

Provisional and Temporary Restorations in the Current Practice among General Dentists in Saudi Arabia and Egypt: Influence in Treatment Outcomes

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Abstract

The aim of this study is to analyze the criteria of clinical practice of provisional and temporary restorations among general dentists in Saudi Arabia and Egypt.

An online survey with a total of 28 questions classified into three domains was developed. 200 general dental practitioners from two largest cities in Saudi Arabia and Egypt respectively were emailed to join the survey voluntarily and anonymously. Only general dentists after internship year, appointed in two major central governmental hospital in each of the study cities were invited. Descriptive statistics and Chi square analysis were performed to study the received responses.

Recorded responses were 155. There was no general agreement between participants regarding the applied strategies of provisional/ temporary restorations followed in their practice.

Most of the participants are aware of the difference between both terms; temporary and provisional restoration. Moreover, adequate knowledge and skills of using temporary and provisional restorations during the undergraduate program was sufficient. However, more recommendations should be implemented to encourage temporization and provisionization among young practitioners in different clinical situations

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Introduction

The clinical success and reliability of the final restorations are mostly mandated by the proper accomplishment of preceding clinical procedures stages such as fabricating of a biomechanically and esthetically reliable satisfactory interim restoration.¹ Although provisional restorations are of limited length of life time in comparison to final restorations, their strategic importance should not be underestimated as they play an indispensable role in the different phases of dental treatment till before completion of the definitive restoration.² According to the Glossary of Prosthodontic Terms, "provisional or interim prosthesis or restoration is a fixed or removable dental or maxillofacial prosthesis designed to enhance esthetics, stabilization and/or function for a limited period of time,

after which it is to be replaced by a definitive dental or maxillofacial prosthesis."³

A temporary restoration is a term usually used to describe a restoration placed in an intracoronal cavity including access cavities during endodontic treatment, and cavities of teeth with normal vital pulps. It also includes temporary crowns used to protect teeth with extracoronal preparations. Herndon outlined the function of a temporary restoration to include sealing against ingress of food debris and bacteria, maintaining space and preventing or minimizing dentin sensitivity, while in addition to the previously mentioned functions, a provisional restoration is used to provide broader biomechanical, phonetic and esthetic functions for a longer duration and can be used to provide a diagnostic role and evaluation of final restoration and as templates in preparing for the final restoration.⁴ An interim restoration usually used for a longer period of time than the temporary restoration.⁵

According to the Glossary of Prosthodontic Terms, temporary is a term used to describe the restoration or prosthesis placed for a shorter time interval while a definitive restoration or prosthesis is being fabricated.¹ The "interim" period of time for a restoration, a prosthesis, or a procedure decided by

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the clinical and professional judgment of the dentist. On the other hand, interim is a restoration or prosthesis meant for usage over a limited extended period of time.⁴ Additionally, a restoration or prosthesis that is implanted temporarily for healing, stability, or diagnostic purposes is known as a temporary restoration or prosthesis.¹

One of the most important aspects of making a provisional reconstruction is satisfying the biofunctional and esthetic demands. On the other hand, the materials used to fabricate temporary and interim restorations should also be able to fulfill the desired requirement, to minimize the failure of treatment and increase the rate of success.^{2 6} An optimal provisional restoration must be able to reliably seal cavities and dentin surfaces against ingress of debris, bacteria and fluids. Moreover, properly restore tooth form, proximal contacts and contours to restore and maintain health of the gingiva and periodontium. Increasingly, prevent food stagnation, assure normal non-interfering occlusion and comfortable mastication, keeping interdental, interocclusal spaces and correct deranged esthetics and provide a satisfactory smile.⁷ Moreover, an ideal provisional restoration should mechanically protect the remaining tooth structure until the time of definitive restoration insertion.⁸

The esthetic and psychological benefits of provisional restorations have been re-emphasized in different clinical reports and studies.⁹ Fabrication of provisional restorations should be taken into consideration by dentists as an essential step during the restorative procedure.⁴

