

# Research Paper

## Awareness of Forensic Odontology Amongst Dentists of Qassim Region



Minal Awinashe<sup>1\*</sup> , Hessah Hessain Almutairi<sup>2</sup> 

1. Department of Oral and Maxillofacial Surgery and Diagnostic Science, College of Dentistry, Qassim University, Buraydah, Kingdom of Saudi Arabia.

2. College of Dentistry, Qassim University, Buraydah, Saudi Arabia.



**Citation** Awinashe M, Almutairi HH. Awareness of Forensic Odontology Amongst Dentists of Qassim Region. *International Journal of Medical Toxicology and Forensic Medicine*. 2025; 15(2):E45348. <https://doi.org/10.32598/ijmtfm.v15i2.45348>

 <https://doi.org/10.32598/ijmtfm.v15i2.45348>

### Article info:

**Received:** 08 Jul 2024

**First Revision:** 17 May 2024

**Accepted:** 16 Jun 2024

**Published:** 07 Jun 2025

### ABSTRACT

**Background:** Forensic odontology utilizes dental evidence to identify individuals in criminal investigations and disasters and to determine age and gender. This study aimed to evaluate the awareness of forensic odontology among dentists in Saudi Arabia and pinpoint potential areas for enhancing education and practice.

**Methods:** A survey involving 266 dentists in the Qassim region of Saudi Arabia was conducted. The survey evaluated the dentists' understanding of forensic odontology concepts, perspectives on the field, and readiness to manage forensic cases.

**Results:** The findings indicate that the dentists firmly grasped the fundamental principles of forensic odontology. Nevertheless, gaps in knowledge exist, especially in alternative identification methods, solved forensic cases, and child abuse protocols. The dentists showed a keen interest in additional training in forensic odontology and endorsed incorporating the field into the dental undergraduate curriculum.

**Conclusion:** This research offers an overview of the present level of forensic odontology knowledge within the dental field. Although the general performance is positive, recognizing and resolving knowledge gaps with specific interventions can enhance the integration of this important field in dental practice. Forensic odontology plays a significant role in raising awareness among dentists in Saudi Arabia.

### Keywords:

Awareness, Forensic odontology, Role, Dentists, Saudi Arabia

### \* Corresponding Author:

**Minal Awinashe, Assistant professor.**

**Address:** Department of Oral and Maxillofacial Surgery and Diagnostic Science, College of Dentistry, Qassim University, Buraydah, Kingdom of Saudi Arabia.

**Tel:** +966 (56) 6044964

**E-mail:** [M.awinashe@qu.edu.sa](mailto:M.awinashe@qu.edu.sa)



Copyright © 2025 The Author(s);  
This is an open access article distributed under the terms of the Creative Commons Attribution License (CC-BY-NC: <https://creativecommons.org/licenses/by-nc/4.0/legalcode.en>), which permits use, distribution, and reproduction in any medium, provided the original work is properly cited and is not used for commercial purposes.

## Introduction

**F**orensic odontology is essential in legal investigations, aiding in victim identification, bite mark analysis and age and gender estimation [1]. Despite its global significance, the awareness and knowledge of this specialized field among dental students in the Kingdom of Saudi Arabia (KSA) is unclear.

Dentists play a crucial role in forensic medicine. Their specialized expertise in oral structures and tissues plays a crucial role in connecting healthcare and legal inquiries, making substantial contributions to victim identification, perpetrator capture and the overall quest for justice [2, 3]. Their expertise provides crucial insights into deciphering bite marks and reconstructing fragmented identities, shedding light on mysteries that would otherwise remain unsolved [4]. As forensic science progresses, the importance of dentists' expertise will grow, echoing within the realm of justice [5, 6].

