RESEARCH ARTICLE

RECENT TRENDS IN COMPLETE DENTURE FABRICATION AMONG SPECIALIST PROSTHODONTISTS IN INDIA

*,[1]Dr. Preeti B Astagi, [2]Dr. Gandage Dhananjay, S., [3]Dr. Praveen P Byakod, [1]Dr. Zarir Ruttonji, [1]Dr. Sushma, K. M. and [1]Dr. Ajaykumar Nayak

[1]Department of Prosthodontics including Crown and Bridge, Maratha Mandal's NGHIDS & RC, Belgaum
[2]Department of Prosthodontics including Crown and Bridge, Dr D Y Patil Dental College and Hospital Pimpri, Pune, Maharashtra State, India
[3]Department of Conservative and Endodontics, Maratha Mandal's NGHIDS & RC, Belgaum

ARTICLE INFO	ABSTRACT
	Introduction: Variations may be observed in material selection as well as techniques followed at every step in complete denture fabrication. This survey aims to identify materials and methods used by specialist prosthodontists working in institution based practice and those into exclusive private dental practice. **Material and Methods:** 25 academicians and 25 private practioners were interviewed based on a structured questionnaire. The responses were tabulated and statistically analyzed using Pearson Chi square test and Fisher's Exact test. **Result:** There is variability in the selection of materials and the technique chosen for every step in fabricating complete dentures. However the differences in the choice of materials and techniques followed in institution based practice and those amongst private practioners is not highly significant.

INTRODUCTION

Loss of teeth may result results in a severe esthetic, functional, nutritional and psychological compromises. Loss of periodontium and the alveolar bone further reduces and compromises the quality of support for any prosthesis. This may result results in the general health of the patient being affected. Over the years dental professionals have significantly contributed towards betterment of the quality of life of edentulous patients. The clinical procedures have advanced through keen observation, experience, empiricism anecdote, artistry and science (Rhonda F Jacob, 1998). Clinical improvements have been noted secondary to advances in dental materials particularly impression materials and techniques and simplifying the instrumentations such as articulators. Variations may also be observed in material selection as well as techniques used in virtually every step in complete denture fabrication. The aim of this survey was to determine trends in complete denture fabrication among prosthodontic specialists

Corresponding author: **Dr. Preeti B Astagi,**
Department of Prosthodontics including Crown and Bridge, Maratha Mandal's NGHIDS & RC, Belgaum

in India; through a structured questionnaire. The aim of this survey was to determine if there was any difference in the choice of materials and techniques in complete denture fabrication amongst specialists working in institution based practice and those into exclusive private practice. The survey did not aim to test the knowledge of the participating specialists.

MATERIALS AND METHODS

25 prosthodontic specialists who held faculty positions at various universities and were in exclusive institution based practices and 25 specialist prosthodontists who were in exclusive private dental practice were selected for this study. The participating specialists had at least two years of clinical experience post specialization. Approval was obtained from the Institutional Ethical Committee of the University. Informed consent was obtained from all participating subjects. A questionnaire was developed seeking information regarding the materials and methods followed by subjects in fabricating complete dentures. The questionnaire had a list of 24 structured questions. The questions were dispatched to these specialists by

post, e mail and through personal interviews. On receiving the responses the results were tabulated and analyzed statistically using Pearson Chi Square Test and Fischer's Exact Test.

RESULTS

The results obtained through this survey were tabulated in Tables 1 and 2.

Table 1. Results of the survey carried out amongst those into academic practice

Total number of academicians evaluated 25.

Q no	Options for the questions					Comments
	I	ii	iii	iv	v	-
1	0	3	22	N A	N A	-
2	4	16	5	N A	N A	-
3	1	22 (3*+19)	0	2 participants prefer CBCT)	N A	3 among those insisting on OPGs also advice IOPAs only for certain areas of interest, 1 academician advised IOPAs only or certain specific areas as diagnostic aid. He did not prefer OPG.
4	19 (3*+16)	0	0	6	0	3 among those using irreversible hydrocolloids use impression compound when ridges are resorbed. 16 use exclusively irreversible hydrocolloid in all cases while 6 use exclusively impression compound
5	25	0	NA	NA	N A	All academicians use custom trays
6	14 (8*+6)	9	0	2	N A	8 academicians using auto polymerizing acrylic resin also use forma tray material as per availability of material in their college stores. 6 use exclusively auto polymerizing acrylic resin
7	16 (1*+15)	3	4	2	0	1 academician prefers doing single step border molding using low fusing compound
8	11	7	5	2	0	
9	23	2	0	N A	N A	
10	3	21	1	0	N A	
11	5	15	2	3	0	
12	23	2	N A	N A	N A	
13	3	13	7	N A	N A	
14					N A	All use a combination of 2 – 3 methods to determine vertical jaw relationship
15	20	0	2	3	N A	
16	25	0	0	0	N A	
17	4	21	0	0	N A	
18	22	3	0	N A	N A	
19	0	25	0	0	N A	-
20	23	2	0	N A	N A	
21	2	3	20	N A	N A	2 academicians answered they do remount the dentures in each and every case
22	7	4	14	0	N A	
23	19	6	N A	N A	N A	
24	22	3	0	N A	N A	

N A – Not applicable

\# Question no 13 was asked only to those participants who answered in YES to question no 12.Total of 23 participants answered YES to Question no 12; so only23 answers for question no 13.

