

*Original Research Article*

# Knowledge and Awareness of Forensic Odontology among the Dental Practitioners in Riyadh City: A Survey-Based Study.

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Accepted, 28<sup>th</sup> June, 2018.

Forensic dentistry (FD) can be defined as the application of dental knowledge in the criminal and civil laws that are forced by police agencies in a criminal justice system and FD helps to collect evidences with regards to child abuse and it is also used in the identification process by taking DNA samples from the teeth, and is involved in the identification of deceased individuals through the comparison of ante- and post-mortem records and would assist in solving cases of abuse and deaths. The DNA technology can be used in the recovery of the genetic material, through the saliva deposited in the skin and Criminological odontology has turned into a fundamental piece of scientific drug in the course of recent years. Legal odontology assumes an imperative part in criminal, fiscal debate, conjugal, social, entombment, and the distinguishing proof of people missing for delayed periods. Distributed by Edwin Saunders in 1857 who asserted that teeth gave the most solid manual for age contrasted with age estimation from stature which was a standard strategy utilized amid that time. The essential utilization of legal odontology incorporate recognizable proof of human stays through dental records and helping at the scene of wrongdoing; in instances of suspected tyke through nibble marks or physical wounds; assurance of age and sex of the living or expired and to affirm as a specialist witness in the court to exhibit measurable dental confirmation.

**Keywords:** Awareness, Dentists, Forensic odontology, Knowledge.

## INTRODUCTION

Interest in forensic dentistry was relatively dormant until the 1960s when renewed interest was sparked by the first formal instructional program in forensic dentistry given in the United States. Dental identification assumes a primary role in the identification of remains when postmortem changes, traumatic tissue injury or lack of a fingerprint record invalidate the use of visual or fingerprint methods (Avon, 2004).

Forensic dentistry can be defined as the application of dental knowledge in the criminal and civil laws that are forced by police agencies in a criminal justice system. Using specific highly technical procedures, forensic dentists can provide an accurate estimate as to the age of a victim, when they died and can also take DNA samples from the teeth for use in the identification process. There was a study conducted in India to determine the extent of awareness of dentists to keep their patients records and they found that few of the dentists maintained and shared records and they had low knowledge about forensic odontology and some of them had poor attitude

and lack of practice of forensic odontology (Gambhir et al, 2016).

Forensic Dentistry (FD) is a science involved in child abuse and local violence of medico-legal cases outside the clinics. FD helps to collect evidences with regards to child abuse. A study was conducted in Saudi Arabia, which focused on determining how common FD incidence in the kingdom. The purpose of this study was to evaluate the awareness of FD among the dental practitioners' population. The researchers found that the senior dental practitioners had higher awareness in FD as compared to the junior colleagues. More than one-third of the subjects of the study maintained good records. In order to increase the awareness of FD among the dental practitioners, it was suggested to implement training programs for dental practitioners as a part of their continuing education and courses in the undergraduate curricular programs in the school of dentistry (Al Sheddi & Al Asiri, 2015). Forensic dentistry is a challenging and fascinating branch of forensic science that

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involves the application of dental sciences in the identification of deceased individuals through the comparison of ante- and post-mortem records and would assist in solving cases of the abuse and deaths. Another study in Kanpur, India compared the ante- and post-mortem records and collected data from dental practitioners regarding the maintenance of records and queries related to receiving formal training to do the former. A very small percentage of participants maintained their patients' records whereas, a large majority had good enough knowledge about forensic dentistry (Nagarajappa et al, 2014).

There was a Cross-sectional study completed among dental practitioners in Pune, India, which concluded that more than half of dental practitioners in this study maintain their patient's dental records as handwritten documents or computerized or in both forms for a specific time. On the other hand, the majority could not identify child abuse; neither could estimate dental age and gender nor the bite mark patterns of the teeth. It was obvious that there was a lack in practice of forensic odontology and basic knowledge among dental practitioners in Pune. One of the reasons behind that was lack of training during undergraduate studies (Harchandani et al, 2014).

Another cross-sectional study was conducted in Islamabad, Pakistan involving dental practitioners working in five major dental schools. The results were staggering 99% participants having no formal undergraduate training related to forensic dentistry. There is a strong need to add forensic dentistry in the undergraduate curriculum (Baig et al, 2014).

A significant field of study and analysis in forensic dentistry is the recognition and interpretation of marks and injuries produced for human bites in foods founded in crime scenes or in the human skin. The DNA technology can be used in the recovery of the genetic material, through the saliva deposited in the skin, generally, resultants of rapes, fight assaults, abuses and child violence (Silva et al, 2007).

