

The functional and esthetic rehabilitation of partially edentulous patients with missing single teeth to multiple teeth includes a range of treatment options such as provisional removable partial dentures, complete dentures, a definitive CPDs, FPDs, or implant-supported prosthesis. The majority of the respondents did not follow the appropriate prosthodontic techniques instead they utilize short cuts to make money and does not think about the outcomes of prosthodontic rehabilitation which can lead to unsatisfactory results. The dentist who are practicing some of the prosthodontic techniques were not taught in the undergraduate curriculum but still they are continuing with that.

Conclusion :

- 1) In this study it was observed that majority of the practitioners try to follow short cut procedures, and many

of them lack the knowledge regarding prosthodontic materials and techniques.

- 2) On an average 34.2% of practitioners were only doing the best practice and this could be possible because of the disconnection between the undergraduate prosthetic curriculum and the general practice of dentistry. Almost all of them practice fixed partial dentures, implants even they are not clinically trained in many expertise.
- 3) There are lot of difference between the techniques prescribed and the techniques followed by them. For the fabrication of an ideal prosthesis, it is required that the practitioner follow the protocols and methods which has been mentioned in the standard text books, cited by various authors and taught during the undergraduate curriculum.
- 4) It is also evaluated that the dentist who has done Postgraduation were more efficient and were using prosthodontic techniques wisely for the excellent outcome. Thus, it is crucial to establish continuing dental education programs, teaching and training courses in complete and RPDs prosthodontics and to clarify the importance of basic techniques and new materials.
- 5) In addition, the undergraduate teaching curriculum may need to be revised and improved to include tracking the continuous development in prosthodontics techniques and materials. This revision could overcome any weakness or deficiency in prosthodontics knowledge demonstrated in the results of studies like this.
- 6) Continuing dental education programs can also help to highlight the hazards of the shortcuts and stress the importance of prescribed techniques which can help to improve the practitioner's clinical effectiveness and the quality of the treatment rendered to the patients. It may also be necessary to emphasize strongly the basic prosthodontic principles in the undergraduate teaching curriculum.

References :

1. Singh G, Kapoor V, Gambhir R, Bansal V. Application Of Prosthodontic Techniques By Private Practitioners In Northern India- A Survey. *Int J Epidemiol* 2010;9(2):1-7.
2. Al-Kaisy N. A Survey of Prosthodontics Techniques Applied by Dental Practitioners in Sulaimani City. *J Bagh Coll Dent* 2016;28(3):22-9.

3. Olin PS, Clay JD, Look JO. Current prosthodontic practice: A dental laboratory survey. *J Prosthet Dent* 1989;61(6):742-5.
4. Hyde TP, McCord JF. Survey of prosthodontic impression procedures for complete dentures in general dental practice in the United Kingdom. *J Prosthet Dent* 1999;81(3):295-9.
5. Cotmore JM, Mingleford EB, Pomerantz JM, Grosso JE. Removable partial denture survey: Clinical practice today. *J Prosthet Dent* 1983;49(3):321-27.
6. Singh G, Gambhir RS, Singh R, Kaur H. Theoretical versus practical application of prosthodontic techniques in private dental clinics in India: A survey. *Eur J Prosthodont* 2014;2(1):23-27.
7. Mehra M, Vahidi F, Berg RW. A Complete Denture Impression Technique Survey of Postdoctoral Prosthodontic Programs in the United States. *J Prosthet Dent* 2014;23(4):320-27.
8. Sonnahalli NK, Mishra SK, Chowdhary R. Attitude of dental professionals toward cast partial denture: A questionnaire survey in India. *J Indian Prosthodont Soc* 2020;20:104-9.
9. Kakatkar VR. Complete Denture Impression Techniques Practiced by Private Dental Practitioners: A Survey. *J Ind Prosthodont Soc* 2013;13(3):233-35.
10. Bhojchibhoya A, Acharya B, Rana SB, Sharma R, Acharya J, Maskey B. Survey of Current Materials and Impression Techniques for Complete Dentures among Nepalese Prosthodontists. *Nepal Med Coll J* 2018;14(2):75-80.
11. Petrie CS, Walker MP, Williams K. A Survey of U.S. Prosthodontists and Dental Schools on the Current Materials and Methods for Final Impressions for Complete Denture Prosthodontics. *J Prosthodont* 2005;14(4):253-62.
12. Fernandez MA, Nimmo A, Horenstein LB. Digital Denture Fabrication in Pre- and Postdoctoral Education: A Survey of U.S. Dental Schools. *J Prosthodont* 2016;25(1):83-90.
13. Ahmed SN, Donovan TE. Gingival displacement: Survey results of dentist's practice procedures. *J Prosthet Dent* 2014;114(1):81-5.
14. Arturo J. Mendez. Application of prosthodontic techniques in private practice. *J Prosthet Dent* 1985;54(5):730-35.
15. Shelly JJ, Plummer KD. Removable prosthodontic laboratory survey. *J Prosthet Dent* 1992;67(4):567-8.
16. Sagar S, Rhea A, Dhanraj M. A Survey on Various Jaw Relation Methods Used for Complete Denture Fabrication Among Private Dental Practitioners in Kanyakumari District - A Questionnaire-Based Study. *Int J Pharm Sci Rev Res* 2019;10(1):619-22.
17. Swetha G, Jain AR. KAP on use of facebow in fabrication of complete denture among Indian prosthodontist. *Drug Invent Today* 2018;10(4):515-19.
18. Gupta VV, Bhat N, Aswana K, Tak M, Bapat S, Chaturvedi P. Knowledge and Attitude Toward Informed Consent Among Private Dental Practitioners in Bathinda City, Punjab, India. *Osong Public Health Res Perspect* 2015;6(2):73-8.
19. Maru K, Dwivedi A, Agarwal J, Vyas A, Jain S, Kulkarni P. Trends in Selection, Usage, and Techniques of Interocclusal Record Materials among Private Dental Practitioners: A Survey. *Contemp Clin Dent* 2018;9(1):127-32.
20. Alhoumaidan A, Mohan MP, Doumani M. The knowledge, attitude and practice of fixed prosthodontics: A survey among Qassim dental practitioners. *J Family Med Prim Care* 2019;8(9):2882-87.
21. Schweyen R, Nawas BA, Arnold C, Hey J. A cross-sectional survey of attitudes towards education in implant dentistry in the undergraduate dental curriculum. *Int J Implant Dent* 2020;6(26):1-11.