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Knowledge and awareness of forensic odontology among medical and dental practitioners working in teaching hospital in Kohat, Khyber-Pakhtunkhwa, Pakistan

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ABSTRACT

Forensic odontology is a sub-specialty of forensic science, which uses dental evidence to identify individuals and support the judicial system. With growing interest and advancements in this field, it is crucial to enhance knowledge and awareness among practitioners. The aim of the study was to evaluate knowledge, awareness, and practice related to forensic odontology among medical and dental practitioners. A quantitative cross-sectional based study was conducted among 230 practitioners from both medical and dental fields. A questionnaire was distributed amongst the participants consisting of a total seventeen close-ended questions which were divided into three sections including introduction, knowledge, and prospects. Out of total n=103 and n=127 medical and dental practitioners respectively, 88.6% didn't study forensic odontology as part of curriculum, 66% were familiar with the term, 87.8 % agreed that dental evidence can be used in court of law, 57.8% were aware of dental age estimation, 93.9% agreed that human remains can be identified using teeth, 67% maintained records of patient, 73.4% agreed human bite marks as distinctive, 56.9% and 56.6% were familiar with dental ethics and dental litigation respectively and regarding future prospects majority of the participants showed interest to include forensic odontology at both undergraduate and postgraduate level. The result of this study concluded that there is a lack of adequate knowledge but sufficient awareness among practitioners. Increased level of interest and good response rate of integration of forensic odontology as a separate subject in curriculum encourages further research and seminars to help rapid advancements in this field.

KEY WORDS

Forensic odontology; Forensic dentistry; Kohat; Pakistan; Knowledge; Awareness

ARTICLE HISTORY

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Introduction

The Latin word "forensis," which means a venue for legal conversations, is where the word "forensic" derives from [1,2]. "That branch of Odontology, which in the interests of justice, deals with the proper handling and examination of dental evidence and with the proper evaluation and presentation of dental findings," is how Keiser Neilsen defined forensic dentistry in 1968 [3]. The field of forensic dentistry, known as forensic odontology, is a concentration of forensic science that was first developed to investigate issues pertaining to deaths involving unidentified remains [1-4]. Age estimation, bite mark analysis, litigation against dental negligence and dental fraud, and above all human identification are among the fields that make up forensic odontology (FO) [3-7]. Teeth are regarded by Interpol as one of the primary identifiers since they are resistant to factors like extreme heat, submersion, and decomposition. Furthermore, when compared to fingerprinting and DNA, teeth are the most affordable, rapid, and straightforward means of human identification [1,8].

Both as a field of practice and as an educational subject, FO is still in its infancy in Pakistan [9]. As of 2018, there were 2,040 dentists registered as specialists in a nation of 207.774 million residents [5]. Despite being a recognized field in many areas of the world, forensic odontology has not yet gained the same level of acceptance in Pakistan. This disparity is caused by a number of things, such as a lack of a centralized dental data archive, a lack of a regulated procedure for keeping dental records, and a lack of knowledge of the importance of the area [2,5,9].

According to a study done in Pakistan in 2014, a comprehensive analysis revealed that 99.32% of participants had no prior experience in forensic dentistry, highlighting a significant gap in practical exposure. Additionally, 100% reported no formal training, indicating a lack of structured educational programs in the region. Despite this, 60% expressed a strong interest in the field, suggesting a demand for training opportunities in Pakistan.

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This interest underscores the need for initiatives to develop forensic dentistry programs, which could enhance career prospects and improve the country's forensic capabilities [2]. A similar study from Karachi, Pakistan yielded the following results: Ninety-nine percent of participants had no prior education in forensic dentistry. While 86.2% of dentists acknowledged the importance of forensics and 88.7% recognized their role in assisting forensic experts by maintaining accurate records, only 64.5% reported keeping dental records properly [10]. Another study done in 2020 revealed that, a total of 476 dentists, comprising 51% females and 49% males, aged between 20 and over 50 years, participated in the survey. Of these respondents, 98.53% indicated that the subject of FO was not included in their dental education. Furthermore, 66% expressed awareness of the field, while 62% reported being only somewhat informed. Notably, 99% had not received any formal training in this area, and 89.7% were not currently employed in the field. Nevertheless, 89% showed a keen interest in pursuing training opportunities within Pakistan [5].