Table 2. Results of the survey carried out amongst those into exclusive practice

Total number of private practioners evaluated 25.

Question no	Option					Comments
	I	ii	iii	iv	V	
1	0	8	17	N A	N A	
2	1	15	9	N A	N A	
3	8	17	0	0	0	All 8 practioners take IOPAs only for specific areas as and when required
4	23(5*+18)	0	0	2	0	5 among those using irreversible hydrocolloids use impression compound when ridges are resorbed. 18 use exclusively irreversible hydrocolloid in all cases while 2 use exclusively impression compound
5	25	0	NA	NA	N A	All practioners use custom trays
6	16	3	2	4	N A	
7	15	5	2	3	0	
8	7	5	9	4	0	
9	19	6	0	N A	N A	
10	6	16	3	0	N A	
11	0	24	1	0	0	
12	23	2	NA	N A	N A	
13#	4	9	10	N A	N A	
14				N A	N A	All academicians use a combination of 2 – 3 methods to determine vertical jaw relationship
15	25	0	0	0	N A	
16	25	0	0	0	N A	
17	1	16	8	0	N A	
18	22	3	0	N A	N A	
19	3	22	0	0	N A	-
20	23	2	0	N A	N A	
21	0	0	25	N A	N A	
22	11	7	7	0	N A	
23	18	7	N A	N A	N A	
24	24	1	N A	N A	N A	

\# Question no 13 was asked only to those participants who answered in YES to question no 12.
Total of 23 participants answered YES to Question no 12; so only 23 answers for question no 13.

Statistical Analysis:

Table 3. QUESTION. 1.00

GROUP * OPTION Crosstabulation

			OPTION		Total
			2.00	3.00	
GROUP	Private Practitioner	Count	8	17	25
		% within GROUP	32.0%	68.0%	100.0%
		% within OPTION	72.7%	43.6%	50.0%
	Academician	Count	3	22	25
		% within GROUP	12.0%	88.0%	100.0%
		% within OPTION	27.3%	56.4%	50.0%
Total		Count	11	39	50
		% within GROUP	22.0%	78.0%	100.0%
		% within OPTION	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.914[a]	1	.088
N of Valid Cases	50		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.50.

b. Computed only for a 2x2 table

Inference

There is no significant difference between the two groups in this question

Table 4 Question 2

GROUP * OPTION Crosstabulation

			OPTION			Total
			1.00	2.00	3.00	
GROUP	Private Practitioner	Count	1	15	9	25
		% within GROUP	4.0%	60.0%	36.0%	100.0%
		% within OPTION	20.0%	48.4%	64.3%	50.0%
	Academician	Count	4	16	5	25
		% within GROUP	16.0%	64.0%	20.0%	100.0%
		% within OPTION	80.0%	51.6%	35.7%	50.0%
Total		Count	5	31	14	50
		% within GROUP	10.0%	62.0%	28.0%	100.0%
		% within OPTION	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	Exact Sig. (2-sided)
Fisher's Exact Test	2.803	.226
N of Valid Cases	50	

Inference

There is no significant difference between the two prosthodontists in this question

Table 5 Question 3

GROUP * OPTION Crosstabulation

			OPTION			Total
			1.00	2.00	4.00	
GROUP	Private Practitioner	Count	8	17	0	25
		% within GROUP	32.0%	68.0%	0.0%	100.0%
		% within OPTION	88.9%	43.6%	0.0%	50.0%
	Academician	Count	1	22	2	25
		% within GROUP	4.0%	88.0%	8.0%	100.0%
		% within OPTION	11.1%	56.4%	100.0%	50.0%
Total		Count	9	39	2	50
		% within GROUP	18.0%	78.0%	4.0%	100.0%
		% within OPTION	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	Exact Sig. (2-sided)
Fisher's Exact Test	7.691	**.012**
N of Valid Cases	50	

Inference

There is significant difference between the two groups. private practioners tend to opt for IOPA's more and the academicians opt for OPG's more often.

