



Research Paper

Assessment of Knowledge, Attitude and Practice Regarding Medicolegal Aspects of Dentistry Among Final Year Bds Students and Interns

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ABSTRACT

BACKGROUND: Having knowledge about medicolegal aspects is an important part of dental practice. A dentist is required have knowledge regarding consent, confidentiality, negligence, record maintenance, and legal responsibilities during patient care as we see the rise in patient awareness and legal cases in dentistry. The best way to teach medicolegal awareness among dentists is to add these topics in curriculum of undergraduate dentistry students.

PURPOSE: The present study was conducted to assess the knowledge and perception regarding medicolegal aspects of dentistry among final year BDS students and interns.

MATERIALS AND METHODS: A cross sectional questionnaire based study was conducted among 390 participants consisting of final year BDS students and interns. Data were collected using a structured questionnaire containing both objective and subjective questions related to medicolegal aspects of dentistry. Knowledge score was calculated from objective questions. Data were entered in Microsoft Excel and analysed using Python. Knowledge level was assigned to participants as a general grading of their knowledge score. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used as per variables. Association between categorical variables was tested using the Chi square test.

RESULTS: Out of 390 participants, 315 were female (80.8%) and 75 were male (19.2%), while 229 were final year students (58.7%) and 161 were interns (41.3%). The mean knowledge score was 8.02 ± 1.79 which is moderate but a significant portion (10%) of participants scored below average. High awareness was observed regarding patient confidentiality (97.2%), implied consent (94.6%), Consumer Protection Act (89.2%), and defensive practice (87.4%). Poor awareness was noted regarding record retention, where only 26.9% participants answered correctly. A statistically significant association was found between gender and knowledge level ($p = 0.016$), and a highly significant association was found between year of study and knowledge level ($p < 0.001$). Most participants (95.1%) also felt that medicolegal aspects should be included in the dental curriculum.

CONCLUSION: The study showed that most dental students had moderate to good knowledge which is satisfactory. But most participants lacked knowledge in certain medicolegal aspects like record retention and professional indemnity insurance. Only 4% students scored perfect i.e. have strong knowledge about medicolegal aspects and 10% students scored below average which shows that a substantial amount of participants have weak knowledge. This tells that there is strong need for medicolegal awareness.

KEYWORDS: Medicolegal aspects; dentistry; Consumer Protection Act; dental students; consent; negligence; indemnity; curriculum

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I. INTRODUCTION

Dentistry is a healthcare profession which not only requires clinical skills but also knowledge regarding legal, ethical and professional responsibilities. Issues such as informed consent, confidentiality, negligence, record keeping, and emergency care which are routine in dental practice have direct medicolegal implications. With rise in the patient awareness and legal accountability of health providers, dentists must have knowledge regarding medicolegal aspects and be prepared to deal with these responsibilities. [2]

The inclusion of healthcare services under the Consumer Protection Act (CPA) has further increased the need for legal awareness among dental professionals. Studies in India have shown that the knowledge regarding CPA in medical fraternities is variable and they lack knowledge in important areas of practice. Goel et al. assessed awareness of medicolegal aspects and CPA among dental professionals and pointed out the need for greater understanding of legal responsibilities. Swapna et al. similarly reported the importance of CPA awareness among the dental fraternity in India. [1][3]

Another important topic like CPA is professional protection through indemnity insurance which is also often neglected. Mahajan et al. described dental indemnity in India as a “missing link,” drawing attention to the lack of knowledge among dental professionals in this area. Gupta et al. also described the growing significance of medicolegal awareness in dentistry and called attention to the importance of legal aspects in daily practice. [4][2]

Final year BDS students and interns are at an important stage of professional development, as they are transitioning from academic learning to independent clinical responsibilities. Assessing their knowledge, attitude, and practice related to medicolegal aspects is important for understanding whether current undergraduate training and curriculum is adequate. Therefore, the present study was undertaken to evaluate the awareness and perception regarding medicolegal aspects of dentistry among final year students and interns.

II. AIM AND OBJECTIVES

Primary Objective

To determine the level of awareness about medicolegal aspects of dentistry among final year BDS students and interns.

Secondary Objective

To assess recognition, perception, and understanding of medicolegal cases among dental undergraduate students.

Materials and Methods

Study Design

A cross sectional questionnaire based study was conducted among final year BDS students and interns.

