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Original Research Article

Knowledge, attitude and practice among dentists of Gujarat regarding medico-legal issues

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ABSTRACT

Background: Law concerns with every field of human life and dentistry is no exception. Therefore, knowledge of legal aspects is as important as knowledge of medicine in life of health care professionals. The patient-dentist relationship had undergone a significant transition over the past few decades with upsurge anxiety in the community and increased lawsuits against dentists. Thus, a health care professional must know about medico-legal problems to protect oneself from legal issues.
Methods: A cross-sectional questionnaire was pre-tested among the group of 10 professionals prior to the study. It was made available to dental practitioners residing in Ahmedabad city. It was mandatory to answer all the questions. Data was collected through online survey forms and were subjected to descriptive statistics.
Results: The results showed that there was lack of knowledge in majority of dentists regarding medico-legal issues. Nearly half (53%) of the participants were unaware concerning consumer protection act and 81.33% of the candidates were not aware regarding minimum duration for the preservation of dental records. Around 56% were unaware about revised code of ethics and less than half know about negligence and non-negligence acts.
Conclusions: The present study depicted that majority of the dentists lack knowledge concerning medico-legal issues. Therefore, seminars should be arranged to intensify their knowledge regarding legal facets or more information should be added in dental curriculum.

Keywords: Consent, Consumer protection act, Dental jurisprudence, Medico-legal issues, Negligence

INTRODUCTION

Dental profession is considered as one of the dignified professions all over the world. The foundation of doctor-patient relationship is trust and confidentiality. Today, we observe a rapid pace of commercialization and globalization in all the spheres of life and the medical/dental profession is no exemption to this actuality.[1] As the result of these, there is upsurge demand for excellence in health care services.

"With the exception of lawyers, there is no profession which considers itself above the law as widely as the medical profession." -Samuel Hopkins Adams

Law and medicine go hand in hand, and an in-depth understanding of law is essential for a safe and sound clinical practice. Legal and ethical considerations are considered to be implicit and integrated parts of good clinical practice across the whole world.[2]

Dental ethics would mean moral duties and obligations of the dentist towards his patients, professional colleagues and to the society.[3]

Jurisprudence is the study and theory of law which is a unique as well as difficult concept to understand. Dental jurisprudence is a set of legal regulations set forth by each state's legislature describing the legal limitations and regulations related to the practice of dentistry, dental hygiene and dental assisting.[2] There are several acts which have direct and indirect effects on the practicing dentist. A dentist should have acquaintance with the main provisions of these acts. He should also be familiar with his legal liabilities and the meaning of some terms used.[2]

Dental practitioners must be aware of the legal elements, as there are greater possibilities of dentist encountering such cases, particularly in the context of patient empowerment and increased desire for improved personal appearance.[4] Many researchers have performed studies related to ethical issues but there is less literature when it comes to particularly medico-legal issues. Therefore, the present study was designed with the aim to evaluate the knowledge and attitude of dentists regarding medico-legal issues.

METHODS

This study was conducted at Ahmedabad Dental College and Hospital, Ahmedabad (Gujarat) from May, 2022 to July, 2022. It was aimed to evaluate the knowledge of dentists regarding medico-legal issues. For sample selection, Ahmedabad city was divided into 5 zones; east, west, north, south, and central zone. From each zone 30 dentists were selected through simple random sampling using lottery method. A total of 150 dentists from Ahmedabad city participated in the study.

Inclusion criteria

Dentists having private practice. Dentists attached to dental college as faculty or post graduate student or intern.

Exclusion criteria

Dentists who were not willing to participate.

A self-designed questionnaire consisting of total 18 questions was formulated. Ethical clearance was obtained from institutional review board. The questions were pre-tested among a group of 10 professionals in order to ensure the level of validity and degree of repeatability. The purpose and procedure of the study was informed to each participant prior to the study. Data was collected through online survey forms. The questions were in English language and to answer all the questions was mandatory. Questions premeditated to test the awareness of dental practitioners toward IC, types of consent, time for taking consent, consent form for minors, common cause for medico-legal litigation, exposure of medico-legal curriculum, consumer protection act and need for the improvement of knowledge of medico-legal issues among dentists. The responses from the participants were recorded on a Microsoft Excel sheet and were subjected to descriptive statistics for proportions, mean and standard deviation. The normality of data was checked by Shapiro-Wilk test. As the distribution of the data was not normal ($p<0.05$), non-parametric tests were applied for statistical comparison. The mean values were compared by using Mann Whitney U test and Kruskal Wallis test. The proportions were compared by using Chi square test. Statistical package for social science (SPSS version 23) was used. The level of significance was kept at 5%.