Table 6 Question 4

GROUP * OPTION Crosstabulation

			OPTION		Total
			1.00	4.00	
GROUP	Private Practitioner	Count	23	2	25
		% within GROUP	92.0%	8.0%	100.0%
		% within OPTION	54.8%	25.0%	50.0%
	Academician	Count	19	6	25
		% within GROUP	76.0%	24.0%	100.0%
		% within OPTION	45.2%	75.0%	50.0%
Total		Count	42	8	50
		% within GROUP	84.0%	16.0%	100.0%
		% within OPTION	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	Exact Sig. (2-sided)
Pearson Chi-Square	2.381ᵃ	.247
Fisher's Exact Test		.247
N of Valid Cases	50	

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 4.00.
b. Computed only for a 2x2 table

Inference

There is no significant difference between the two groups in this question

Table 7 Question 5

GROUP * OPTION Crosstabulation

			OPTION	Total
			1.00	
GROUP	Private Practitioner	Count	25	25
		% within GROUP	100.0%	100.0%
		% within OPTION	50.0%	50.0%
	Academician	Count	25	25
		% within GROUP	100.0%	100.0%
		% within OPTION	50.0%	50.0%
Total		Count	50	50
		% within GROUP	100.0%	100.0%
		% within OPTION	100.0%	100.0%

Inference

All participants used custom trays to make final impressions.

Table 8 Question 6

GROUP * OPTION Crosstabulation

			OPTION				Total
			1.00	2.00	3.00	4.00	
GROUP	Private Practitioner	Count	16	3	2	4	25
		% within GROUP	64.0%	12.0%	8.0%	16.0%	100.0%
		% within OPTION	53.3%	25.0%	100.0%	66.7%	50.0%
	Academician	Count	14	9	0	2	25
		% within GROUP	56.0%	36.0%	0.0%	8.0%	100.0%
		% within OPTION	46.7%	75.0%	0.0%	33.3%	50.0%
Total		Count	30	12	2	6	50
		% within GROUP	60.0%	24.0%	4.0%	12.0%	100.0%
		% within OPTION	100.0%	100.0%	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	Exact Sig. (2-sided)
Fisher's Exact Test	5.334	.124
N of Valid Cases	50	

Inference

There is no significant difference between the two groups in this question

Table 9 QUESTION 7

GROUP * OPTION Crosstabulation[a]

			OPTION				Total
			1.00	2.00	3.00	4.00	
GROUP	Private Practitioner	Count	15	5	2	3	25
		% within GROUP	60.0%	20.0%	8.0%	12.0%	100.0%
		% within OPTION	48.4%	62.5%	33.3%	60.0%	50.0%
	Academician	Count	16	3	4	2	25
		% within GROUP	64.0%	12.0%	16.0%	8.0%	100.0%
		% within OPTION	51.6%	37.5%	66.7%	40.0%	50.0%
Total		Count	31	8	6	5	50
		% within GROUP	62.0%	16.0%	12.0%	10.0%	100.0%
		% within OPTION	100.0%	100.0%	100.0%	100.0%	100.0%

a. QUESTION = 7.00

Chi-Square Tests[a]

	Value	Exact Sig. (2-sided)
Fisher's Exact Test	1.470	.739
N of Valid Cases	50	

a. QUESTION = 7.00

Inference

There is no significant difference between the two groups in this question

Table 10 QUESTION 8

GROUP * OPTION Crosstabulation[a]

			OPTION				Total
			1.00	2.00	3.00	4.00	
GROUP	Private Practitioner	Count	7	5	9	4	25
		% within GROUP	28.0%	20.0%	36.0%	16.0%	100.0%
		% within OPTION	38.9%	41.7%	64.3%	66.7%	50.0%
	Academician	Count	11	7	5	2	25
		% within GROUP	44.0%	28.0%	20.0%	8.0%	100.0%
		% within OPTION	61.1%	58.3%	35.7%	33.3%	50.0%
Total		Count	18	12	14	6	50
		% within GROUP	36.0%	24.0%	28.0%	12.0%	100.0%
		% within OPTION	100.0%	100.0%	100.0%	100.0%	100.0%

a. QUESTION = 8.00

Chi-Square Tests[a]

	Value	Exact Sig. (2-sided)
Fisher's Exact Test	2.987	.461
N of Valid Cases	50	

a. QUESTION = 8.00

Inference

There is no significant difference between the two groups in this question

Table 11. QUESTION 9

GROUP * OPTION Crosstabulation[a]

			OPTION		Total
			1.00	2.00	
GROUP	Private Practitioner	Count	19	6	25
		% within GROUP	76.0%	24.0%	100.0%
		% within OPTION	45.2%	75.0%	50.0%
	Academician	Count	23	2	25
		% within GROUP	92.0%	8.0%	100.0%
		% within OPTION	54.8%	25.0%	50.0%
Total		Count	42	8	50
		% within GROUP	84.0%	16.0%	100.0%
		% within OPTION	100.0%	100.0%	100.0%

a. QUESTION = 9.00

Chi-Square Tests[a]

	Value	Exact Sig. (2-sided)
Pearson Chi-Square	2.381[b]	
Fisher's Exact Test		.247
N of Valid Cases	50	

a. QUESTION = 9.00

b. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 4.00.