The expression "legal" has its starting point in the Latin word "forensis" from "gathering," which implies a place where legitimate issues are examined. The investigation of dentistry as identified with the law is known as legal dentistry or measurable odontology. Scientific odontology is a specific field of dentistry identified with lawful issues. It is a standout amongst the most quickly creating branches of criminological prescription and scientific science. Legal odontology can be characterized as the branch of dentistry that tends to the best possible dealing with an examination of dental confirmation and the assessment and introduction of dental discoveries in light of a legitimate concern for equity. This moderately little claim to fame inside the scientific sciences has been used for a long time, chiefly in the territory of setting up personality in normal and artificial fiascos. (Preethi, Einstein & Sivapathasundharam, 2011)

Enthusiasm for measurable dentistry was moderately lethargic until the point that the 1960s when recharged intrigue was started by the principal formal instructional program in criminological dentistry given in the United States at the Armed Forces Institute of Pathology. From that point forward the quantity of cases announced has extended to such a degree, to the point that the expression "legal odontology" is getting comfortable to the dental calling as well as to law authorization organizations and other legal gatherings. The primary measurable dental ID in India was accounted for in a survey directed by Sansare and Dayal in 1995. As indicated by this audit, M. Raja Jayachandra Rathore of Canouj, kicked the bucket on the combat zone in 1191. His body was recognized by his false foremost teeth. This was most likely the principal

instance of recognizable proof utilizing dentition from India (Preethi & Einstein, 2011).

Criminological odontology has turned into a fundamental piece of scientific drug in the course of recent years. It might likewise be subclassified into criminological odonto-toxicology, which manages instances of harming, however, this field is yet to pick up prominence internationally. Legal odontology assumes an imperative part in criminal, fiscal debate, conjugal, social, entombment, and the distinguishing proof of people missing for delayed periods. Distinguishing proof assumes an essential part in common cases like protection claims, marital question, property debate, pantomime, and issue of travel permits and different licenses.

A general dental practitioner separated from having an expansive foundation learning of general dentistry, ought to likewise have fundamental information of the part of the legal pathologist, strategies utilized as a part of post-mortem examination, the part of a dental specialist in the recognizable proof of a man, and the significance of keeping up dental records of all patients. Tragically, in India, qualified measurable odontologists are not very many. This is most likely because of the absence of appropriate mindfulness; neither the legislature nor the general population has totally comprehended the part that can be played by a scientific dental practitioner (Astekar et al, 2011).

Legal dentistry is a testing and entrancing branch of scientific science that includes the use of dental sciences in the distinguishing proof of perished people through the examination of bet and after death records. From AD 66 to date, dental recognizable proof has demonstrated key in distinguishing perished people, the principal case being acknowledged by the law in the year 1849. As of late, measurable odontology has developed as another beam of expectation in helping legal medication, at the same time, this key and essential field of scientific pharmaceutical is still in a condition of earliest stages in India (FRANCISCO, DAVID & STEPHEN, 1998).

Legal science alludes to territories of try that can be utilized as a part of a legal setting and acknowledged by the court and the general academic group to isolate truth from untruth. Forensic is gotten from the Latin word gathering, which signifies "official courtroom". Odontology alludes to the investigation of teeth. Scientific odontology, consequently, has been characterized by the Federation Dentaire International (FDI) as that branch of dentistry which, in light of a legitimate concern for equity, manages the correct taking care of and examination of dental proof, and with the best possible assessment and conservation of dental discoveries.

The different materials utilized as a part of recognizable proof of human remains are the individual possessions like bits of dress, adornments, fingerprints from blood gathering and dentition. Human dentition is considered as hard tissue simple to the fingerprints. It is nearly as one of a kind to a person as fingerprints. Every grown-up human dentition comprises of thirty-two teeth of which some might miss or twisted. Impacts of different natural occasions, similar to sustenance, drugs and so on will likewise be showed on the teeth (Navya & Raj, 2016).

Each race has trademark appearances on the dentition. With such a broad cluster of contrasts, it is to a great degree uncommon to have two comparable dentitions. Teeth are a standout amongst the most strong parts of our body which can withstand a larger number of ambushes than some other piece of the body. This is especially valuable in the distinguishing proof of bodies in mass fiascos and regular disasters. Generally, age evaluation utilizing teeth was first distributed by

Edwin Saunders in 1857 who asserted that teeth gave the most solid manual for age contrasted with age estimation from stature which was a standard strategy utilized amid that time. Age is one of the fundamental factors in setting up the personality of the individual and a basic part in dental profiling. Little varieties in the tooth arrangement and emission among people have made a dental estimation of sequential age the essential strategy for age assurance for more youthful people. The utilization of radiographs is normal for methods that include perception of the morphologically particular phases of mineralization (Burke & Tan, 1997).

