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Original article

Assessing Knowledge, Attitudes, and Skills in Fixed Prosthodontic Procedures Among Dental Practitioners in Tripoli, Libya: A Cross-Sectional Study

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Abstract
Fixed partial dentures (FPDs) are a prevalent restorative option, yet their success hinges on adherence to standardized clinical protocols. This study aimed to evaluate the knowledge, attitudes, and practices (KAP) of dental practitioners (DPs) in Tripoli, Libya, regarding FPD procedures. A cross-sectional survey was conducted among 157 DPs in Tripoli, encompassing general practitioners (GPs), specialists, and those with varying clinical experience. A 21-item questionnaire assessed preoperative diagnostics, technical procedures, laboratory communication, and post-delivery care. Data were analyzed using descriptive statistics and chi-square tests. Clinical procedure differences were noted among gender, education, and experience. Females adhered more to preoperative radiographic procedures ($p<0.001$), while males managed implant prosthetics independently more often ($p<0.012$). Provisional crowns/bridges were more often performed by prosthodontists ($p<0.005$), and implant prosthetic independent management was more often performed ($p<0.004$). Practitioners with 1-3 years used common vitality testing ($p<0.001$), whereas those with more than 16 years utilized high-speed handpieces more ($p<0.033$). There were significant differences in impression disinfection ($p<0.011$) and interocclusal record materials ($p<0.04$) according to experience. Tooth preparation was unanimously considered the most important factor for FPD retention. This study highlights significant variations in FPD practices among DPs in Tripoli, indicating a need for targeted continuing education and standardization of clinical protocols to improve patient outcomes.
Keywords. Fixed Partial Dentures, Knowledge, Practices, Tripoli, Libya.

Introduction

Fixed prosthodontics play a crucial role in restoring oral function and aesthetics after losing teeth due to caries, trauma, periodontal disease, or other pathological conditions [1,2]. Effective prosthetic rehabilitation is necessary because tooth loss can negatively affect facial appearance, psychological well-being, speech, and mastication [3]. Fixed partial dentures (FPDs), a widely used dental restoration method, are second only to dental implants in popularity and provide durable solutions when executed with precision [4–6]. When clinical procedures such as careful tooth preparation, precise impression techniques, proper occlusion management, and efficient communication with the laboratory are executed correctly, fixed partial dentures offer a durable and aesthetically pleasing solution among the available restorative options [7,8].

The success of fixed prosthodontics, however, depends on the accuracy of diagnostic tools like preoperative X-rays and diagnostic casts that are used for proper treatment planning and to minimize complications [9]. To capture precise details of the prepared tooth and surrounding gingival tissues, retraction cords are necessary during impression making [10]; and for their superior detail reproduction and dimensional stability, elastomeric impression materials are preferred [11]. Provisional crowns are also indispensable to protect prepared teeth, maintain occlusion, and prevent further tooth damage [12].

The retention of crowns and bridges depends on the quality of tooth preparation, cement, and laboratory construction. The ideal retention is possible only when all the factors are present in harmony. According to tooth preparation, it is usually considered the most important factor [13, 14]. The use of bite registration in an accurate way also helps in achieving proper occlusion and thus the functional success of the restoration [10].

According to several studies, fixed prosthodontic practices vary significantly [15-22]. While many practitioners adhere to basic diagnostic and procedural standards, gaps still exist in areas such as using diagnostic radiographs, choosing impression material, using retraction cords, and temporization techniques. These disparities contribute to significant failure rates in crown and bridge procedures, underscoring the necessity of ongoing education and adherence to established professional recommendations [23-25].

With an emphasis on detecting differences between GPs and specialized dentists with different levels of experience, this study aimed to examine the knowledge, attitudes, and practices (KAP) of DPs in Tripoli, Libya, with regard to fixed prosthodontics. By looking at these differences, the study seeks to identify areas that need work and encourage better clinical results through developed instruction and standardized procedures.

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Methodology

This cross-sectional descriptive study used a questionnaire survey to evaluate the knowledge, attitude, and practice (KAP) of DPs in Tripoli, Libya, about fixed prosthodontic procedures. A total sample of 186 DPs was randomly selected from private and public dental clinics, hospitals, and educational institutes located in Tripoli city. The inclusion criteria required participants to be actively practicing in Tripoli city with clinical experience in fixed prosthodontics.