Providing adequate satisfactory and clinically reliable provisional restorations requires adequate scientific knowledge and clinical skills of the dentist to ensure proper treatment outcomes.² The terms temporaries and provisionals are often used interchangeably and thus used sometimes even incorrectly. It is exceedingly important to be aware of the distinction between these two terms of interim dental restorations in order to achieve the optimal treatment for the patient.⁴

This cross-sectional study was performed to assess the current practice of general dentists in Egypt and Saudi Arabia regarding provisional/ temporary restorations. The objective was to verify the awareness and knowledge of general dentists in Egypt and Saudi Arabia regarding the techniques and strategies they follow in their routine clinical practice. Furthermore, this study aimed to provide number of recommendations to assure optimum quality practices in fabricating and evaluating temporary/ provisional restorations.

Materials and methods

Dental interns and general dentists from Saudi Arabia and Egypt were invited to join the online survey. The two selected countries are differently geographically located with variation in economical status and the working environment. The study was designed to include general dentists after the internship training year in two cities in Saudi Arabia, namely, Riyadh, and Jeddah and two main cities in Egypt, namely, Cairo, and Alexandria. A major central governmental hospital in each city was included in the study. The selected hospitals have the largest number of patients flow among the main central hospitals of the nominated cities. Accordingly, the targeted population of the study was 200 general dentists. Email Invitations were sent to the targeted general dentists. The calculated sample size was 132 and the number of responses obtained was 155. Calculations were performed at the 95% confidence level using a free online sample size calculator (<https://www.calculator.net/sample-size-calculator.html?type=1&cl=95&ci=5&pp=50&ps=500&x=76&y=28>). Invitations clearly stated that, the participation of the survey is anonymous and voluntary and that every participant is free to quit the survey at any time. To test the validity and reliability of the questions, content validation was performed by inviting 10 experts to validate each question of the survey over a scale of four ranks: the question is not relevant, the question is somewhat relevant, the question is quite relevant, or the question is highly relevant. All experts ranked all questions as relevant or highly relevant.

The survey consisted of 28 questions classified into the following sections: The first section of questionnaire included questions regarding demographic data relative to the location of the working place, level of experience, average activity (Table1, 2, 3, 4, 5). In the second section, dentists were asked about the different techniques used for temporization, attaining adequate knowledge and skills in the undergraduate program regarding temporization, type of temporaries they mostly apply, type of temporary restoration used in endodontically treated teeth, type of indirect temporary/ provisional restoration used in certain situations, indication of indirect temporary restorations, indication for use of long-term Provisionals. The final section was aimed to ask about patients' complaints and satisfaction regarding temporary / provisional restoration, opinion about the direct technique for fabricating temporary / provisional restorations (extensive, time consuming, difficulty... etc) in certain situations, time required to fabricate

direct temporary restoration, How to adjust problems with temporary / provisional restorations and significance of complete removal of all remnants of temporary restoration before final restoration. For most questions, only 1 possible answer could be chosen, except for 6 questions where multiple answers were possible. Descriptive statistics were implemented to analyze the results.

Demographic Variables		Frequency	Percentage
Place of practice	Saudi Arabia	109	69.4%
	Egypt	48	30.6%
Duration of clinical experience	Less than five years	92	58.6%
	From 5-10 years	51	32.5%
	More than ten years	14	8.9%

Table 1: Demographic data.

Results

A total of 155 responses were received. The demographic data are presented in Table 1, while the remaining questions with their answers and the corresponding frequencies and percentages are presented in Table 2. Chi-square test was used to statistically analyze the received responses at a level of significance of $p < 0.05$.

69.7% of the respondents were from Saudi Arabia, while 30.3% were from Egypt. 59.4% of respondents practiced dentistry less than five years, while 31.6% have five to ten years of practice. Meanwhile, only 9% of participants have more than 10 years of experience. A statistically significant number of respondents ($P < 0.05$) attained adequate skills for using temporary and provisional restorations during their undergraduate program.