c. Computed only for a 2x2 table

Inference

There is no significant difference between the two groups in this question

Table 12 QUESTION 10

GROUP * OPTION Crosstabulation[a]

			OPTION			Total
			1.00	2.00	3.00	
GROUP	Private Practitioner	Count	6	16	3	25
		% within GROUP	24.0%	64.0%	12.0%	100.0%
		% within OPTION	66.7%	43.2%	75.0%	50.0%
	Academician	Count	3	21	1	25
		% within GROUP	12.0%	84.0%	4.0%	100.0%
		% within OPTION	33.3%	56.8%	25.0%	50.0%
Total		Count	9	37	4	50
		% within GROUP	18.0%	74.0%	8.0%	100.0%
		% within OPTION	100.0%	100.0%	100.0%	100.0%

a. QUESTION = 10.00

Chi-Square Tests[a]

	Value	Exact Sig. (2-sided)
Fisher's Exact Test	2.564	.300
N of Valid Cases	50	

a. QUESTION = 10.00

Inference

There is no significant difference between the two groups in this question

Table 13 QUESTION 11

GROUP * OPTION Crosstabulation[a]

			OPTION				Total
			1.00	2.00	3.00	4.00	
GROUP	Private Practitioner	Count	0	24	1	0	25
		% within GROUP	0.0%	96.0%	4.0%	0.0%	100.0%
		% within OPTION	0.0%	61.5%	33.3%	0.0%	50.0%
	Academician	Count	5	15	2	3	25
		% within GROUP	20.0%	60.0%	8.0%	12.0%	100.0%
		% within OPTION	100.0%	38.5%	66.7%	100.0%	50.0%
Total		Count	5	39	3	3	50
		% within GROUP	10.0%	78.0%	6.0%	6.0%	100.0%
		% within OPTION	100.0%	100.0%	100.0%	100.0%	100.0%

a. QUESTION = 11.00

Chi-Square Tests[a]

	Value	Exact Sig. (2-sided)
Fisher's Exact Test	9.935	.005
N of Valid Cases	50	

a. QUESTION = 11.00

Inference

There is significant difference between the two groups in this question. Almost 96% of the private practioners opt for auto polymerizing acrylic resins to fabricate record bases.

Table 14 QUESTION 12

GROUP * OPTION Crosstabulation[a]

			OPTION		Total
			1.00	2.00	
GROUP	Private Practitioner	Count	23	2	25
		% within GROUP	92.0%	8.0%	100.0%
		% within OPTION	50.0%	50.0%	50.0%
	Academician	Count	23	2	25
		% within GROUP	92.0%	8.0%	100.0%
		% within OPTION	50.0%	50.0%	50.0%
Total		Count	46	4	50
		% within GROUP	92.0%	8.0%	100.0%
		% within OPTION	100.0%	100.0%	100.0%

a. QUESTION = 12.00

Chi-Square Tests[a]

	Value	Exact Sig. (2-sided)
Fisher's Exact Test		1.000
N of Valid Cases	50	

a. QUESTION = 12.00
c. Computed only for a 2x2 table

Inference

There is no significant difference between the two groups in this question

Table 15 QUESTION 13

GROUP * OPTION Crosstabulation[a]

			OPTION			Total
			1.00	2.00	3.00	
GROUP	Private Practitioner	Count	4	9	10	23
		% within GROUP	17.4%	39.1%	43.5%	100.0%
		% within OPTION	57.1%	40.9%	58.8%	50.0%
	Academician	Count	3	13	7	23
		% within GROUP	13.0%	56.5%	30.4%	100.0%
		% within OPTION	42.9%	59.1%	41.2%	50.0%
Total		Count	7	22	17	46
		% within GROUP	15.2%	47.8%	37.0%	100.0%
		% within OPTION	100.0%	100.0%	100.0%	100.0%

a. QUESTION = 13.00

Chi-Square Tests[a]

	Value	Exact Sig. (2-sided)
Fisher's Exact Test	1.438	.614
N of Valid Cases	46	

a. QUESTION = 13.00

Inference

There is no significant difference between the two groups in this question

Table 16 QUESTION 15

GROUP * OPTION Crosstabulation[a]

			OPTION			Total
			1.00	3.00	4.00	
GROUP	Private Practitioner	Count	25	0	0	25
		% within GROUP	100.0%	0.0%	0.0%	100.0%
		% within OPTION	55.6%	0.0%	0.0%	50.0%
	Academician	Count	20	2	3	25
		% within GROUP	80.0%	8.0%	12.0%	100.0%
		% within OPTION	44.4%	100.0%	100.0%	50.0%
Total		Count	45	2	3	50
		% within GROUP	90.0%	4.0%	6.0%	100.0%
		% within OPTION	100.0%	100.0%	100.0%	100.0%

a. QUESTION = 15.00

Chi-Square Tests[a]

	Value	Exact Sig. (2-sided)
Fisher's Exact Test	4.782	.050
N of Valid Cases	50	

a. QUESTION = 15.00

Inference

There is significant difference between the two prosthodontists in this question. Private practitioners use static method to record centric jaw relationship.