Therefore, due to insufficiency of data from the city of Kohat, Pakistan, the aim of this study is to assess the knowledge and awareness of forensic odontology amongst medical and dental practitioners working in a renowned teaching hospital in the area.

Methodology

A quantitative cross-sectional questionnaire-based study was conducted for a total of 2 months from 27th May 2024 to 30th June 2024 to assess the knowledge and awareness of forensic odontology. A census sampling technique was used to include all practitioners willing to participate within the specified criteria. The following criteria was used to include/exclude participants of the study; Inclusion criteria being medical and dental practitioners affiliated with Khyber Medical University Institute of Dental Sciences (KMU-IDS), Khyber Medical University Institute of Medical Sciences (KMU-IMS), Kohat and District Headquarters (DHQ) Hospital, KDA, Kohat to maintain a sample reflective of target population. On the other hand, students, office workers, dental technicians, and dental assistants were excluded from the study to maintain focus on practitioners directly involved in clinical practice. The criteria were summarized in the table 1 below.

Table 1. Inclusion and exclusion criteria.

Inclusion criteria	Exclusion criteria
Dental and medical practitioners (Doctors, Training medical officer and house officers) of KMU-IDS and DHQ hospital KDA, Kohat	Office workers
Faculty members of KMU-IDS, KMU-IMS Kohat	Dental assistants and Dental technicians
	Medical and dental undergraduate students

A closed ended questionnaire was used that consisted of total 17 questions divided in total three sections concerning Introduction , knowledge and prospects of practitioner related to forensic odontology. The introduction section records demographic data of participants along with inclusion of forensic odontology in their curriculum. Forensic odontology section includes assessment of knowledge and practices of participant concerning this field. The last section of future prospect is concerned with interest of participant related to inclusion of forensic odontology as a part of curriculum and need for further training programs. A summary of the survey questions based on the categories of questions (colour coded) was provided in the table 2 below.

Table 2. Survey questions summary.

Q no.	Purpose of the questions	Category of Questions
1	Name of the participant	
2	Sex of the participant	
3	Designation of the participant	Introduction
4	To know whether they had forensic odontology as part of their curriculum?	
5	Is the participant familiar with the term forensic odontology?	
6	Does the participant think dental evidence can be used in courts of law?	
7	Participants understanding on whether teeth can be used as tools for identifying human remains?	
8	Does the participant maintain medical/dental records?	
9	What methods of estimating age is the participant familiar with?	
10	Whether the participant is familiar with any method of dental age estimation?	Knowledge related to forensic odontology?
11	Participant's opinion on the uniqueness of bitemarks?	
12	Participants awareness of head and neck injuries involved in cases of abuse (child/domestic/geriatric)?	
13	Is the participant aware of the principles of dental ethics?	
14	Participant's familiarity with the term 'dental litigation' and/or 'dental malpractice'?	
15	How likely is the participant to develop interest in forensic odontology?	
16	Understanding whether participant agrees to forensic odontology Prospects being taught as part of undergraduate medical and dental courses?	
17	Would the participant be interested in opting for a formal education course in forensic odontology?	

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Prior to data collection , ethical approval was obtained from the Institutional Review Board (IRB) of Khyber medical university – institute of dental sciences on 26th May 2024 under the reference number KIDS-IRBB/ECC/24-6/22 to ensure adherence to ethical standards in terms of confidentiality and the rights of participants. Contestants were briefed on the purpose of the study, and informed consent was obtained by the consent form attached along with the questionnaire. Questionnaires were distributed to all medical and dental practitioners at KMU-IDS , KMU-IMS and DHQ Hospital Kohat. The Participants were given half an hour to complete the survey, and collection was done on the same day to minimize non-responses. Participant confidentiality was strictly maintained. All collected data was anonymized, stored securely, and used solely for research purposes. The data was to be retained for 2 years and would then be deleted as per the consent form agreement.