Study Population

The study population consisted of:

- Final year BDS students
- BDS interns

Sample Size

A total of 390 participants were included in the study. The sample size was calculated as given below-

The sample size was calculated using the single proportion formula: $n = Z^2 p(1 - p) / d^2$, where $Z = 1.96$ at a 95% confidence interval, $p = 0.44$ (assumed prevalence), and $d = 0.05$. The calculated sample size was 378.62, which was rounded to 379. 390 samples were collected which is more than the found sample size.

Study Tool

Fifteen questions were curated related to medicolegal aspects of dentistry and was distributed among final year students and interns in the form of Google Form. The responses was collected were converted into excel sheet. This data was than analysed using Python software. The questionnaire included both objective and perception based questions. Questions covered implied consent, confidentiality, defensive practice, CPA, negligence, indemnity insurance, record retention, consent in local language, management of HIV/AIDS patients, emergency refusal, punishable offences, and students' views on curriculum adequacy and preferred mode of learning.

Scoring of Knowledge

Knowledge score was calculated from the objective based questions of the questionnaire. Each correct response was assigned a score of 1 and each incorrect response a score of 0. The total score ranged from 0 to 11. Knowledge level was then categorized into poor, moderate, and good based on the general grading criteria. Knowledge score less than 5 then Knowledge level is Poor, score between 5 and 8 then Knowledge level is Moderate and above 8 is Good.

Data Collection and Analysis

Data were compiled in Microsoft Excel and analysed using Python. Descriptive statistics were used to summarize categorical variables as frequency and percentage, and numerical data as mean and standard deviation. Association between categorical variables (Gender & Knowledge Level and Education Year & Knowledge Level) was tested using the Chi square test. A p-value of less than 0.05 was considered statistically significant.

III. RESULTS

Demographic Characteristics

Among the 390 participants, 315 (80.8%) were female and 75 (19.2%) were male. Based on year of study, 229 (58.7%) were final year students and 161 (41.3%) were interns. (Table 1, Table 2, Figure 1, Figure 3)

Knowledge Score

The knowledge score ranged from 3 to 11, with a mean of 8.02 ± 1.79 . The median score was 8, indicating that most students had a moderate to good level of knowledge regarding medicolegal aspects of dentistry. 10.3% students scored poorly, 41.5% students scored good and 48.2% students scored moderately. (Table 3, Figure 2, Figure 4)

Association Between Gender and Knowledge Level

A Chi-square test showed a statistically significant association between gender and knowledge level ($\chi^2 = 8.227$, $p = 0.016$), indicating that knowledge levels differed significantly between male and female participants but the difference is not that significant.

Association Between Year of Study and Knowledge Level

A highly significant association was found between year of study and knowledge level ($\chi^2 = 179.306$, $p < 0.001$). Interns showed a markedly higher proportion of good knowledge compared to final year students, while most final year students fell into the moderate knowledge category.

Question wise Findings

Awareness was highest for:

- **Patient confidentiality:** 379 participants (97.2%)
- **Implied consent:** 369 participants (94.6%)
- **Consumer Protection Act:** 348 participants (89.2%)
- **Defensive practice:** 341 participants (87.4%)

Moderate levels of correct responses were noted for:

- **Refusal to treat patients with AIDS:** 322 participants (82.6%)
- **Legal action for rejecting emergency/medically compromised cases:** 293 participants (75.1%)
- **Definition of negligence:** 250 participants (64.1%)
- **Punishable offence in dentistry:** 240 participants (61.5%)
- **Written consent in local language:** 238 participants (61.0%)
- **Professional indemnity insurance:** 242 participants (62.1%)

The lowest awareness was observed for:

- **Retention of dental records:** only 105 participants (26.9%) answered correctly.

You can see above result in (Table 5).

Perception Based Responses

A majority of participants felt that the current education scenario was insufficient to develop adequate knowledge of medicolegal responsibilities. Only 70 (17.9%) believed that the present education system was sufficient, while 320 (82.1%) felt it was insufficient.

