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Cross-Sectional Study

Saudi Dentists' Knowledge and Approaches to Managing Tooth Wear: A Cross-Sectional Survey-Based Analysis

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ABSTRACT

Unlike caries, which have been shown to affect both the surface and subsurface layers, dental erosion is primarily considered a surface phenomenon. Tooth erosion occurs in acidic conditions; however, no universally established pH threshold has been identified for its onset. This study investigated the awareness and clinical approaches of Saudi dental professionals regarding the management of tooth-wear. A cross-sectional study was conducted through an online survey targeting Saudi dental professionals. A total of 500 dentists from different regions of Saudi Arabia participated. The majority of respondents were male, accounting for 60.1% of the sample. Furthermore, 72.3% of the participants were general practitioners with limited experience. Among the surveyed dentists, 74.7% routinely examined and documented cases of tooth wear. Almost half of them routinely investigated its underlying cause, with Bruxism being the most commonly identified factor. While most practitioners occasionally assessed patients' dietary habits, 52.6% did not associate caries with tooth-wear. Treatment strategies typically involved restoring affected areas, including the maxillary anterior, premolars, and second molars, using inlays, onlays, or root canal therapy. In addition, 62.1% of respondents expressed a need for more education on managing tooth-wear. Findings showed that dentists demonstrated moderate confidence in diagnosing and identifying the causes of tooth wear, with minimal differences between genders. However, specialists and those with more experience demonstrated higher confidence in both diagnosis and treatment. Bruxism remained the most commonly cited cause, while composite restorations and onlays were the preferred treatment options.

Keywords: Saudi dentists, Treatment decision, Awareness, Tooth wear

Introduction

Unlike caries, which affect both the subsurface and surface regions, dental erosion is generally regarded as a surface condition. However, erosion also leads to mineral loss beneath the softened layer, contributing to surface degradation. This phenomenon, termed 'near-surface demineralization,' differentiates it from the carious process. Although tooth erosion occurs in acidic conditions, no universally established pH threshold has been determined for its onset [1-3].

Early detection of tooth wear during routine dental examinations is essential for effective management. Upon identifying tooth wear, all potential contributing factors should be assessed, including systemic health conditions, oral hygiene practices, discomfort, and functional impairments [4, 5]. This requires a thorough evaluation by the dentist through detailed patient questioning. Keeping a food diary for a specific period allows patients to track their dietary habits, and salivary flow rates can be measured when necessary. A comprehensive analysis of clinical findings and etiological factors is crucial, enabling the development of a personalized preventive strategy for each patient [6-8].

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Modern dental care is moving away from surgical interventions, focusing instead on preventive and minimally invasive approaches. Since tooth wear is an irreversible condition, prevention and management are critical. The prevalence of pathological tooth wear is increasing across different age groups, often going unnoticed by patients until symptoms like dentine hypersensitivity or functional issues emerge [5, 6, 9]. To effectively monitor and control dental wear, reliable assessment methods are necessary. While conventional radiographic techniques and visual inspections remain common, three-dimensional imaging has been integrated to enhance diagnostic accuracy [6-9].

A study conducted among Danish dentists highlighted the importance of reinforcing oral hygiene through the use of a soft-bristled brush and non-abrasive fluoride toothpaste, along with maintaining non-erosive dietary and drinking habits. Among non-invasive treatment approaches, topical fluoride applications were the preferred choice for first molars, while direct composite restorations were the most frequently selected restorative method. Less than 3% of participants considered ceramic laminates, onlays, or crowns as viable treatment options. Notably, there was no significant variation in treatment choices based on the severity of erosion [7-10].

Research among Jordanian dentists revealed that both prosthodontists and general dentists demonstrated knowledge of tooth wear mechanisms. However, general dentists placed less emphasis on clinical assessment and proper documentation in patient records. Although prosthodontists favored minimally invasive treatments for managing tooth wear, general practitioners exhibited lower confidence in diagnosing and addressing the condition. To mitigate further deterioration, patients wearing braces were routinely provided with a sleep guard. When restorative intervention was deemed necessary, resin composite was recommended as the first-line material. While traditional restorative techniques were still utilized in certain cases, the least invasive option was always prioritized [6, 9, 10].