Results

The data gathered was entered and analysed using Microsoft® Excel® for Microsoft 365 MSO (Version 2410 Build 16.0.18129.20158) 64-bit to ensure accuracy and minimize errors. Descriptive statistics, such as frequencies and percentages, were used to summarize the findings.

Demographics

Males represented 69.6% (n=160) of the 230 participants, while females composed of 30.4% (n=70), as seen in figure 1 below.

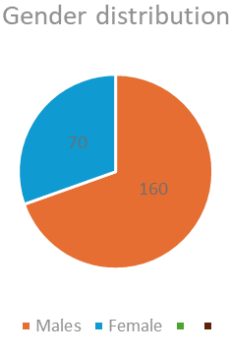

Figure 1. Gender distribution.

With 44.8% (n=103) of the participants coming from the medical profession and 55.2% (n=127) from the dental field, the participants were evenly dispersed across specialties [Figure 2].

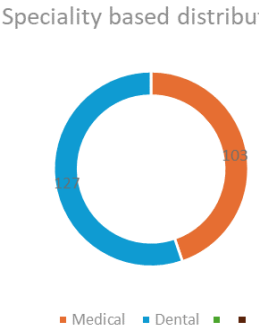

Figure 2. Speciality based distribution of participants.

A large percentage of participants, 88.6% (n=204), said forensic odontology was not part of their curriculum, while only 11.3% (n=26) [Figure 3].

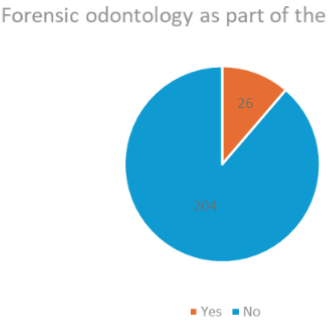

Figure 3. Forensic odontology as part of curriculum.

Knowledge about forensic odontology

Dental evidence can be used in court, according to the majority of participants (87.8%; n = 202), with 6.9% (n = 16) disagreeing and 4.3% (n = 10) being uncertain [Figure 4]. Human remains are identified using a variety of forensic odontology techniques in a variety of situations, including mass murders, fires, train, airplane, and terrorist attacks. Dentition morphology, crowding, tooth colour and location, rotations, and other distinctive dental aberrations are among the dental traits that contribute to an individual unique identity.

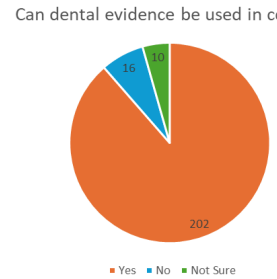

Figure 4. Use of dental evidence in courts.

Of the total 230 participants, 66%(n=152) were familiar with the term forensic odontology while 28% (n=65) had no idea and 6%(n=13) were not sure. Forensic odontology is the integration of dental sciences and criminal investigations. Dentists play an important role in identifying an individual based on their dental structures.

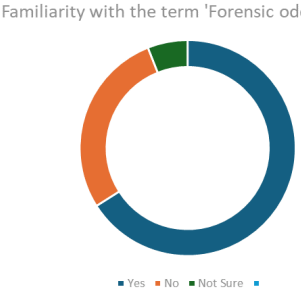

Figure 5. Participants familiarity with the forensic odontology.

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Of the participants, 93.9% (n=216) believed that human remains could be identified by their teeth, whilst 5.6% (n=13) disagreed [Figure 6]. The strongest structures in the human body are the teeth. They are not harmed by powerful explosions. They are among the last remnants of a person to disintegrate after death since they can endure the breakdown process.

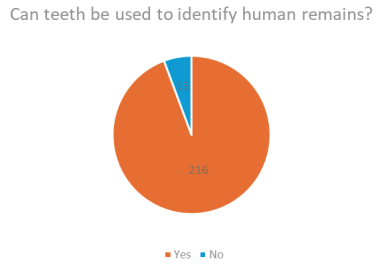

Figure 6. Identification using teeth.