A 21-item multiple-choice survey was administered to DPs. It was prepared in English. Both electronic (i.e., Microsoft Form) and paper formats (Supplementary) were used to administer the survey. The survey questions were used to evaluate the knowledge, attitudes, and practices regarding fixed prosthodontics among DPs in Tripoli, derived from the studies by Kannan et al., Alhoumaidan et al., Berhaim et al., Rathi et al., and Eltawati and Elfallah [4,17-21]. The pretested questionnaire was used to assess validity and reliability. The questions were validated through expert review, pilot testing, and reliability testing (Cronbach's α = 0.80). The protocols used conform to the validation procedures outlined by Alhoumaidan et al. [18]. The questionnaire was divided into two distinct sections to systematically gather data. The first part focused on demographic and professional characteristics, including gender, educational qualifications, working environment (private, public, or academic), and clinical experience. The second part of the questionnaire included an evaluation of preoperative diagnostic steps, technical procedures, procedural accuracy, and interdisciplinary communication. Prior to their involvement, participants were informed of the aims of the study. Participants were assured confidentiality and anonymity, and no personal identification data were gathered. Completed questionnaires were rigorously checked for completeness and consistency before analysis.

Data analysis was performed with DATAtab software [26]. Descriptive statistics in the form of figures and percentages were computed to consolidate response trends for various demographic and practice-based categories. For analyzing relationships between categorical variables, chi-square tests (x^2) were applied. The level of significance to determine statistically significant differences was established at $p \leq 0.05$.

Results

Of the 186 DPs initially recruited, 23 were excluded from practicing outside Tripoli city, and 6 were excluded due to insufficient clinical experience in providing fixed partial dentures (FPDs). The total analysis comprised 157 practitioners who met the inclusion criteria. Data from these participants was analyzed based on demographic variables, namely gender, level of education, and clinical experience in years. Figure 1 depicts the characteristics of the survey respondents. The data demonstrated variation in the clinical experience and work setting of participants within the study population.