The essential utilization of legal odontology incorporate recognizable proof of human stays through dental records and helping at the scene of wrongdoing; in instances of suspected tyke or grown-up manhandle through nibble marks or physical wounds; assurance of age and sex of the living or expired and to affirm as a specialist witness in the court to exhibit measurable dental confirmation. The inquiry dependably emerges in the matter of whether the dental experts should think about criminological odontology, the reason being that dental distinguishing proof gives a precise wellspring of ID of the casualty or the suspect.

As of late, common and man-made fiascos are happening all the more often in India. Under these conditions, the collections of the casualties end up plainly mangled to the point of being unrecognizable, where the crucial part of dental specialists comes into picture in the ID of such people. Consequently, the present investigation was led to survey the information, state of mind and routine with regards to criminological odontology among dental experts (Sreekanth Kumar, Madhuri & Sivakumar, 2017).

#### AIMS OF THE STUDY

- To determine the knowledge and perception of dental practitioners regarding forensic dentistry.
- To determine the extent of record maintaining in clinical practice analyze comparisons on the basis of gender and type of workplace.

#### MATERIALS AND METHODS

This is a cross-sectional study, which involved 308 dentists from Riyadh city. A closed-ended questionnaire was constructed using the key article. Convenient sampling was done. We aimed to reach out to the private and public hospitals as well as academic institutions and visit their dental departments. After receiving the institutional review board approval, we went on with the data collection. The questionnaire included demographics, questions related to the knowledge and practice of dental records maintenance consisting of recognition of physical trauma/abuse, bite marks, assistance after mass disaster etc.

The questionnaires were distributed on paper format as well as using online sources. Data were collected from male and female dentists from King Fahad Medical City, Dr. Sulaiman Al Habib Medical Group, Riyadh Colleges of Dentistry and Pharmacy, King Faisal Specialist Hospital & Research Center and Al Muhaidib Dental Clinics. Collected data was subjected to data analysis using Statistical Package for Social Sciences (SPSS) version 16. Descriptive statistics was done including frequencies, crosstabs with Chi-square test having the significant value kept under 0.05. This study was completed in two months.

#### RESULTS

A total of 308 dentists from Riyadh took part in this study. 153 males and 155 females from different hospitals and clinics were utilized in order to fulfill the aims of this study. These participants had a working background of various setups including private clinics (35%), government hospitals (38%) and academic institutions (27%). The study participants were inquired about a set of questions related to forensic odontology and record maintenance of patients. The responses were compared between males and females. Overall results suggested that female participants had better knowledge as compared to males. But this difference was statistically insignificant. The individual responses can be seen in table 1.

We also compared the responses on the basis of the type of workplace. Table 2 shows the comparison and it can be acknowledged that we received a mixed response from all the groups whether they were working in private clinics, government hospitals or academic institution. However, dentists working in government hospitals revealed better knowledge in keeping and maintaining records of their patients. This difference from other groups was found out to be statistically significant.

#### DISCUSSION

The aim of this study was to assess the knowledge and readiness of dental practitioners of Riyadh city towards forensic dentistry and patient record maintenance. Initially, we planned to opt for stratified sampling as it would have given us uniform and standardized results. For that purpose, we would have to gather information from the hospitals of all parts of Riyadh. Due to lack of time, we opted for convenient sampling and chose hospitals and clinics according to our ease of access.

We compared the results of our study with a few other related researches done in different parts of the world. A study done in Chennai, India by Preethi et al. (2011) revealed that 93% of the dentists were not keeping the records for their patients for 7 or more years. On the other hand, this number was 65% in our study for the similar variable. Their results revealed that 40% of the participants did not have any knowledge regarding signs of child abuse and related actions to be taken, which was incidentally similar to what we found out in our study.

There was a similar study done in Australia by Al-Azri et al. (2016) among the dentists. It was noted that the Australian dentists reported overall reasonable awareness of the major applications of forensic odontology. Personal information and details of restorative treatment were recorded at the high levels (similar to our study findings), while tooth anomalies, photography, additional patient details and denture marking were recorded inadequately, which was the case for our study as well.

In our study, we were able to retrieve some statistically significant comparisons between genders and type of workplace. These findings among the genders were significant when asked about the type of record maintained regularly, identification of abuses in patients by the dentists, determination of gender, and age of diseased and finally the experience of dentists in exposing to forensic cases. Whereas the type of work was concerned, there was significant difference found when inquired about methods of record storage, assistance of dental records in identifying diseased, suspecting signs of abuse in patients and identification of age

and gender of the diseased (Preethi, Einstein & Sivapathasundharam, 2011).