It is essential to recognize that tooth wear has health-related consequences that must be factored into the rehabilitation process and material selection. The use of a well-designed and durable occlusal stabilizing splint is crucial for protecting restorations and minimizing further wear, ensuring ongoing monitoring and follow-up.

Study benefits

The results of this research could contribute to improving the diagnosis and management of tooth wear in future clinical practice.

Study scope

This study examined the awareness and clinical approaches of Saudi dental professionals regarding the management of toothwear.

Study objectives

To evaluate the knowledge and practices of Saudi dentists in diagnosing and treating tooth wear.

To analyze variations in responses based on gender, professional experience, and job designation.

Materials and Methods

Study design

A cross-sectional study was conducted among Saudi dental practitioners using an online survey.

Study sample

This research included 500 dentists from various regions across Saudi Arabia.

Study tool

A structured online questionnaire was developed, incorporating demographic inquiries along with questions assessing knowledge and clinical practices related to the causes, diagnosis, and management of tooth wear.

Instrument reliability and validity

A pilot study was carried out by distributing the survey to twenty participants, and the data were analyzed using SPSS version 22 to assess reliability through Cronbach's coefficient alpha, which yielded a value of 0.741. The validity of the questionnaire was evaluated by experienced REU researchers, and no modifications were required.

Statistical analysis

Data collected were processed using SPSS version 22, employing both descriptive and inferential statistical methods. Group comparisons were conducted using the Chi-square test, with statistical significance set at a p-value of less than 0.05.

Results and Discussion

Power of sample

Table 1. Power of sample

Mean	3.27
Std. deviation	0.71
Sample size	500
Alpha	0.05
Sample mean	3.30
Standard error of the mean	0.03
Critical value	3.25
Beta	0.07
Power	**0.93**

Table 2. Frequency

Variable	Frequency percentage
Gender	
Male	60.1%
Female	39.9%
Work Experience	
Ten years or less	72.3%
For more than a decade	27.7%
Designation	
General Dentist	62.8%
Specialist/Consultant	37.2%
How frequently do you encounter patients with tooth-wear in your practice?	
Always	21.3%
Often	74.7%
Never	4%
Do you document tooth wear in the patient's record?	
Yes	59.7%
No	40.3%
If not, what is the reason for not documenting tooth wear?	
It is not the chief complaint	71.4%
I am not sure how to register	16.5%
I find tooth-wear difficult to diagnose	12%
Do you typically identify a potential cause for tooth wear?	
Mostly yes	46.2%
Occasionally	45.8%
Mostly not	7.9%

In your view, what is the primary cause of tooth wear in Saudi Arabia?	
Bruxism	64.4%
Gastroesophageal reflex	5.1%
Consumption of acidic foods and drinks	27.3%
Rampant caries	3.2%
Do you inquire about the dietary habits of patients presenting with tooth wear?	
Always	41.1%
Occasionally	45.5%
Never	13.4%
In your opinion, do individuals with tooth-wear experience a higher incidence of caries?	
Yes	32%
No	52.6%
I do not know	15.4%
What approach would you take to treat the maxillary anterior region?	
RCT	0.8%
Restore with a crown	10.7%
Restore with a composite	32.8%
Restore with overlay/Onlay	37.9%
Construct a night guard	4.3%
Treat locally with fluoride	7.1%
No treatment	6.3%
What treatment would you apply to the maxillary and mandibular premolar regions?	
RCT	47.9%
Restore with a crown	34.7%
Restore with a composite	17.4%
Restore with overlay/Onlay	39.1%
Construct a night guard	10.3%
Treat locally with fluoride	4%
No treatment	7.1%
What treatment would you use for the maxillary and mandibular second molars?	
RCT	47%
Restore with a crown	27.4%
Restore with a composite	25.6%
Restore with overlay/Onlay	42.7%
Construct a night guard	11.5%
Treat locally with fluoride	1.6%
No treatment	10.3%
Do you feel that additional information is necessary for managing patients with tooth wear?	
Yes	62.1%
No	12.3%
May be	25.7%