There was no statistically significant difference between participants regarding the applied technique of fabricating temporary and provisional restorations ($P > 0.05$) as direct, indirect, or indirect-direct techniques. While most of participants ($P < 0.05$) apply temporary restorations in different clinical situations before the final restorations, a statistically significant number of respondents ($P < 0.05$) know the difference between the terms, temporary and provisional restorations.

Non statistically significant difference ($P > 0.05$) exists between responses concerning the applied technique of temporaries whether prefabricated or custom made. Moreover, significant number of respondents ($P < 0.05$) preferred to use the glass ionomer as a temporary restoration in the access cavity in root canal treatment in case of long intervals.

Discussion

Biomechanical and esthetic concerns necessitate that a provisional restoration should be of adequate mechanical properties and established biocompatibility.¹⁰ Furthermore, it should be esthetically appealing and comfortable to the patient. A provisional or temporary restoration should protect remaining tooth structure and investing gingiva and periodontium. Moreover, effectively restore tooth form, proximal contacts, axial physiologic contours, emergence profile, facilitate functional non-interfering occlusion, preventing tipping, overeruption or drifting of adjacent or opposing teeth, and maintain adequate interocclusal and interdental spacing till the time of final restoration.^{1,4,7,11} Moreover, patients care during the interim restorative treatments mandatory in complex cases and must meet patient's expectations of comfort, pleasing esthetics, and effective mastication.² Correct choice of provisional restoration fabrication technique and proper knowledge about such techniques enhance the longevity of provisional restorations, and maintain the healthy state of the surrounding and underlying soft and hard tissues as well as provide the patient's contentment and comfort.¹

Thus, it is crucial to understand how each material behaves in the oral setting that affects its clinical performance and longevity. None of the provisional materials available meets the necessary requirements or cover the full spectrum of clinical scenarios.¹² Selecting a provisional crown material for each case proper based on the particular features of the material is an essential.¹³ Knowledge and awareness of the practitioner is a must to achieve optimal care.

In this study we designed the questions to represent the extent of awareness regarding temporary restoration by inviting general dental practitioners graduated from different provinces in Saudi Arabia and Egypt. The questions were precise, comprehensive, simple and took not more than 10 minutes to answer.

The recorded responses supported the implantation of an effective standard of care and insure that the practitioners in the undergraduate program have attained adequate skills and competencies that will satisfactorily serving the community.

A properly fabricated provisional restoration is important in achieving a successful final restoration. The importance of provisional restorations as an integral part of fixed prosthodontic treatment is evident from the abundance of the literature pertaining to their importance regarding margin fidelity, function,

occlusion, and esthetics.¹⁰ However, the majority of respondents in Saudi Arabia shows that they sometimes apply a temporary restoration before the final restoration, while the respondents in Egypt usually apply it (Table1). Possible explanation for this might be that we had limited number of respondents as well as the participants were from various dental schools and exposed to different clinical situations.

The current study shows that a greater fraction of respondents in both countries regarding the knowledge and skills of using temporary/interim restorations in under graduate program were sufficient. This is due to the fact that provisional restoration is an essential step in achieving consistently predictable success in the functional and esthetic outcomes in restorative and fixed prosthodontics.¹⁴ Nevertheless, some clinicians and patients may be tempted to minimize and devalue the importance of temporization specifically due to their transitional nature.¹⁵ By extension, it can be inappropriate to refer to provisional restorations as “temporary” restorations, a term that tends to minimize their therapeutic value and strategic role.¹⁴

In addition, based on the questionnaire responses, most of respondents in Saudi Arabia and Egypt can differentiate between the two terms “provisional” and “temporary” restorations. On the contrary, a previous study showed that there is confusion between a temporary restoration and a provisional restoration. Thus, they are misused interchangeably.¹⁶

Furthermore, a greater number of respondents agreed that the Glass ionomer was the restoration of choice as a temporary restoration in the access cavity in root canal treated teeth in case of long intervals. Use of these materials as a temporary restoration during endodontic therapy has been investigated in a number of studies with favorable results.¹⁶ In one study, glass ionomer cement microleakage values did not differ significantly from the intact crown values after 8 weeks.¹⁷

Provisional restorations have to imitate the definitive restoration and helps in giving a predictable final result to the patient. Moreover, in multiple adjacent prepared teeth the capacity to fabricate an individual provisional restoration will provide isolated path of insertion and permit the patient to preserve better hygiene.¹⁸ According to the result of the current study, we found that more than half of Saudi and Egyptian dentists they prefer to make joined indirect provisionals for multiple adjacent teeth in fixed prosthodontics.