Table 17 QUESTION 16

GROUP * OPTION Crosstabulation[a]

			OPTION	Total
			1.00	
GROUP	Private Practitioner	Count	25	25
		% within GROUP	100.0%	100.0%
		% within OPTION	50.0%	50.0%
	Academician	Count	25	25
		% within GROUP	100.0%	100.0%
		% within OPTION	50.0%	50.0%
Total		Count	50	50
		% within GROUP	100.0%	100.0%
		% within OPTION	100.0%	100.0%

a. QUESTION = 16.00

Chi-Square Tests[a]

	Value
Pearson Chi-Square	.[b]
N of Valid Cases	50

a. QUESTION = 16.00
b. No statistics are computed because OPTION is a constant.

Table 18 QUESTION 17

GROUP * OPTION Crosstabulation[a]

			OPTION			Total
			1.00	2.00	3.00	
GROUP	Private Practitioner	Count	1	16	8	25
		% within GROUP	4.0%	64.0%	32.0%	100.0%
		% within OPTION	20.0%	43.2%	100.0%	50.0%
	Academician	Count	4	21	0	25
		% within GROUP	16.0%	84.0%	0.0%	100.0%
		% within OPTION	80.0%	56.8%	0.0%	50.0%
Total		Count	5	37	8	50
		% within GROUP	10.0%	74.0%	16.0%	100.0%
		% within OPTION	100.0%	100.0%	100.0%	100.0%

a. QUESTION = 17.00

Chi-Square Tests^a

	Value	Exact Sig. (2-sided)
Fisher's Exact Test	10.874	.003
N of Valid Cases	50	

a. QUESTION = 17.00

Inference

There is significant difference between the two groups in this question. Significantly higher number of Private practioners get their teeth arrangements done from their chair side assistants.

Table 19 QUESTION 18

GROUP * OPTION Crosstabulation^a

			OPTION		Total
			1.00	2.00	
GROUP	Private Practitioner	Count	22	3	25
		% within GROUP	88.0%	12.0%	100.0%
		% within OPTION	50.0%	50.0%	50.0%
	Academician	Count	22	3	25
		% within GROUP	88.0%	12.0%	100.0%
		% within OPTION	50.0%	50.0%	50.0%
Total		Count	44	6	50
		% within GROUP	88.0%	12.0%	100.0%
		% within OPTION	100.0%	100.0%	100.0%

a. QUESTION = 18.00

Chi-Square Tests^a

	Value	Exact Sig. (2-sided)
Fisher's Exact Test		1.000
N of Valid Cases	50	

a. QUESTION = 18.00
c. Computed only for a 2x2 table

Inference

There is no significant difference between the two groups in this question

Table 20 QUESTION 19

GROUP * OPTION Crosstabulation^a

			OPTION		Total
			1.00	2.00	
GROUP	Private Practitioner	Count	3	22	25
		% within GROUP	12.0%	88.0%	100.0%
		% within OPTION	100.0%	46.8%	50.0%
	Academician	Count	0	25	25
		% within GROUP	0.0%	100.0%	100.0%
		% within OPTION	0.0%	53.2%	50.0%
Total		Count	3	47	50
		% within GROUP	6.0%	94.0%	100.0%
		% within OPTION	100.0%	100.0%	100.0%

a. QUESTION = 19.00

Chi-Square Tests^a

	Value	Exact Sig. (2-sided)
Pearson Chi-Square	3.191^b	.235
Fisher's Exact Test		.235
N of Valid Cases	50	

a. QUESTION = 19.00
b. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.50.
c. Computed only for a 2x2 table

Inference
There is no significant difference between the two groups in this question

Table 21 QUESTION 20

GROUP * OPTION Crosstabulation[a]

			OPTION		Total
			1.00	2.00	
GROUP	Private Practitioner	Count	23	2	25
		% within GROUP	92.0%	8.0%	100.0%
		% within OPTION	50.0%	50.0%	50.0%
	Academician	Count	23	2	25
		% within GROUP	92.0%	8.0%	100.0%
		% within OPTION	50.0%	50.0%	50.0%
Total		Count	46	4	50
		% within GROUP	92.0%	8.0%	100.0%
		% within OPTION	100.0%	100.0%	100.0%

a. QUESTION = 20.00

Chi-Square Tests[a]

	Value	Exact Sig. (2-sided)
Fisher's Exact Test		1.000
N of Valid Cases	50	

a. QUESTION = 20.00
c. Computed only for a 2x2 table

Inference

There is no significant difference between the two groups in this question

Table 22 QUESTION 21

GROUP * OPTION Crosstabulation[a]