Table 3. Gender-based comparison of responses

Variable	Male	Female	P-value
How regularly are patients with tooth wear present in your practice?			
Always	22.4%	19.8%	.887
Often	73.7%	76.2%	
Never	3.9%	4%	

Do you document tooth wear in the patient's record?			
Yes	61.2%	57.4%	.551
No	38.8%	42.6%	
If not, what is the reason for not documenting tooth wear?			
It is not the chief complaint	38.2%	36.6%	.109
I am not sure how to register	5.3%	13.9%	
I find tooth-wear difficult to diagnose	5.9%	6.9%	
Do you typically identify a likely cause for tooth wear?			
Mostly yes	46.1%	46.5%	.594
Occasionally	47.4%	43.6%	
Mostly Not	6.5%	9.9%	
In your opinion, what is the leading cause of tooth wear in Saudi Arabia?			
Bruxism	60.5%	70.2%	
Gastroesophageal reflex	6.6%	3%	.359
Consumption of acidic foods and drinks	29.6%	23.8%	
Rampant caries	3.3%	3%	
How do you proceed when treating a patient with tooth wear that requires intervention?			
I treat him/her myself	42.1%	46.5%	.544
I refer him/her to a specialty/university clinic	49.3%	42.6%	
I refer him/her to another dentist	8.5%	10.9%	
Do you gather dietary information from patients presenting with toothwear?			
Always	42.1%	39.6%	.924
Occasionally	44.7%	46.5%	
Never	13.2%	13.9%	
In your opinion, do individuals with tooth-wear experience a higher rate of caries?			
Yes	32.9%	30.7%	.856
No	52.6%	52.5%	
I do not know	14.5%	16.8%	
What treatment approach would you use for the maxillary anterior region?			
RCT	1.3%	0%	
Restore with a crown	15.1%	4%	
Restore with a composite	30.9%	35.6%	.008
Restore with overlay/Onlay	38.8%	36.6%	
Construct a night guard	4.5%	4%	
Treat locally with fluoride	6.6%	7.9%	
No treatment	2.6%	11.9%	
What treatment method would you apply to the maxillary and mandibular premolar regions?			
RCT	2%	1%	
Restore with a crown	15.8%	10.9%	
Restore with a composite	26.3%	20.8%	.583
Restore with overlay/Onlay	36.2%	43.5%	
Construct a night guard	8.6%	12.9%	
Treat locally with fluoride	4.6%	3%	
No treatment	6.6%	7.9%	
What approach would you take to treat the maxillary and mandibular first molars?			
RCT	2%	0%	
Restore with a crown	21.7%	10.9%	
Restore with a composite	19.1%	12.9%	
Restore with overlay/onlay	41.4%	53.5%	
Construct a night guard	7.9%	11.9%	
Treat locally with fluoride	3.3%	2%	
No treatment	4.6%	8.9%	

What treatment would you use for the maxillary and mandibular second molars?			
RCT	4.6%	0%	.008
Restore with a crown	21.7%	9.9%	
Restore with a composite	15.8%	11.9%	
Restore with overlay/Onlay	39.5%	47.5%	
Construct a night guard	9.9%	13.9%	
Treat locally with fluoride	2%	1%	
No treatment	6.6%	15.8%	
Do you feel that additional information is necessary for managing patients with tooth wear?			
Yes	59.2%	66.3%	.015
No	17.1%	4.9%	
May be	23.7%	28.7%	

