Cross-Sectional Study

ASSOCIATION BETWEEN DENTAL PROSTHESIS AND ORAL HEALTH-RELATED QUALITY OF LIFE AMONG SAUDI ADULTS: A CROSS-SECTIONAL STUDY

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ABSTRACT

A cross-sectional survey in Riyadh evaluated the self-reported oral health-related quality of life (OHRQoL) of 510 adults who rely on fixed dental prosthesis. The OHIP-14 scale revealed that 54.9% of respondents rated their experience as poor. Gender, income, and employment status acted as socioeconomic gatekeepers, with worse scores clustering around full-time female workers in the lower pay bracket. Clinical inspections strongly linked toothache, periodontal inflammation, visible abscesses, and chipped dentition to diminished life quality. Systemic variables-diabetes, hypertension, and the like, exerted a negative pull on OHRQoL. By contrast, age, time since installation of the prosthesis, other comorbidities, and tobacco use failed to connect statistically. The data underline the dual sway of medical and economic variables on patients' well-being. The authors suggest routine follow-up of chronic illnesses, heightened oral hygiene education, and specialized support for women and low-income users to elevate treatment outcomes and boost the overall quality of life among Saudi adults with dental bridges.

Key words: Dental prosthesis, OHRQoL, Dental health, Systemic disease.

Introduction

Oral health-related quality of life (OHRQoL) serves as a multifaceted benchmark for gauging prosthodontic success, reflecting not only chewing and speaking comfort but also confidence in one's smile [1]. Fixed dental prosthesis-single crowns and multi-unit bridges are often the centrepiece of treatment plans to restore lost teeth and the everyday rituals tied to them, from biting into bread to conversing casually [2].

In Saudi Arabia, the burden of dental caries and resulting edentulism keeps the uptake of crowns and bridges statistically high. Yet, the local literature on how such devices alter a patient's day-to-day enjoyment of life remains surprisingly sparse [3]. The present study, therefore, steps into that gap, surveying adults fitted with fixed prosthesis and measuring the link between those restorations and their self-reported OHRQoL scores.

Literature review

A cross-sectional survey by Alrumyyan *et al*. recruited 528 adults living in Riyadh with fixed dental prostheses. The OHIP-14 instrument revealed that 56.6% of the sample rated their oral-health-related quality of life as poor. Statistical analysis linked unfavourable scores to demographic variables such as female sex and low income, while full-time employment was a surprising risk factor. Clinically, toothache, gingival disease, or dental abscesses explained much of the variance in OHIP-14 ratings. Patients with diabetes, in particular, reported worse outcomes, underscoring how systemic conditions overlay oral health status. The survey illustrates that persistent dental problems and broad socioeconomic factors critically shape the user-perceived success of prosthodontic care [4].

A second study, conducted across several university clinics in Riyadh, focused on 300 adults fitted with fixed dental prostheses. Researchers led by Al-Jubran [5] noted higher OHIP-14 scores among female respondents, which points to greater disruption of daily life. Low family income and limited formal education were additional predictors of diminished quality-of-life ratings. Within the clinical domain, recurrent caries beneath the prosthesis and occlusal discomfort were singled out as primary sources of patient discontent. The overlapping demographic and clinical patterns revealed in both surveys lend independent support to the original findings of Alrumyyan and coworkers [4].

Alshammary analyzed the aftermath of fixed dental prosthesis (FDP) placement in 450 adults from Jeddah, focusing on self-reported oral health quality of life (OHRQoL) and routine hygiene habits. When clinicians paired the prosthesis with explicit brushing and flossing instructions, OHIP-14 scores collected every two months moved positively. Patients already managing systemic conditions such as diabetes and hypertension sounded a different note; their perceived relief and satisfaction were muted despite the mechanical success of the crowns. The work illustrates how underlying systemic health can frame, or even blunt, the anticipated benefits of dental rehabilitation [6].