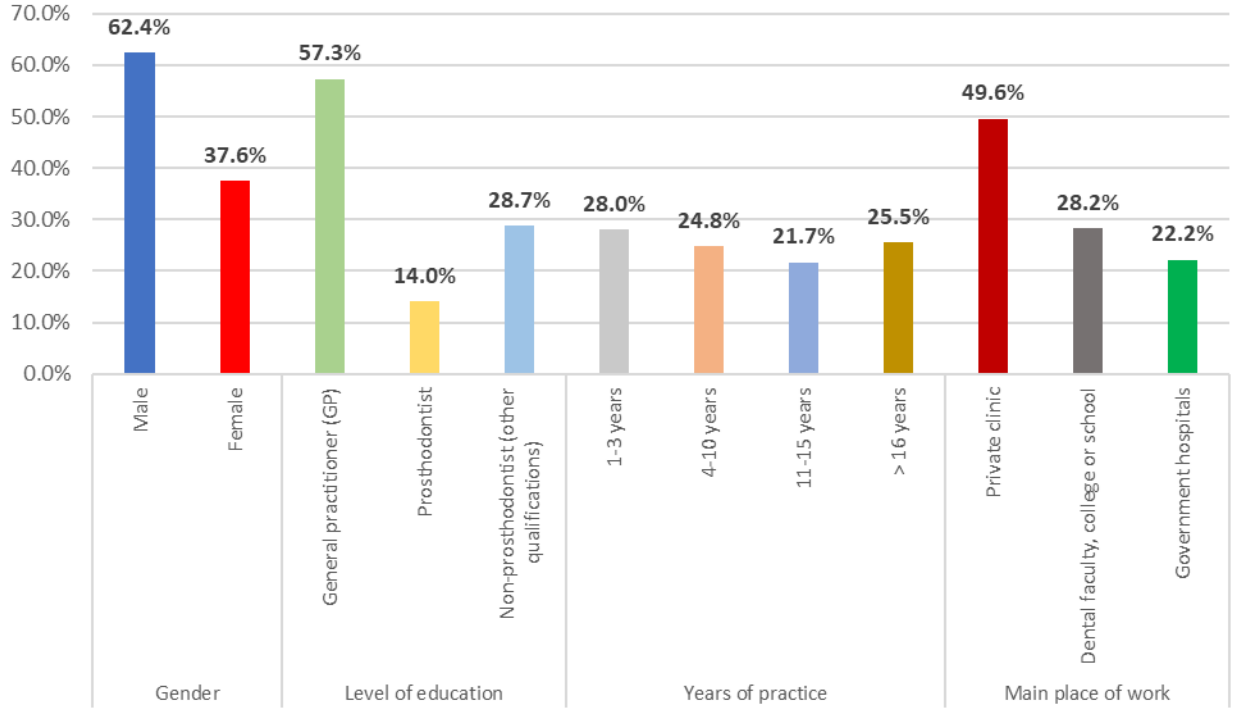

Figure 1. Demographic and professional characteristics of study participants

Most participants were males (62.4%), and females comprised 37.6% of the sample. Concerning educational qualifications, the largest group was represented by GPs at 57.03%, followed by non-prosthodontists with other qualifications at 28.7%, whereas the lowest group was prosthodontists at 14.0%. Concerning years of practice, a greater portion of respondents reported that they had 1-3 years of clinical experience (28.0%),

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with less than half being 4 to 10 years of experience (24.8%). Some practitioners had 11-15 years of experience (21.7%), but the majority with more than 16 years of experience were greater at 25.5%.
Figure (2) also illustrated that the respondents differed in their primary place of work. Close to half of the participants worked in private practice clinics (49.6%), while less than a third were connected to dental faculties (28.2%). The lowest number of respondents were in the employment of governmental hospitals (22.2%). The results reveal several striking differences in fixed prosthodontic practices among the DPs. The findings also indicated that newly graduated dentists (1-3 years of experience) were mainly employed in private clinics, while the most experienced practitioners mostly worked in dental faculties, colleges, and government hospitals. This tendency reveals the impact of workplace context as an influence on professional work.
Figure 2 shows three types of dental professionals - GPs, Prosthodontists, and Non-Prosthodontists with additional qualifications - and their varying degrees of experience. Four experience ranges define the data: 1–3 years; 4–10 years; 11–15 years; and more than 16 years (>16).

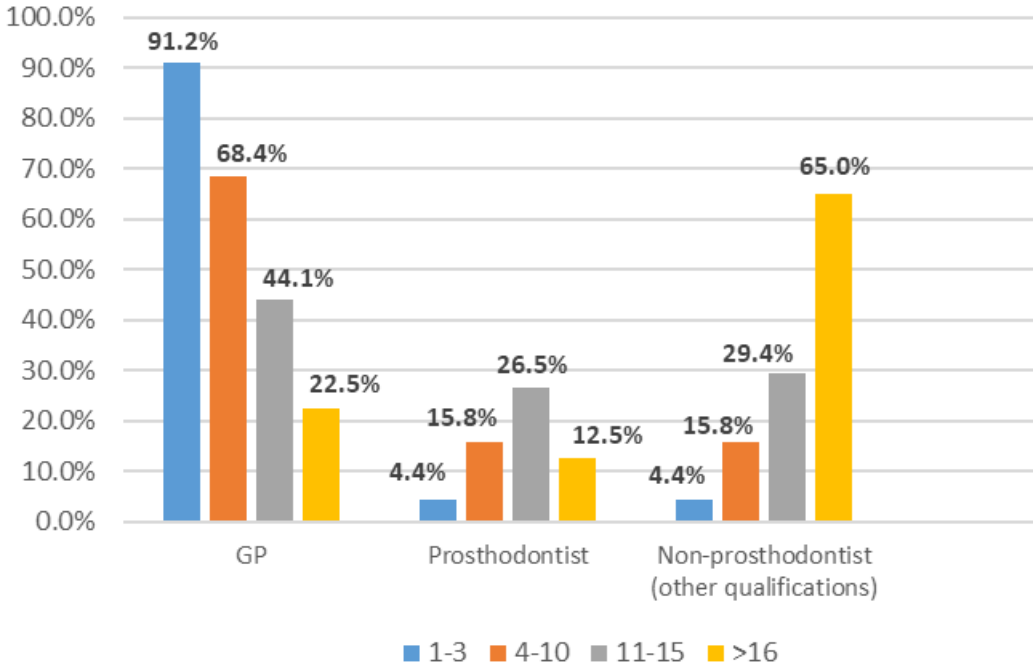

Figure 2. Distribution of dental practitioners (DPs) by experience level and qualification

