**ABSTRACT**

**BACKGROUND-**The doctor-patient relationship has been changing due to some malpractices of doctors; people started looking at doctor's community with distrust.

**OBJECTIVES**-To evaluate the knowledge attitude and practiceof medico-legal problems among dentist practitioners residing in Vidharbha region.

**METHOD**- The cross sectional study was done in a Private Dental College and were assessed through a self administered, closed ended questionnaire. It was made available to all levels of dentistry being under graduates, post graduates, staff and interns.

**RESULTS**-A total of 180 of 181 dentists participated in this study. A total of 92 respondents were males and 88 were females. The mean knowledge of females was better than of males. On the other hand, attitude and practice for males was better than females.

**CONCLUSION**-The results indicate the need for more focusing on medico-legal issues by arranging training programs and creating awareness among the dental professionals.

**KEY WORDS**- Awareness, Dentist, Law, Lawsuit, Malpractice, Negligence.

**Introduction**

A superfluity of medical malpractice proclaims that medical practitioners not only have to deal with medical issues but also legal affairs. Hence, a health provider should be aware of legal allegations of their act while providing medical care to patients1.Dentist and physician both are healthcare professional providing patient’s care. Therefore, at certain standard of care, every dentist is obliged to perform certain duties to practice dentistry. Negligence is a violation of the duties of the dentist which can result in patient’s injury which may cause lawsuit against them2.It is self-explanatory that not only practitioner but also therapist and hygienist from medical field should be aware and have a meticulous understanding of the philosophy of consent, but also should have cognizance of these principles and to apply them in the wide variety of circumstances that can arise in the practice of dentistry3.

The concept of jurisdiction is unique and no single definition can cover all its components. In simple terms Law may be defined as “the system of rules which a particular country or community acknowledge as regulating the actions of its members and which it may inflict by the imposition of penalties”4.Law has an impact on every aspect and interest of an individual, dentistry in this regard being no exception. There is a lack of knowledge regarding medico–legal aspect of dental professionals and patients, which in turn hinders effective implementation and delivery of dental services. The interface between Law and Dentistry is mediated by important statutes relating to health, the chief among which involves drug and cosmetics act, dentists act etc. The ethical standards of the dental profession are undergoing a steady decline, market driven system pushing away the altruistic concepts of the early teachers of the art.

Today’s corporate dentistry has degenerated to a common business practice whose concerns are strictly governed by profit and loss concerns, despite the emergence of forensic odontology that ensures that every dentist must keep some kind of record for every patient they treat. An evaluation of knowledge regarding the maintenance of dental records among dentists found a very low percentage of dentists maintaining dental records5. Medical officers are encountered with medico-legal cases and are considered to be an integral part of the medical practice6.

The implementation and enhancement of the conceptual foundation of health laws is in its infancy. There is a lack of knowledge regarding medico–legal aspect of dental professionals and patients, which in turn hinders effective implementation and delivery of dental services. Laxity of dentist which fails or attempts to perform any procedure or treatment beyond their knowledge of dentistry and neglect to refer patients to a specialist is also a cause of negligence7.Literature says that any complicated case of particular speciality should be referred to the specialist when the prognosis is unsure8. Topics related to medico legal issues are being covered only in the legal specialty Criminal law and Criminal Justice (Criminology) and it is not being covered in any of the other dental colleges according to a cross-sectional study done in Chennai 9.

A study was done based on the knowledge and perceptions of health workers, training on ethics which showed that 74% and 35.4% of them had knowledge and attitude towards the ethical code respectively and 49% of the respondents indicated that training on medico-legal issues should be taught during formal training and also on the job10.There are many researchers have been performed related to ethical issues among dental practitioner but literature search shows there is deficiency in researches on particularly medico-legal aspects especially on dentist Therefore, present study was designed with the aim to evaluate the insights of medico-legal problems among dental professionals in Vidharbha region.

**Methodology**

A cross – sectional, observational study design was used in this study. Ethical authorization from the institutional review board was given for this research. A 32 item self-administered structured closed ended questionnaire about knowledge, attitude and practice regarding legal issues was made and tested. It was made available to all levels of dental professionals attending the aforementioned institution and the ones residing in Vidharbha region.