			OPTION			Total
			1.00	2.00	3.00	
GROUP	Private Practitioner	Count	0	0	25	25
		% within GROUP	0.0%	0.0%	100.0%	100.0%
		% within OPTION	0.0%	0.0%	55.6%	50.0%
	Academician	Count	2	3	20	25
		% within GROUP	8.0%	12.0%	80.0%	100.0%
		% within OPTION	100.0%	100.0%	44.4%	50.0%
Total		Count	2	3	45	50
		% within GROUP	4.0%	6.0%	90.0%	100.0%
		% within OPTION	100.0%	100.0%	100.0%	100.0%

a. QUESTION = 21.00

Chi-Square Tests[a]

	Value	Exact Sig. (2-sided)
Fisher's Exact Test	4.782	**.050**
N of Valid Cases	50	

a. QUESTION = 21.00

Inference

There is significant difference between the two groups in this question. None of the of the private practitioners remount the dentures prior to denture insertion.

Table 23 QUESTION 22

GROUP * OPTION Crosstabulation[a]

			OPTION			Total
			1.00	2.00	3.00	
GROUP	Private Practitioner	Count	11	7	7	25
		% within GROUP	44.0%	28.0%	28.0%	100.0%
		% within OPTION	61.1%	63.6%	33.3%	50.0%
	Academician	Count	7	4	14	25
		% within GROUP	28.0%	16.0%	56.0%	100.0%
		% within OPTION	38.9%	36.4%	66.7%	50.0%
Total		Count	18	11	21	50
		% within GROUP	36.0%	22.0%	42.0%	100.0%
		% within OPTION	100.0%	100.0%	100.0%	100.0%

a. QUESTION = 22.00

Chi-Square Tests[a]

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.040[b]	2	.133
N of Valid Cases	50		

a. QUESTION = 22.00
b. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.50.

Inference

There is no significant difference between the two groups in this question

Table 24 QUESTION = 23.00

GROUP * OPTION Crosstabulation[a]

			OPTION		Total
			1.00	2.00	
GROUP	Private Practitioner	Count	18	7	25
		% within GROUP	72.0%	28.0%	100.0%
		% within OPTION	48.6%	53.8%	50.0%
	Academician	Count	19	6	25
		% within GROUP	76.0%	24.0%	100.0%
		% within OPTION	51.4%	46.2%	50.0%
Total		Count	37	13	50
		% within GROUP	74.0%	26.0%	100.0%
		% within OPTION	100.0%	100.0%	100.0%

a. QUESTION = 23.00

Chi-Square Tests[a]

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.104[b]	1	.747
N of Valid Cases	50		

a. QUESTION = 23.00
b. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.50.
c. Computed only for a 2x2 table

Inference

There is no significant difference between the two groups in this question

Table 25 QUESTION 24

GROUP * OPTION Crosstabulation[a]

			OPTION		Total
			1.00	2.00	
GROUP	Private Practitioner	Count	24	1	25
		% within GROUP	96.0%	4.0%	100.0%
		% within OPTION	52.2%	25.0%	50.0%
	Academician	Count	22	3	25
		% within GROUP	88.0%	12.0%	100.0%
		% within OPTION	47.8%	75.0%	50.0%
Total		Count	46	4	50
		% within GROUP	92.0%	8.0%	100.0%
		% within OPTION	100.0%	100.0%	100.0%

a. QUESTION = 24.00

Chi-Square Tests[a]

	Value	Exact Sig. (2-sided)
Pearson Chi-Square	1.087[b]	.609
Fisher's Exact Test		.609
N of Valid Cases	50	

a. QUESTION = 24.00
b. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 2.00.
c. Computed only for a 2x2 table

Inference

There is no significant difference between the two groups in this question

Name of the specialist:
Attached to University/Private Clinic:
Type of Private clinic:
i)Exclusive prosthodontic specialty practice
ii)I practice general dentistry as well
Academicians having private clinics should please specify the answers for the following questionnaire are for the dentures fabricated in the university hospital or in their respective private clinics:

Questionnaire:
1.How many complete denture patients do you treat in one year on an average?
i)0-5
ii)5-10
iii)More than 10
2.Do you insist on pre extraction records before starting a case of complete dentures?
i)Yes in every case
ii)In few cases
iii)Not at all
3.Which radiographs you insist upon before starting a case of complete dentures?
i)Full mouth IOPAs
ii)Orthopantographs
iii)Cephalometry
iv)Any other please specify

4.What material you choose for making primary impression?
i)Irreversible hydrocolloid
ii)Poly vinyl siloxane putty
iii)Condensation silicone putty
iv)Impression compound
v)Any other
5.Do you choose custom tray for making final impressions?
i)Yes
ii)No
6.What is the material you choose for fabricating custom trays?
i)Auto polymerizing acrylic resin
ii)Forma tray material
iii)Poly urethane resins
iv)Shellac base plate
7.What material you choose for border molding?
i)Low fusing compound and incremental border molding
ii)Polyvinyl siloxane putty and single step border molding
iii)Polyvinyl siloxane heavy consistency and single step border molding
iv)Poly ether and single step border molding
v)Any other please specify