According to the result of the current study, the majority of the dentists in Saudi Arabia and Egypt

usually apply temporaries for veneer preparation as an interim step. provisional restoration protects the altered tooth surface from oral environment and minimize sensitivity, it can be used as a tool to evaluate the uniform clearance for the final restoration and provide template to guide the functional, phonetic and esthetic treatment outcomes.¹⁹ Furthermore, the outcome of this survey shows that the plurality of dentists in both countries used the temporary / provisional restoration as a mock to achieve predictable success in functional and esthetic outcomes.¹⁴ In addition, we found more than half of dentists are not using provisional for long term (at least 8 weeks). Cross sectional study that measure the knowledge, attitude and practice of dentists regarding provisional restorations of Nagpur region in 2019 show, 54% of the dentists preferred to give the provisionals for a period of 7-15 days. Only 23% felt the need to perform diagnostic wax up prior to giving provisionals.²⁰ Finishing and polishing of temporary/provisional is an essential procedure to maximize the function and esthetic of the final treatment in terms of shape, form, function and comparative characteristic of natural tooth in color, marginal adaptation and retention contour.²¹ In the current study, the majority of the participants in both countries are considering finishing and polishing as a mandatory step during provisionalization.

In the current study, some questions were designed to evaluate the role of temporary/provisional restoration in patient's satisfaction. According to this fact, infrequent number of patients reported problems with temporary/provisional restorations.

The highest number of Saudi and Egyptian dentists found that the direct technique of fabrication temporary/provisional restoration for inlays, onlays and fixed prosthodontics was easy and simple procedure. Sufficient knowledge about fabrication techniques enables the practitioner to fabricate restorations through simple process and maintain the health of underlying and surrounding tissues to ensure the patient satisfaction and comfort.²² However, the direct technique for fabrication temporary/provisional restoration takes 5-9 minutes for the majority of dentists in Saudi Arabia and Egypt.

Provisional restoration is a mandatory procedure, particularly if the restoration is expected to function for extended periods of time. It allows the clinician to predict the restorative outcome by placing the provisional prosthesis at the estimated vertical dimension and the patient is allowed to function for a period to determine optimal function. Common agreement between respondents of the current study that the occlusal correction is the condition were the

long-term Provisionals can be used. Furthermore, multiple visit procedures are another condition were the most respondents apply the temporary / provisional restorations in the restorative procedures.

Provisional material selection should be based on how their mechanical, physical, and handling properties fulfill specific requirements for any clinical case.²² This was particularly the most common reflected answers received in the current study. At the same time, most practitioners reported that the loss of retention is the most common failure of provisional/ temporary restoration. The degree of retention of a fixed prosthetic appliance is directly related to the retainer's height, taper, length and arrangement. Failures are usually due to improper preparation form, improper restoration fit or occlusal interference during excursive movements.

However, the choice of a proper temporary cement is also important regarding the retention of the restorations. When the correct temporary cement is not selected, complications as microleakage, subsequent recurrent caries and loss of the provisional restoration with consequent migration of antagonist and adjacent teeth may occur.²³