The participants' experience with various age estimation techniques varied. Within the participants, 57.8% (n=133) were aware of dental age estimation, which was followed by cervical vertebral maturation (CVM) 43.4% (n=100), hand-wrist approach 46.9% (n=108), and epiphyseal evaluation 47.8% (n=110). 1.3% of those surveyed (n=3) mentioned alternative approaches [Figure 7].

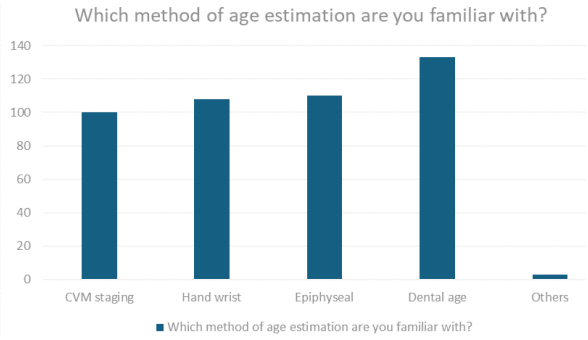

Figure 7. Familiarity with age estimation methods.

While exploring the practice of dental or medical record maintenance among practitioners, 67%(n=153) used to record the status of patients while 33%(n=77) did not [Figure 8]. In most accidents, usually teeth are the only parts of the body which can be effectively recovered for identification of an individual, such cases rely on dental documentation.

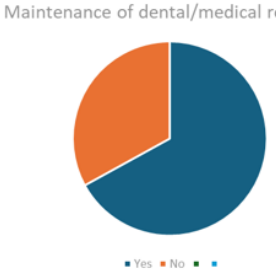

Figure 8. Maintenance of medical/dental records.

Of those polled, 47.3% (n=109) were unfamiliar with dental age estimation, whereas 50.4% (n=116) claimed to be familiar with it but were unable to name any methodology [Figure 9]. Since genetic variables influence age estimation, radiographic approaches are thought to be somewhat more trustworthy than environmental and nutritional factors.

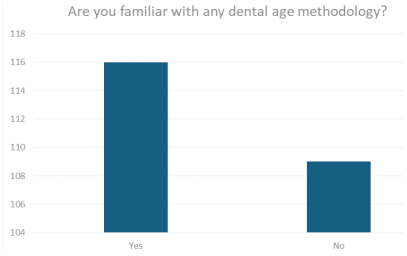

Figure 9. Familiarity with dental age estimation.

Human bite marks are distinctive, according to the majority of participants (73.04 %; n = 168), with 10% (n = 23) disagreeing and 15.2% (n = 35) not sure [Figure 10]. In violent circumstances, such as child abuse and sexual assault, bite marks are commonly seen. They may indicate self-defence on the part of the victims or an assault by the culprit. Humans may be easily identified by their bite marks because of the distinctive morphology and arrangement of their teeth.

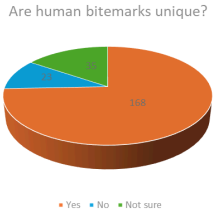

Figure 10. Uniqueness of bitemarks.

While 22.6% of participants (n=52) did not know of head and neck injuries that might be associated with abuse (75.2%) [Figure 11]. Only one person was able to name a handful of these injuries when asked. The identification of injuries in these regions is essential in forensic and medical assessments since they are frequently seen as important markers of physical violence or abuse. Research indicates that head and neck injuries are present in over half of cases of child abuse and maltreatment, which is a worldwide issue. When it comes to forensic and medical evaluations, injuries to these areas are important evidence of physical assault or abuse.

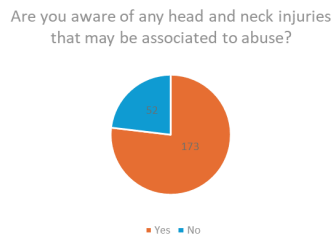

Figure 11. Injuries in abuse.

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Of the 230 participants, 56.9% (n=131) said they understood the principles of dental ethics, 30.9% (n=71) said they did not, and 10.9% (n=25) said they were unsure [Figure 12]. Maintaining standards in dental practice, protecting patient rights, and directing professional behaviour all depend on an understanding of dental ethics.