GPs exhibit the highest percentage of respondents in the 1–3 years bracket (approximately 91%), followed by a stepwise decline in higher experience ranges. Although prosthodontists appear to have a more balanced distribution, they show a lower overall percentage across all experience brackets. For instance, about 22% of prosthodontists are in the 1–3 years bracket, with smaller proportions in the remaining categories. Non-prosthodontists present a contrasting pattern, with the majority (about 65%) having more than 16 years of experience and notably lower percentages in the shorter experience brackets.
The analysis presented in Table 1 highlighted significant gender-related differences in responses to various questionnaire items. Female practitioners were much more likely to follow preoperative radiographic recommendations than male practitioners (94.9% and 70.4%, respectively; p = 0.001). In contrast, males were significantly more inclined to independently manage the prosthetic phase of implant treatments (42.7% compared to 20.3%, p = 0.012). Although the overall frequency of providing fixed partial dentures was slightly higher among males (63.3%) than females (50.9%), this difference was not statistically significant. Furthermore, there was no statistically significant difference between genders for the remaining questionnaire items.

Table 1. Statistically Significant Differences in Questionnaire Responses on Fixed Prosthodontic Practices Among Dental Practitioners Based on Gender (p < 0.05)

Questions	Items	Gender				Total		Chi²	df	P-value
		Female		Male						
		N	%	N	%	N	%			
Do you take a preoperative radiograph for the abutment tooth (teeth)?	Yes	56	94.92	69	70.41	125	79.62	13.67	2	0.001
	Sometimes	3	5.08	28	28.57	31	19.75			
	No	0	0.00	1	1.02	1	0.64			

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Questions	Items	Gender				Total		Chi²	df	P-value
		Female		Male						
		N	%	N	%	N	%			
Do you personally manage the prosthetic phase (part) of dental implant treatment in your practice?	Yes, I handle the prosthetic part of implants	12	20.34	42	42.86	54	34.39	8.81	2	0.012
	No, I collaborate with specialists or technicians for the prosthetic aspect of implant cases	9	15.25	14	14.29	23	14.65			
	No, I do not manage the prosthetic part of implants	38	64.41	42	42.86	80	50.96			

Clinical practice differences based on educational backgrounds were noticeable (Table 2). The use of fixed partial dentures was appreciated more by prosthodontists (77.3%) compared to GPs (56.7%) and non-prosthodontists (53.3%). The usage of high-speed handpieces was consistent (prosthodontists: 77.3%, GPs: 74.4%, non-prosthodontists: 82.2%). Moreover, addition silicone was the most preferred material for final impression taking within all groups (prosthodontists: 50%, GPs: 61.1%, non-prosthodontists: 46.7%). Significantly, GPs reported conducting vitality tests more often compared to prosthodontists, at 71.1% and 27.3%, respectively (p = 0.001). There was also a remarkable dissimilarity in the use of impression trays. The prosthodontists tended to choose stock trays (72.7%) mainly, whereas the other group utilized custom and stock trays (p = 0.001). In addition, provisional crown/bridge placement was considerably greater among the prosthodontists at 77.3% in comparison to GPs at 41.1% and non-prosthodontists at 46.7 (p = 0.005). For implant prosthetic management, 59.09% of prosthodontists handled this phase independently versus 22.2% of GPs and 46.7% of non-prosthodontists (P = 0.004). The ways to knowledge updates varied significantly. For GPs, the preference for prioritizing continuous education was at 50.00%, whereas for prosthodontists, it was 13.6%, and for non-prosthodontists, it was 40.00% (P = 0.004).