The current study shows that the light cure flowable resin composite is the most commonly used material to adjust short margins or loose indirect temporary/ provisional restorations. The use of flowable resin composite offers several advantages that include availability in multiple shades, low viscosity, ease of use, extended working time, ability to polymerize on demand, reasonable cost, minimal waste, and accurate result.²⁴ The strength of the repair has been shown to be very durable, as demonstrated by Hagge and colleagues who tested the shear bond strength of bis-acryl provisional material repaired with flowable composite. In all specimens tested, the failures occurred cohesively within the bisacryl composite itself rather than at the repair interface.²⁴ Provisional or temporary cements play an important role in restorative dentistry.²³ Proper use and clean-up of dental cements ensures the success of restorations and aids in preventing postoperative complications associated with residual cement.²⁵

Selecting a provisional cement depends on several criteria that are important in the physical and handling properties of the restorative material. One of these criteria is easy removal of excess from the external surfaces of the restoration after cementation and removal of the provisional cement from the internal surfaces of the restoration when the restoration needs to be recemented.²⁶ Complete removal of all remnants of temporary cement is mandatory before final restoration, since any remnants can interfere with proper seating, adhesion, and seal-ability of the final restoration. The results of the current research, revealed that great fraction of participant are aware of this crucial step.

The knowledge and awareness of the practitioners in Egypt and Saudi Arabia were satisfactory in terms of concept of provisionization, different strategies, techniques, selected material for fabrication, temporary cementation and patient satisfaction.

Conclusions

Within the limitations of the current study, the following conclusions can be drawn. Most of the participants are aware of the difference between both terms; temporary and provisional restoration. Moreover, adequate knowledge and skills of using temporary and provisional restorations during the undergraduate program was sufficient. However, more recommendations should be implemented to encourage temporization and provisionization among young practitioners in different clinical situations before application of final restoration. Full mouth rehabilitation, long term provisionals should gain more attention regarding the practice of their applications and techniques of fabrication.

Declaration of Interest

The authors report no conflict of interest.

Applied question	Answer	Saudi	Egyptian	Total	p-Values
How frequently you apply temporary restoration in different clinical situations before the final restoration	Always	37 (34.3%)	15 (31.9%)	52 (33.6%)	0.001
	Usually	13 (12%)	18 (38.3%)	31 (20%)	
	Sometime	57 (52.8%)	14 (29.8%)	71 (45.8%)	
	Never	1 (0.9%)	0 (0%)	1 (0.6%)	
Have you attained adequate knowledge and skills of using temporary / provisional restorations during your undergraduate program	Yes	95 (88%)	32 (68.1%)	127 (81.9%)	0.003
	No	13 (12%)	15 (31.9%)	28 (18.1%)	
Do you know the difference between the terms (Temporary and provisional) restoration	Yes	64 (59.3%)	22 (46.8%)	86 (55.5%)	0.045
	No	19 (17.6%)	5 (10.6%)	24 (15.5%)	
	Not Sure	25 (23.1%)	20 (42.6%)	45 (29%)	
Which technique for temporization in general do you usually use in your practice	Direct Technique	64 (59.3%)	34 (72.3%)	98 (63.3%)	0.3
	Indirect Technique	9 (8.3%)	3 (6.4%)	12 (7.7%)	
	indirect- Direct Technique	35 (32.4%)	10 (21.3%)	45 (29%)	
Which kind of temporaries do you usually prefer	Pre-fabricated	39 (36.1%)	14 (29.8%)	53 (34.2%)	0.45
	Custom Made	69 (63.9%)	33 (70.2%)	102 (65.2%)	
Which temporary restorative material do you prefer to use when resin composite is the final restoration	Cavit	25 (23.1%)	16 (34%)	41 (26.4%)	0.227
	IRM	11 (10.2%)	2 (4.3%)	13 (8.4%)	
	Glass ionomer	72 (66.7%)	29 (61.7%)	101 (65.2%)	
Which temporary restoration do you prefer with ceramic inlays and onlays is	Cavit	23 (21.3%)	14 (29.8%)	37 (23.9%)	0.5
	IRM	15 (13.9%)	8 (17%)	23 (14.8%)	
	Glass ionomer	36 (33.3%)	15 (31.9%)	51 (32.9%)	
	Single component resin Composite	34 (31.5%)	10 (21.3%)	44 (28.4%)	
Which temporary restoration do you prefer in the access cavity in root canal treatment in case of long intervals	Cavit	19 (17.6%)	15 (31.9%)	34 (21.9%)	0.024
	IRM	6 (5.6%)	6 (12.8%)	12 (7.8%)	
	Glass ionomer	83 (76.9%)	26 (55.3%)	109 (70.3%)	
Which material do you usually use for temporization of endodontic access cavity preparation in short term treatment	Cavit	82 (75.9%)	30 (63.8%)	112 (72.3%)	0.272
	IRM	12 (11.1%)	9 (19.1%)	21 (13.5%)	
	Glass ionomer or resin modified glass inomer	14 (13%)	8 (17%)	22 (14.2%)	
In which way do you usually prefer to make indirect temporary / provisional for multiple adjacent teeth in crown and bridge work	Separate	49 (45.4%)	24 (51.1%)	73 (47.1%)	0.5
	Joined	59 (54.6%)	23 (48.9%)	82 (52.9%)	
Do you usually apply temporaries for veneer preparation	Yes	88 (81.5%)	39 (83%)	127(81.9%)	0.8
	No	20 (18.5%)	8 (17%)	18 (18.1%)	
Have you used the temporary / provisional restoration as a mock	Yes	76 (70.4%)	39 (83%)	115 (74.2%)	0.1
	No	32 (29.6%)	8 (17%)	40 (25.8%)	