8.What material you choose for final impression?
i)Zinc oxide eugenol impression paste
ii)Eugenol free impression paste
iii)Poly vinyl siloxane light viscosity
iv)Poly vinyl viscosity medium viscosity
v)Poly ether light viscosity
vi)Any other please specify

9.How do you disinfect your impressions?
i)Spray
ii)Immersion
iii)Any other please specify

What material you use to disinfect your impressions?
i)Iodophores

ii)Glutaraldehyde
iii)Alcohols
iv)Any other please specify

10.What material you choose to fabricate record base?
i)Shellac
ii)Auto polymerizing acrylic resin
iii)Poly urethane resins
iv)Heat polymerizing acrylic resins
v)Any others please specify

11.Do you believe recording orientation jaw relation is important for the success of complete dentures?
i)Yes
ii)No
12.Do you use semi adjustable articulator in complete denture fabrication? (this question is only for those participants who answer "yes" to the previous question)
i)For every case
ii)For few cases
iii)Not at all. I use mean value articulator.
13.What method you use to record vertical relation?
i)Niswonger's method
ii)Phonetics
iii)Any other please specify
----
14. What method you use to record centric jaw relation?
i)Static method
ii)Functional method
iii)Graphic with intra oral tracers
iv)Graphic with extra oral tracers
15.What is the material of choice for denture teeth?
i)Acrylic teeth
ii)Porcelain teeth
iii)Combination of acrylic and porcelain
iv)Any other please specify

16.Who does the teeth arrangement for your cases?
i)I do it myself
ii)Laboratory technician
iii)I taught my assistant to do it.
iv)Any other please specify

17.Do you recall the patient for try in?
i)Yes always in each and every case
ii)Sometimes I give it a miss
iii)Not at all
18.What material you choose for definitive denture base?
i)Heat polymerizing acrylic resin
ii)Reinforced heat polymerizing acrylic resins
iii)Metal denture bases
iv)Any other please specify

19.Preferred method of choice for definitive denture base fabrication:
i)Compression molding
ii)Injection molding
iii)Any other please specify

20.Do you remount the dentures before insertion?
i)Yes
ii)Few cases
iii)Not at all
21.How do you convey Post insertion instructions to your patients

i)Verbally
ii)Written format
iii)Both
iv)Any other please specify

22.Do you fabricate implant supported overdentures?
i)Yes I do it myself
ii)No I depend upon an impalntologist for the same
23.On an average what percentage of complete denture patients opt for implant supported overdentures?
i)About 25%
ii)About 50%
iii)More than 50%

DISCUSSION

The survey revealed most of the prosthodontists routinely treated more than 10 cases. Of complete dentures per year. More number of academicians (almost 80%) insisted on pre - extraction records for complete denture s cases as compared to private practiners (64%). Radiographs are important aids in evaluation of sub mucosal conditions in patients seeking prosthodontic care. The presence of abnormalities in edentulous jaws or in edentulous segments of partially edentulous jaws, may be unsuspected because of absence of clinical signs or symptoms (Zarb, Bolender, 12th edition). These abnormalities can be seen on radiographic examination. 88% academicians routinely prescribed Orthopantographs as diagnostic aids as compared to 68% of the private practiners. More private practiners (i.e. 32%) used Intra Oral Peri Apical radiographs as a diagnostic tool. Evidence suggests impression techniques for complete dentures in dental practice may vary from those taught in institutions (Paul Hyde and Fraser McCord, 1999). Basker *et al.* (1976) advocated a compound and alginate primary impression with the same basic materials. Literature recommends different materials and techniques for each step in complete denture fabrication with the basic objective of maximum tissue coverage with minimal distortion of the basal tissues without impinging upon mobile freni or muscle attachment (Zarb, Bolender, 12th edition; DeVan, 2005). The survey revealed 76 % of academicians exclusively used irreversible hydrocolloid for making preliminary impressions for complete dentures. 24 % used impression compound alone in all their cases. Among those in to private practice; 92 % preferred using irreversible hydrocolloids for making preliminary impressions 8% used only impression compound. More prosthodontists favored using irreversible hydrocolloid for preliminary impressions. However there was no statistically significant difference in the choice of material among the two groups being compared. All of the participants favored using custom trays for making final impressions. However there was no statistically significant difference in the choice of material to fabricate the custom trays. 56% of the academicians and 64% private practiners favored auto polymerizing acrylic resin, 36% of the academicians and 12% of the private practiners favored tray resins to fabricate custom trays. 8% private practiners favored using shellac base plate to fabricate the custom trays. 8% academicians and 16% of the private practiners favored using poly urethane resin to fabricate custom trays. In spite of the obvious disadvantage of being thermoplastic and brittle, shellac base plate is still being used to fabricate custom trays. The ease of manipulating poly urethane resins is well documented. (Zarb, Bolender, 12th