A comparative report which was completed had a center of the present deliberate survey was on the information, mindfulness, and routine with regards to measurable odontology among dental specialists. The audit used different parameters so as to accumulate critical data from dental specialists and different pros on the point of scientific odontology, which is apparent from the outcomes. The information and mindfulness level in regards to measurable odontology among the subjects is lacking and there is huge variety practically speaking and administration in various investigations, which could be credited to the distinction in test estimate and to the diverse examination settings.

This may have expanded the danger of predisposition while assessing ponders on information and mindfulness. Three investigations utilized a nearby finished survey to assemble data about different parts of measurable odontology from their examination subjects, while just a single report utilized a poll that contained both open-and close-finished inquiries. The benefit of utilizing a nearby finished poll is that it diminishes review inclination, and such inquiries are anything but difficult to dissect and may accomplish faster reaction from the subjects (Vijay et al, 2014).

Contrasted with the investigation which was completed by us it can be seen from the outcomes that every one of the subjects in one of the examinations had information in regards to criminological odontology. This could be because of the reason that scientific dentistry constitutes a critical bit of the subject of Oral Pathology and Microbiology in the postgraduate syllabus. Logical diaries were referred to as the primary wellspring of learning among a noteworthy extent of subjects rehearsing in metros, though dental specialists in level 2 urban areas, for the most part, relied on the daily paper for the same in one of the investigations. This could be because of the simple access of diaries to the dental practitioners who are dwelling in metros (Charangowda et al, 2010).

Legal dental examination mostly relies on the accessibility of antemortem records and in this way dental records turn out to be an extremely helpful apparatus in such cases. These are additionally kept up for buyer court confirm and for dental protection. Just 12% of dental practitioners kept up entire dental records in one of the examination reports. In this way, it requires the social obligation of every dental practitioner to fundamental finish dental records of their customers that can fill in as a vital wellspring of data in case of any setback (Devadiga, 2014).

The impediments in this following examination were somewhat unique to that of what we had in our investigation. It depended on an audit of prior investigations that were led in various eras by various creators. Thusly, the generalizability might be incorrect. Additionally, a portion of the articles that passed the incorporation criteria amid the underlying inquiry was accessible just on installment; sends were sent to the diaries/writers asking for a waiver of the same yet no reaction was gotten, as the present examination was not supported, these articles couldn't be incorporated.

The present survey thought about and examined just those viewpoints with respect to legal odontology that were normal in every one of the examinations as it was not basically conceivable to talk about and think about unique attributes of every last investigation. In addition, the example in each investigation included distinctive kind of subjects: One examination looked at the learning levels of experts and academicians, while different examinations drew in dental professionals and authorities like oral pathologists. In this

manner, this sort of testing could account toward the diverse levels of information and mindfulness found in the examination (Manea et al, 2007).

Another examination which was done present included the electronic and manual pursuit of various logical databases, with no limitation in regards to year of distribution. The reference arrangements of writing surveys were hunted down for different investigations that could likewise be incorporated. Be that as it may, it is conceivable that some significant information may have been excluded as far as criminal writing (gathering procedures, papers, specialized reports, and so forth). This could have represented some distribution inclination and any imperative data would without a doubt have been disregarded given the kind of writing look methodology used to direct the present survey (Parul et al, 2013).

Legal odontology is a critical branch of the investigation of dentistry that would help with explaining instances of misuse and passings. More prominent information and consciousness of criminological odontology among the dental specialists would be required in the developing field of solution. The act of measurable odontology has picked up significance in various created nations over the world (Mehtar et al, 2007).

Like our examination rehearsing dental specialists can end up noticeably profitable individuals from the dental recognizable proof process by creating and keeping up models of record-keeping, which would be significant in reestablishing their patients' character. In the present examination, every single dental expert keeps up dental records while, in an investigation done by Preethi et al, 21% dental professionals maintained dental records in their facility. Of the staying 79%, just 12% kept up total dental records. Ninety-three rates of the specialists kept up the dental records for under seven years (Narendra et al, 2014).

With respect to learning or mindfulness about keeping up dental records, shockingly a low percentile of around 38% of reviewed dental practitioners in Rajasthan kept up records and in another investigation done by Preethi et al, 17% dental practitioners did not know about keeping up dental records. Be that as it may, in display think about just 6.1% of dental practitioners didn't know about keeping up dental records. Kid mishandle is introducing a genuine social issue with worldwide measurements, expanding at a disturbing rate in every financial stratum and all ethnic or racial groups which were very like our investigation (Vijayalakshmi S et al, 2010).