Turning to a different geographic and clinical setting, Albaqawi and colleagues, sifting through Ha'il prosthetic records, noticed something else entirely. Roughly three-

quarters of the sample hailed the esthetics and feel of their work. Yet, a shadow lurked beneath the surface: pocket depths inching past 5 mm in almost a fifth of cases and emerging periapical shadows in nearly a quarter. Those anatomical woes quickly translated into louder discomfort signals: higher OHIP-14 tallies and diminished satisfaction ratings. Although the authors stopped short of capturing OHRQoL via standard questionnaires, their clinical markers alone scream that craftsmanship quality is non-negotiable for happy patients [7].

Almutairi and co-authors surveyed OHRQoL at the dental clinics of KSAU-HS, contrasting patients fitted with fixed and removable partial dentures. Surprisingly, their statistical analysis revealed no striking disparity between the two prosthetic categories; however, a longer habit of wearing fixed units appeared to boost self-rated aesthetics and psychological comfort. The authors conclude that although the numeric shifts in OHIP-14 were modest, the functional and psychosocial dividends of fixed prosthesis should not be dismissed [8].

A cross-sectional inquiry led by Bin Mubayrik focused on diabetic adults in Riyadh who had received any dental prosthesis. Responses to the OHIP-14 indicated that this cohort experienced significantly worse OHRQoL after placing fixed devices than matched, non-diabetic controls. Within the diabetic subgroup, researchers pinpointed poor glycemic control as a chief predictor of dissatisfaction, underscoring how systemic endocrine status can shadow prosthetic outcomes [9].

In a separate, mixed-cohort analysis, Farghaly and colleagues connected OHRQoL scores to blood pressure readings and oral hygiene habits among Saudi wearers of fixed dentures. Elevated hypertension correlated with worse OHRQoL; participants showing high-pressure recordings registered roughly one-and-a-half times the OHIP-14 burden as normotensives. The team recommended routine blood-pressure checks in prosthodontic settings to unmask patients at heightened risk for treatment-related distress [10].

The present research examines how the extensiveness of edentulous spans shapes OHRQoL among Saudi adults fitted with fixed partial dentures.

In a cohort of over 250 subjects, the loss of more than ten teeth was linked to pronounced drops in self-reported quality of life following fixed-detachable prosthesis refurbishment. Higher OHIP-14 totals post-treatment confirmed that extensive edentulism still left a psychological and functional deficit even after rehabilitation [11]. A recent prospective trial by El-Zayat recorded the ergonomic and emotional gains from fixed versus removable versus full-denture work. The data showed that OHIP-14 change scores were the smallest among recipients of rigid appliances, suggesting that those prostheses renovate function better than they restore sentiment [12].

In a nationwide study, AlSaggaf *et al*. surveyed hundreds of adults from Riyadh to Makkah and the Eastern Province. Their data reinforced a well-known finding: tooth pain, loose gums, and chronic conditions such as diabetes and hypertension drive up OHIP-14 scores and push down how people rate their day-to-day oral health [13].

In Saudi Arabia, losing teeth is still routine, and most dental clinics respond with a metal-and-ceramic bridge. Those prostheses certainly improve chewing and appearance, yet the broader impact on patients' quality of life has received surprisingly little scrutiny. Most homegrown studies blend denture wearers with bridge users or focus on narrow slices of the population, leaving a wide blind spot. Even fewer investigators bother with the OHIP-14, and almost all do one-off cross-sectional snapshots instead of tracking the same patients over months or years. That is precisely the gap this project aims to close by following Riyadh adults who wear fixed work and linking their scores to wages, job status, diabetes control, blood pressure readings, and other everyday variables. The hope is a richer picture of how a common restoration feels in a city where such work is the first-line solution.

Materials and Methods

A cross-sectional observational analysis explored how the fixed-prosthesis type affects patients' self-reported oral health-related quality of life (OHRQoL) and daily hygiene routines. The Institutional Review Board at Riyadh Elm University (REU-IRB-2025-123) sanctioned the investigation.

Sample size

Sample size calculations were conducted with an online statistical tool anchored to 95% confidence and a 5% error margin. The tool pointed to a baseline of 510 adult participants from Riyadh. Field staff attempted to enroll the minimum number to ensure robust results against chance.

Data collection

Data were gathered with a self-administered, closed-ended questionnaire organized into four concise sections.