Table 2. Statistically Significant Differences in Questionnaire Responses on Fixed Prosthodontic Practices Among Dental Practitioners Based on Level of Education (p < 0.05)

Questions	Items	Level of education						Total		Chi²	df	P-value
		Prosthodontist		General practitioner (GP)		Non-prosthodontist (other qualifications)						
		N	%	N	%	N	%	N	%			
Do you do a vitality test for restored abutment?	Yes	6	27.27	64	71.11	20	44.44	90	57.32	18.77	4	0.001
	Sometimes	14	63.64	21	23.33	22	48.89	57	36.31			
	No	2	9.09	5	5.56	3	6.67	10	6.37			
Which type of impression tray do you use for the final impression?	Stock trays	16	72.73	53	58.89	20	44.44	89	56.69	18.24	4	0.001
	Special or custom-made trays	3	13.64	25	27.78	6	13.33	34	21.66			
	Both of them	3	13.64	12	13.33	19	42.22	34	21.66			
Do you do a provisional (temporary) crown or bridge after finishing the preparation?	Yes	17	77.27	37	41.11	21	46.67	75	47.77	14.97	4	0.005
	Sometimes	5	22.73	40	44.44	23	51.11	68	43.31			
	No	0	0.00	13	14.44	1	2.22	14	8.92			

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Questions	Items	Level of education						Total		Chi²	df	P-value
		Prosthodontist		General practitioner (GP)		Non-prosthodontist (other qualifications)						
		N	%	N	%	N	%	N	%			
Do you personally manage the prosthetic phase (part) of dental implant treatment in your practice?	Yes, I handle the prosthetic part of implants	13	59.09	20	22.22	21	46.67	54	34.39	15.59	4	0.004
	No, I collaborate with specialists or technicians for the prosthetic aspect of implant cases	3	13.64	14	15.56	6	13.33	23	14.65			
	No, I do not manage the prosthetic part of implants	6	27.27	56	62.22	18	40.00	80	50.96			
How do you ensure your knowledge remains up-to-date regarding the latest treatments in fixed prosthodontics?	Engage in continuous education courses	3	13.64	45	50.00	18	40.00	66	42.04	22.34	8	0.004
	Subscribe to professional journals	5	22.73	2	2.22	6	13.33	13	8.28			
	Discuss and share the knowledge with colleagues	5	22.73	12	13.33	11	24.44	28	17.83			
	Join online forums or discussion groups	6	27.27	17	18.89	4	8.89	27	17.20			
	Others	3	13.64	14	15.56	6	13.33	23	14.65			

Years of clinical experience also had a marked impact on practice patterns (Table 3). Practitioners with 1–3 years of experience reported the highest rate of vitality test preferring at 77.8%, which sharply declined to 37.50% among those with over 16 years of experience (p = 0.001). The use of high-speed handpieces increased with experience, peaking at 92.50% among the most seasoned practitioners (p = 0.033). Moreover, significant differences were observed in impression disinfection practices, with only 30.0% of practitioners having more than 16 years of experience disinfecting impressions compared to 65.8% among those with 4–10 years (p = 0.011). Additionally, the choice of material for interocclusal records was different and included wax for newer practitioners (42.5%) and increasing use of a combination of materials by senior practitioners (p = 0.04).

Table 3: Statistically Significant Differences in Questionnaire Responses on Fixed Prosthodontic Practices Among Dental Practitioners Based on Years of Practice (p < 0.05)

Questions	Items	Year of practice								Total		Chi²	df	P-value
		1-3 years		4-10 years		11-15 years		More than 16 years						
		N	%	N	%	N	%	N	%	N	%			
Do you do a vitality test for restored abutment?	Yes	35	77.78	24	63.16	16	47.06	15	37.50	90	57.32	23.26	6	0.001
	Sometimes	6	13.33	11	28.95	18	52.94	22	55.00	57	36.31			
	No	4	8.89	3	7.89	0	0.00	3	7.50	10	6.37			
Which type of handpiece do you use for dental crown preparation?	High-speed handpiece	35	77.78	26	68.42	23	67.65	37	92.50	121	77.07	8.72	3	0.033
	Low-speed handpiece	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00			
	Both of them	10	22.22	12	31.58	11	32.35	3	7.50	36	22.93			