RESULTS

After collection of data, the data were coded and entered in Microsoft Excel 2019. The descriptive analysis was done for proportions, mean, and standard deviation. The normality of data was checked by Shapiro-Wilk test. As the distribution of the data was not normal ($p<0.05$), non-parametric tests were applied for statistical comparison. The mean values were compared by using Mann Whitney U test and Kruskal Wallis test. The proportions were compared by using Chi square test with statistical package for social science (SPSS version 23, IBM). The level of significance was kept at 5%.

Table 1: Demographic characteristics of study subjects.

Variables	N	Percentage (%)
Gender		
Male	51	34.00
Female	99	66.00
Education level		
BDS	96	64.00
MDS	54	36.00
Experience		
<5 years	125	83.33
5 to 15 years	20	13.33
>15 years	5	3.33

Table 2: Knowledge regarding medico-legal issues.

Questions	Correct answer N (%)	Wrong answer N (%)
Do you know under how many legal heads dentists are liable?	22 (14.67)	128 (85.33)
Do you know the minimum duration till which dental records should be preserved?	28 (18.67)	122 (81.33)
Are you aware of the legal procedure to tackle "Consumer protection Act"?	80 (53.33)	70 (46.67)
If a patient dies due to Anaphylactic shock, because LA was administered for the first time without test dose, is dentist liable?	98 (65.33)	52 (34.67)

Out of 150 participants, 99 were females and 51 were males. Of the participants, 125 had been practicing for less than 5 years, 20 for 5-15 years and 5 for more than 15 years (Table 1).

About 81.33% of the candidates were not aware regarding minimum duration for the preservation of dental records. When asked about legal procedure to tackle consumer protection act, 53.33% were aware. A question concerning legal heads was asked, only 14.67% dentists answered correctly (Table 2).

Table 3: Attitude regarding medico-legal issues.

Questions	N (%)	P value	
		Education	Experience
Is it unethical to refuse treatment to patient if he/ she is suffering from major contagious disease such as HIV or any other diseases?		0.09 (NS*)	0.23 (NS*)
No	20 (13.33)		
Yes	113 (75.33)		
Don't know	17 (11.33)		
Are you aware of revised code of ethics (2014) considered by DCI?		0.83 (NS*)	0.64 (NS*)
Don't know	85 (56.67)		
If yes, from colleague	21 (14.00)		
If yes, from social media	13 (8.67)		
If yes, from academics	31 (20.67)		
Do you think that current education scenario teaches us enough about medico-legal issues?		0.42 (NS*)	0.78 (NS*)
No	127 (84.67)		
Yes	23 (15.33)		

*NS= non-significant (proportions compared by Chi square test, p>0.05 not significant).

About 75% of the dentists correctly answered that it is unethical to refuse treating HIV positive patient. More than half of the respondents were unaware about revised code of ethics (2014). Nearly 80% of the participants believed that current education scenario does not teach enough about medico-legal issues (Table 3).

About 44% of the candidates take both oral as well as written informed consent from the patients and around 54% either take oral or written informed consent. More than 99% of the dentists discuss prognosis with the patients before treatment. Only 49% of the respondents are aware about modified maximum recommended dose of lignocaine with or without epinephrine to prevent negligence of LA toxicity (Table 4).

Table 4: Practice regarding medico-legal issues.

Questions	N (%)	P value	
		Education	Experience
Do you take informed consent before treatment from the patient?		0.64 (NS*)	0.40 (NS*)
No	2 (1.33)		
Yes, oral consent	42 (28.00)		
Yes, written consent	40 (26.67)		
Yes, both oral and written consent	66 (44.00)		
Do you discuss possibilities of good or bad prognosis of treatment to the patient before starting any procedure?		0.45 (NS*)	0.90 (NS*)
No	1 (0.67)		
Yes	149 (99.33)		
What is the modified maximum recommended dose of lignocaine with or without epinephrine approved by FDA to prevent LA toxicity in patients?		0.66 (NS*)	0.90 (NS*)
5 mg/kg	35 (23.33)		
6 mg/kg	17 (11.33)		
7 mg/kg	74 (49.33)		
Don't know	24 (16.00)		

*NS=Non-significant (Proportions compared by Chi square test, p>0.05 not significant).

A statistically significant difference for knowledge scores was observed between the gender (p=0.01). While the differences between the academic positions and experience was statistically insignificant (Table 5).

Table 5: Comparison of knowledge score by demographic variables.

Variables	Mean±SD	P value
Gender		
Male (n=51)	2.57±1.81	0.01*[a]
Female (n=99)	3.10±1.30	
Education level		
BDS (n=96)	2.96±1.56	0.75[a]
MDS (n=54)	2.85±1.43	
Experience		
<5 years (n=125)	2.94±1.48	0.69[b]
5 to 15 years (n=20)	2.80±1.67	
>15 years (n=5)	2.80±2.05	

*p<0.05=significant, [a]Mann Whitney test, [b]Kruskal Wallis test.