Table 2. Comparison of different parameters regarding temporization between Saudi and Egyptian dentists (n= 155).

Applied question	Answer	Saudi	Egyptian	Total	p-values
Have you ever used provisionals for long term (at least for 8 weeks)	Yes	46 (42.6%)	23 (48.9%)	69 (44.5%)	0.5
	No	62 (57.4%)	24 (51.1%)	86 (55.5%)	
Do you consider finishing and polishing of the temporary/provisional restoration is a mandatory step	Yes	92 (85.2%)	44 (93.6%)	136 (87.7%)	0.14
	No	16 (14.8%)	3 (6.4%)	19 (12.3%)	
How frequent your patient reports problems with the temporary/provisional restoration	Seldom (less than 5% of cases)	41 (38%)	7 (14.9%)	48 (30.9%)	0.04
	Infrequent (5-20% Of cases)	47 (43.5%)	28 (59.6%)	75 (48.4%)	
	Frequently (more than 20-50 % of cases)	18 (16.7%)	10 (21.3%)	28 (18.1%)	
	Usually (more than 50% of cases)	2 (1.9%)	2 (4.3%)	4 (2.6%)	
How do you find the direct technique of fabricating temporary/provisional restorations in inlays, onlays and crown and bridge work	Extensive and time consuming	27 (25%)	9 (19.1%)	36 (23.2%)	0.2
	Simple and easy	58 (53.7%)	20 (42.6%)	78 (50.3%)	
	Complex and requires special skills	15 (13.9%)	12 (25.5%)	27 (17.4%)	
	Of inferior quality to indirect techniques	8 (7.4%)	6 (12.8%)	14 (9.1%)	
How long does it usually take for you to fabricate direct temporary restoration	< 5	19 (17.6%)	12 (25.5%)	31 (20%)	0.3
	5 – 9	47 (43.5%)	22 (46.8%)	69 (44.5%)	
	10 – 14	42 (38.9%)	13 (27.7%)	55 (35.5%)	
How do you rank the initial satisfaction of your patient with the temporary/provisional restoration	very satisfied in most cases	37 (34.3%)	11 (23.4%)	48 (31%)	0.4
	have some mild comments on esthetic quality or some irritation in most cases	66 (61.1%)	34 (72.3%)	100 (64.5%)	
	totally not satisfied in most cases	5 (4.6%)	2 (4.3%)	7 (4.5%)	
How do you usually adjust short margins or loose indirect temporary/ provisional restorations	using light cure Flowable composite	72 (66.7%)	25 (53.2%)	97 (62.6%)	0.13
	using chemically activated composite temporary restorative material	19 (17.6%)	15 (31.9%)	34 (21.9%)	
	using glass ionomer cement	17 (15.7%)	7 (14.9%)	24 (15.5%)	
How do you find the significance of complete removal of all remnants of temporary filling before final restoration	Essential since any remnants can interfere with proper seating, adhesion and seal-ability of the final restoration	91 (84.3%)	38 (80.9%)	129 (83.2%)	0.145
	important only if resin adhesive bonding will be used	12 (11.1%)	3 (6.4%)	15 (9.7%)	
	I don't find it a problem since I don't usually use a temporary cement in cementing temporary or provisional indirect restorations.	5 (4.6%)	6 (12.8%)	11 (7.1%)	

