

A survey of impression materials and techniques in fixed partial dentures among general dental practitioners and prosthodontists in India



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ABSTRACT

Background: Replacement of missing tooth plays an important role in patient's comfort and self-esteem. **Aims and Objectives:** The aims of this study were to investigate the most commonly used impression materials and techniques practiced for crowns and bridgework by prosthodontists and general dental practitioners compared to the theoretical methods suggested in the literature and to determine the clinical factors that might influence the decision-making process for the selection of impression materials and techniques. **Materials and Methods:** Pre-tested and pre-validated structured and closed-ended anonymous questionnaire was shared with general dental practitioners and prosthodontists. **Results:** Most of the prosthodontists use diagnostic impression compared to general dental practitioners ($P < 0.01$). Full-arch tray was used by general dental practitioners significantly more frequently compared to prosthodontists ($P < 0.01$) for single anterior, single posterior, anterior, and posterior bridge preparations. Alginate hydrocolloid was used by general dental practitioners significantly more than prosthodontists ($P < 0.05$); however, addition silicone and condensation silicone were used by prosthodontists significantly more than general dental practitioners ($P < 0.05$). For the impression technique followed in case of using elastomeric impression materials, the prosthodontists used the two-step putty reline technique with spacer more commonly, while general dental practitioners used the multiple mix technique ($P < 0.01$). For the use of provisional restoration for single tooth crowns and for all the bridges, prosthodontists used provisional restoration in significantly higher proportion as compared to general dental practitioners ($P < 0.01$). **Conclusion:** According to our study compared to general dental practitioners, practices of the prosthodontists regarding use of fixed partial denture is more in line with the current global trend.

Keywords: Denture; Dental practice; Missing teeth

INTRODUCTION

Replacement of missing teeth not only improves patient comfort and masticatory efficiency but also maintains the health and integrity of the dental arches and, therefore, helps to boost patient's self-image.

Archaeological and anthropological evidence suggests various approaches and attempts to replace lost or

damaged teeth with materials available at such times. One such ancient specimen even shows ox teeth tied with adjacent natural counterparts.¹ History and evidence suggested that gold wires or bands were used around 700 BC.² In the present scenario, dentists can replace one or a few missing teeth using one of three alternatives – removable partial dentures, fixed partial dentures, or dental implants. Patients choose their options based on socioeconomic factors, knowledge, and social perceptions.

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Conventional fixed partial dentures remain a major tool in prosthodontists as they are relatively economical, have substantial durability, yield satisfactory retention, and have no requirements for surgery.³⁻¹⁰ In this questionnaire-based study, we investigated the most commonly used impression materials and techniques which are being practiced for crowns and bridgework by prosthodontists and general dental practitioners compared to the theoretical methods suggested in the literature and determined the clinical factors that may influence the decision-making process for the selection of impression materials and techniques among the general dental practitioners and prosthodontists.

Aims and objectives

To investigate the most commonly used impression materials and techniques practiced for crowns and bridgework by prosthodontists and general dental practitioners compared to the theoretical methods suggested in the literature and to determine the clinical factors that might influence the decision-making process for the selection of impression materials and techniques

MATERIALS AND METHODS

Type of study

A cross-sectional study was conducted among prosthodontists and general dental practitioners in Eastern India (Kolkata), based on clinical preferences elicited by a structured questionnaire.

The questionnaire

The closed-ended anonymous questionnaire was designed to assess the six basic tenets for impressions in fixed restorations that are being followed by dental surgeons across India. The questions were framed by reviewing different studies carried out across the world including India. The questionnaire was pre-validated and pre-tested for understandability and clarity of language by the faculty members of the same department of the teaching hospital. A total of 18 questions were framed.

Inclusion criteria

All Indian general dental surgeons who practice fixed restorations. The specialists have been considered as those who have undergone training in the field of prosthodontics.

Exclusion criteria

Dental surgeons who indicated that they do not perform fixed restorations were not included in the study and specialists other than prosthodontics.