Studies worldwide present diverse findings regarding dental students' involvement in forensic odontology. In Riyadh, Saudi Arabia, a study revealed that many postgraduates, graduates and undergraduates understand the importance of teeth in DNA analysis. Most participants were knowledgeable about forensic dentistry's role in criminal investigations and dentists serving as expert witnesses in court. Interestingly, only 20% were unaware of this responsibility [7]. An investigation conducted in India found that dental practitioners in the region had limited knowledge, unfavorable attitudes, and minimal experience in forensic odontology [1]. A study conducted in Cyprus analyzed dental students' proficiency in forensic odontology. Unfortunately, the search results do not contain the precise findings of this study [8]. The disparities underscore the impact of curriculum integration, as evidenced by the positive effects of dedicated forensic odontology courses on student knowledge and engagement.

Beyond mere awareness, global studies reveal worrying knowledge gaps across specific areas of forensic odontology. Advanced applications like age and gender estimation through dental records tend to show lower comprehension than basic concepts like bite mark analysis [8, 9]. This finding underscores the need for curriculum revisions that cater to the evolving demands of forensic investigations in the 21<sup>st</sup> century.

However, closer examination reveals disparities within KSA's student population. Due to dedicated coursework,

postgraduates boast the highest awareness levels, exceeding 90%, followed by graduates and undergraduates demonstrating progressively lower levels [7]. This finding underscores the crucial role of curriculum integration in fostering awareness and equipping future dentists with the necessary skills. The present study highlighted the awareness of forensic odontology amongst dentists in the Qassim region in the KSA.

## Materials and Methods

### Study design and setting

This study utilized a cross-sectional, descriptive, quantitative survey-based design at Al-Qassim Dental faculties from September 2022 to May 2023.

### Sample size and population

All faculty members of Qassim Dental College and private practitioners in Qassim participated in the study. Only graduate and postgraduate dentists from Qassim regions in KSA were eligible to participate. Participants in the pilot research, dentistry students, non-Saudi subjects, and an incomplete questionnaire were among the reasons for their elimination. Using a multistage cluster sampling procedure with a 95% confidence level and a 5% margin of error, an appropriate sample size was determined based on the total number of answers. This number included estimating an average proportion that produces the most practicable sample size ( $P=0.50$ ). The research was expanded to include an extra 10% of respondents to account for the possible impacts of the clustering approach, non-response, and inadequate information. A total of 266 participants were included in the investigation.

### Data collection methods, instruments used, and measurements

The questionnaire was meticulously crafted based on a comprehensive review of relevant literature, global standards, and the structure of a previously validated instrument [10]. It comprised two sections. First, demographics included gathering basic details such as gender, dental qualification (graduate vs postgraduate) and institutional affiliation. These data provided crucial context for interpreting responses in subsequent sections. Second, participants' understanding of various practical applications within forensic odontology included victim identification, bite mark analysis, age and gender estimation, dental trauma analysis, DNA collection from dental tissues, self-perceived preparedness and skills related to

forensic odontology applications and interest in further training or involvement in forensic investigations. Developed in English, the questionnaire underwent rigorous translation into Arabic by a bilingual professional with dentistry and questionnaire translation expertise. Back-translation ensured accuracy and consistency. A panel of dental professionals with forensic odontology experience reviewed the questionnaire, evaluating item relevance, clarity and comprehensiveness. Their feedback refined the final version. A pilot study with a smaller sample of graduates and postgraduates identified any ambiguities or potential misinterpretations, leading to further refinements. A structured questionnaire in English and Arabic was distributed to 266 participants. The questionnaire was disseminated to [Qassim Dental College](#) faculty members and dental practitioners in the Qassim region through [Google Forms](#). A short description of the purpose of the study was shared along with the questionnaire. Data collection spanned from September 2022 to May 2023.

### Data management and analysis plan

Descriptive statistics were employed to summarize the responses to the questionnaire. The resulting data were visually represented through the use of frequencies and percentages. A significance threshold of  $P < 0.05$  was used in the chi-square tests to compare the groups. Within the scope of the study, the positive responses given by the respondents to the 16 questions were thoroughly investigated. A frequency analysis was used to determine the rate of “yes” replies among the dental graduate and postgraduate groups. In the end, responses that agreed were given a score of 1, while responses that disagreed were given a score of 0. These scores were included in the calculation to determine the overall scores for each group. The percentages were divided into four levels: less than 50 (“poor”), 50-70 (“moderate”) and 71-100 (“good”). The chi-square tests were used to investigate the relationship between the percentages and the dental groups. Additionally, the median scores were computed to enable comparisons between the various groups. The data were analyzed using SPSS software, version 16.0 (SPSS Inc., Chicago, Illinois, USA).