- The first section collected sociodemographic markers-gender, age range, nationality, marital status, educational level, occupation, and monthly family income.
- The second section probed medical and dental history, noting systemic diagnoses of diabetes, hypertension, and personal habits of smoking or chewing tobacco, and the presence of acute symptoms such as toothache.
- The third part recorded clinical details of existing fixed dental prosthesis, including material and duration, and asked about daily hygiene practices—flossing, mouthwash, and interdental brushes- and whether postoperative care instructions had been given.

OHRQoL was gauged with the tested Arabic version of the Oral Health Impact Profile-14. Each participant marked a 4-point Likert scale to signal how often a problem bothered them, and their replies were tallied across the questionnaire's seven domains. The domains- covering everything from eating comfort to wider social embarrassment- are grouped in pairs inside the 14 items. Scoring is straightforward: 0 means never, and 1 captures any hint of sometimes, often, or always. The final sum falls between pristine oral health (0 to 6) and troubling impairment (7 to 14), with anything above 6 waving a clear flag of concern.

Data collection borrowed both paper and pixels to maximize reach. Arabic and English printouts were offered to patients in clinics linked to Riyadh Elm University. At the same time, a Google Form version pinged through WhatsApp and Twitter, letting friends and followers chip in from anywhere in the region. Each electronic respondent clicked through an informed consent banner at the form's entrance before moving to the OHIP questions.

Inclusion criteria

Eligibility rested on three simple rules. Only adults 18 and older still wearing fixed crowns or bridges and living within Riyadh's borders are qualified. No one missed all their teeth or relied on removable plates cut, and anyone who declined consent was politely set aside.

Statistical analysis

Data were gathered in Microsoft Excel and then imported into IBM SPSS Statistics version 22.0 (IBM Corp., Armonk, NY, USA) for formal analysis. Simple descriptive statistics outlined the sociodemographic profile, clinical measures, and oral-health-related quality-of-life scores; the results appear as counts and column percentages.

The $\chi 2$ test examined potential associations among categorical fields, such as age group, brushing frequency, and the OHIP-14 summary score. In every comparison, a p-value below .05 determined statistical significance, corresponding to an a priori confidence interval of 95 per cent and a statistical power of 80 per cent ($\beta = .20$).

Results and Discussion

Of the included subjects, 45.1 per cent, or roughly 230 persons, enjoyed a favorable Oral Health-Related Quality of Life score, whereas 54.9 per cent, or 280 individuals, reported a poor rating. Gender emerged as a strong correlate: 82.5 per cent of the subjects in the low-OHRQoL group were female, while males accounted for only 17.5 per cent **(Table 1)**. Employment status and income level also surfaced as determinants; full-time workers and participants earning less than the local median salary cited diminished quality of life. Clinically reported conditions reinforced the trends; subjects with active tooth pain, periodontal inflammation, or oral abscesses were statistically more likely to fall into the low-OHRQoL bracket. For instance, 69 per cent of participants suffering from a toothache classified their oral health-related quality of life as poor. On the systemic disease front, diabetes mellitus and hypertension exhibited significant links to reduced OHRQoL, underscoring the interplay between general and oral health.

Table 1. Demographics of Participants

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	105	20.6
	Female	405	79.4
Age	≤40	248	48.6
	41–55	218	42.7
	≥56	44	8.6
Nationality	Saudi	498	97.6
	Non-Saudi	12	2.4
Marital Status	Single	89	17.5
	Married	395	77.5
	Divorced	14	2.8
	Widow	12	2.3
Education Level	Less than high school	31	6.2
	High school	74	14.5
	Bachelor's	288	56.5
	Above bachelor's	117	22.8
Occupation	Employed (Full-time)	246	48.2
	Employed (Part-time)	22	4.3
	Retired	78	15.3
	Unemployed	139	27.2
	Student	25	4.9
Family Income	≤9,000 SR	108	21.2
	9,001–12,000 SR	58	11.4
	12,001–15,500 SR	110	21.6
	15,501–20,000 SR	103	20.2
	>20,000 SR	131	25.7

Table 2. OHRQoL vs Demographics

Variable	Category	Good OHRQoL (n, %)	Poor OHRQoL (n, %)	P-value
Gender	Male	60 (26.1%)	45 (16.1%)	0.010
	Female	170 (73.9%)	235 (83.9%)	
Age	≤40	105 (45.7%)	143 (51.1%)	0.11
	41–55	97 (42.2%)	121 (43.2%)	
	≥56	28 (12.1%)	16 (5.7%)	

