

Knowledge Attitude Perception about Forensic Criminology amongst Dentist: A Web based Survey

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ABSTRACT:

Aim: To analyse and assess the knowledge and perception about forensic criminology amongst dentists.

Introduction: Forensic criminology is the study of crime and criminals and the legal proceedings pertaining to it. It is the role of a forensic criminologist to understand the process of crime. Dentists on the other hand are the ones who come across victims of abuse and torture frequently. The abuse could be as subtle as child or elder neglect and could be profound as child abuse, domestic abuse, elder abuse or sexual abuse. The signs of abuse and torture are mostly reflected in the head and neck area. A dentist is endowed with the knowledge of medical and legal capabilities so as to report a case of crime. In order to do so, a practising dentist must learn the signs of abuse and few laws that protect the victims from abuse or any sort of crime. The role of a dentist is not just to protect the victims, but also to provide the details of criminals or the detainee to the police.

Materials and Methods: A set of 18 questions were formulated and circulated via Email and WhatsApp. The results procured were tabulated using microsoft excel and statistical analysis was made using SPSS version 20.0.

Results: A total of 152 responses were received. 17.1% of the dentists perceived that forensic odontologists are the ones who can identify in a better manner the victims of abuse and have the ability to report it. 19.1% were clueless about the role of a forensic odontologist in the field of forensic criminology. 48% of the respondents are aware that IPC section 354, 375 and 377 deals with child sexual abuse. 72% of the respondents were aware of all the signs and symptoms of a victim of child sexual abuse. Only 8.6% were aware that a person can report elder abuse in India according to the Maintenance and Welfare of Parents and Senior Citizens Act, 2007.

Conclusion: As a practising dentist in India, it is imperative to be aware of forensic criminology in order to elevate one's knowledge and to partake in societal duties in an efficient manner.

INTRODUCTION :

Forensic Criminology is the scientific study of crime and criminals so as to address the investigative and legal questions. “Forensic” refers to the application of a specific acquired skill set to a legal situation. “Criminology” is the scientific study of crime and criminals. Forensic criminology is a behavioral and forensic science, characterized by an integration of material from many sub-disciplines including forensic science, criminal investigation, criminalistics, forensic psychology, victimology, crime reconstruction, criminal event analysis, criminal profiling, practical experience, and more. A forensic criminologist has a particular examination to perform, or set of questions to answer [1].

A practicing forensic criminologist employs advanced critical thinking skills directed at a certain set of facts and circumstances. Critical thinking, as defined by Paul and Scriven, is “the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action.” [2] The forensic criminologist is an expert by virtue of his relevant training, knowledge, experience, and education [3].

Criminology is a theory or model that allows for a better understanding of criminal behaviour and that permit the development of strategies intended to address the problem of crime [4]. Theories (interrelated propositions that attempt to describe, explain, predict and ultimately control some class of events) gain explanatory power from inherent logical consistency and are “tested” by how well they

describe and predict reality [5]. Criminology in the forensic context may be confused with theoretical criminology, which is typically reserved for academic settings. Forensic criminology makes use of theory in an applied manner, focusing on the practical, as opposed to theoretical [5, 6].

Forensic odontology has been established as an influential science in medico-legal matters and in the identification of the dead or alive person. The dental tissues are often preserved even if the deceased person is skeletonized, decomposed, burnt, or dismembered. Various methods have been developed to determine age, sex, and ethnicity of the person, using dental tissues and dental records [7].

In today's world, the role of forensic dentist has expanded. As a forensic odontologist, the work today isn't just limited to human identification, but also he/she is an active participant in legal systems. A dentist must know about a few legal maneuvers. Having a sound knowledge about legal proceedings will not only boost their knowledge, but can also help reporting any abuse or criminal cases, as mostly a dentist is the first one to notice silent and non evident abuses such as child and domestic abuse, elderly abuse, abuse on vulnerable individuals.

AIM OF THE STUDY :

To analyse and assess the knowledge and perception about forensic criminology amongst dentists.

METHODOLOGY:

A set of 18 questions were prepared and authenticated. The questions were then formulated using Google Forms and them circulated via Whatsapp and Email.

The set questions consisted of three parts. First few questions were about the responders personal details such as age, sex, years of clinical experience. The second set of questions were framed in order to know of any training provided by the, in this field.