## Results

### Demographics and knowledge of respondents

The sample had more female participants (62%) than males (38%). Over half of the participants (53.8%) primarily work in clinic practice, while 30.8% were involved in teaching and 15.4% engaged in both. The

sample was equally divided between dental graduates and postgraduates (50% each). The results readily highlight a remarkable level of basic understanding of forensic odontology. The overwhelming agreement that it constitutes a distinct branch of dentistry (85.3%) and the near-unanimous recognition of teeth as a DNA source (98.7%) point to a promising foundation for further engagement. Although core concepts seem well-grasped, certain areas appear to warrant deeper focus. Teeth printing remains the dominant first step in identifying unclaimed bodies (21%), suggesting potential low levels of awareness. Similarly, moderate knowledge regarding solved forensic odontology cases (36.1%) could benefit from targeted educational initiatives.

Notably, the vast majority (90.2%) acknowledge the importance of dentists maintaining accurate records for forensic assistance, showcasing a commendable sense of professional responsibility. Furthermore, the overwhelming support for incorporating forensic odontology into the undergraduate curriculum (81.9%) and high interest in further training (90.2%) demonstrate an apparent demand for knowledge expansion and practical skill development within this domain ([Table 1](#)).

### Assessment of subjects' knowledge

Both graduates and postgraduates demonstrated predominantly good knowledge scores (over 90% in categories 71-100). This finding suggests a positive overall understanding of the field's core concepts and applications ([Table 2](#), [Figure 1](#)). The chi-square analysis ( $\chi^2=5.132$ ,  $P=0.004$ ) observed a statistically significant difference. A slightly higher proportion of graduates (15%) fell in the average knowledge range (50-70%) compared to postgraduates (6.05%). This result could have various potential explanations, such as differences in curriculum content, years of experience, or individual study habits. Further research with additional variables would help pinpoint the specific factors contributing to this observed discrepancy.

[Table 3](#) shows a comparative analysis of dental graduates' and postgraduates' forensic odontology awareness, revealing insightful nuances within their knowledge repertoire. While both groups demonstrate a commendable grasp of core concepts, certain questions unveil subtle disparities. Notably, postgraduates demonstrate significantly higher awareness of solved forensic odontology cases ( $\chi^2=6.726$ ,  $P=0.035$ ), suggesting potential exposure to such information during their advanced training. Additionally, their heightened desire for further training

**Table 1.** Demographic data about knowledge among all dental participants

Variables and Questions		No. (%)
Gender	Male	101(38)
	Female	165(62)
Work profile	Teaching	82(30.8)
	Clinic practice	143(53.8)
	Both	41(15.4)
Qualification	Dental graduate	133(50)
	Dental postgraduate	133(50)
Is forensic odontology a special branch of Dentistry?		Agree 222(85.3)
Can teeth serve as a source of DNA?		Agree 230(98.7)
What is the first step for the identification of un-claimed bodies?		Fingerprinting 56(21)
Can sex determination be done using Barr bodies?		Agree 216(81.2)
Can enamel/dentin act as an aid for the identification of age?		Agree 219(82.3)
What would you do if you identified signs and symptoms of child abuse?		Inform police 94(35.3)
Do you know about any criminal cases solved with the help of forensic odontology?	No	170(63.9)
	Yes	96(36.1)
As a dentist, can we help forensic experts by maintaining records?		Yes 240(90.2)
Do you feel forensic odontology should be available in the undergraduate dental curriculum?		Yes 218(81.9)
If given a choice, would you like to undergo any such training?		Yes 240(90.2)
Total		266(100)

International Journal of  
Medical Toxicology & Forensic Medicine

( $\chi^2=3.951$ ,  $P=0.047$ ) underscores a thirst for deeper engagement with this domain.