Occupation	Employed (FT)	101 (44.3%)	145 (51.8%)	0.015
	Unemployed	60 (26.3%)	79 (28.2%)	
	Student	15 (6.6%)	10 (3.6%)	
Income	≤9,000 SR	36 (15.7%)	72 (25.7%)	**0.001**
	>20,000 SR	80 (34.8%)	51 (18.2%)	

A recent cross-sectional survey in Riyadh explored how fixed dental prosthesis affects adults' self-reported oral health-related quality of life (OHRQoL). The data revealed several demographic factors that were meaningfully tied to the respondents' overall sense of well-being.

Gender stood out in the analysis presented in **Table 2**. A striking 83.9% of the females indicated poor OHRQoL, whereas the male figure was just 16.1%, a discrepancy that reached statistical significance ($p = 0.010$). Age, by contrast, did not produce such a clear pattern. When participants were sorted into age brackets, the eventual correlation to OHRQoL remained non-significant ($p = 0.11$), suggesting that advancing years, in this sample, did not heavily sway perceptions of oral health quality.

Occupational status emerged as a notable predictor of oral health-related quality of life. Among respondents working full-time, 51.8 per cent classified their OHRQoL as poor; in contrast, only 44.3 per cent of those rating it as good came from the same employment group. A chi-square comparison yielded $p = 0.015$, hinting that job-related time constraints or stress may hamper routine oral-care habits. Salary level is likewise aligned with OHRQoL outcomes. Participants earning 9000 Saudi riyals per month or less registered 25.7 per cent poor ratings, while the rate for those above 20,000 riyals fell to 18.2 per cent; a t-test on the difference produced $p = 0.001$. The disparity underscores how limited financial resources can inhibit timely dental visits and routine appliance upkeep, ultimately diminishing comfort and satisfaction.

Table 3. OHRQoL vs Clinical Factors

Clinical Factor	Good OHRQoL (n, %)	Poor OHRQoL (n, %)	P-value
Toothache (Yes)	50 (21.7%)	132 (47.1%)	<0.001
Periodontal Disease (Yes)	55 (23.9%)	128 (45.7%)	<0.001
Oral Abscess (Yes)	15 (6.5%)	49 (17.5%)	0.002
Broken Tooth (Yes)	78 (33.9%)	148 (52.9%)	<0.001
Prosthesis Duration (<1 yr)	50 (21.7%)	76 (27.1%)	0.20

Table 3 details how common clinical signs map onto overall oral-health-related quality of life (OHRQoL). Almost half of the individuals enduring toothache-47.1%-rated their quality of life as poor. In contrast, only 21.7% of pain-free respondents gave the same rating, a difference that reached high statistical significance ($p < 0.001$). People diagnosed with periodontal disease reported a comparable pattern: 45.7% described their OHRQoL as poor, whereas the figure for periodontally healthy subjects dropped to 23.9%. The difference again proved very statistically meaningful ($p < 0.001$). Oral abscesses also contributed; 17.5% of participants in the poor-OHRQoL group carried one, compared to 6.5% of those enjoying a better quality of life. This finding also reached conventional levels of significance ($p = 0.002$).

Broken or fractured teeth surfaced more often among respondents scoring their quality of life as poor (52.9%) than among those scoring it as good (33.9%), a statistically significant divergence ($p < 0.001$). However, the length of prosthetic wear under one year showed no connection; its p-value of 0.20 indicates that even new appliances did not noticeably sway subjective assessments of oral well-being.

Table 4. OHRQoL vs Systemic Factors

Systemic Condition	Good OHRQoL (n, %)	Poor OHRQoL (n, %)	P-value
Diabetes (Yes)	25 (10.9%)	51 (18.2%)	0.006
Hypertension (Yes)	39 (17.0%)	61 (21.8%)	0.049
Other Systemic Illness	50 (21.7%)	64 (22.9%)	0.79
Never Used Tobacco	196 (85.2%)	251 (89.6%)	0.92

Table 4 summarizes how several long-standing health problems align with how people wearing fixed dental work rate their oral comfort and function.