Distribution of the questionnaire

After ethical committee clearance, the final questionnaire was sent out through a web link, which was then sent out

through email, social media, and handed out personally, whenever possible. A private company, "bulk database" was contacted through email, and they agreed to share the database of dental surgeons in India. The questionnaire link was then shared with the dentists enrolled in the said database.

Statistical analysis

Statistical analysis was performed with help of EpiInfo (TM) 7.2.2.2.

Descriptive statistical analysis was performed to calculate the means with corresponding standard deviations (SD). Chi-square (χ^2) test was used to test the association between different study variables. Z-test (standard normal deviate) was used to test the significant difference between the two proportions. $P < 0.05$ was considered to be statistically significant.

RESULTS

Out of the 503 respondents, proportion of 271 (53.9%) were prosthodontists which were higher than that of general dental practitioners 232 (46.1%), but it was not significant ($Z=1.13$; $P=0.25$) (Table 1).

Eighty general dental practitioners and 11 prosthodontists do not make diagnostic impression. The proportion of prosthodontists (5.0%) using elastomeric impression was higher than that of general dental practitioners (2.6%) (Table 2).

General dental practitioners used of gingival retraction for recording fixed prosthodontic impressions (34.9%) which was lower than who did not use (65.1%) ($P < 0.01$). Prosthodontists used of gingival retraction for recording fixed prosthodontic impressions (79.7%) which was higher who did not use (20.3%) ($P < 0.01$) (Table 2).

General dental practitioners used both equi- and subgingival finish lines (48.1%) followed by subgingival finish line (40.7%) which was higher than other finish lines ($P < 0.01$). Prosthodontists used mostly both equi- and subgingival finish lines (63.4%) which were higher than other finish lines ($P < 0.01$) (Table 2).

Table 1: Distribution of type of respondents in this study

Type of respondents	Number	%
General dental practitioners	232	46.1
Prosthodontists	271	53.9
Total	503	100.0

Table 2: Comparison of responses from the participants: Part I

Material routinely used for preparing diagnostic cast before tooth preparation	General dental practitioners (n=151)	Prosthodontists (n=260)	Total	χ^2	P
Elastomeric impression	4 (2.6%)	13 (5.0%)	17 (4.1%)	103.70	<0.0001 (S)
Irreversible Hydrocolloid (Alginate)	147 (97.4%)	247 (95.0%)	394 (95.9%)		
Total	151 (100.0%)	260 (100.0%)	411 (100.0%)		
Type of retraction system used	General dental practitioners (n=232)	Prosthodontists (n=271)	Total	χ^2	P
Electrosurgery (Surgical)	1 (1.2%)	1 (0.5%)	2 (0.7%)	40.27	<0.0001
Gingival retraction cord (Mechanical)	28 (34.6%)	47 (21.8%)	75 (25.3%)		
Gingival retraction cord with impregnated chemical (chemicomechanical)	38 (46.9%)	138 (63.9%)	176 (59.3%)		
Injectable retraction system (i.e. Magic Foam, Expasyl, Racegel, Gingitrac, and others)	11 (13.6%)	25 (11.6%)	36 (12.1%)		
Laser (surgical)	1 (1.2%)	3 (1.4%)	4 (1.3%)		
Rotary curettage (surgical)	2 (2.5%)	2 (0.9%)	4 (1.3%)		
Total	81 (100.0%)	216 (100.0%)	297 (100.0%)		
Type of tray used for impression recording after anterior bridge preparation	General dental practitioners (n=232)	Prosthodontists (n=271)	Total	χ^2	p
Custom tray	5 (2.2%)	33 (12.2%)	38 (7.6%)	76.23	<0.0001
Dual arch tray (Metal)	10 (4.3%)	6 (2.2%)	16 (3.2%)		
Dual arch tray (Plastic)	17 (7.3%)	7 (2.6%)	24 (4.8%)		
Full-arch tray (Metal)	132 (56.9%)	203 (74.9%)	335 (66.6%)		
Full-arch tray (Plastic)	67 (28.9%)	22 (8.1%)	89 (17.7%)		
Intra oral scanner	1 (0.4%)	0 (0.0%)	1 (0.2%)		
Total	232 (100.0%)	271 (100.0%)	503 (100.0%)		

Prosthodontists used mostly gingival retraction cord with impregnated chemical (63.9%) which was higher than other retraction systems ($P<0.01$) (Table 2).