Table 4. Comparison across working experience

Variable	< 10 years	> 10 years	P-value
How regularly are patients with tooth wear present in your practice?			
Always	23%	17.1%	.600
Often	73.2%	78.6%	
Never	3.8%	4.3%	
Do you document tooth wear in the patient's record?			
Yes	57.4%	65.7%	.227
No	42.6%	34.3%	
If not, what is the reason for not documenting tooth wear?			
It is not the chief complaint	36.1%	41.4%	.365
I am not sure how to register	9.8%	5.7%	
I find tooth-wear difficult to diagnose	7.1%	4.3%	
Do you typically identify a likely cause for tooth wear?			
Mostly yes	43.7%	52.9%	.014
Occasionally	45.4%	47.1%	
Mostly not	10.9%	00	
In your opinion, what is the leading cause of tooth wear in Saudi Arabia?			
Bruxism	63.9%	65.7%	.799
Gastroesophageal reflex	4.9%	5.7%	
Consumption of acidic foods and drinks	27.3%	27.1%	
Rampant caries	3.8%	1.4%	
How do you proceed when treating a patient with tooth wear that requires intervention?			
I treat him/her myself	39.3%	51.4%	.000
I refer him/her to a specialty/university clinic	55.7%	22.9%	
I refer him/her to another dentist	4.9%	21.4%	
Do you gather dietary information from patients presenting with toothwear?			
Always	39.9%	44.3%	.816
Occasionally	46.4%	42.9%	
Never	13.6%	12.9%	
In your opinion, do individuals with tooth-wear experience a higher rate of caries?			
Yes	33.9%	27.1%	.017
No	47.5%	65.7%	
I do not know	18.6%	7.1%	

What treatment approach would you use for the maxillary anterior region?			
RCT	0.5%	1.4%	.637
Restore with a crown	12%	7.1%	
Restore with a composite	34.4%	28.6%	
Restore with overlay/Onlay	35%	45.7%	
Construct a night guard	4.9%	2.9%	
Treat locally with fluoride	7.1%	7.1%	
No treatment	6%	7.1%	
What treatment method would you apply to the maxillary and mandibular premolar regions?			
RCT	1.6%	1.4%	.969
Restore with a crown	13.7%	14.3%	
Restore with a composite	25.1%	21.4%	
Restore with overlay/Onlay	37.7%	42.9%	
Construct a night guard	9.8%	11.4%	
Treat locally with fluoride	4.4%	2.9%	
No treatment	7.7%	5.7%	
What approach would you take to treat the maxillary and mandibular first molars?			
RCT	1.6%	00	.445
Restore with a crown	16.9%	18.6%	
Restore with a composite	18%	12.9%	
Restore with overlay/Onlay	43.7%	52.9%	
Construct a night guard	8.7%	11.4%	
Treat locally with fluoride	3.3%	1.4%	
No treatment	7.7%	2.9%	
What treatment would you use for the maxillary and mandibular second molars?			
RCT	2.7%	2.9%	.986
Restore with a crown	18%	14.3%	
Restore with a composite	13.7%	15.7%	
Restore with overlay/Onlay	41.5%	45.7%	
Construct a night guard	12%	10%	
Treat locally with fluoride	1.6%	1.4%	
No treatment	10.4%	10%	
Do you feel that additional information is necessary for managing patients with tooth wear?			
Yes	65.6%	52.9%	.142
No	10.4%	17.1%	
May be	24%	30%	

Table 5. Comparison across designation

Variable	General practitioners	Specialists/ consultants	P-value
How regularly are patients with tooth wear present in your practice?			
Always	20.1%	23.4%	.759
Often	75.5%	73.4%	
Never	4.45%	3.2%	
Do you document tooth wear in the patient's record?			
Yes	57.9%	62.8%	.442
No	42.1%	37.2%	
If not, what is the reason for not documenting tooth wear?			
It is not the chief complaint	80.6%	43.6%	.027
I am not sure how to register	22.4%	4.3%	
I find tooth-wear difficult to diagnose	19.4%	3.25%	