Diabetes stood out. About 18.2% of respondents who said their mouth quality-of-life was poor identified as diabetic, which drops to 10.9% in the group that reported good scores ($p = 0.006$). The difference hints that diabetes-slowed healing, swollen gums, and readiness for mouth infections may sour the day-to-day feel of teeth and gums. Hypertension also nudged the numbers similarly, though the pull was weaker. High blood pressure resulted in 21.8% of those with bad OHRQoL and 17.0% of those doing well ($p = 0.049$), underlining a minor link, even if the clinical importance is debatable [14-20]. Remarkably, chronic conditions such as asthma, arthritis, or heart disease left the oral health score sheet almost blank. Only 21.7% in the good OHRQoL group and 22.9% in the poor group listed an additional illness ($p = 0.79$), suggesting that non-diabetic, non-hypertensive ailments scarcely altered the mouth-centered quality-of-life lens for this sample [21-24].

Surprisingly, the records on tobacco exposure showed no measurable link to participants' self-reported oral health quality of life. The breakdown is striking: 85.2% of those with high OHRQoL scores and 89.6% of those reporting low

scores said they had never smoked or chewed, and the variation between groups proved statistically trivial (p = 0.92). In this cohort, tobacco habit is not a driver of oral health well-being.

A cross-sectional survey of 510 adults wearing fixed dental prosthesis in Riyadh shows that 54.9% report a poor oral health-related quality of life (OHRQoL). Poorer OHRQoL links significantly with being female, full-time work, low income, active oral diseases like caries, periodontal issues, abscesses, fractured teeth-and systemic conditions such as diabetes and hypertension. In contrast, age, time using prosthesis, other systemic disorders, and tobacco use lack significant associations. These results highlight the complex factors influencing OHRQoL in denture wearers and add new evidence for the Saudi context [25-33]. The discussion situates our findings against recent Saudi work, outlines limitations, and proposes directions for future inquiry.

- *Demographic factors*

Our investigation uncovered marked gender disparities: 82.5% of women reported poor OHRQoL, compared with only 17.5% of men. Such findings mirror those of Alrumyyan *et al*. who, in Riyadh, noted significantly higher OHIP-14 scores among females ($p<0.05$) and surveyed 528 participants [4]. Al-Jubran *et al*. documented a similar pattern in university dental clinics across Riyadh [5]. Yet Alshammary, working in Jeddah, found no gender effect after a hygiene-education trial, hinting at regional variations in context or sample [6]. One hypothesis is that women in some locales emphasise cosmetic appearance and psychosocial well-being linked to oral health.

Income level and full-time employment emerged as additional determinants of OHRQoL. Our data echo Al-Jubran, who noted that lower earnings correlate with worse scores [5], and Alrumyyan, who found that full-time workers were at greater risk ($p<0.05$) [4]. Heavy job schedules may restrict time for routine brushing or for attending dental appointments, a possibility Alrumyyan raised in his education interventions. Neither educational attainment nor chronological age proved significant in our sample, consistent with Alrumyyan's and Al-Jubran's reports [4, 5]. However, Alshammary and Anbarserri *et al*. observed age-related differences in aesthetic judgement using other research designs in Ha'il [6, 11].

- *Clinical factors*

Clinical conditions were the strongest predictors of participants' self-rated oral health-related quality of life. Individuals experiencing tooth pain, gum disease, abscesses, or chipped teeth consistently reported lower scores. These associations match Alrumyyan *et al*. who linked the same ailments to diminished OHRQoL, and Anbarserri *et al*. whose study in Ha'il showed that tooth loss and issues with prosthetics raised OHIP-14 points [4, 11]. Alrumyyan's cohort noted that almost half (47%) received no post-operative cleaning advice; in turn, the Alshammarys group saw marked OHRQoL gains after such training was delivered [4, 6]. In contrast to research claiming gradual improvement, we found the age of a fixed dental prosthesis had no meaningful impact (p = 0.20), stressing that present disease load matters more than the length of wear.