A very large majority, 371 (95.1%), believed that medicolegal aspects should be added to the dental curriculum. Regarding the preferred mode of learning, 261 (66.9%) preferred separate dedicated lectures on CPA, professional indemnity insurance, and medicolegal aspects in private and public practice. In addition, 362 (92.8%) felt that such curriculum inclusion would be meaningful rather than an unnecessary burden. (Table 6)

Gender	Count	Percentage
Female	315	80.77
Male	75	19.23

Table 1: Gender Distribution

Year of Study	Count	Percentage
Final Year	229	58.72
Intern	161	41.28

Table 2 : Education Year Distribution

Gender Distribution of Respondents

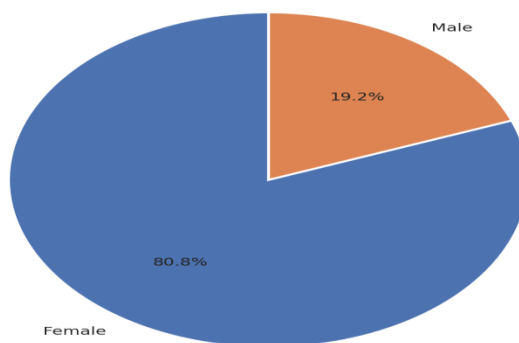


Figure 1: Gender Distribution

	Knowledge Score
count	390.000000
mean	8.017949
std	1.790344
min	3.000000
25%	7.000000
50%	8.000000
75%	10.000000
max	11.000000