Do you typically identify a likely cause for tooth wear?			
Mostly yes	42.8%	52.1%	
Occasionally	47.2%	43.6%	.149
Mostly Not	10.1%	4.3%	
In your opinion, what is the leading cause of tooth wear in Saudi Arabia?			
Bruxism	64.8%	63.8%	
Gastroesophageal reflex	5%	5.3%	.485
Consumption of acidic foods and drinks	25.8%	30%	
Rampant caries	4.4%	1.1%	
How do you proceed when treating a patient with tooth wear that requires intervention?			
I treat him/her myself	39.6%	51.1%	
I refer him/her to a specialty/university clinic	54.7%	33%	.001
I refer him/her to another dentist	5.7%	16%	
Do you gather dietary information from patients presenting with toothwear?			
Always	37.7%	46.8%	
Occasionally	47.2%	42.6%	.311
Never	15.1%	10.6%	
In your opinion, do individuals with tooth-wear experience a higher rate of caries?			
Yes	32.7%	30.9%	
No	50.9%	55.3%	.770
I do not know	16.4%	13.8%	
What treatment approach would you use for the maxillary anterior region?			
RCT	0.6%	1.1%	
Restore with a crown	8.2%	14.9%	
Restore with a composite	39.6%	21.3%	
Restore with overlay/Onlay	35.2%	42.6%	
Construct a night guard	3.8%	5.3%	.085
Treat locally with fluoride	7.5%	6.4%	
No treatment	5%	8.5%	
What treatment method would you apply to the maxillary and mandibular premolar regions?			
RCT	1.9%	0%	
Restore with a crown	12.6%	25.5%	
Restore with a composite	20.1%	10.6%	
Restore with overlay/Onlay	45.3%	47.9%	.021
Construct a night guard	9.4%	9.6%	
Treat locally with fluoride	4.4%	0%	
No treatment	6.3%	6.4%	
What approach would you take to treat the maxillary and mandibular first molars?			
RCT	1.3%	2.1%	
Restore with a crown	10.1%	20.2%	
Restore with a composite	28.9%	15.9%	.140
Restore with overlay/Onlay	37.1%	42.6%	
Construct a night guard	11%	9.6%	
Treat locally with fluoride	4.4%	3.2%	
No treatment	7.5%	6.4%	

What treatment would you use for the maxillary and mandibular second molars?			
RCT	3.1%	2.1%	
Restore with a crown	14.5%	21.3%	
Restore with a composite	15.7%	11.7%	.543
Restore with overlay/Onlay	42.1%	43.6%	
Construct a night guard	11.9%	10.6%	
Treat locally with fluoride	2.5%	0%	
No treatment	10.1%	10.6%	
Do you feel that additional information is necessary for managing patients with tooth wear?			
Yes	68.6%	51.1%	
No	5.7%	23.4%	.000
May be	25.8%	25.5%	

The findings of the current study on tooth wear indicate that a notable portion of the sample consisted of male participants, representing 60.1%, with the remainder being female **(Figure 1)**. Among the total sample, 72.3% had less than ten years of experience as general practitioners **(Figure 2)**. A majority, 74.7%, of the practitioners regularly monitor and document patients with tooth wear issues. Those who did not document these cases explained it was due to tooth wear not being the primary complaint. Nearly half of the dentists can identify the cause of tooth wear and attribute bruxism as the primary factor. Most dentists reported occasionally taking dietary histories from their patients. **Table 1** shows that the calculated sample power was 0.93. According to **Table 2**, 52.6% of dentists did not consider caries as a contributing factor for tooth wear.