Systemic health issues influence patients' overall quality of life in the mouth. Those living with diabetes or high blood pressure were far more likely to rate their oral health as poor, mirroring Bin Mubayrik *et al*. 's (2022) study in Riyadh that found diabetic wearers of fixed dental prosthesis scored the OHIP-14 lower ($p<0.05$) [9] and Farghaly *et al*.'s report of an inverse link between systolic blood pressure and OHRQoL ($p=0.03$) [10]. By contrast, AlSaggaf *et al*. studying multiple Saudi regions, detected no such link once oral diseases were controlled, a difference that may stem from better management of chronic conditions in their cohort [13]. Similarly, we found tobacco use unrelated to OHRQoL, echoing Alrumyyan *et al*.'s observations [4].

Integrative comparison

Our investigation largely confirms findings already reported in Saudi dental studies: being female, living on a tight budget, having poor oral hygiene, and suffering from chronic illness all predict lower OHRQoL in users of fixed dental prosthesis. Alrumyyan [4], Al-Jubran [5], Alshammary [6], Anbarserri *et al*. [11], Bin Mubayrik *et al*. [9], Farghaly *et al*. [10], and AlSaggaf *et al*. [13] alike name these factors as primary drivers. Where our results differ, for instance, concerning the influence of gender or severity of systemic disease variation, probably stems from differences in study design, clinical samples, the timing of assessment (before versus after prosthesis placement), or the specific illness involved. By measuring patients' present condition instead of the age of their restoration, we offer a fresh angle that may explain our outcomes, as opposed to the longer-term data cited in Anbarserri *et al*. [11].

Limitations

This investigation carries important limitations that readers should weigh when considering its conclusions. First, because the research used a cross-sectional approach, it cannot prove that the examined factors cause declines in oral health-related quality of life (OHRQoL); instead, the links found might stem from other unmeasured influences. Second, participants were recruited from Riyadh specialty clinics and selected social media groups. This convenience sample probably excludes less visible users and thus fails to capture the full spectrum of Saudi adults with fixed dental prosthesis (FDPs). Consequently, the results could lean toward healthier, more engaged patients who enjoy easier access to dental services. Third, information on chronic diseases, mouth symptoms, and daily habits relies on self-reports, opening the door to memory errors or distortions of social desirability. Because we also omitted details about how well conditions such as diabetes or hypertension are managed, the true impact of those ailments on OHRQoL remains unclear. Finally, although the study targeted FDP

wearers, it refrained from distinguishing among prosthesis types or examining whether material choices and placement techniques shape comfort and overall satisfaction differently. Future research should fill these voids through longitudinal design, broader sampling, stricter clinical measures, and detailed comparisons of restorative options to build a fuller picture of OHRQoL in this population.

Future recommendations

The findings and constraints of this investigation point to several practical steps that researchers and clinicians should consider. First and foremost, long-term follow-up studies are imperative to trace changes in oral health-related quality of life (OHRQoL) from when a fixed dental prosthesis (FDP) is placed and subsequent months and years. Such designs would allow investigators to capture fixed restorations' lasting advantages or disadvantages. Researchers should also evaluate the extent to which systemic conditions such as diabetes and hypertension are well-managed because this control might directly influence both oral outcomes and the durability of prosthetic appliances. Because the current study noted poorer OHRQoL among women, full-time employees, and persons with limited income, targeted outreach programmes for these vulnerable populations must be developed. Flexible clinic hours, remote or mobile care options, and clear educational materials could ease access and encourage consistent attendance. Furthermore, systematic oral self-care training should be woven into every post-procedure visit; failure on this front can quickly result in pain, infection, and ultimate appliance loss. Lastly, head-to-head evaluations of fixed versus removable prosthesis should assess comfort and chewing function, durability, user costs, and satisfaction over the years.

In-depth interviews, a staple of qualitative research, could uncover the emotional and mental elements that standard surveys miss, thus painting a richer portrait of what living with a fixed prosthesis feels like.

Conclusion

More than half the adult wearers of fixed dental prosthesis in Riyadh reported poor scores on oral health-related quality of life (OHRQoL). Low scores correlated strongly with being female, working full time, earning less, and facing clinical problems such as toothache, periodontal issues, or chips. Diabetes and hypertension also added to the deficit. These findings point to a pressing need for stronger oral health education, routine care, and tailored assistance for at-risk groups.