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Questions	Items	Year of practice								Total		Chi²	df	P-value
		1-3 years		4-10 years		11-15 years		More than 16 years						
		N	%	N	%	N	%	N	%	N	%			
Do you chemically disinfect the impression after it is removed from the patient's mouth and before pouring or sending it to the lab?	Yes	22	48.89	25	65.79	14	41.18	12	30.00	73	46.50	16.62	6	0.011
	Sometimes	9	20.00	8	21.05	11	32.35	20	50.00	48	30.57			
	No	14	31.11	5	13.16	9	26.47	8	20.00	36	22.93			
If yes, which material do you use for the interocclusal record?	Wax	26	57.78	11	28.95	11	32.35	17	42.50	65	41.40	17.61	9	0.04
	Silicon	10	22.22	9	23.68	7	20.59	2	5.00	28	17.83			
	Both of them	6	13.33	17	44.74	13	38.24	17	42.50	52	33.12			
	I never use interocclusal records	3	6.67	1	2.63	3	8.82	4	10.00	11	7.01			

The questionnaire revealed that certain responses based on gender, level of education, or years of practice in dentistry did not differ significantly. The majority of the practitioners carried out fixed partial dentures more frequently, with prosthodontists heading up the group for specialized procedures. Preoperatively, almost participants preferred taking radiographs for the abutment teeth and making diagnostic casts. Addition silicone was mostly chosen as an impression material, while crown preparation was mostly done with a high-speed handpiece with diamond burs. Stock trays were more prevalent, with some practitioners using custom trays for more precision. Temporary crowns and try-in steps were all standard practices, although prosthodontists always seemed to use them consistently. Communication with dental technologists was mostly through a mix of written and verbal methods. Not all practitioners independently dealt with the prosthetic phases of implants; in fact, GPs still collaborated with specialists while sometimes dealing with the prosthetic phase of implants. Continuing education preferences were largely varied, such that GPs were more active in continuous learning than prosthodontists. Overall, the findings highlighted varied approaches in fixed prosthodontics that were influenced by the practitioner's background and experience.

Discussion

The current study, conducted in Tripoli, sought to understand the knowledge, attitudes, and practices of DPs concerning fixed prosthodontics. Specifically, it investigated how these aspects varied with gender, education level, and clinical experience. The results paint a detailed picture of current practice, revealing areas of agreement alongside significant differences that merit further discussion.

An intriguing finding was the gender-based variations in practice. While males showed a slightly higher frequency of providing FPDs, the difference was not statistically significant. In contrast, females were significantly more likely to routinely take preoperative radiographs compared to males, suggesting potential differences in risk perception and adherence to pre-treatment evaluation protocols. When compared to the study by Eltawati and Elfallah, the overall percentage of radiograph usage aligns more closely with the findings for females in Tripoli [21]. These results suggested that females in Tripoli may be more aligned with global recommendations for radiographic evaluation, while males may need to improve in this area. This contrasts with a previous study by Berhaim et al., which found that specialists (predominantly males) were more likely to take radiographs, emphasizing the complex relationship between gender and professional training. Additionally, a larger proportion of males managed the implant prosthetic phase themselves compared to females [17], potentially reflecting differences in training, confidence, or practice focus and raising questions about training and mentorship opportunities for females in implant dentistry. Despite these differences, many practical aspects were consistent across genders, with both groups predominantly using high-speed handpieces and addition silicone impressions and emphasizing post-delivery instructions. The consistent use of additional silicone impressions aligns with the findings of Berhaim et al, which also indicate a global trend toward using this material [20].