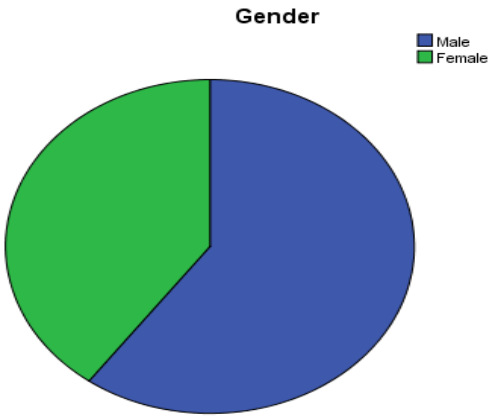

Figure 1. Gender distribution in the present study

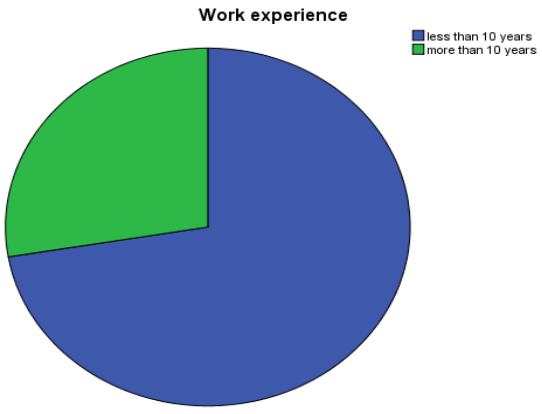

Figure 2. Distribution of work experience among study participants.

When it comes to treatment, dentists address the maxillary front region, premolar regions (both maxillary and mandibular), and second molars using restorations like onlays or overlays, as well as root canal treatments (RCT). Approximately 62.1% of dentists expressed a need for more information on managing patients with tooth wear. **Table 3** indicates no significant differences based on gender. Both female and male dentists reported similar experiences of having fewer than ten years of practice and regularly encountering tooth-wear patients, often documenting these cases. The main reason for not documenting tooth wear was that it was not the chief complaint. Female dentists tended to identify the cause of tooth wear more often than male dentists, with bruxism being the most commonly identified cause. Both genders occasionally take dietary histories and did not believe that people with tooth wear experience more caries. The treatment approach for the maxillary front region, premolar regions, and first and second molars involve restorations like onlays or overlays, with no significant gender differences in the approach. Both genders expressed a need for further information on managing tooth-wear patients **(Table 3)**.
Table 4 highlights differences based on working experience, showing important differences in designation and treatment methods. Specialists typically had more than ten years of experience, while general practitioners had less. Both groups frequently encountered tooth-wear patients and registered them in their practice, with those who did not register cases considering tooth-wear as less common. Experts were better at identifying the cause, often linking it to bruxism as the most prevalent cause of tooth decay. Specialists tended to handle these patients independently, while general practitioners referred them to specialized clinics due to their limited experience. Those with more experience were more likely to take dietary histories and did not associate tooth-wear with caries. Both groups used onlays or overlays for treating the maxillary front region, premolar regions, and first and second molars, while the more experienced practitioners also treated premolar regions with composite restorations. Both groups expressed a need for more information on managing tooth-wear patients.
Table 5 showed no significant differences in findings based on professional designation, with both groups frequently encountering patients with tooth wear and documenting these cases. Those who did not document tooth wear cases did not consider it a primary issue. Specialists typically identify the underlying cause of the problem, with bruxism being the most frequently mentioned cause by both groups. General dentists generally refer patients to specialists, while specialists manage treatment independently. Both groups occasionally take dietary histories and do not associate tooth wear with an increased risk of caries. Treatment for the maxillary and mandibular regions in both groups typically involves restoring with composite materials or overlays/onlays. Both groups expressed a need for further information on how to manage such patients.