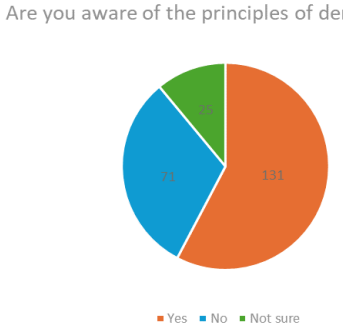

Figure 12. Dental ethics.

59.6% (n=137) of the 230 participants said they were familiar with the term "dental litigation," compared to 30.4% (n=170) who were not and 8.7% (n=20) who were not sure [Figure 13]. Legal action brought about by issues with dental care, such as carelessness, mistakes, or patient complaints, is known as dental litigation.

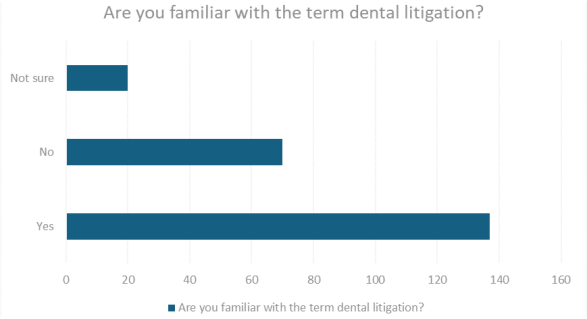

Figure 13. Dental litigation.

As can be seen in Figure 14 below, when asked if they were likely to become interested in forensic odontology, most participants (n=190) were unsure, while the remaining participants (n=17) gave a score below.

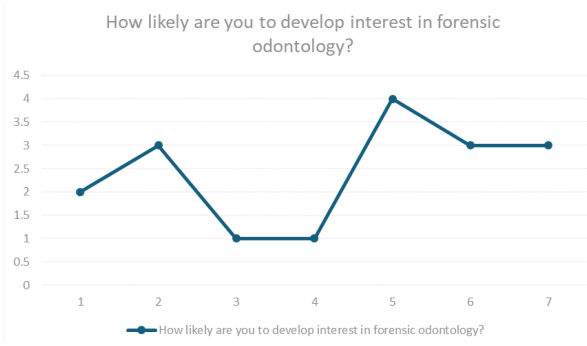

Figure 14. Developing interest in forensic odontology.

Prospects

When asked if forensic odontology should be taught in undergraduate programs, 43.5% of respondents (n=100) agreed and 42.2% (n=97) strongly agreed. Just 0.9% (n=2) strongly disagreed, 3% (n=7) disagreed, and a smaller proportion of 9.1% (n=21) were unsure [Figure 15].

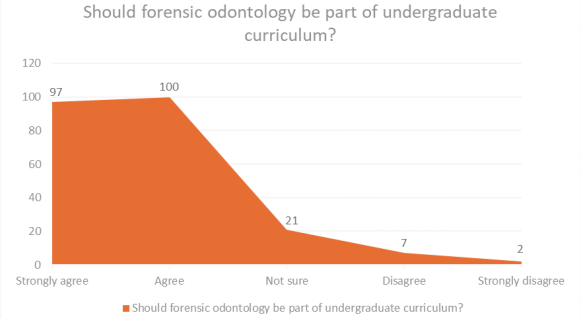

Figure 15. Forensic odontology as part of undergraduate curriculum.

47.4% (n=109) of respondents agreed that forensic odontology should be taught at the postgraduate level, compared to 35.2% (n=81) who opposed and 16.1% (n=37) who were not sure. Its significance is demonstrated by the fact that almost half of the participants are interested in its inclusion at the postgraduate level [Figure 16].

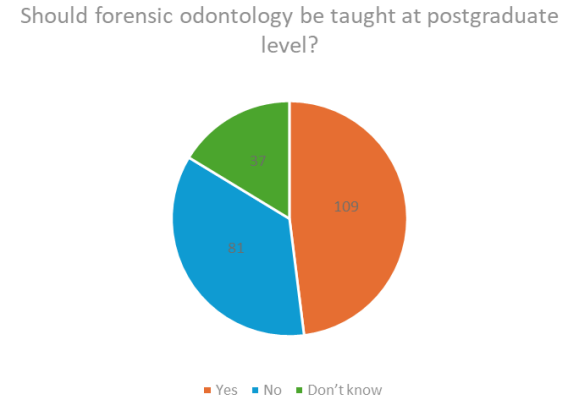

Figure 16. Forensic odontology as a postgraduate specialty.