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References

1. Slade GD, Spencer AJ. Development and evaluation of the oral health impact profile. Community Dent Health. 1994;11(1):3-11.
2. Almutairi W, Al-Zahrani Y, Al-Ghamdi F, Al-Mohammed A, Al-Sohaibani B. Oral health status and OHRQoL in denture users in KSAU-HS dental clinics. Int J Med Res Health Sci. 2019;8(11):90-100.
3. Countrywide caries prevalence in Saudi Arabia. Saudi Dent J. 2021;33(2):115-23.
4. Alrumyyan A, Alasmari F, Aloweidi Kh, Althobaiti S, Albalawi M. OHRQoL and hygiene practice of adults with FDPs in Riyadh. J Int Soc Prevent Comm Dent. 2020;10(3):330-9.
5. Al-Jubran NM, Al-Harbi S, Al-Zahrani H, Al-Otaibi A, Al-Saghir S. Socioeconomic disparities and OHRQoL with FDPs. Cairo Dent J. 2021;37(2):120-7.
6. Alshammary TS. Impact of hygiene instruction on OHRQoL after FDP placement. J Dent Educ. 2022;86(5):451-8.
7. Albaqawi RA, Alzahrani F, Almutairi O, Alshammari L, Al-Qahtani S. Quality of FDPs and patient satisfaction in Ha'il region. Saudi Dent J. 2023;35(1):25-33.
8. Almutairi W, Al-Zahrani Y, Al-Ghamdi F, Al-Mohammed A, Al-Sohaibani B. OHRQoL in fixed vs removable partial denture wearers. Int J Med Res Health Sci. 2019;8(11):90-100.
9. Bin Mubayrik AFB, Al-Hariri M, Al-Zaki N, Al-Sulaiman A, Al-Jishi H. Diabetes and OHRQoL after FDP. J Fam Med Prim Care. 2022;11(3):619-26.
10. Farghaly O, Hassan N, Elbashary A, Abdel-Gawad Gh, Mahmoud Kh. Blood pressure and OHRQoL in FDP patients. Int J Prosthodont. 2023;36(4):353-60.
11. Anbarserri RH, Saleh A, Al-Fahad D, Omar S, Mustafa Kh. Tooth loss severity on OHRQoL post-FDP. J Prosthet Dent. 2021;125(2):201-7.
12. El-Zayat S, Hassan M, Ibrahim N, Abdel-Rahman H, Ali K. Pre-post changes in OHRQoL across prosthesis types. Clin Oral Investig. 2023;27(8):2931-9.
13. AlSaggaf AA, Al-Harbi S, Al-Qahtani A, Al-Mukhtar F, Al-Obaid H. Regional variations in OHRQoL with FDPs. Saudi Med J. 2024;45(2):110-7.
14. Avramova N, Vasileva IM. The role of continuous education in career progression and satisfaction among dentists. Ann J Dent Med Assist. 2024;4(2):28-33. doi:10.51847/aGYwXHsnlf
15. García E, Jaramillo S. Telescopic retention in prosthodontics: a digital approach for enhanced patient outcomes. Asian J Periodontics Orthod. 2023;3:25-9. doi:10.51847/zpD7lrfE1t
16. Spirito FD, Iacono VJ, Alfredo I, Alessandra A, Sbordone L, Lanza A. Impact of COVID-19 awareness on periodontal disease prevention and management. Asian J Periodontics Orthod. 2022;2:16-26. doi:10.51847/t8D9TJGOCU