Electrosurgery (surgical), gingival retraction cord, injectable retraction system, and rotary curettage were used by general dental practitioners in higher proportion than prosthodontists ($P<0.01$), whereas gingival retraction cord with impregnated chemical (Chemicomechanical) and laser (Surgical) was used by prosthodontists in higher proportion than general dental practitioners ($P<0.01$) (Table 2).

General dental practitioners used full-arch tray (metal) (58.6%) followed by full-arch tray (plastic) (28.0%) which was higher than tray used for impression recording after single anterior tooth preparation ($P<0.01$) (Table 2). Prosthodontists used mostly full-arch tray (metal) (80.4%) which was higher than tray used for impression recording after single anterior tooth preparation ($P<0.01$) (Table 2).

General dental practitioners used full-arch tray (metal) (50.9%) followed by full-arch tray (plastic) (27.6%) which was higher than tray used for impression recording after single posterior tooth preparation ($P<0.01$). Prosthodontists used mostly full-arch tray (metal) (74.2%) which was higher than

tray used for impression recording after single posterior tooth preparation ($P<0.01$) (Table 2). General dental practitioners used full-arch tray (metal) (56.9%) followed by full-arch tray (plastic) (28.9%) which was higher than tray used for impression recording after single anterior bridge tooth preparation ($P<0.01$) (Table 2). Prosthodontists used mostly full-arch tray (metal) (74.9%) which was higher than tray used for impression recording after single anterior bridge tooth preparation ($P<0.01$). General dental practitioners used full-arch tray (metal) (52.2%) followed by full-arch tray (plastic) (28.4%) which was higher than tray used for impression recording after single posterior bridge tooth preparation ($P<0.01$). Prosthodontists used mostly full-arch tray (metal) (75.3%) which was higher than tray used for impression recording after single posterior bridge tooth preparation ($P<0.01$) (Table 2). General dental practitioners used alginate hydrocolloid (53.9%) followed by addition silicone (39.7%) which was higher than other material used for impression recording after single anterior tooth preparation ($P<0.01$) (Table 3). Prosthodontists used mostly addition silicone (62.4%) which was higher than other material used for impression recording after single anterior tooth preparation ($P<0.01$) (Table 3). General dental practitioners used alginate hydrocolloid (54.3%) followed by addition silicone (39.7%) which was higher than