A pilot study was conducted preliminary to the start of study. The questionnaire was given to 20 dental professionals in order to check reliability and validity of questionnaire. Former to the start of the core study, questions had to undergo successive revisions for interpretation of the subjects. In the main study the outcomes of the pilot study was not incorporated. The pilot study done on dental practitioner did not take part in the main study.

The final questionnaire consisted of demographic information and 32 questions on legal issues with 16, 8, 8 items assessing knowledge, attitude and practice respectively. Knowledge was assessed on objective assessment. A total of 16 questions on knowledge were asked, scoring was given on the basis of correct answer (Score=1) wrong answer (Score=0). A single participant can obtain a minimum score of 0 and maximum score of 16. Questions related to knowledge were based on the practitioners having knowledge on informed consent, about keeping the dental records of the patients and consequences of violation of law and their offences. Attitude and practice were assessed by a five point likert scale and scores ranging from “Definitely yes” (Score=5) to “Definitely no” (Score=1) and from “Always” (Score=5) to “Never” (Score=1), respectively. The possible scores for both attitude and practice will have a minimum score of 8 and maximum score of 40.The structure of the questionnaire and their scores were taken from previous study11.Attitude pertaining questions included whether the dental practitioner should have the right attitude towards legal issues in their dental practice, harmonious coordination with other practitioners towards legal issues and whether they persistently are up to date about the knowledge on legal affairs. Questions pertaining to practice were assessed on how often the practitioners carried out an ethical practice, and if the patient’s dental records are maintained by them during their practice.Participants were given 25-30 minutes to fill the questionnaire and to return it back.

**Statistical Data analysis**

The data collected from the questionnaire was entered on Ms Excel (2007 version developed by Microsoft) and was deployed on SPSS version 21 to carry out statistical analysis. Unpaired‘t’ test was used to analyse the comparison of mean scores of knowledge, attitude and practice with both the gender. Multiple comparisons of knowledge, attitude and practice were done with respect to academic positions by applying one way Anova test. Once statistical significant result was found, Post Hoc Anova test was applied to find out the significant academic group between academic positions. Pearson’s correlation analysis was done to find out correlation of knowledge, attitude and practice among study subjects.

**Result**

A total of 180 subjects responded out of 181 of them, the response rate being 99.4%. A total of 92 respondents were males (51.1%) and the remaining 88 were females (48.88%). The three different variables viz knowledge, attitude and practice where categorized among ‘good’, ‘fair’, ‘poor’, depending upon the score each respondent have achieved. Statistical analysis was done and the following tables are given below.

**Tables of research**

Table 1: - Demographic distribution of study participants

|  |  |
| --- | --- |
| **Gender** gGender | **No.** ofyNo of study subjects |
| Male | 92 |
| Female | 88 |
| Mean age (in years) | 27.18 ± 6.14 |

The table shows that males were more than females with mean age being 27.18 ± 6.14.

Table 2: -Distribution of variables into Good, fair, poor scores.

|  |  |  |  |
| --- | --- | --- | --- |
|  | | Number of subjects | Percentage |
| Knowledge | Good (16-11) | 1 | 0.6% |
| Fair (10-5) | 83 | 46.1% |
| Poor (5-1) | 96 | 53.3% |
| Attitude | Good (40-28) | 1 | 0.6% |
| Fair (27-14) | 123 | 68.3% |
| Poor (13-1) | 56 | 31.1% |
| Practices | Good (40-28) | 28 | 15.5% |
| Fair (27-14) | 122 | 67.8% |
| Poor (13-1) | 30 | 16.7% |

Study subjects having knowledge were given scores ranging from good (11-16), fair (6-10), poor (1-5) while study subjects having attitude and practice were given a range of good (40-28), fair (27-14), poor (13-1). When the distribution was done it was found out that the study subjects had good (0.60%), fair (46.10%) and poor (53.30%) knowledge scores. While good (0.60%), fair (68.30%) and poor (31.10%) scores were found with attitude and for practice good (15.50%), fair (67.80%) and poor (16.70%) scores were found out.