### Correlation studies

A nuanced examination of the Pearson correlations revealed intriguing associations between participant characteristics and forensic odontology knowledge. Interestingly, gender emerges as a statistically significant predictor, with females demonstrating a marginally higher average knowledge score ( $r=-0.379$ ,  $P<0.001$ ). Similarly, work profile exhibits a noteworthy link with

knowledge, with individuals occupying dual clinic and teaching roles showing slightly lower scores ( $r=-0.318$ ,  $P<0.001$ ). Additionally, academic qualification is a significant predictor, with dental postgraduates demonstrating a notably higher average knowledge score than graduates ( $r=0.414$ ,  $P<0.001$ ). This expected trend underscores the potential efficacy of postgraduate education in bolstering forensic odontology expertise (Tables 4 and 5).

**Table 2.** Total score analysis of knowledge in all groups of dental participants

Category		No. (%)			$\chi^2$ , P
		Dental Graduate	Dental Postgraduate	Total	
Knowledge score	Low	$\leq 50$	1(0.75)	1(0.75)	2 (0.75)
	Average	50-70	20(15.0)	8(6.05)	28(21.05)
	Good	71-100	112(84.25)	124(93.2)	236(78.2)
	Total		133(100)	133(100)	266(100)

International Journal of  
Medical Toxicology & Forensic Medicine

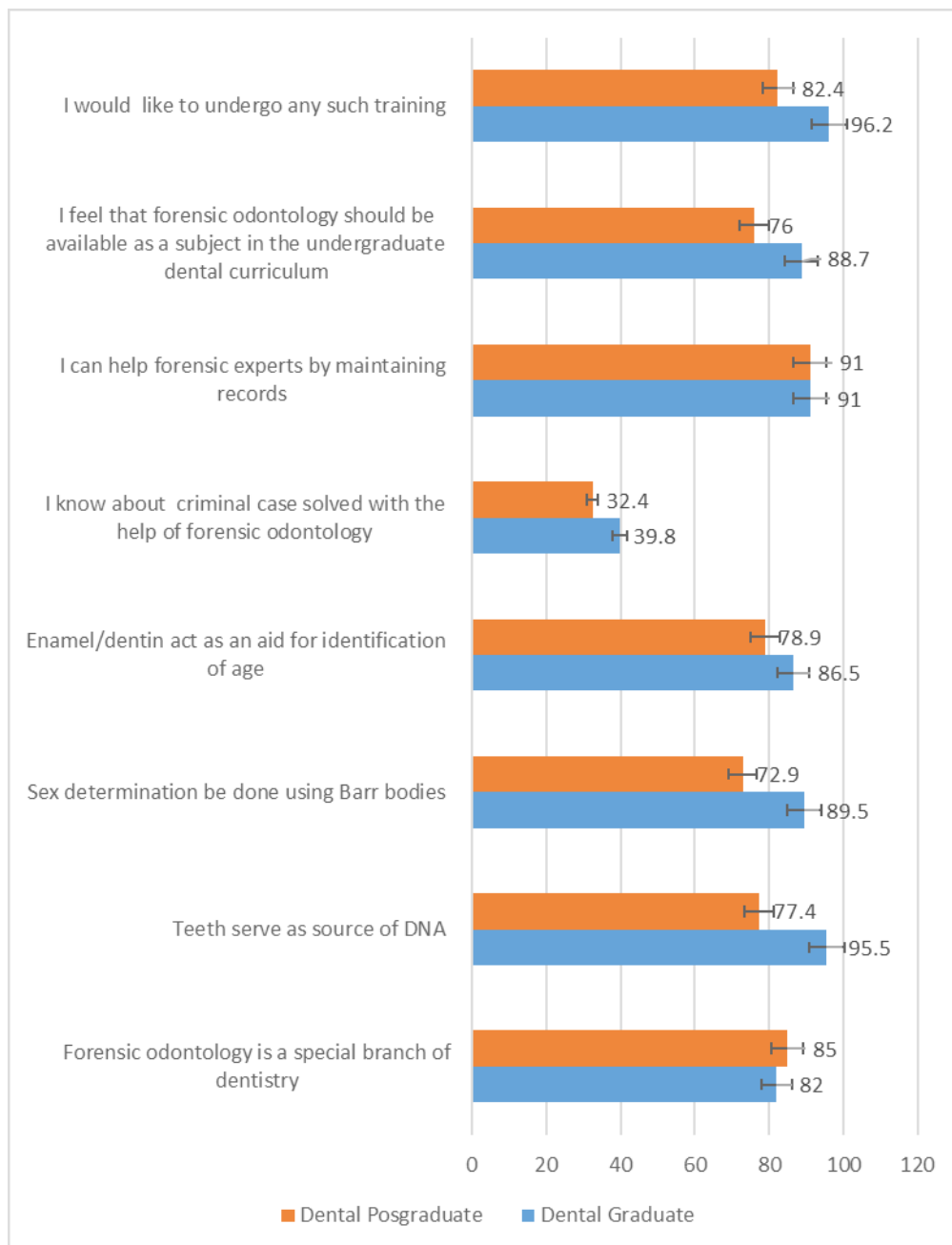


Figure 1. Correct answers among dental graduates and postgraduates

## Discussion

The findings provide valuable insights into the understanding and engagement of dental professionals in this specialized field. The results indicate a strong foundational knowledge of forensic odontology among the participants. The majority recognized forensic odontology as a distinct branch of dentistry, highlighting their awareness of its significance in the field.