Discussions

Forensic odontology is a branch of forensic science that uses dental expertise to compare an individual's ante-mortem and post-mortem records. With the rise in crime, terrorism, and natural disasters worldwide, this field has become increasingly important. Forensic dentists often play a crucial role in identifying individuals where only teeth are the only remaining part of the body where principles of forensics can be applied. This study aims to assess the extent of knowledge, awareness and practices of medical and dental practitioners in this field, in order to highlight the barriers that impedes the effective application of principles applied in forensic odontology.

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Findings of this study contribute to the existing evidence suggesting that practitioners have limited knowledge of forensic odontology, likely due to inadequate coverage of this subject in curriculum with no dedicated professional bodies to organize post graduate training programs and seminars to advocate for knowledge of forensic odontology. According to a previous study conducted in Peshawar, KPK, Pakistan in 2018 which examined the knowledge, attitude, and practice of forensic odontology among dental practitioners, it was concluded that while dental practitioners had a positive attitude towards incorporating forensic odontology into the dental curriculum, their knowledge and practices in this area were insufficient. In contrast, this study is conducted in Kohat city, KPK, Pakistan and encompasses both medical and dental practitioners providing a broader insight into knowledge, awareness and practices of forensic odontology.

Overall 4 credit hours are allocated to forensic odontology under primary oral surgery curriculum which is approved by regulatory body of dental schools in Pakistan (9). This limited dedicated time is not enough to provide students in depth knowledge of the subject to be applied later in practice. Forensic odontology is not given much consideration as evident from the results of present study which reveals that a significant majority (88.6%) of the respondents did not have forensic odontology included in their curriculum, however, only 11.3% studied it as a part of their curriculum. This finding is consistent with previous research by Zeeshan et al., which reported that only 2% of respondents had studied forensic odontology at the undergraduate or postgraduate level III [2]. Similar studies in Lahore and Karachi, Pakistan, have also reported alarming gaps in knowledge, with 87% and 84.4% of participants, respectively, lacking formal training in forensic dentistry [11]. These findings collectively underscore the need to integrate forensic odontology as a separate subject in the curriculum. Similarly, numerous other researches in Pakistan show same low level of responses and emphasizes to include forensic odontology as a separate subject [10,12,13].

On contrary to above findings, a study conducted in Punjab, India showed more than (90%) of respondents had knowledge of forensic odontology6, as their regulatory body has approved it as a part of curriculum with specific allocated hours. Increased awareness in India is due to the active professional bodies conducting seminars and training programs, inclusion of forensic odontology as a subject in curriculum, increased exposure through conferences and workshops under IAFO (Indian association of forensic odontology) – all these factors are lacking in Pakistan. In other parts of the world, such as Norway, Australia, Malaysia, Japan, Nepal and some Latin American countries, even if in a different way, the Forensic Dentistry is also approached in universities, emphasizing its importance in teaching [14].

Despite limited access to specialty, this study revealed about 66% of practitioners were familiar with the term "forensic odontology". These results are in line with other studies in literature showing about 54 % of the participants were aware of a few cases in Pakistan where forensic dentistry had been applied [15]. Moreover, evidence from a study conducted in Karachi disclosed 83 % of respondents aware of forensic odontology 8 while 82.5% familiarity presented in a study in India [16], and 100% in a study conducted in Saudia Arabia [16], representing comparatively a higher ratio than Pakistan. Most developed countries are actively involved in promoting forensic odontology by spreading awareness through media, organizing campaigns, promoting advanced research, and training programs. Increased considerations for the development of effective regulatory bodies and professional organizations under this field has led to advancements in practices of forensic odontology and interdisciplinary collaboration. By bridging gaps between various fields, there is an effective exchange of knowledge for mutual cooperation to investigate crime or identify the suspect and victim.