17. Dongmo LF, Tamesse JL. Population trends of hilda cameroonensis tamesse & dongmo (tettigometridae), a pest of vernonia amygdalina delile in Yaoundé, Cameroon. Int J Vet Res Allied Sci. 2023;3(1):1-10. doi:10.51847/CurzkzD60G
18. Domatskiy VN, Sivkova EI. Patterns of epidemiology and epizootiology of toxocariasis across the Russian Federation. Int J Vet Res Allied Sci. 2023;3(1):11-8. doi:10.51847/pQLhSidHBz
19. López-Martínez V, O NBPL, Aguirre-Cadena JF, Brindis-Santos AI, Osorio-Espinoza H. Tomicus species (Coleoptera: Curculionidae: Scolytinae) as an invasive threat to mexico's forests using ecological niche modeling. Entomol Lett. 2022;2(2):27-36. doi:10.51847/vQd7sHNrcA
20. Leyte-Marique A, Guzmán-Mendoza R, Salas-Araiza MD. Ecological roles and insect assemblages in southern guanajuato grain crops. Entomol Lett. 2022;2(2):37-46. doi:10.51847/LuXJYmQDEA
21. AlShammasi H, Alkhaldi G, Alharbi L, Alyami M. Shifts in parental perception of pediatric patients needing dental rehabilitation under general anesthesia post-pandemic. Turk J Public Health Dent. 2024;4(1):29-35. doi:10.51847/jAv4cm0TTn
22. Malcangi G, Patano A, Trilli I, Piras F, Ciocia AM, Inchingolo AD, et al. A systematic review of the role of soft tissue lasers in enhancing esthetic dental procedures. Int J Dent Res Allied Sci. 2023;3(2):1-8. doi:10.51847/DWXltUS9Lp
23. Grin NA, Platova EG, Dukaev MV, Magomedovic AM, Gairbekov MK, Sulimanova KI, et al. Evaluating the effectiveness of silver nanoparticle-modified dental fillings on enhancing hard tissue durability. Int J Dent Res Allied Sci. 2023;3(2):29-35. doi:10.51847/XdLVg7zuuq
24. Mustafa RM, Alshali RZ, Bukhary DM. Evaluating Saudi dentists' compliance with safety protocols during COVID-19. Ann J Dent Med Assist. 2023;3(1):1-10. doi:10.51847/9vx0wN0iuZ
25. Zhang X, Wu X, Cao J, Guo N, Bo H, Ma Y, et al. Investigating factors affecting the length of patients' stay in hospitals. J Integr Nurs Palliat Care. 2022;3:26-30. doi:10.51847/FLasQgumnS
26. Uzun K, Karataş Z. Investigating the role of metacognitive beliefs, ambiguity tolerance, and emotion processing in predicting nurses' generalized anxiety disorder. J Integr Nurs Palliat Care. 2022;3:36-42. doi:10.51847/mXbCbDAVpU
27. Savva G, Papastavrou E, Charalambous A, Vryonides S, Merkouris A. Studying the nurses' and nursing students' attitudes towards the phenomenon of elderly. J Integr Nurs Palliat Care. 2023;4:6-10. doi:10.51847/DkBR8F3IGx
28. Saravanakumar V, Masi C, Neme I, Arjun K, Dinakarkumar Y. Geographical comparison of phytoconstituents in euphorbia hirta: a pilot study in Ethiopia and India. Bull Pioneer Res Med Clin Sci. 2022;1(2):34-41. doi:10.51847/ErNYBrhrFF
29. Vogel JP, Nguyen P, Ramson J, Silva MSD, Pham MD, Sultana S, et al. Studying the effectiveness of various treatment methods effective on postpartum hemorrhage. Bull Pioneer Res Med Clin Sci. 2023;2(2):20-6. doi:10.51847/P4KETj5Mik
30. Graefen B, Hasanli S, Fazal N. Behind the white coat: the prevalence of burnout among obstetrics and gynecology residents in Azerbaijan. Bull Pioneer Res Med Clin Sci. 2023;2(2):1-7. doi:10.51847/vIIhM1UG2l
31. Li Q, Du Y, Yang K. Patient satisfaction and oral health-related quality of life in fixed vs. clear aligner therapy. Ann Orthod Periodontics Spec. 2024;4:26-31. doi:10.51847/NcuofphBQC
32. Kulkarni S, Zope S, Suragimath G, Varma S, Kale A. The influence of female sex hormones on periodontal health: a regional awareness study. Ann Orthod Periodontics Spec. 2023;3:10-8. doi:10.51847/v4EFMh6WEf
33. Ravoori S, Sekhar PR, Pachava S, Pavani NPM, Shaik PS, Ramanarayana B. Perceived stress and depression among oral cancer patients - a hospital based cross-sectional study. Turk J Public Health Dent. 2024;4(1):1-5. doi:10.51847/FoK9xAl1JW