Lastly, the questions were aimed at the knowledge and perception about forensic criminology. Questions were pertaining to the basic knowledge of laws of India, mostly useful to any walks of professions in India and just pertaining to the dentists alone.

The results were procured and tabulated in Microsoft excel and statistical analysis was made using SPSS version 20.0.

RESULTS:

A total of 152 responses were received. 66.4% were female and 33.6% were male respondents. 50.7% of the respondents had clinical experience of more than 5 years, followed by 38.8% having clinical experience between 1 to 5 years. 84.2% of the respondents have never worked or were in association with forensic medicine. 82.9% of dentists have never taken a fellowship or certificate courses in forensic dentists and a mere 12.5% of the respondents have received training in the subject. 65.8% of the respondents have claimed to be aware of the term forensic criminology. The role of forensic odontologist in the field of forensic criminology was identified by the respondents out of which, 63.8% of them believe that a forensic odontologists are the ones responsible for procuring evidence and presenting them in the court of law. 17.1% of the respondents perceived that forensic odontologists are the ones who can identify in a better manner the victims of abuse and have the ability to report it. 19.1% were clueless about the role of a forensic odontologist in the field of forensic criminology.

The least age of criminal liability in India is 7 years and surprisingly only 17.1% of the respondents were aware of it. 56.1% of the respondents agree to the fact that as a dentist, it is imperative to know a few sections of Indian Penal Code. 48% of the respondents are aware that IPC section 354, 375 and 377 deals with child sexual abuse. 72% of the respondents were aware of all the signs and symptoms of a victim of child sexual abuse. Only 8.6% were aware that a person can report elder abuse in India according to the Maintenance and Welfare of Parents and Senior Citizens Act, 2007. Dentists were aware of the term elder abuse and 66.5% of the respondents were cognizant about minute signs of elder abuse such as skipping dental appointments, unable to maintain proper oral hygiene and homelessness. 30.3% of the respondents were aware of the The Criminal Amendment Act passed in 2013, also called as the Nirbhaya Act, as a law enforced for women and child safety in India. 74% of the respondents have agreed that they would call the police, provide the required dental records and report the type of abuse conducted by an abuser/criminal, if they come across a convicted person. 76% of the respondents are aware of the term abuse.

Association and Chi square analysis was made between the dentists clinical experience with that of the knowledge and perceptions of the respondents. 32.9% of the respondents with clinical experience >5 years were most aware of the term forensic criminology. An association was made between clinical experience and awareness about the IPC sections of child sexual abuse. 24% of the respondents who claimed to know about the sections of child sexual abuse were those with clinical experience greater than 5 years. The p value was 0.411, which is statistically not significant. Another association was

made between the years of clinical experience of dentists with the ability of identifying the victims of child abuse. 36.18% of the respondent who have claimed to know all the signs and symptoms of child abuse were having clinical experience more than 5 years. The p value is 0.72, which is statistically not significant.

DISCUSSION:

The role of forensic odontologists and dentists have become so expansive that they play an extensive role in the judicial systems in India. They are often the first ones who have the ability to detect and diagnose the type of abuse, either it could be domestic, child or elder abuse and other criminal activities associated with the general population.

It is imperative of a dentist to keep all the patients records, so that when need comes, the records could be presented in the court of law. In our study, 63.8% dentists who are not associated with forensics have agreed that it is their duty to provide all dental records if needed be in the court of law. Similar results were also seen amongst the dentists of North America . According to them, it is their legal and moral duty to provide data and report abuse [8, 9][10][11] Dentists are often the ones who can identify the victims of abuse [8][12]. A study conducted in central India stated that dentists understand the importance of maintaining dental records for forensic analysis, but only a handful of them are able to maintain the records as opposed to a minimum of 7 years and maximum of 10 years [13][14]. In the present study, majority of the dentists were capable enough to understand the signs of child sexual abuse an neglect (CAN). Studies conducted by various authors have suggested the same results, but it was also revealed that they were hesitant to report such cases. It could be due to social stigma or fear of personal and professional loss. Many authors have stated the major reason apart from the aforementioned was the lack of knowledge of the judicial formalities required for such cases. A study conducted by Kaur et al stated that 55% of the dentists were unable to identify the salient features of child abuse [15], on the contrary, in another study conducted by Malpani et al, only 7.2 % of the dentists have correctly identified the victims of child abuse in their past clinical practices [16] and 16% in their practices [17][18]. 93% of the dentists have acknowledged that their are unfathomable barriers in reporting the cases of child abuse and only 68% of the dentists are aware of the law that are required to know as to protect a child against abuse [15].