The results align with previous research conducted in Saudi Arabia, where awareness levels ranged from 62.5% to 78.4% [11]. About 87% of faculty members and 65% of students showed knowledge of forensic odontology as a dental expertise in Cyprus [8]. In addition, the levels of awareness among students in our study closely match the findings of similar studies [7, 12].

However, our study exceeds the comprehension ranges noted among Indian dental practitioners [13]. The disparity in awareness levels throughout distinct geograph-

**Table 3.** Knowledge difference among all groups of dental participants

Questions		No. (%)		χ <sup>2</sup> , P
		Dental Graduate	Dental Postgraduate	
Is forensic odontology a special branch of Dentistry?	Agree	109(82.0)	113(85.0)	4.245, 0.120
Can teeth serve as a source of DNA?	Agree	127(95.5)	103(77.4)	5.099, 0.165
What is the 1st step for the identification of unclaimed bodies?	Dental printing	30(22.6)	26(19.5)	4.944, 0.293
Can sex determination be done using Barr bodies?	Agree	119(89.5)	97(72.9)	2.048, 0.563
Can enamel/dentin act as an aid for the identification of age?	Agree	115(86.5)	104(78.9)	4.895, 0.180
What would you do if you identified signs and symptoms of child abuse?	Inform police	48(36.1)	46(34.6)	2.114, 0.347
Do you know about any criminal cases solved with the help of forensic odontology?	No Yes	80(60.2) 53(39.8)	90(67.7) 43(32.4)	6.726, 0.035
As a dentist, can we help forensic experts by maintaining records?	Yes	121(91.0)	119(91.0)	8.661, 0.13
Do you feel forensic odontology should be available in the undergraduate dental curriculum?	Yes	118(88.7)	100(76.0)	0.70, 0.08
If given a choice, would you like to undergo any such training?	Yes	128(96.2)	112(84.2)	3.951, 0.047
Total		133(100)	133(100)	

International Journal of  
Medical Toxicology & Forensic Medicine

**Table 4.** Correlations between the studied variables (n=266)

Variables	Male	Female	Work Profile (both)	Dental Graduate	Dental Postgraduate
r	-0.379*	-0.318*	-0.144*	-0.324*	0.414*
P	>0.001*	>0.001*	0.023*	>0.001*	>0.001*

r: Pearson correlation, \*Statistically significant at P≤0.05.