Like the examination which was completed in our investigation, just 10.2% dental professionals did not know how to recognize youngster manhandle and only a couple of them didn't know the moves to be made in instances of kid mishandle. Though, in an investigation done by Preethi et al, 40% dental experts did not know how to distinguish youngster manhandle. Age assurance has improved the situation for different reasons, for example, of bodies in criminal cases and in exceptionally mangled casualties of mass fiascos. In living people, the age estimation is done to survey whether the tyke has achieved the time of criminal obligation in cases, for example, capturing, business, unlawful migration, marriage and when birth endorsement isn't accessible and records are suspected. In spite of the fact that 87.8% of the subjects claim to have experienced a formal preparing in dental confirmation, it was amazing to see that 37.5% of the dental specialists did not know how to appraise the dental age by analyzing the teeth; though, in another examination 41% dental experts did not know how to assess the age.

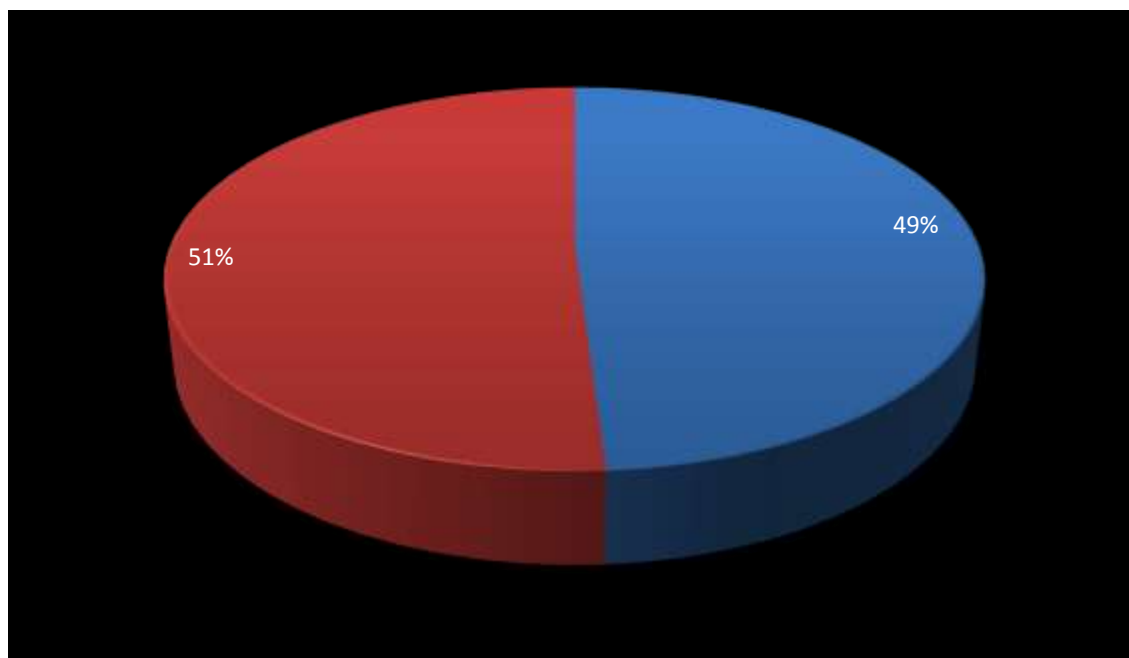


Figure 1: Male to female ratio participating in this study

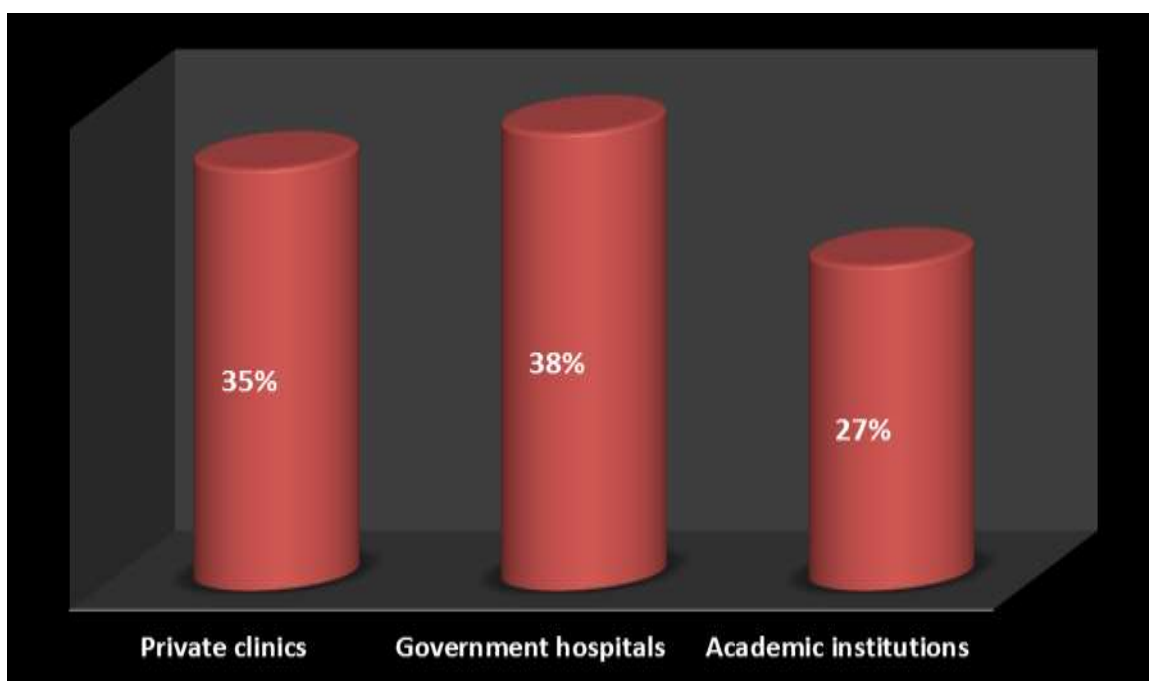


Figure 2: Different working sites of the participants

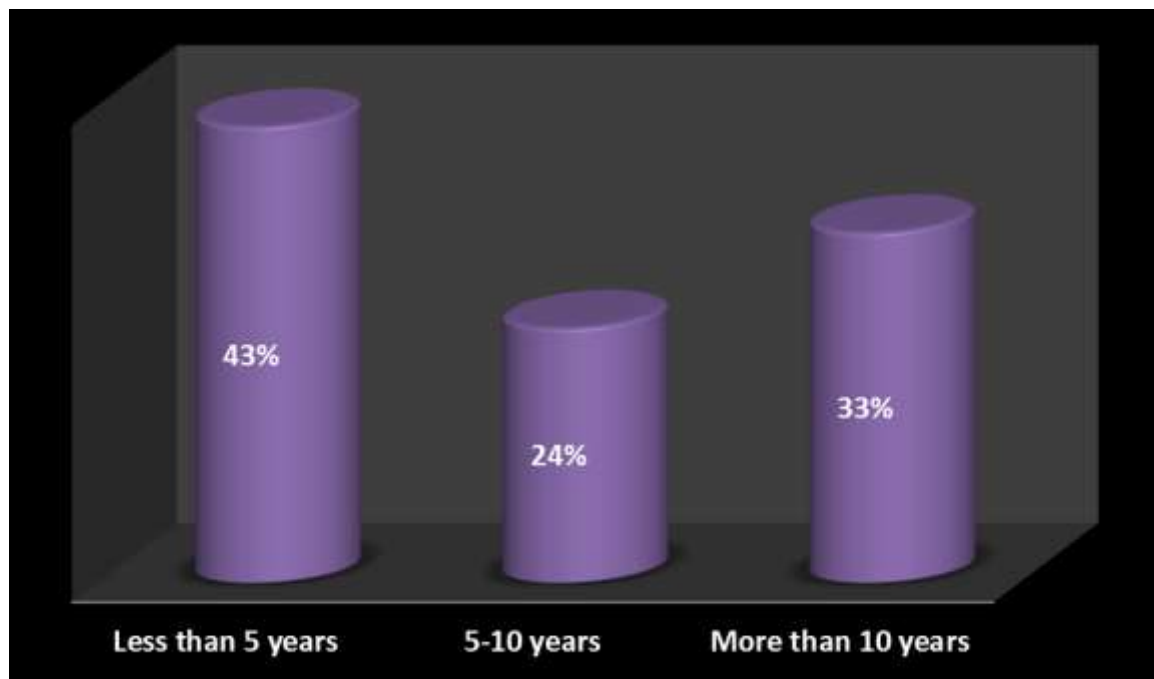


Figure 3: Clinical experience of the participants

Table 1: Gender comparison for the responses of questionnaire

Variables	Responses With Percentage			p-value
Do you maintain dental records?	<b>All the time</b> Males 72% Females 74%	<b>Sometimes</b> Males 25% Females 22%	<b>Never</b> Males 2% Females 4%	<b>0.470</b>
What do you maintain regularly?	<b>Patient details + Medical history</b> Males 60% Females 45%	<b>Photos +Dental casts</b> Males 8% Females 17%	<b>Family history + Radiographs</b> Males 16% Females 24%	<b>0.047</b>
Duration of maintenance of records	<b>Less than 2 years</b> Males 33% Females 37%	<b>3 to 6 years</b> Males 29% Females 29%	<b>More than 6 years</b> Males 37% Females 31%	<b>0.642</b>
Methods of record storage.	<b>Hand written case paper</b> Male 26% Females 19%	<b>Computerized records</b> Males 33% Females 40%	<b>Both</b> Males 41% Females 41%	<b>0.216</b>