Forensic odontology involves integration of dental studies and crime/forensic analysis. Crime control agencies greatly rely on forensic odontologists in the pursuit of justice. Forensic odontologists can provide expert testimony and present dental evidence in court, supporting the identification of individuals. As per the current study, 87.8% of the participants agreed that dental evidence can be used in court of law, which corresponds to the findings conducted in Karachi and Dow University of health sciences (DUHS). Inconsistent with these results, other study showed 26.5% of respondents were aware of their prospective function as expert witnesses in court [11]. According to the findings of study in India, 56% were aware that a dentist can testify as an expert witness in court to present forensic dental evidence [17]. On the contrary, according to Preeti et al 30% responders showed awareness [18]. Discrepancies in the results of these findings can be attributed to the variations in exposure and access to this field during training and practice among different institutions, leading to poor competence of practitioners in some areas. Furthermore, organizations may engage actively in some regions compared to others, thus limiting facilities, resources and opportunities for development of infrastructure in some regions compared to others; all these factors leading to low response rate regarding role of practitioners as witness in court.

Constituents of teeth including dentin and cementum are rich in mtDNA which can be amplified using polymerase chain reaction (PCR) technique and compared with ante mortem samples, such as blood, hair, clothes, cervical smear and biopsy [18]. Teeth are the most resilient part of the body, surviving most of the deadly explosions and are the last to decompose after death. These unique properties of teeth form the basis of forensic odontology.

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According to the results of this study, 93.9% of respondents agreed that teeth can be used as a source for identifying human remains. In scientific studies, 78.3% participants agreed that teeth can serve as a source of DNA [10], along with more than 70% of the participants showed similar trend [19]. However, according to a study in 2011 by Preeti et al, 67% were aware of the significance of teeth in forensic odontology [18]. Alterations in the findings of these studies are due to the increased level of awareness among professionals over time. With advancement in research and subsequently emphasis on specialized training in this field, more practitioners are gaining skills to apply knowledge and principles of forensic odontology in routine investigations.

Furthermore, 67% of individuals affirmed adherence to record keeping practices in harmonizing with other study revealing 69.9% represented similar trends with 87% agreed that dental records have a significant role in crime suspects [13], whereas an alternative survey even reported universal dental record maintenance [9]. However, variations exist, literature shows some practitioners didn't know or agree that maintaining dental record is of any significance in forensic odontology, while some preserved record for only a short period. Over half of respondents in one study admitted to shortcomings in record-keeping [2], with 59% of dentists not retaining patient records [19], and 22% failing to maintain them in clinics [20]. This poor response rate may be due to restricted awareness regarding significance of record keeping, lack of resources for preserving data or absence of guidelines for record keeping. Additionally, 72% of dental students in Pakistan reported creating complete records, reflecting an uneven yet improving awareness of their significance in forensic dentistry over time [15].

In the current study, 57.8% respondents displayed awareness regarding dental examination as a tool to estimate age, but none was able to name such methodology. This analysis revealed minimal awareness among practitioners, aligning with findings from other studies in Pakistan where 56% of the respondents showed similar trends [9]. Despite these shortcomings, a separate study revealed 78.3% of participants recognized the role of teeth in age assessment [10]. However, Findings of the study conducted in India showed 59% response rate, consistent with our results [18]. This adds up to the evidence that there is sufficient awareness of forensic odontology but considerable lack of knowledge among practitioners. This may be due to limited exposure of practitioners to advanced methodologies used in dental age estimation or practitioners may prefer other techniques to identify age due to limited resource availability such as x-rays.

Bite marks, either abusive or defensive, found on objects or over the body of suspect or victim can be effectively used in suspecting crime cases. Size, number, shape and occlusion of teeth creates unique patterns that can be used in terms if individuality. According to the results of the current study, 73.4% of participants agreed that bite marks are as distinctive as fingerprints. These findings align with other studies in literature where 90% of respondents recognized variations in dentition [15], compared to other survey at Pakistan in 2022, 69% acknowledging role of unique bite marks in crime investigations [19]. Additionally, 83% of participants in a survey done in Karachi, Pakistan supported forensic value of bite marks [10], reinforcing results of the current study. In contrast, research conducted in 2011 at Chennai, India, by Preeti et al. reported that 18% of dental practitioners lacked awareness of the significance of bite marks [18], with another study, done at Tamil Nadu, India in 2022, revealing an even higher Percentage of 32% [20]. 78.7% of participants in a study in Brazil were aware of uniqueness of bite marks [21]. Overall, these findings indicate positive trends in understanding of individuality of bite marks and their role in crime investigations.