International Journal of  
Medical Toxicology & Forensic Medicine

**Table 5.** Multiple Linear regression analysis of demographics on knowledge (n=266)

Variables	B	Beta	t-test	P	95% CI	
					Lower Limit	Upper Limit
Gender	0.002	0.030	0.503	0.006	-0.006	0.010
Work profile (both)	-0.150	-0.078	-1.398	0.013	-0.363	0.062
Dental graduate	0.003	0.004	0.060	0.042	-0.099	0.105
Dental postgraduate	0.007	0.091	1.320	0.048	-0.004	0.018
Participants' knowledge and practice						
Knowledge	0.510	0.318	4.849*	<0.001*	0.303	0.717

R<sup>2</sup>=0.356, F=19.105, \*Significant at P≤0.05.

International Journal of  
Medical Toxicology & Forensic Medicine

ic areas may be affected by various factors, such as cultural differences, educational priorities, and the level of importance given to forensic odontology in the medical institutions of those regions. This consistency in findings emphasizes the universal significance of forensic odontology and the need for continued research and education in this field.

Furthermore, nearly all participants acknowledged the potential of teeth as a valuable source of DNA in forensic investigations. These findings demonstrate a solid knowledge base and a recognition of the importance of forensic odontology in criminal investigation and victim identification [5, 10, 14, 15].

Nevertheless, there were specific areas where participants showed lower levels of knowledge. For example, many participants recognized teeth printing as the primary technique for identifying unclaimed bodies, suggesting a possible lack of awareness among the other individuals. There is a moderate level of knowledge about solved forensic odontology cases, indicating a necessity for additional education and sharing of information in this field. Additionally, novel and improved methods for analyzing DNA samples in forensic scenarios have been described. DNA fingerprinting is used in various situations, including identifying deceased victims, locating missing individuals, revealing culprits, resolving paternity disputes, interpreting genetic diseases, and determining ancestral origins [16, 17].

The study found a notable gap in knowledge between dental graduates and postgraduates. Individuals pursuing postgraduate studies showed a higher average knowledge score, suggesting that further education and training could enhance comprehension of forensic odontology. It is crucial to prioritize ongoing education and specialized training programs to improve the skills of dental professionals in this area [5, 7].

Examining the relationships between participant characteristics and forensic odontology knowledge offers further insights. Female participants showed a slightly higher average knowledge score, indicating gender as a significant predictor. This discovery could be due to differences in educational backgrounds or individual preferences. Moreover, individuals involved in clinical and teaching duties showed slightly lower knowledge scores, indicating that splitting focus between these roles could affect the level of expertise in forensic odontology.

The significant support for integrating forensic odontology into the undergraduate curriculum, data collec-

tion, and keen interest in additional training among the participants highlights the importance of ongoing professional development in this area [18]. The study emphasizes dental professionals' dedication to enhancing their expertise in forensic odontology, potentially advancing forensic medicine in Saudi Arabia [7, 10, 14, 19, 20].

### Strengths and limitations

With 266 participants, the study's findings can be considered statistically accurate and applicable to the dental community in the Qassim region. The comprehensive questionnaire addressed various aspects of forensic odontology knowledge, application and professional perspectives. Utilizing the chi-square analysis to detect statistically significant differences between groups enhances the study's findings.

The study's focus on participants within the Qassim region may restrict the generalizability of findings to the broader Saudi Arabian dental community. Using self-reported information through questionnaires may introduce biases or inaccuracies. Not including dental students in the study overlooks essential insights into the early stages of awareness development and curriculum effectiveness.

### Implications and future studies

There is a strong push to integrate forensic odontology into the undergraduate curriculum, which should be acted upon promptly. Creating thorough course modules and hands-on training can prepare upcoming dentists to manage forensic cases effectively.

Specialized educational programs that emphasize alternative identification methods, resolved forensic cases, and child abuse protocols have the potential to enhance fundamental understanding and address current deficiencies. Different teaching methods, such as interactive workshops, case studies and simulations, can improve engagement and retention of knowledge.

### Promoting cooperation

Establishing robust collaborations between dental and forensic sectors is essential for maximizing knowledge and assets. Collaborative environments can be established through joint workshops, training programs, and knowledge exchange forums, allowing dentists and forensic experts to learn from each other.