Education level also played a significant role. The findings indicate that prosthodontists showed a greater preference for fixed partial dentures and provisional crown/bridge placement compared to GPs and non-

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prosthodontist specialists. This finding aligns with the study by Berhaim et al. and reinforces the importance of specialized training [17]. Our findings further reveal that dentists with specialized training consistently preferred to take a preoperative X-ray of abutment teeth before beginning fixed prosthodontic work, a result similar to that reported by Berhaim et al. [17]. The results regarding vitality testing were also similar to those reported in Eltawati and Elfallah's study [21]. One survey question asked whether abutment teeth should undergo a vitality test before preparation, and the responses indicated that participants always perform the vitality test. Interestingly, GPs were more likely to perform vitality tests on restored abutments than prosthodontists, perhaps due to differences in patient populations or case complexity. Regarding material preferences, prosthodontists favored stock trays for impressions, whereas GPs and non-prosthodontist specialists used both stock and custom trays. This contrasts with the findings of Berhaim et al., potentially reflecting differences in study populations [17]. Approaches to continuous education also differed, with GPs prioritizing it more than prosthodontists, possibly indicating that prosthodontists rely more on their specialist education.

Clinical experience also influenced fixed prosthodontic practices. While the frequency of providing FPDs did not vary significantly across experience levels, newer practitioners showed a higher rate of performing vitality tests compared to more experienced dentists, possibly reflecting a greater emphasis on evidence-based protocols in recent dental school curricula. The use of high-speed handpieces increased with experience, and disinfection practices as well as the choice of material for interocclusal records also varied with experience, potentially reflecting evolving protocols.

Comparing our study with previous research reveals a trend toward increasing adherence to best practices, including radiographic evaluation, vitality testing, and the adoption of addition silicone. However, inconsistencies persist in study model utilization and retraction cord application, underscoring the need for continued professional development and standardization [17, 21]. When comparing our findings with those of Berhaim et al., overall adherence has improved, particularly among GPs. Although temporary restoration practices have increased, gaps remain between GPs and specialists, and impression disinfection rates still lag behind international standards [17]. Differences between our findings and the results of Eltawati and Elfallah, conducted in Benghazi, highlight regional variations [21].

In the present study, just over half of the participants preferred using addition silicone (55.4%) as the final impression material. The remaining participants selected condensation silicone, alginate, or other materials (28.7%, 7.6%, and 8.3%, respectively). In contrast, the study by Eltawati and Elfallah found that participants favored condensation silicone (65.8%) [21]. This suggests that the transition among practitioners in Libya aligns with international trends, which prioritize materials with superior accuracy and dimensional stability. Furthermore, this shift may indicate improved access to advanced materials and evolving professional preferences in the country.

On the other hand, communication with dental technologists was predominantly conducted through a combination of written and verbal methods. This finding is consistent with the results of Eltawati and Elfallah's study, in which 76.3% of practitioners reported using similar communication methods [21].

Compared to international studies, practitioners in Tripoli demonstrate strengths in adopting advanced impression materials and performing vitality testing more frequently than practitioners in Sudan and eastern Nepal. However, gaps remain in infection control, provisional restorations, and retraction cord usage [15, 20]. Although the rate of taking preoperative radiographs (79.6%) is comparable to that reported in Rathi et al.'s study in eastern Nepal [20], it is slightly lower than the rate observed in Saudi Arabia 82% [19]. The frequency of performing vitality testing (57.32%) was higher than that reported in eastern Nepal 46% [20] but lower than in Saudi Arabia 2022 (66%) [19]. The preference for addition silicone (55.4%) was higher than that reported in eastern Nepal [20] but lower than the preference observed in Saudi Arabia 76% [19]. Retraction cord utilization (58%) lagged behind Nepal (70%) but exceeded Saudi Arabia (40.3%), suggesting training or cost-related variations, and the use of provisional restorations (47.8%) was lower than in Qassim [18]. Moreover, only 46.5% of practitioners disinfected impressions—a rate far lower than the 91% reported in Saudi Arabia [19]. Nevertheless, 73% of the surveyed dentists in Khartoum state, Sudan never disinfected the impression before been send to the dental laboratory [15].

However, in contrast to the results from Tripoli in our survey, Moldi et al.'s study discovered that a sizable portion of practitioners do not take diagnostic impressions [27], and Mohamed et al.'s study observed the infrequent usage of study casts and radiography [15]. Additional training and adherence to global guidelines are required to enhance clinical practices.