The awareness of strong correlation between abuse and head and neck injuries was confirmed by 75.2% of the respondents in our study. This result corresponds to an evaluation carried out in 2005, reporting 59% awareness rate [22], besides 50% results in another survey. Furthermore, analysis done on trauma admissions to the hospital revealed 60% of the patients suffered from craniofacial injuries, thus underscoring the role of dentists in identifying trauma related to abuse [23].

56.9% of the contributors were aware of the principles of dental ethics which is in parallel to 60.7% rate in another study [24], alongside 52.5% confirmed receiving formal education on the subject in Pakistan [23]. As per published studies, a survey based on ethics, confidentiality, and medicolegal concepts displayed data revealing about 74% knowledge rate [25], aligning with the studies conducted in Pakistan.

Although, 59.6% of the respondents in our study exhibited awareness regarding the term "dental litigation", however, insufficient knowledge and practice of legal rules and regulations, contributing to grave outcomes of malpractice, is highlighted in previous studies in literature.

While most participants were unsure regarding interest in this field, more than half of the responders agreed about inclusion of this subject at undergrad level and 47.4% were in favor of being taught at postgrad level. These results are consistent with other findings from both national and international level including 88% interest expressed by participants in receiving formal training in forensic dentistry along with inclusion of forensic odontology as a separate subject at postgrad level in Pakistan with a response rate of 96% [19]. Furthermore, 67.4% of respondents found the idea of studying forensic odontology at the postgraduate level appealing [21].

The limitations of our investigation into forensic odontology awareness among medical and dental practitioners in Kohat are multifaceted. A small sample

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size and reliance on a single institution diminish the external validity, limiting the generalizability to other regions or healthcare settings. Should self-reported data be the primary source, response bias is an inherent risk, with participants potentially inflating their perceived expertise. As forensic odontology is a highly specialized domain, practitioners' limited exposure could distort their actual proficiency in the field. Furthermore, the study's geographical constraint to Kohat disregards regional or cultural disparities in knowledge. The cross-sectional methodology restricts insights to a specific moment, neglecting temporal shifts in awareness or changes in post-intervention. Variations in professional experience and educational backgrounds may impact familiarity with forensic odontology but may not be adequately controlled. Moreover, the absence of an analysis of available training opportunities hampers a deeper understanding of the factors influencing awareness. Potential language or cultural misinterpretations could compromise survey accuracy, and social desirability bias may prompt respondents to overstate their competence, thereby distorting the results.

As evident from the responses of practitioners in this study, there is a dire need for further comparative studies across different regions of Pakistan and other countries to help access the knowledge gap at a higher level which will further provide a baseline educational framework to design modules for integrating forensic odontology as separate subject in undergrad and postgrad programs. Further research can be planned to evaluate the effectiveness of special training programs, seminars and hands-on workshops in enhancing knowledge and awareness among practitioners so that they can effectively perform and promote cases related to forensic odontology. Furthermore, evidence is required to relate medical and dental ethics and forensic laws to help make forensic odontology as integral part of every postmortem.

Conclusions

The results of this study conclude that there is adequate awareness but insufficient knowledge among practitioners regarding forensic odontology. Most respondents are unaware of the importance of record-keeping and age estimation using teeth in the context of forensic odontology. However, many participants expressed interest in including forensic odontology as a distinct subject in the undergraduate curriculum to ensure the effective application of its principles in future practice. Additionally, seminars, postgraduate training programs, and workshops can be organized under a dedicated organization to promote knowledge and awareness among practitioners.

Disclosure Statement

No potential conflict of interest was reported by the author.

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