Studying forensic odontology awareness and curriculum integration models in various regions and countries can offer valuable insights for enhancing approaches in Saudi Arabia. Researching the lasting effects of improved forensic odontology education on dentists' confidence, skills, and practical experience in forensic cases can illustrate the concrete advantages of these programs.

### Exploring new teaching approaches

Studying the impact of new teaching approaches like gamified learning or virtual reality simulations can improve engagement and knowledge retention, especially for challenging forensic odontology subjects.

## Conclusion

The study provides valuable insights into forensic odontology awareness among dental professionals in Saudi Arabia. Recognizing the positive grasp of fundamental concepts and a commitment to professional duties, there are opportunities to enhance knowledge depth and practical skills. There is a significant need for additional training and curriculum integration, indicating a potential opportunity to strengthen the role of dentists in forensic investigations. Saudi Arabia can enhance its dental community's impact on forensic odontology through focused educational interventions and partnerships with forensic experts.

## Ethical Considerations

### Compliance with ethical guidelines

This study was approved by the Ethics Committee of, **Qassim University**, Buraydah, Kingdom of Saudi Arabia (Code: EA/6093/2021). A meticulous procedure guarantees strict compliance with the esteemed principles outlined in the Declaration of Helsinki, reinforced by the rigorous ethical standards and regulations set forth by **Al-Qassim Dentistry College**. Participants provided online informed consent before the study began. The consent process clearly outlined participation's voluntary and anonymous nature and the right to withdraw at any time without consequences. This study protects the rights and autonomy of its participants by strictly following informed consent principles

### Funding

This research did not receive any grant from funding agencies in the public, commercial, or non-profit sectors.

## Authors' contributions

Data analysis, drafting the manuscript, design, interpretation and supervision: Heshah Hessain Almutairi; Interviews: Minal Awinashe.

## Conflict of interest

The authors declared no conflict of interest.

## Acknowledgements

The authors thank Maram Shalabi for her help with the statistical analysis and manuscript revision.

## References

- [1] Reddy G, Reddy VP, Sharma M, Aggarwal M. Role of orthodontics in forensic odontology-A social responsibility. *Journal of Clinical and Diagnostic Research*. 2016; 10(4):ZE01-3. [DOI:10.7860/JCDR/2016/15798.7633] [PMID]
- [2] Verma AK, Kumar S, Rathore S, Pandey A. Role of dental expert in forensic odontology. *National Journal of Maxillofacial Surgery*. 2014; 5(1):2-5. [DOI:10.4103/0975-5950.140147] [PMID]
- [3] Krishan K, Kanchan T, Garg AK. Dental evidence in forensic identification - An overview, methodology and present status. *The Open Dentistry Journal*. 2015; 9:250-6. [DOI:10.2174/1874210601509010250] [PMID]
- [4] Divakar KP. Forensic odontology. The new dimension in dental analysis. *International Journal of Biomedical Science*. 2017; 13(1):1-5. [DOI:10.59566/IJBS.2017.13001]
- [5] Bjelapavlovic M, Badt F, Lehmann KM, Petrowski K. Forensic dentistry for identity verification. A survey at the state police level. *Bundesgesundheitsblatt, Gesundheitsforschung, Gesundheitsschutz*. 2023; 66(11):1268-76. [DOI:10.1007/s00103-023-03769-2]
- [6] Yazdani M, Karami S, Tahmasebi E, Alam M, Abbasi K, Rahbar M, et al. dental radiographic/digital radiography technology along with biological agents in human identification. *Scanning*. 2022; 2022:5265912. [DOI:10.1155/2022/5265912] [PMID]
- [7] Abdul NS, Alhazani L, Alruwail R, Aldres S, Asil S. Awareness of forensic odontology among undergraduate, graduate, and postgraduate dental students in Riyadh, Saudi Arabia: A knowledge, attitude and practice-based study. *Journal of Forensic Dental Sciences*. 2019; 11(1):35-41. [DOI:10.4103/jfo.jfds\_52\_19] [PMID]
- [8] Giannakopoulos K, Lambrou-Christodoulou P, Kaklamanos EG. Awareness of forensic odontology among dental students and faculty in cyprus: A survey-based study. *Dentistry Journal*. 2023; 12(1):6. [DOI:10.3390/dj12010006] [PMID]