Table 3: Comparison of responses from the participants: Part II					
Type of impression material used for impression recording after single anterior tooth preparation	General dental practitioners (n=232)	Prosthodontists (n=271)	Total	χ^2	P
Addition silicone	92 (39.7%)	169 (62.4%)	261 (51.9%)	70.70	<0.0001
Alginate hydrocolloid	125 (53.9%)	53 (19.6%)	178 (35.4%)		
Condensation silicone	9 (3.9%)	38 (14.0%)	47 (9.3%)		
Intra oral scanner	1 (0.4%)	0 (0.0%)	1 (0.2%)		
Poly ether	4 (1.7%)	10 (3.7%)	14 (2.8%)		
Poly sulfide	1 (0.4%)	1 (0.4%)	2 (0.4%)		
Total	232 (100.0%)	271 (100.0%)	503 (100.0%)		
Type of impression material used for impression recording after single posterior tooth preparation	General dental practitioners (n=232)	Prosthodontists (n=271)	Total	χ^2	P
Addition silicone	92 (39.7%)	152 (56.1%)	244 (48.5%)	48.82	<0.0001
Alginate hydrocolloid	126 (54.3%)	73 (26.9%)	199 (39.6%)		
Condensation silicone	7 (3.0%)	38 (14.0%)	45 (8.9%)		
Intra oral scanner	1 (0.4%)	0 (0.0%)	1 (0.2%)		
Poly ether	5 (2.2%)	7 (2.6%)	12 (2.4%)		
Poly sulfide	1 (0.4%)	1 (0.4%)	2 (0.4%)		
Total	232 (100.0%)	271 (100.0%)	503 (100.0%)		
Type of impression material used for impression recording after anterior bridge preparation	General dental practitioners (n=232)	Prosthodontists (n=271)	Total	χ^2	P
Addition silicone	107 (46.2%)	205 (75.6%)	312 (62.2%)	91.66	<0.0001
Alginate hydrocolloid	104 (44.8%)	23 (8.5%)	127 (25.2%)		
Condensation silicone	14 (6.0%)	35 (12.9%)	49 (9.7%)		
Intra oral scanner	1 (0.4%)	0 (0.0%)	1 (0.2%)		
Poly ether	5 (2.2%)	8 (3.0%)	13 (2.6%)		
Poly sulfide	1 (0.4%)	0 (0.0%)	1 (0.2%)		
Total	232 (100.0%)	271 (100.0%)	503 (100.0%)		
Type of impression material used for impression recording after posterior bridge preparation	General dental practitioners (n=232)	Prosthodontists (n=271)	Total	χ^2	P
Addition silicone	99 (42.7%)	192 (70.8%)	291 (57.9%)	87.05	<0.0001
Alginate hydrocolloid	115 (49.6%)	34 (12.5%)	149 (29.6%)		
Condensation silicone	13 (5.6%)	36 (13.3%)	49 (9.7%)		
Intra oral scanner	1 (0.4%)	0 (0.0%)	1 (0.2%)		
Poly ether	3 (1.3%)	9 (3.3%)	12 (2.4%)		
Poly sulfide	1 (0.4%)	0 (0.0%)	1 (0.2%)		
Total	232 (100.0%)	271 (100.0%)	503 (100.0%)		
Chemical agent used for disinfecting the impression	General dental practitioners (n=232)	Prosthodontists (n=271)	Total	χ^2	P
Chlorine compounds (hypochlorides)	17 (7.4%)	17 (6.3%)	34 (6.8%)	40.88	<0.0001
Glutaraldehyde	69 (29.9%)	141 (52.0%)	210 (41.8%)		
Iodophors	1 (0.4%)	13 (4.8%)	14 (2.8%)		
Phenolic compounds	6 (2.6%)	7 (2.6%)	13 (2.6%)		
Do not disinfect	138 (59.7%)	93 (34.3%)	231 (46.0%)		
Total	232 (100.0%)	271 (100.0%)	503 (100.0%)		

other material used for impression recording after single posterior tooth preparation ($P<0.01$). Prosthodontists used mostly addition silicone (56.1%) which was higher than other material used for impression recording after single posterior tooth preparation ($P<0.01$). General dental practitioners used addition silicone (46.2%) followed by alginate hydrocolloid (44.8%) which was higher than other material used for impression recording after anterior bridge tooth preparation ($P>0.05$) (Table 3). Prosthodontists used mostly addition silicone (70.8%) which was higher

than other material used for impression recording after posterior bridge tooth preparation ($P<0.01$). General dental practitioners all the technique almost in equal proportion except single mix (monophase) technique ($P<0.01$). Prosthodontists used mostly two-step putty relined/dual mix technique with spacer technique (50.9%) which was higher than other techniques ($P<0.01$) (Table 3). Prosthodontists used mostly glutaraldehyde (52.0%) which was higher than other chemical agent used for disinfecting the impression ($P<0.01$). General dental practitioners mostly used alginate

impressions (67.1%) for cast prepared in the clinic for which type of impression ($P < 0.01$). Prosthodontists also used mostly alginate impressions (57.2%) for cast prepared in the clinic for which type of impression ($P < 0.01$). Both general dental practitioners and prosthodontists mostly used die stone as material used to pour the cast ($P < 0.01$). Both general dental practitioners and prosthodontists mostly used provisional restoration for single tooth crowns ($P < 0.05$). However, prosthodontists used significantly higher proportion as compared to general dental practitioners ($P < 0.01$). Both general dental practitioners and prosthodontists mostly used provisional restoration for all bridges ($P > 0.05$). However, prosthodontists used significantly higher proportion as compared to general dental practitioners ($P < 0.01$).