Elder abuse is also increasing in India and around the world and dentists are also the first ones who can detect it [19][20][21]. Even though there are few laws by which a dentist or a citizen can report abuse

[22]. In our study, 65% of the respondents were aware of the signs of geriatric abuse, but only 22.4% of them knew regarding the laws for protecting them. In a study conducted by Mattoo et al, 40% of the dentists have come across the fact that the elders are abused or neglected in some way or the other. Even though it was not emphasised upon the knowledge of the legal duties of a dentist on reporting such abuse cases, it was emphasised that as a dentist it is our duty to identify, investigate and report of such mishappenings [23].

CONCLUSION:

In conclusion, forensic criminology is a part of forensic sciences and as dentists, we must be aware of this subject. As a dentist or a forensic odontologist, it is imperative for us to know about the signs of abuse, know the psyche and conditions upon which an abuser can attack the victim. If we are turning our blind eyes upon it, it would be difficult for the dentists to even look beyond the basic practice. In today's time and era, dentists are playing a major role in our legal and judiciary systems. Providing dental records and becoming an important witness to abuse cases has been happening for a few years. Hence it is justified that dentists should know and be trained about few laws and IPC sections of India so as to report cases correctly. This will also help in eliminating the social taboo and will lead to fewer personal litigation.

CONFLICT OF INTEREST:

The authors have none to declare

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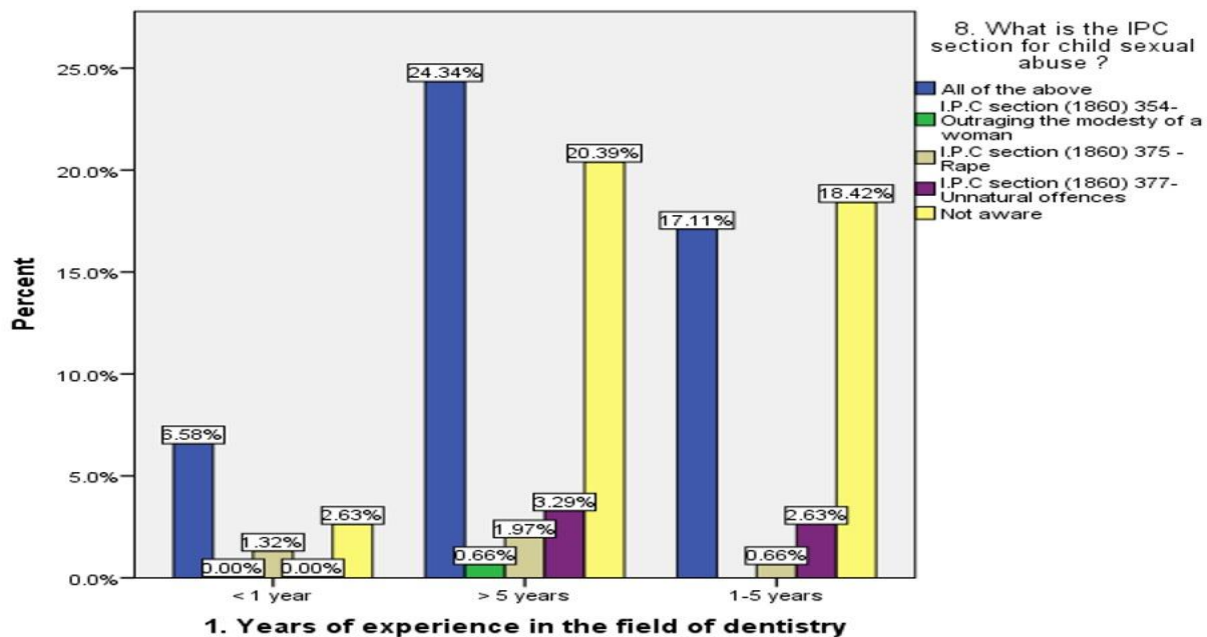
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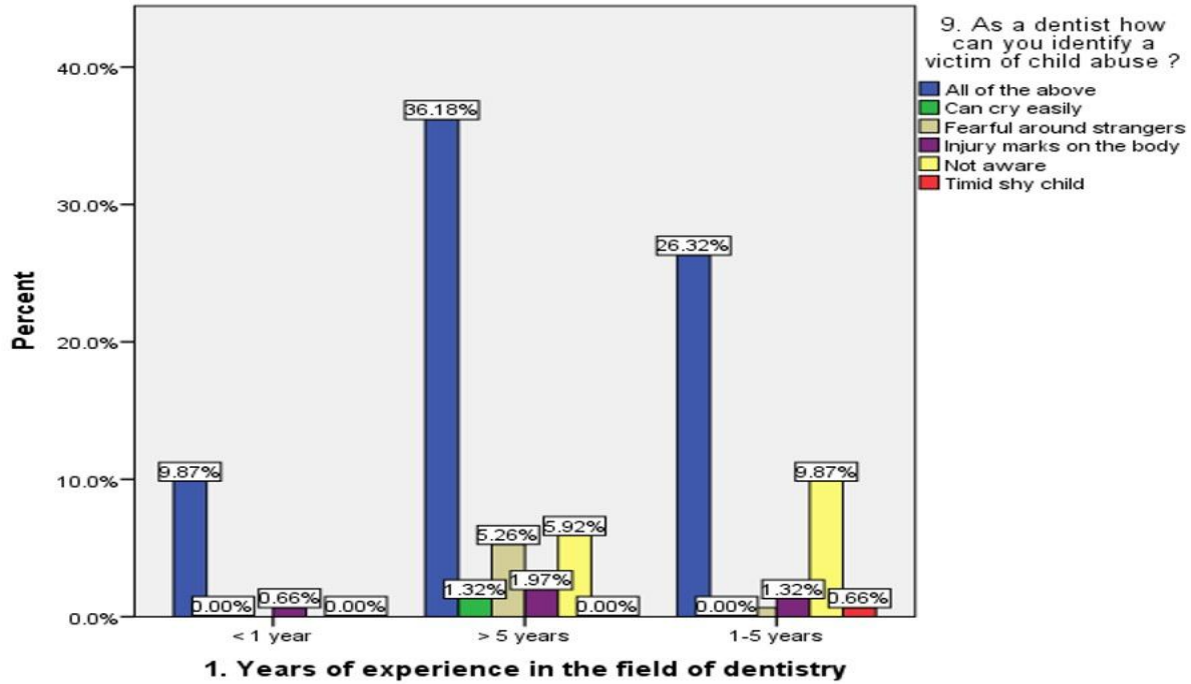
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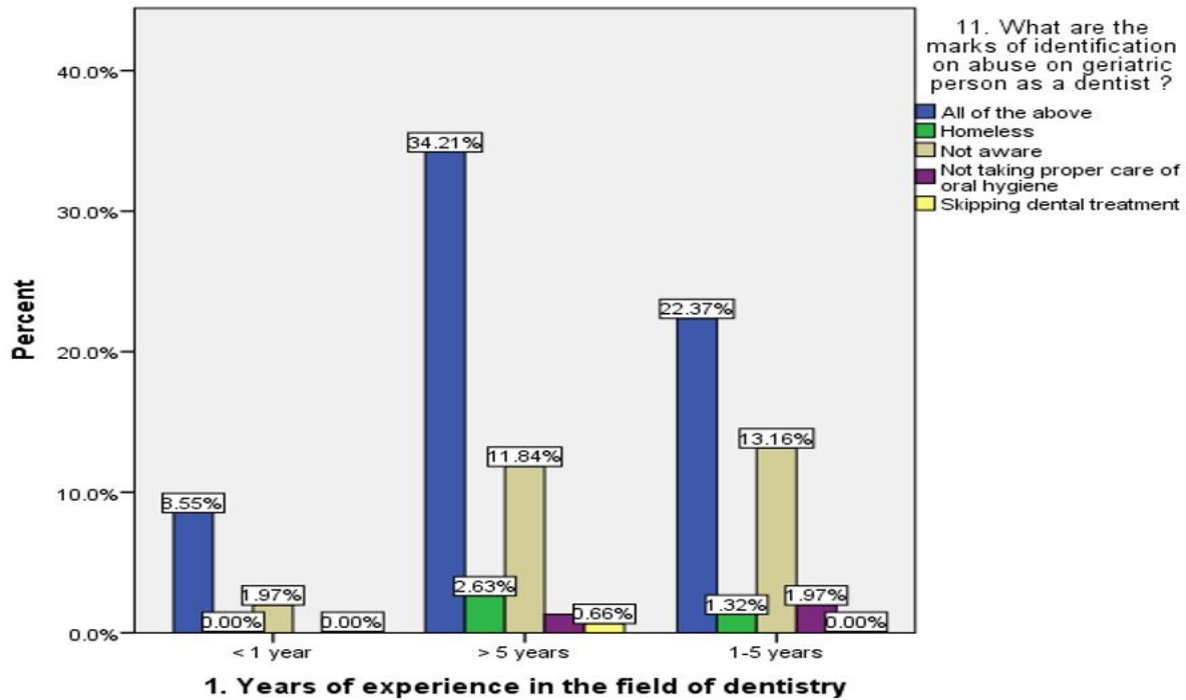
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Graph 1: Association between the years of experience of dentists with the knowledge regarding IPC sections for child sexual abuse