- [9] Nagare SP, Chaudhari RS, Birangane RS, Parkarwar PC. Sex determination in forensic identification, a review. *Journal of Forensic Dental Sciences*. 2018; 10(2):61-6. [DOI:10.4103/jfo.jfds\_55\_17] [PMID]
- [10] Sahni A, Rehani S, Mathias Y, Kardam P, Nagpal R, Kumari R. A questionnaire survey on forensic odontology: Are we really aware? *Journal of Forensic Dental Sciences*. 2016; 8(2):113. [DOI:10.4103/0975-1475.186377]
- [11] Abdul NS, Alotaibi SZ, Almughalliq FA, Alamri MD, Alshahrani RA, Almujailli AI. A questionnaire-based study to assess knowledge and awareness regarding cheilioscopy as a forensic odontology diagnostic tool among dental professionals. *Cureus* 2022; 14(11):e31188. [DOI:10.7759/cureus.31188]
- [12] Umashankar K, Yadalam U, Raghava V, Bose A, Roy PP, Prakash N. Assessment of knowledge, awareness and practice of forensic odontology among interns and post graduate students assessment of knowledge, awareness and practice of forensic odontology among interns and postgraduate students. *RGUHS Journal of Medical Sciences*. 2022; 12(1):30-4. [DOI:10.26463/rjms.12\_1\_7]
- [13] Dineshkumar T, Rekha M. Assessment of knowledge and awareness of forensic odontology among dentists in Tamil Nadu-A systematic review. *Journal of Oral and Maxillofacial Pathology*. 2022; 26(1):121-5. [DOI:10.4103/jomfp.jomfp\_506\_20] [PMID]
- [14] Preethi S, Einstein A, Sivapathasundharam B. Awareness of forensic odontology among dental practitioners in Chennai: A knowledge, attitude, practice study. *Journal of Forensic Dental Sciences*. 2011; 3(2):63-6. [DOI:10.4103/0975-1475.92145] [PMID]
- [15] Soon A, Graham J, Basset R. Teaching of forensic odontology in basic dental programmes in nine Australian dental schools: A survey. *European Journal of Dental Education*. 2019; 23(3):244-50. [DOI:10.1111/eje.12425] [PMID]
- [16] Malik SD, Pillai JP, Malik U. Forensic genetics: Scope and application from forensic odontology perspective. *Journal of Oral and Maxillofacial Pathology*. 2022; 26(4):558-63. [DOI:10.4103/jomfp.jomfp\_341\_21] [PMID]
- [17] Qadri AW, Yadav S, Jain A, Shetty DC, Gulati N. Tooth as a vital source of DNA in forensic odontology: Recent perspective. *Journal of Academy of Dental Education*. 2023; 9(2):73-9. [DOI:10.25259/JADE\_43\_2023]
- [18] Baqai HS, Zaidi SJA, Baig QA, Bashir MB, Anwar M, Ansari AS. Maintenance of dental records and awareness of forensic odontology among Pakistani dentists: A mixed-method study with implications for dental data repository. *BMC Oral Health*. 2023; 23(1):783. [DOI:10.1186/s12903-023-03500-2]
- [19] Rathod V, Desai V, Pundir S, Dixit S, Chandraker R. Role of forensic dentistry for dental practitioners: A comprehensive study. *Journal of Forensic Dental Sciences*. 2017; 9(2):108-9. [DOI:10.4103/jfo.jfds\_93\_15] [PMID]
- [20] Kashif M, Kamran MA, Rizwan S, Iqbal S, Aslam A, Shifa S. Awareness of dental students about forensic odontology in Karachi, Pakistan. *Journal of Oral Health and Oral Epidemiology* 2020; 9(3):149-55. [DOI:10.22122/johoe.2020.91030]