Table 3: -Comparison of mean scores of all the three variables in both the gender by unpaired‘t’ test

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Variables | Study subjects | N | Mean | Std. Deviation | Std. Error Mean | P value |
| Knowledge | Male | 92 | 5.40 | 2.51 | 0.26 | 0.54 |
| Female | 88 | 5.63 | 2.36 | 0.25 |
| Attitude | Male | 92 | 17.62 | 6.35 | 0.66 | 0.24 |
| Female | 88 | 16.55 | 5.97 | 0.64 |
| Practices | Male | 92 | 21.98 | 7.61 | 0.79 | 0.83 |
| Female | 88 | 21.75 | 6.57 | 0.70 |

The mean scores of all the three variables were compared with both the gender which showed that the knowledge was good in females (5.63.) compared to males (5.40). Dissimilar comparison was found for attitude and practice when study variables were compared with both the gender, were male having a slightly higher mean of 17.62 and 21.98 for attitude and practice respectively than of females being 16.55 and 21.75 respectively. But no statistically significant value was found between the genders.

Table 4: -Multiple comparisons of variables with different academic positions by using one-way ANOVA

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Study Variables | Academic position | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | F | Sig (P value) |
| Lower Bound | Upper Bound |
| Knowledge | Staff | 41 | 5.56 | 2.40 | 0.37 | 4.80 | 6.32 | 1.32 | 0.26 |
| Intern | 51 | 6.01 | 2.28 | .319 | 5.37 | 6.66 |
| Under graduate | 30 | 5.03 | 2.76 | 0.50 | 4.00 | 6.06 |
| Post graduate | 58 | 5.27 | 2.38 | 0.31 | 4.64 | 5.90 |
| Attitude | Staff | 41 | 16.04 | 6.23 | 0.97 | 14.08 | 18.01 | 5.88 | 0.001\* |
| Intern | 51 | 16.19 | 6.24 | 0.87 | 14.44 | 17.95 |
| Under graduate | 30 | 21.23 | 5.13 | 0.93 | 19.31 | 23.14 |
| Post graduate | 58 | 16.48 | 5.82 | 0.76 | 14.95 | 18.01 |
| Practices | Staff | 41 | 23.56 | 5.53 | 0.86 | 21.81 | 25.30 | 2.38 | 0.71 |
| Intern | 51 | 21.64 | 7.03 | 0.98 | 19.66 | 23.62 |
| Under graduate | 30 | 23.26 | 6.36 | 1.16 | 20.88 | 25.64 |
| Post graduate | 58 | 20.13 | 8.16 | 1.07 | 17.99 | 22.28 |

|  |  |  |
| --- | --- | --- |
| Post-hoc analysis of attitude | | |
| Group | Group | p-value |
| Staff | Intern | 0.90 |
| Post-graduate | 0.72 |
| Under-graduate | 0.001\* |
| Intern | Under-graduate | 0.001\* |
| Post-graduate | 0.80 |
| Under-graduate | Post-graduate | 0.001\* |

\*p<0.05; Significant

When the comparison of study variables was done with respect to academic positions it was found that intern (6.01) had a better knowledge than staff (5.56) , under graduates (5.03) and post graduates (5.27). While Under graduates (21.23) had a better attitude than post graduates (16.48), Interns (16.19), staff (16.04). While staff (23.56) had a better practice than under graduates (23.26), intern (21.64), and post graduates (20.13). A statistically significant difference for attitude scores was observed between the academic position (F=5.88, p=0.001\*). The difference between academic positions was statistically insignificant for Knowledge and Practice (F=1.23, p=0.26 and F=2.38, p=0.71) respectively whereas for attitude the difference was statistically significant. Thus, post-hoc analysis was done to find out statistical significance in between the groups which revealed that, under graduates had significant difference when compared with staff, intern and post graduates (p<0.05).

Table 5: -Correlation analysis of knowledge, attitude and practice among study subjects by using Pearson correlation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Study variables | | Knowledge | Attitude | Practices |
| Knowledge | Pearson Correlation | 1 | 0.28 | 0.22 |
| Sig. (2-tailed) P value |  | 0.001\* | 0.003\* |
| N |  | 180 | 180 |
| Attitude | Pearson Correlation |  | 1 | 0.30 |
| Sig. (2-tailed) P value |  |  | 0.001\* |
| N |  |  | 180 |

\*p<0.05; significant

Pearson Correlation analysis revealed that statistically significant positive correlation was seen between the all the three variables with each-other.