edition) It is highly recommended that clinicians should be made aware of this fact and shift to a better material to fabricate the custom trays. For the success of an impression and the subsequent denture, it is important to develop a peripheral seal by making the borders compatible to the peripheral tissues in the labial and buccal vestibule (DeVan, 2005). This goal is achieved by molding the borders of the custom tray. Border molding is carried out in sections (i.e incremental technique) or the entire peripheral border molding is carried out simultaneously (Zarb, Bolender, 12th edition). 64% academicians and 60% private practiners used low fusing impression compound and incremental technique for border molding. Literature lists the advantages of simultaneous border molding procedures; and recommends polyether impression materials for single step border molding. (Zarb, Bolender, 12th edition) 36% academicians favored single step border molding. 12% used poly vinyl siloxane putty consistency; 16% used poly vinyl siloxane heavy consistency while 8% used poly ether for single step border molding. 1 academician used low fusing impression compound for single step border molding. 40% private practiners favored single step border molding as the method of choice. 20% used putty consistency poly vinyl siloxane, while 8% used heavy consistency poly vinyl siloxane and 12% used poly ether.

44% academicians used zinc oxide eugenol impression paste alone for final impressions, while 28% private practiners did the same. 28% academicians and 20% private practiners used eugenol free metallic oxide pastes. 20% academicians used light viscosity poly vinyl siloxane; while 8% were in favor of medium viscosity. Among private practiners 36% used light viscosity poly vinyl siloxane and 16% used medium viscosity poly vinyl siloxane. 60% percent academicians and 96% percent private practiners preferred to use auto polymerizing acrylic resins to fabricate their record bases. 20% academicians used shellac base plate and 8% used heat polymerizing acrylic resin to fabricate a record base while none of the private practiners used shellac base plate or heat polymerizing acrylic resin for fabricating record bases; and 12% academicians and 4% private practiners used poly urethane light cured resins. Again for the obvious disadvantages with shellac base plate; clinicians should substitute it with a more suitable material to fabricate the record bases. Fabricating definitive record bases in heat polymerizing acrylic resin was observed only in institution based practice by academicians. 92% academicians and private practiners believed in recording orientation jaw relationships was a critical step in successful denture fabrication. Amongst them only 56.5% academicians actually recorded orientation jaw relationship in every case while only 39.1% of the private practiners did the same. All the respondents used more than one method to record the vertical jaw relationships.

80% academicians used static method while 20% preferred making a graphic record of the centric relation (8% used intra oral tracers, 12 % used extra oral tracers). All the private practiners used only static method to record centric relation. All the participants used acrylic teeth in denture fabrication. 16% academicians and 4% private practiners did the teeth arrangement on their own while 84% academicians and 64% private practiners were dependent upon their lab technicians. 32% private practiners had taught their chair side assistants the job of teeth arrangement. 88% of academicians and private practiners regularly recall the patients for a try in appointment. All the academicians and 88% private practiners

prefer fiber reinforced poly methyl methacrylate resin to fabricate definitive denture bases. 92% of academicians and private practioners preferred compression molding technique for denture fabrication and 8% preferred injection molding technique. Only 20% of academicians followed remounting procedures prior to denture insertion while none of the private practioners remounted the dentures. 76% academicians and 72% private practioners were competent enough to do implant supported over dentures by themselves. The survey showed that more number of implant supported over dentures were being fabricated in institution based practices as compared to private practice.

Conclusions

The survey showed that the techniques and materials used in fabricating complete dentures are multifarious. Much depends upon the clinical skills of the operator and skill enhancement through regular continuing education programmes is highly recommended. The choice of techniques and materials also depends upon the resources available at the clinician's disposal.

The survey finally concludes that there is no significant difference in the institution based practice and private practice of specialist prosthodontists.

REFERENCES

Basker RM, Davenport JC, Tomlin HR. 1976. Prosthetic treatment of the edentulous patient. 3rd ed. London: Macmillan Press; p. 142-67.

DeVan MM. 2005. Basic principles in impression making. *Journal of Prosthetic Dentistry*, 93: 6-503-8

Paul Hyde, T. and J. Fraser, 1999. McCord: Survey of prosthodontic impression procedures for complete dentures in general dental practice in the United Kingdom. *Journal of Prosthetic Dentistry,* 81: 295-9.

Rhonda F Jacob, 1998. The traditional therapeutic paradigm. *Journal of Prosthetic Dentistry*, 79:6-13

Zarb, Bolender. Prosthodontic Treatment for Edentulous Patients. Complete Dentures and Implant Supported Prosthesis. 12th edition. Mosby; Elsevier, St Louis.

****