Table 3. Comparison of different parameters.

Applied question	Answer	Saudi	Egyptian	Total	p-Values
*When do you need to use temporary / provisional restorations in your restorative procedures	In multiple visits procedures	89 (82.4%)	42 (89.4%)	131(84.5%)	0.27
	In vital pulp therapy	57 (52.8%)	23 (48.9%)	80 (51.6%)	0.6
	In extensive complex cases	71 (65.7%)	39 (83%)	110 (70.9%)	0.03
	For esthetic purpose	55 (50.9%)	29 (61.7%)	84(54.2%)	0.216
*The main deciding factors for selecting your temporary / provisional restorative material is	Esthetic quality, physical and mechanical properties	82 (75.9%)	40 (85.1%)	122(78.7%)	0.2
	Chemical compatibility with the final restorative	58 (53.7%)	27 (57.4%)	85(54.8%)	0.7
	Ease of fabrication	54 (50%)	27 (57.4%)	81(52.3%)	0.4
	Cost	21 (19.4%)	23 (48.9%)	44(28.4%)	<0.0001
*When do you usually shift to an indirect temporary restoration instead of direct temporary / provisional restoration	Complex cavities & mutilated teeth	61 (56.5%)	32 (68.1%)	93(60%)	0.2
	Full mouth rehabilitation	47 (43.5%)	26 (55.3%)	73(47.1%)	0.2
	Crown & bridge work	48 (44.4%)	20 (42.6%)	68(43.9%)	0.82
	Deep bite cases	34 (31.5%)	13 (27.7%)	47(30.3%)	0.6
	Esthetic anterior restorations	65 (60.2%)	32 (68.1%)	97(62.6%)	0.3
*What is your recommended technique for fabricating temporary/ provisional restorations in crown& bridge work	Direct technique with putty or silicon index	92 (85.2%)	40 (85.1%)	132(85.2%)	0.9
	Indirect direct	32 (29.6%)	13 (27.7%)	45(29%)	0.8
	Polycarbonate relined	20 (18.5%)	2 (4.3%)	22(14.2%)	0.02
	Milled or printed provisional restorations	18 (16.7%)	22 (46.8%)	40(25.8%)	<0.0001

Table 4. Comparison of different parameters.

Applied question	Answer	Saudi	Egyptian	Total	p-Values
*In which of the following conditions have you applied the long term Provisionals	Implant healing	34 (31.5%)	18 (38.3%)	52(33.5%)	0.41
	Occlusal correction	44 (40.7%)	19 (40.4%)	63(40.6%)	0.97
	Periodontal splinting	21 (19.4%)	12 (25.5%)	33(21.3%)	0.4
*What is the most common form of failure you usually encounter with your temporary/ provisional restoration	Fracture	47 (43.5%)	21 (44.7%)	68(43.9%)	0.8
	Loss of retention	57 (52.8%)	24 (51.1%)	81(52.3%)	0.8
	Discoloration	26 (24.1%)	4 (8.5%)	30(19.4%)	0.024
	Pain and discomfort	19 (17.6%)	10 (21.3%)	29(18.7%)	0.6
	Gingival and periodontal problems	33 (30.6%)	13 (27.7%)	46(29.7%)	0.72

Table 5. Comparison of different parameters.

*Question with more than one answer

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