DISCUSSION

The ideal fixed partial denture needs planning and that is started by an adequate diagnostic impression and diagnostic casts.⁶⁻¹² The diagnostic cast is necessary to give the dentist a complete perspective regarding the patient's condition as well as the conditions of the prospective abutments, their inclination, the opposing dentition's conditions, and the presence and details of the wear facets. This also serves for the diagnostic wax up.¹³

The textbooks suggested the use of irreversible hydrocolloids for diagnostic impressions, but it is up to the operator to use the materials of his/her choice.^{5,14-17} Most of the earlier surveys by Moldi *et al.*,¹⁸ Magray *et al.*,¹⁹ and Shah *et al.*,²⁰ have shown that the general dental practitioners do not make diagnostic impressions and directly proceed to tooth preparation.

This study found that 95.9% prosthodontists take diagnostic impression, which was significantly higher ($P < 0.01$) than the general dental practitioners. General dental practitioners proceed to tooth preparation without the diagnostic cast fabrication.

The material used for diagnostic impressions must sufficiently reproduce the prospective abutments, the adjacent structures, and the opposing dentition for successful evaluation.²¹⁻²³ According to Rosenstiel, as long as the impression extends several millimeters beyond the cervical line of the teeth and has no visible flaws, it is usually sufficient properly manipulated irreversible hydrocolloid which is sufficiently accurate and offers adequate surface details for planning purposes.²⁴ Earlier similar surveys also highlighted the popularity of alginate as the choice for primary impressions.

Among those who take primary impressions (i.e., 151 general dental practitioners and 260 prosthodontists), 95% prosthodontists and 97.4% general dental practitioners use irreversible hydrocolloids (alginate), and the difference was not statistically significant ($P = 0.24$). This underscores the popularity of alginate, as it is cheap, easily available, and produces good surface details as discussed by Nassar *et al.*²⁵

Among the prosthodontists, 79.7% used gingival retraction before final impressions while 20.3% did not, which was statistically significant ($P < 0.01$). Among the general dental practitioners, only 34.9% used gingival retraction before final impressions, while a majority 65.1% did not, which was significantly different. The prosthodontists use gingival retraction in situations of both equigingival and subgingival finish lines (63.4%), followed by subgingival finish lines (20.8%) and equigingival finish lines (10.2%). A very few also used gingival retraction in supragingival finish lines (5.6%), the differences being statistically significant; among the general dental practitioners, 48.1% use gingival retraction in situations of both equigingival and subgingival finish lines, followed by subgingival finish lines (40.7%), and equigingival finish lines (7.4%). A very few also used gingival retraction in supragingival finish lines (3.7%), the differences being statistically significant.

Across the two groups, prosthodontists used gingival retraction in situations of both equigingival and subgingival finish lines, which were significantly higher than the general dental practitioners ($P < 0.01$).

This study found that the prosthodontists mostly used the chemomechanical retraction (63.9%) ($P < 0.01$) followed by the mechanical retraction (21.8%), injectable retraction systems (11.6%), and laser (1.4%) which show that laser retraction is still in its nascent stages in India; the general dental practitioners also mostly used the chemomechanical retraction (46.9%) ($P < 0.05$) followed by the mechanical retraction (34.6%), injectable retraction systems (13.6%), and laser (1.2%).