D.R. can assist in identifying diseased?	<b>YES</b> Males 62% Females 82%	<b>NO</b> Males 38% Females 18%		<b>0.041</b>
Do you know signs of child abuse?	<b>YES</b> Males 66% Females 69%	<b>NO</b> Males 34% Females 31%		<b>0.477</b>
Suspect signs of abuse in your patients?	<b>YES</b> Males 38% Females 37%	<b>NO</b> Males 62% Females 63%		<b>0.617</b>
Include details of abuse in patient's file?	<b>YES</b> Males 33% Females 27%	<b>NO</b> Males 67% Females 73%		<b>0.394</b>
Do you talk to the suspect about it?	<b>YES</b> Males 47% Females 42%	<b>NO</b> Males 53% Females 58%		<b>0.351</b>
Dentist can identify all types of abuses in pts?	<b>YES</b> Males 63% Females 80%	<b>NO</b> Yes 37% Females 20%		<b>0.035</b>
Aware of the significance of bite mark patterns of teeth?	<b>YES</b> Males 70% Females 73%	<b>NO</b> Males 30% Females 27%		<b>0.477</b>

Can you identify age and gender of diseased?	<b>YES</b> Males 55% Females 43%	<b>NO</b> Males 45% Females 57%		<b>0.048</b>
Dentists can testify in court to present forensic evidence?	<b>YES</b> Males 64% Females 57%	<b>NO</b> Males 36% Females 43%		<b>0.182</b>
Your workplace has F.O. department?	<b>YES</b> Males 16% Females 15%	<b>NO</b> Males 84% Females 85%		<b>0.819</b>
Have you studied the subject of F.O.?	<b>YES</b> Males 39% Females 35%	<b>NO</b> Males 41% Females 65%		<b>0.620</b>
F.O. should be taught in undergraduate?	<b>YES</b> Males 82% Females 86%	<b>NO</b> Males 18% Females 14%		<b>0.548</b>
You have adequate knowledge of F.O.?	<b>YES</b> Males 23% Females 15%	<b>NO</b> Males 77% Females 85%		<b>0.217</b>
Attended workshops regarding F.O.?	<b>YES</b> Males 24% Females 12%	<b>NO</b> Males 76% Females 88%		<b>0.021</b>
Experienced cases where F.D. was required?	<b>YES</b> Males 37% Females 19%	<b>NO</b> Males 63% Females 81%		<b>0.002</b>

**Table 2:** Comparison of responses on the basis of various work places

Variables	Responses With Percentage			p-value
Do you maintain dental records?	<b>All the time</b> Private clinics 74% Public hospital 73% Dental school 72%	<b>Sometimes</b> Private clinics 21% Public hospital 22% Dental school 28%	<b>Never</b> Private clinics 5% Public hospital 5% Dental school 0%	<b>0.266</b>