In a study conducted with dentists in Saudi Arabia, participants were questioned about their awareness of tooth wear and their treatment approaches. Data was gathered through a cross-sectional survey, and SPSS was used for hypothesis testing through chi-square and descriptive statistics. Frequency analysis revealed that 60.1% of participants were male, with the remaining participants being female. Among the total sample, 72.3% had fewer than ten years of experience and worked as general practitioners. A total of 74.7% of these practitioners regularly examined patients with tooth wear and documented the cases. Those who did not record tooth wear cases considered it a non-priority issue. Nearly half of the dentists typically identified the cause of tooth wear, with bruxism being identified as the primary cause by both groups. Contrasting literature suggested that 88% of healthy teeth were correctly diagnosed as free from dental issues, though dentists performed less well in identifying dental problems. Most dentists occasionally took dietary histories, and 52.6% did not associate caries with tooth wear. Treatment involved restoring the maxillary front, maxillary and mandibular premolar regions, and second molars with overlays/onlays and root canal treatment (RCT). Additionally, 62.1% of dentists believed they would benefit from more information on managing patients with tooth wear [10].
Table 3 showed no significant gender differences in findings. Both female and male dentists, with less than ten years of experience, typically work as general practitioners. Both groups frequently encounter patients with tooth wear and document these cases. Those who do not record tooth wear cases cited it as not a primary concern. Female dentists tend to identify the cause of tooth wear more often than male dentists. Bruxism was considered the leading cause of tooth wear by both genders. In contrast, literature reported that carbonated beverages (98%) were the most common cause, followed by acidic juices, sports drinks, and fruits, each at 46%. Other contributing factors mentioned included reflux (24%) and eating issues (13%). Both groups occasionally ask about dietary habits but do not associate tooth wear with a higher risk of caries. Treatment typically involves restoring the maxillary front region, maxillary and mandibular premolars, and first and second molar regions with overlays/onlays. Both groups agreed that more information is needed for managing patients with tooth wear [7].

Both specialists and general practitioners reported frequent encounters with tooth-wear patients and documented these cases. Those not registering tooth wear cases did not view it as a primary complaint. Specialists are more likely to identify the cause of the issue, with literature showing that most dentists (82%) generally identified the source of erosive lesions, while 17% reported doing so occasionally, and only 2% struggled to find a plausible cause. Less experienced practitioners refer such cases to specialty clinics, while specialists tend to treat patients independently. More experienced practitioners always take dietary histories and do not associate tooth wear with an increased risk of caries. Treatment methods for both groups typically include restoring the maxillary front, premolar regions, and first and second molars with overlays/onlays. However, more experienced practitioners also use composite restorations for the premolar region. Both groups expressed a need for more information to improve the management of patients with tooth wear [7].

Table 5 indicated no significant differences based on professional designation. Both groups frequently encounter and document patients with tooth wear, while those who do not report it do not view it as a primary concern. Specialists are more likely to determine the underlying cause, with bruxism being the most commonly identified cause according to both groups. General dentists typically refer patients to clinics, while specialists provide treatment independently. Both groups occasionally gather dietary histories and do not associate tooth wear with an increased risk of caries. Treatment for all maxillary and mandibular regions generally involves restoring the affected areas with composites or overlays/onlays. Both groups believe they need more information to manage such patients effectively. Previous studies indicated that 83% of specialists examine patients with tooth wear, with 61.5% of patient files noting wear lesions and 68.2% identifying a plausible cause. In Jordan, 87.2% of dentists identified bruxism as the most common cause. Dentists treated 63.3% of patients with tooth wear, and dietary history was documented by 77% of those surveyed. However, 77% of respondents did not associate tooth-wear with caries. General practitioners expressed a lack of confidence in diagnosing and treating tooth wear. For therapy, the majority of dentists opted for composite restorations to repair damaged teeth and the use of night guards [8].

Conclusion

Minor gender differences were observed in the study. Specialists and those with more experience demonstrated greater confidence in diagnosing and treating tooth wear. Bruxism was identified as the most common cause, and the primary treatment method involved restoring the affected areas with composites or overlays/onlays. Dentists expressed a need for additional information to better manage these cases.

Limitations

This research was conducted within a specific geographical region and with a limited sample size, which may affect the generalizability of the findings. The reliance on self-reported data raises concerns about social desirability bias, potentially impacting the internal consistency of the results.

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Ethics Statement: Participants' data will be kept confidential.

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