**Discussion**

The present study was done to assess various medico legal problems among dental professionals. The study was first of its kind, and minimum literature was available for comparison. The study focuses on the Knowledge, attitude and practice among dental professionals practicing in Vidharbha region.

In the present research the subjects were assessed on dental jurisprudence and legal liabilities. It was found that 45.5% of the dental practitioners had knowledge regarding the importance of dental record keeping, which was unsatisfactory. Similarly, R Kesavan et al12reported that 48% of the dental practitioners had knowledge regarding the importance of keeping dental records of the patients. Another study was done pertaining the dental records in Uttar Pradesh and Punjab was conducted by Gupta et al 13, where they found that a very low percentage (22%) of dentists seemed to be maintaining the dental records. This shows that majority of the dentists are usually ignorant regarding the laws prevailing in their profession. Also, there is less awareness of dental jurisprudence among the dental professionals.

Maintenance of patient records is desirable both legally as well as ethically to safeguard ourselves against any kind of medico legal lawsuit. Records, including medical and dental history, radiographs, models, and photographs are of utmost importance while facing litigations when subjected to a court of law, and hence, must be scrupulously kept. It is a well approved fact that during a lawsuit, more than the patient’s recollections, dentist’s written records are given more weightage14.

It is clearly stated under Article 51 A (h) of the Indian Constitution that it is a moral responsibility on the part of a doctor, and his/her legal obligation, to sustain and conserve medical and medico legal documents for the best interest of communal and professional integrity15.Records and official documents should be conserved for surveillance for a bare minimum of 8 years to evade penalty under Section 271of the Income Tax Act, 196115.

Lack of knowledge among dental professionals was highlighted in this present study having a poor result of 53.3% regarding the medico legal issues. According to study conducted by Brinda et al 16, advocates having an undergraduate degree had knowledge of 37.7% of medico-legal issues, which is undesirable. Thus, this situation should be taken into consideration and more topics on medico legal issues should be included in the educational curriculum. In the present scenario, the dentist and advocates both cannot be blamed because of paucity of knowledge.

It was observed that the 67.8% of the participating dentist of our study took informed consent before the procedure. These results were comparable to the study conducted by Chandrashekar J et al 17, on dentists in South India, where 77.1% dentist obtained informed consent. This shows that a fair percentage dentist are well aware of taking informed consent, but still more awareness needs to be spread about the same as it is the most necessary legal document before undergoing any procedure.

The present study also revealed that the knowledge among interns was comparatively better than those of staff, post graduates and under graduates; the reason for this situation might be because the interns have a fresh knowledge of their studies in final year and might be doing preparation for their post graduation. The under graduates which are learning under the super vision of their staff, had a right attitude towards their work and was found same in our study.Naturally, the practice of the staff was reasonably better off than the other academic position, due to their working experience in the field.

**Limitations**

Certain limitation should be taken into consideration before concluding to any findings for this cross-sectional study. To start with, this study was done on dental practitioner and dental institute considering only a particular district, which might not be a representative of all dental professionals, thus limiting the generalization. As the research was conducted using questionnaire as a tool of measurement one should consider the in-built pros and cons of the same. Though it might have led to the possibility of collecting data from a large number of respondents relatively quickly and inexpensively but the authenticity of the actual knowledge, attitude and practices of the participants become questionable.

Nevertheless, the attitude of the practitioner was fair compared to the other two variables. However paucity of knowledge and practice of legal issues make us understand that there is exigency to recognize the problem prevailing among dentist regarding legal problems. Proper teaching protocol should be mandated for undergraduates and postgraduates alongside raising the awareness standards among the practicing dentist.

**Conclusion**

The results indicate the need for more focusing on medico-legal issues by arranging training programs and creating awareness among the dental professionals. The mushrooming of the ‘goggle doctors’ and patient awareness and consumer protection bills has resulted in pressing necessity of doing similar surveys and addition of medico legal problems in the curriculum of undergraduates and post graduates. Taking prior precaution with adequate awareness among dentist will facilitate in enhanced clinical practice and in turn prolonging proper healthcare of the patients.

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