What do you maintain regularly?	<b>Patient details + Medical history</b> Private clinics 58% Public hospital 62% Dental school 60%	<b>Photos +Dental casts</b> Private clinics 5% Public hospital 5% Dental school 9%	<b>Family history + Radiographs</b> Private clinics 25% Public hospital 22% Dental school 14%	<b>0.114</b>
Duration of maintenance of records	<b>Less than 2 years</b> Private clinics 44% Public hospital 33% Dental school 45%	<b>3 to 6 years</b> Private clinics 26% Public hospital 30% Dental school 40%	<b>More than 6 years</b> Private clinics 30% Public hospital 37% Dental school 5%	<b>0.298</b>
Methods of record storage.	<b>Handwritten case paper</b> Private clinics 25% Public hospital 31% Dental school 10%	<b>Computerized records</b> Private clinics 37% Public hospital 28% Dental school 48%	<b>Both</b> Private clinics 40% Public hospital 41% Dental school 42%	<b>0.004</b>
D.R. can assist in identifying diseased?	<b>YES</b> Private clinics 76% Public hospital 90% Dental school 88%	<b>NO</b> Private clinics 24% Public hospital 10% Dental school 12%		<b>0.042</b>
Do you know signs of child abuse?	<b>YES</b> Private clinics 68% Public hospital 72% Dental school 75%	<b>NO</b> Private clinics 32% Public hospital 28% Dental school 25%		<b>0.301</b>
Suspect signs of abuse in your patients?	<b>YES</b> Private clinics 28% Public hospital 42% Dental school 44%	<b>NO</b> Private clinics 72% Public hospital 58% Dental school 56%		<b>0.034</b>
Include details of abuse in patient's file?	<b>YES</b> Private clinics 27% Public hospital 32% Dental school 30%	<b>NO</b> Private clinics 73% Public hospital 68% Dental school 70%		<b>0.717</b>
Do you talk to the suspect about it?	<b>YES</b> Private clinics 52% Public hospital 42% Dental school 45%	<b>NO</b> Private clinics 48% Public hospital 58% Dental school 55%		<b>0.191</b>
Dentist can identify all types of abuses in pts?	<b>YES</b> Private clinics 89% Public hospital 80% Dental school 75%	<b>NO</b> Private clinics 11% Public hospital 20% Dental school 25%		<b>0.083</b>