This study found that the prosthodontists mostly used metal full-arch tray (80.4%) ($P < 0.01$) followed by the plastic full-arch tray (10.7%), dual arch tray (plastic) (3.3%), dual arch tray (metal) (1.1%), and a few indicated the use of custom trays (4.4%); general dental practitioners used full-arch tray (metal) (58.6%) followed by full-arch tray (plastic) (28.0%) which was statistically significant ($P < 0.01$), followed by dual arch tray (plastic) (7.8%) and dual arch tray (metal) (1.7%).

Across the two groups, dual arch tray (metal), dual arch tray (plastic), and full-arch tray (plastic) were used by

general dental practitioners in higher proportion than prosthodontists ($P<0.01$).

This study found that the prosthodontists mostly used metal full-arch tray (74.2%) ($P<0.01$) followed by dual arch tray (plastic) (10%), the plastic full-arch tray (8.9%), dual arch tray (metal) (3.3%) and a few indicated the use of custom trays (3.7%); general dental practitioners used full-arch tray (metal) (50.9%) followed by full-arch tray (plastic) (27.6%) which was statistically significant ($P<0.01$), followed by dual arch tray (plastic) (15.1%) and dual arch tray (metal) (4.3%).

Across the two groups, dual arch tray (metal), dual arch tray (plastic), and full-arch tray (plastic) were used more by the general dental practitioners than prosthodontists ($P<0.01$); while custom tray and full-arch tray (metal) were used by more by the prosthodontists than general dental practitioners ($P<0.01$).

This study found that the prosthodontists mostly used metal full-arch tray (74.9%) ($P<0.01$) followed by the plastic full-arch tray (8.1%), dual arch tray (plastic) (2.6%), and dual arch tray (metal) (2.2%) and some indicated the use of custom trays (12.2%); general dental practitioners used full-arch tray (metal) (56.9%) followed by full-arch tray (plastic) (28.9%) which was statistically significant ($P<0.01$), followed by dual arch tray (plastic) (7.3%) and dual arch tray (metal) (4.3%).

Across the two groups, dual arch trays and full-arch tray (plastic) were used more by the general dental practitioners than prosthodontists ($P<0.01$); while custom tray and full-arch tray (metal) were used by more by the prosthodontists than general dental practitioners ($P<0.01$).

This study found that the prosthodontists used mostly addition silicone (62.4%) ($P<0.01$), followed by alginate (19.6%) and condensation silicone (14%). General dental practitioners used alginate hydrocolloid (53.9%) followed by addition silicone (39.7%) ($P<0.01$), condensation silicone (3.9%), polyether (1.7%), and poly sulfide (0.4%).

Across the two groups, addition silicone and condensation silicone were used by prosthodontists significantly more than general dental practitioners ($P<0.05$).

This study found that the prosthodontists used mostly addition silicone (56.1%) ($P<0.01$), followed by alginate (26.9%) and condensation silicone (14%). A few indicated the use of polyether (2.6%) and polysulfide (0.4%); general dental practitioners used alginate hydrocolloid (54.3%) followed by addition silicone (39.7%) ($P<0.01$), condensation silicone (3%), polyether (2.2%), and poly sulfide (0.4%).

Across the two groups, alginate hydrocolloid was used by general dental practitioners significantly more than prosthodontists ($P<0.05$), while addition silicone was used by prosthodontists significantly more than general dental practitioners ($P<0.05$).

Across the two groups, alginate hydrocolloid was used by general dental practitioners significantly more than prosthodontists ($P<0.01$), while addition silicone and condensation silicone were used by prosthodontists significantly more than general dental practitioners ($P<0.05$).

This study found that the prosthodontists mostly used the two-step putty reline technique with spacer (50.9%) ($P<0.01$), followed by the multiple mix technique (25.5%), two-step putty reline technique without spacer (17%), and monophase technique (7.4%); general dental practitioners used the multiple mix technique (34.6%), followed by two-step putty reline technique with spacer (29.9%), two-step putty reline technique without spacer (23.8%), and the least used was the monophase technique (7.4%) ($P<0.01$).