Graph 2: Association between years of clinical experience and knowledge regarding signs of child abuse.



Graph 3: Association between the years of experience and knowledge regarding identification of geriatric abuse.

Forensic criminology : survey

1. Age
2. Sex: M/ F / not willing to disclose
3. Years of experience in the field of dentistry
 - a) Less than 1 yr b) 1-5 years c) more than 5 yrs
4. Do you have any experience in working with forensic medicine department or autopsy centre?
 - a) Yes b) no c) willing to
5. Have you taken any fellowship or certificate course in forensic dentistry/ forensic medicine ?
 - a) Yes b) no
6. Are you aware of the term- forensic criminology ?
 - a) Yes b) no c) maybe
7. What is the role of forensic odontologist in the branch of criminology ?
 - a) Presenting evidence so as to produce in the court of law
 - b) Identifying and reporting cases of abuse and neglect
 - c) Not sure
8. What-is the least age of criminal liability in India?
 - a) 5 yrs b) 7 yrs c) 12 yrs
9. Do you think as a dentist, you need to know few sections of IPC?
 - a) Yes b) no c) maybe
10. What is the IPC section for child sexual abuse ?
 - a) IPC section 83
 - b) IPC section 84
 - c) Not aware
11. As a dentist how can you identify a victim of child abuse ?
 - a) Timid shy child b) fearful around strangers c) can cry easily d) injury marks on the body e) All of the above f) Not aware
12. Under what act can you report abuse on geriatric person ?
 - a) The maintenance and welfare of parents senior citizens act, 2007
 - b) The maintenance and welfare of parents senior citizens act, 2009
 - c) Not aware
13. What are the marks of identification on abuse on geriatric person as a dentist ?
 - a) Homeless b) not taking proper care of oral hygiene c) Skipping dental treatment
 - d) All of the above e) Not aware
14. What are the laws enforced on women and child safety after Nirbhaya Gang Rape case?
 - a) Criminal law amendment act 2013 b) Criminal Law enforcement act 2011 c) Not aware
15. As a dentist how can you help the law in general if you spot a seasoned criminal ?
 - a) Call 100 b) report to police station c) Provide dental records to police d) All of above e) Not sure
16. What do you understand by the term abuse ?
 - a) Inflicting harm towards someone intentionally b) Inflicting harm towards someone unintentionally c) Not sure
17. What is care and protection of children act, 2010?
 - a) Section 317- children not to abandoned
 - b) 368- Children should not be kidnapped for the purpose of begging
 - c) Not aware
18. What is jurisprudence?
 - a) Theoretical study of law
 - b) Practice of law
 - c) Not aware
19. What is inquest?
 - a) Investigation or inquiry
 - b) Act of giving punishment
 - c) Not aware
20. Which court has the highest judicial tribunal ?
 - a) The high court
 - b) The supreme court
 - c) The family court
 - d) Not aware

Image 1: Prepared set of questionnaire