Conclusion:

The study provided a comprehensive overview of fixed prosthodontic practices among DPs in Tripoli, Libya. Our findings reveal significant variations in clinical protocols based on gender, educational background, and years of experience. While the majority of practitioners adhere to fundamental procedures such as preoperative radiographic evaluations and the use of high-quality impression materials, gaps persist in areas including vitality testing, impression disinfection, and provisional restoration techniques. These inconsistencies underscore the critical need for ongoing professional development and the standardization of clinical protocols to enhance treatment outcomes and patient care quality.

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Limitations

Several limitations must be acknowledged. First, the cross-sectional design of the study limits our ability to infer causality between the observed variables. Second, since the sample was drawn exclusively from practitioners in Tripoli, the findings may not fully represent dental practices across Libya. Third, relying on self-reported data introduces the potential for recall and social desirability biases. Lastly, while the sample size is adequate for initial insights, it may restrict the generalizability of the results to a broader population of dental practitioners.

Recommendations

Based on the study outcomes and limitations, it is recommended that targeted continuing education programs be developed to address the identified gaps in clinical practice, particularly in advanced prosthodontic techniques and infection control protocols. Establishing and disseminating standardized clinical guidelines across both public and private sectors could promote greater uniformity in treatment approaches. Future research should aim to expand the geographical scope beyond Tripoli to capture a more comprehensive picture of DPs nationwide and consider longitudinal studies to monitor the evolution of clinical standards over time. Additionally, fostering stronger collaboration and communication between DPs and laboratory technicians may further enhance the quality of prosthodontic care.

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المستخلص

تعد الجسور الثابتة خيارًا شائعًا في ترميم الأسنان، إلا أن نجاحها يعتمد على الالتزام بالبروتوكولات السريرية القياسية. هدفت هذه الدراسة إلى تقييم مستوى المعرفة والمواقف والممارسات) لدى ممارسي طب الأسنان في طرابلس، ليبيا، فيما يتعلق بإجراءات الجسور الثابتة. تم إجراء دراسة مسحية مقطعية شملت 157 ممارسًا لطب الأسنان في طرابلس، من بينهم ممارسون عامون، وأخصائيون، وأطباء من ذوي الخبرات السريرية المتفاوتة. تضمن الاستبيان، المكون من 21 بندًا، تقييم التشخيصات قبل العلاج، والإجراءات التقنية، والتواصل مع المعامل، ورعاية ما بعد التركيب .تم تحليل البيانات باستخدام الإحصاءات الوصفية واختبارات مربع كاي. لوحظت فروق في الإجراءات السريرية بين الجنسين، ومستوى التعليم، والخبرة. أظهرت النتائج أن الإناث يلتزمن أكثر بإجراء الأشعة التشخيصية قبل العلاج ($p<0.001$) ، في حين أن الذكور ينشؤون تعويضات السنية على الزرعات بشكل مستقل بمعدل أعلى ($p<0.012$) . كما تبين أن التيجان والجسور المؤقتة يتم تنفيذها بشكل أكبر من قبل أخصائيي تركيبات الأسنان ($p<0.005$) ، وأنهم يقومون بصناعة التعويضات السنية على الزرعات بشكل مستقل في كثير من الأحيان ($p<0.004$). أظهر الممارسون ذوو الخبرة من 1-3 سنوات استخدامًا شائعًا لاختبار حيوية الأسنان ($p<0.001$) ، بينما استخدم الممارسون الذين تزيد خبرتهم عن 16 عامًا إعداد الأسنان بأداة عالية السرعة (High speed handpiece) بمعدل أكبر ($p<0.033$) . كما لوحظت فروق كبيرة في تعقيم الطبعات السنية ($p<0.011$) ومواد تسجيل الإطباق($p<0.04$) وفقًا لمستوى الخبرة. اتفق جميع المشاركين في الاستبيان على أن تحضير الأسنان هو العامل الأكثر أهمية في نجاح تثبيت الجسور الثابتة. تسلط هذه الدراسة الضوء على التباينات المهمة في ممارسة التركيبات الثابتة بين ممارسي طب الأسنان في طرابلس، مما يشير إلى الحاجة إلى برامج تعليم مستمر مستهدفة وتوحيد البروتوكولات السريرية لتحسين نتائج العلاج للمرضى.

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