DISCUSSION

The present study is a modest effort to assess knowledge, attitude and practice among dentists practicing in Ahmedabad city. Civic consciousness of medical and dental carelessness and slackness in India is growing which is causing upsurge in complaints regarding facilities, standards of professional skill and suitability of therapeutic and diagnostic methods.[1] Medical negligence is defined as lack of reasonable care and skill or wilful negligence on the part of doctor in the treatment of patients whereby the health or life of a patient is endangeared.[3]

In the present study, it was found that majority of dental professionals were uninformed about medico-legal issues. Similar observations were found in the study of Gupta et al that there was lack of knowledge in dentists about informed consent and its importance in medico legal issues.[1] A dentist can be held liable for harm caused to the public by inadvertent exposure of harmful substances like mercury, arsenic or for that matter even radiations; accidental ingestion of crowns, dental instrument, teeth etc.; death of patient from anaphylaxis developed after administering local anesthesia without test dose.[4]

Negligence can occur in any aspect of proficient practice, whether history taking, examination, advice, testing or failing to test, reporting and acting on results of tests, or treatment. The standard is one of realistic care, not of excellence. The court will decide having gazed at to all the circumstances whether the health expert has been negligent.

Goel et al summarized some of the non-negligent acts: 1) Not obtaining a consent form in an emergency is not negligent. 2) Patient's dissatisfaction with the progress of treatment cannot be called negligence. 3) Not getting desired relief is not negligence. 4) Charging, what the patient thinks is exorbitant is not negligence. 5) When patient does not follow advice of the doctor and does not get satisfactory results, dentist cannot be held negligent.

Majority of participants (62.67%) were unaware about negligence acts. Thus, this situation must be taken into consideration and a systemic approach should be done to make dentists more aware regarding negligence and non-negligence acts. Dental malpractice related to local anaesthesia is not uncommon which may lead a practitioner to legal liability hence a reasonable practitioner needs to be able to determine the proper dosage levels to be administered to patients before the time of administration. The present study describes that only 49.33% of the dentists were aware about maximum recommended dose of lignocaine with or without epinephrine which is unsatisfactory. An inability to reasonably treat complications that are foreseeable is a breach of duty.[6] Consent plays vital role in patient treatment and management. The core idea of autonomy is one's action and decisions are one's own. Consent involves informing patient regarding merits and demerits of differing treatment options, benefits and risks of no treatment at all. It should be ensured by health care professional that appropriate consent should be obtained.

Majority of the respondents (64%) have diverse opinions when asked about ethical and unethical acts from revised dental regulations. According to revised code of ethics it is unethical to have dentist name on designate tooth paste. Similarly, Kesavan et al reported that only 19% knew that the dentist regulations (code of ethics) came into force in 1976.[7] About 32% were aware that the code was revised in 2014 and the differences were found to be statistically highly significant.

According to revised code of ethics formulated by Dental Council of India (DCI), it is the duty of a dentist to preserve dental records for the minimum period of three years. It was found that 81% of the participants were unaware about the duration for preservation of dental records. When asked about consumer protection act (CPA), about 53% answered that they are aware about legal procedure to tackle any issues arising from this act. However, the results of further questions related to CPA were unsatisfactory. Around 23% responded correctly that the original jurisdiction of state commission is between 20 lakhs up to 1 crore. Likewise, Gambhir et al concluded that more than 50% of the subjects in their study had low knowledge scores regarding CPA.[8] This might be due to deficiency in the Indian educational system which doesn't have much information on CPA in theory and its applicability in detail in the dental curriculum either in the under or post-graduate, both in formal and informal ways.[8]

A dental practitioner in case of legal issues can take the help of a competent legal representative who specializes in such litigation.[2] Nevertheless, for avoiding consequences from any such medico-legal issues; it is indispensable for a dentist to be aware of legal code of ethics. In the present study, it was found that knowledge and awareness concerning dental jurisprudence, ethical issues and CPA is lacking in dental professionals. Therefore, it needed to be refurbished as soon as possible and added in dental curriculum for undergraduates to make them aware of present scenario.

For the present study, certain limitations should be taken into account. Since it was not conducted on a large scale, respondents who return the questionnaire do not constitute a representative section of the entire group. Thus, generalization cannot be done. Though online survey forms are economical and quick, the responses received may be filled unconscientiously and dishonest.

CONCLUSION

Within the limitations, the present study draws an inference that there is an urgent need to educate and aware dental professionals as the results showed lack of

knowledge on medico-legal aspect of the profession, negligence acts and revised dental regulations. It is recommended that this research should be carried out on a large scale, curricular changes should be made starting at under-graduate level giving importance to legal liabilities or seminars should be arranged to enhance their understanding and confidence about medico-legal aspects to avoid any consequences arising from unfamiliarity of legal facets.

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