Aware of the significance of bite mark patterns of teeth?	<b>YES</b> Private clinics 68% Public hospital 82% Dental school 74%	<b>NO</b> Private clinics 32% Public hospital 18% Dental school 26%		<b>0.289</b>
Can you identify age and gender of diseased?	<b>YES</b> Private clinics 61% Public hospital 88% Dental school 51%	<b>NO</b> Private clinics 39% Public hospital 12% Dental school 49%		<b>0.048</b>
Dentists can testify in court to present forensic evidence?	<b>YES</b> Private clinics 55% Public hospital 49% Dental school 45%	<b>NO</b> Private clinics 45% Public hospital 51% Dental school 55%		<b>0.443</b>
Your workplace has F.O. department?	<b>YES</b> Private clinics 61% Public hospital 65% Dental school 65%	<b>NO</b> Private clinics 39% Public hospital 35% Dental school 35%		<b>0.885</b>
Have you studied the subject of F.O.?	<b>YES</b> Private clinics 14% Public hospital 11% Dental school 22	<b>NO</b> Private clinics 86% Public hospital 89% Dental school 78%		<b>0.322</b>
F.O. should be taught in undergraduate?	<b>YES</b> Private clinics 42% Public hospital 40% Dental school 18%	<b>NO</b> Private clinics 58% Public hospital 60% Dental school 82%		<b>0.123</b>
You have adequate knowledge of F.O.?	<b>YES</b> Private clinics 90% Public hospital 92% Dental school 80%	<b>NO</b> Private clinics 10% Public hospital 8% Dental school 20%		<b>0.566</b>
Attended workshops regarding F.O.?	<b>YES</b> Private clinics 17% Public hospital 22% Dental school 17%	<b>NO</b> Private clinics 83% Public hospital 78% Dental school 83%		<b>0.513</b>
Experienced cases where F.D. was required?	<b>YES</b> Private clinics 20% Public hospital 14% Dental school 18%	<b>NO</b> Private clinics 80% Public hospital 86% Dental school 82%		<b>0.538</b>

The explanations behind this could be multifactorial, either their numbness or absence of essential information or absence of trust in noting this inquiry, aside from not knowing the essentialness of dental age with respect to legal sciences (Gabriel M. et al, 2014).

The recognizable proof of countless in mass catastrophes is mind-boggling and laden with perils, both physically and feelings. For creating nations like India, dental ID is a fitting strategy to consider in Disaster Victim Identification. If there should arise an occurrence of catastrophe casualties, because of disintegration, just dental confirmation or DNA may stay for examination. Regarding cost, DNA is both much costly and additional tedious.

Involvement in different debacles in distinguishing casualties in nations like Estonia and Croatia has demonstrated a high rate of dental ID. In the present examination, 87.8% of dental specialist had formal preparing in gathering, assessing and displaying dental confirmation. Be that as it may, the correlation of reactions in connection to sex, capability and years of experience was fluctuating contrasted with our own investigation (Al-Azri, Harford & James, 2016). There is a huge scope of improvement in our study and we will try our best to accomplish better results when we continue this research in our internship.

## CONCLUSIONS

- Male and female dentists showed significant differences in options related to the maintenance of dental records, whereas the female largely supported the fact that dental records may assist in forensic

dentistry cases and this comparison was also statistically significant.

- Male and female participants revealed a relatively poor knowledge towards the identification of age and gender using forensic evidences. However, the difference between males and females was significant.
- Males witnessed significantly higher cases related to F.D.
- A large majority of participants reported to have maintained the dental records electronically. This percentage was highest among practitioners working in dental schools and this difference was statistically significant.
- The ability to identify age and gender of diseased was significantly higher in the dentists working in government setups.

## CONFLICT OF INTEREST

No conflict of interest among the authors or any other person/organization regarding the publication of this study.

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