Across the two groups, there was significant difference regarding use of elastomeric impression materials ($P<0.01$); while the prosthodontists used the two-step putty reline technique with spacer, the general dental practitioners preferred the multiple mix technique.

This study shows that the prosthodontists mostly used glutaraldehyde (52%) ($P<0.01$), followed by hypochlorides (6.3%), iodophor (4.8%), and phenolic compounds (2.6%). About 34.3% prosthodontists did not disinfect the Impressions; general dental practitioners mostly did not disinfect (59.7%) ($P<0.01$). Among those who do, use glutaraldehyde (29.9%), followed by hypochlorides (7.4%), phenolic compounds (2.6%), and iodophor (0.4%).

Across the groups, prosthodontists used mostly glutaraldehyde (52.0%) which was higher than other chemical agent used for disinfecting the impression ($P<0.01$), and most general dental practitioners did not disinfect the impressions. This study has shown a significant improvement towards the disinfection process.

This study has shown that the prosthodontists prepared the cast in the clinic for Alginate impressions (57.2%) ($P<0.01$), followed by both elastomeric and alginate impressions (38.4%), elastomeric impressions (3.3%), and 3.3% do not pour in any impressions; general dental practitioners also prepared the cast in the clinic for Alginate impressions (67.1%) ($P<0.01$), followed by both elastomeric and alginate impressions (22.9%), elastomeric impressions (2.6%), and 7.4% do not pour in any impressions.

Across the groups, there was significant difference in using cast prepared in the clinic for the type of impression by the respondents of the two groups ($P < 0.01$).

This study shows that the prosthodontists preferred die stone (67.5%) ($P < 0.01$), followed by dental stone (32.5%); general dental practitioners too preferred die stone (71.9%) ($P < 0.01$) followed by dental stone (28.1%).

Across the groups, there was no significant difference in using material used to pour the cast by the two groups ($P = 0.29$).

This study shows that the prosthodontists mostly used provisional restoration for single tooth crowns (82.3%) ($P < 0.05$), and 17.7% did not use provisional restoration for single tooth crowns; general dental practitioners too mostly used provisional restoration for single tooth crowns (59.5%) ($P < 0.05$), but 40.5% did not use provisional restoration for single tooth crowns.

Across the groups, prosthodontists used provisional restoration significantly more than general dental practitioners ($P < 0.01$).

It was seen that the prosthodontists mostly used provisional restoration for all bridges (76.0%) ($P < 0.05$), and 24% did not use provisional restoration; general dental practitioners mostly did not use provisional restoration for all bridges (51.7%), but 48.3% did use provisional restoration for all bridges.

Across the groups, prosthodontists used provisional restoration for all bridges significantly more than general dental practitioners ($P < 0.01$).

It is the prerogative of the treating dentist to make sure that the quality of treatment is at the highest level possible and that it must be guided by his/her limitations of either skill or knowledge. That is where the specialty of prosthodontics comes into play. It is expected that a prosthodontist must be able to render the highest quality of service for treatment planning, active treatment phase, the materials and techniques used, as well as the final delivery of the prostheses. The factor to be kept in mind is that a single crown is at a risk of caries and endodontic failure up to 3%, whereas the risk goes up to 15% for abutments under fixed partial denture.¹⁸

Limitations of the study

The major limitation of this study is the small sample size which was only 503. The demographics were not assessed according to the regions of urban or rural areas. Furthermore, the fact that, dental surgeons other than prosthodontics were not considered in this study.

CONCLUSION

Considering all the limitations of our study, we found that compared to general dental practitioners, practices of the prosthodontists regarding use of fixed partial denture are more in line with the current global trend.

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Authors Contribution:

DM- Concept and design of the study, prepared first draft of manuscript; **SS-** Interpreted the results; reviewed the literature and manuscript preparation; **PS-** Concept, coordination, statistical analysis and interpretation, preparation of manuscript and revision of the manuscript.

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