Table 3: Knowledge Score Statistics

Knowledge_Level	count
Moderate	188
Good	162
Poor	40

Table 4: Knowledge level Statistics

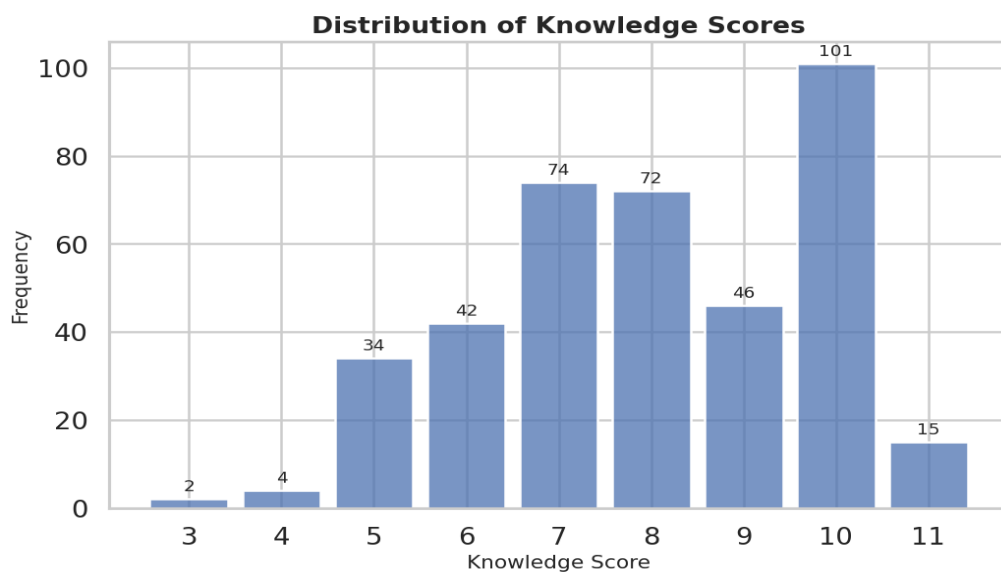


Figure 2: Knowledge Score Distribution

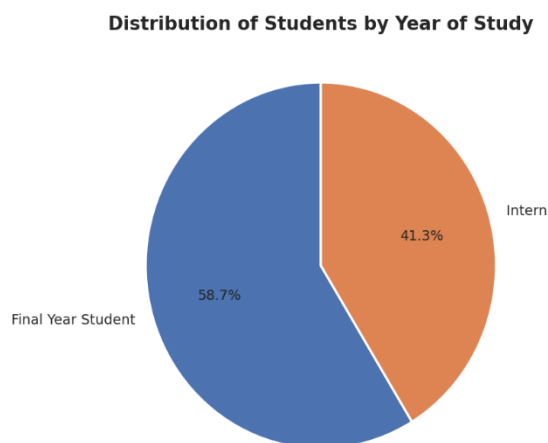


Figure 3: Education Year Distribution

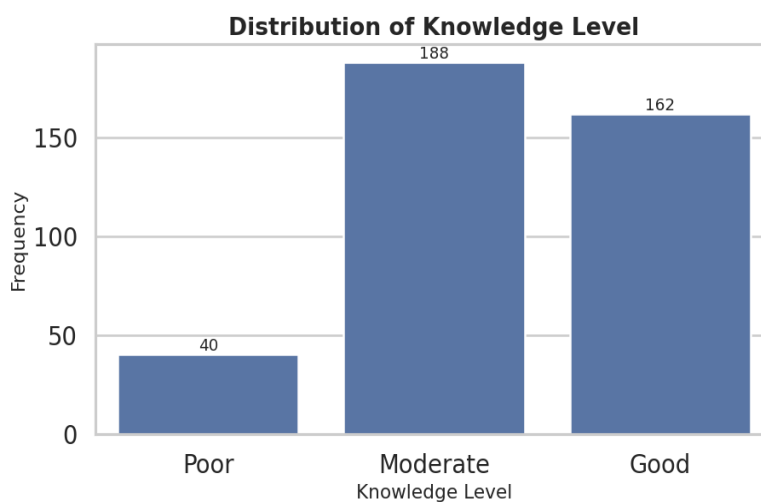


Figure 4 : Knowledge Level Distribution

Question	Respond/option	Final Year N(%)	Intern N(%)	Total Correct N(%)	Chi-square	P-value
1. Do you believe in concept of implied consent ?	Yes	215 (93.9%)	154 (95.7%)	369 (94.6%)	0.284	0.594 (NS)
	No	14 (6.1%)	7 (4.3%)			
2. Do you think maintaining patient's confidentiality is important?	Yes	225 (98.3%)	154 (95.7%)	379 (97.2%)	1.481	0.224 (NS)
	No	4 (1.7%)	7 (4.3%)			
3. Do you believe in practising 'Defensive Medicine'? (Practising on basis of avoiding medicolegal aspects/ practising safe)	Yes	196 (85.6%)	145 (90.1%)	341 (87.4%)	1.338	0.247 (NS)
	No	33 (14.4%)	16 (9.9%)			
4. Do you know about 'Consumer Protection Act'?	Yes	191 (83.4%)	157 (97.5%)	348 (89.2%)	18.144	0.0 (S)
	No	38 (16.6%)	4 (2.5%)			
5. What according to you is considered as negligence?	Not obtaining a consent form in an emergency.	59 (25.8%)	10 (6.2%)	250 (64.1%)	51.578	0.0 (S)
	patient's dissatisfaction with the progress of the treatment.	41 (17.9%)	8 (5.0%)			
	Lack of proper care and attention.	114 (49.8%)	136 (84.5%)			
	Charging, what the patient thinks is exorbitant.	15 (6.6%)	7 (4.3%)			
6. Do you know about 'Professional Indemnity Insurance'?	Yes	108 (47.2%)	134 (83.2%)	242 (62.1%)	50.707	0.0 (S)
	No	121 (52.8%)	27 (16.8%)			
7. Retained records i.e. (treatment records, X-rays, study models and correspondence) is to be retained for?	for adults 11 years and for children until patient turns 25 years old.	68 (29.7%)	110 (68.3%)	105 (26.9%)	73.789	0.0 (S)
	for adults 25 years and for children until patient turns 18 years old.	58 (25.3%)	7 (4.3%)			
	for adults 5 years and for children permanently	38 (16.6%)	4 (2.5%)			
	for adults permanently and for children until patient turns 25 years old	65 (28.4%)	40 (24.8%)			
12. Do you obtain a written consent in local language?	Yes	99 (43.2%)	139 (86.3%)	238 (61.0%)	72.047	0.0 (S)
	No	130 (56.8%)	22 (13.7%)			
13. In case you diagnose the patient with AIDS, can you refuse the patient for treatment?	Yes	64 (27.9%)	4 (2.5%)	322 (82.6%)	40.828	0.0 (S)
	No	165 (72.1%)	157 (97.5%)			
14. Can a patient sue a doctor for rejecting an emergency case/ medically compromised case?	Yes	138 (60.3%)	155 (96.3%)	293 (75.1%)	65.625	0.0 (S)
	No	90 (39.3%)	6 (3.7%)			
15. What according to you is a	Death on Dental	42 (18.3%)	1 (0.6%)	240 (61.5%)	69.698	0.0 (S)

punishable offence?	Chair.		
	Extracting a wrong tooth/ RCT of wrong tooth.	62 (27.1%)	23 (14.3%)
	none of the above	21 (9.2%)	1 (0.6%)
	both (a) and (b)	104 (45.4%)	136 (84.5%)

Table 5: Knowledge Based Question Statistics

Question	Response option	Final Year N(%)	Intern N(%)	Total N(%)
8. Do you think that the present education scenario is sufficient to know about medicolegal responsibilities?	Yes	56 (24.5%)	14 (8.7%)	70 (17.9%)
	No	173 (75.5%)	147 (91.3%)	320 (82.1%)
9. Do you think addition of medicolegal aspects in dental curriculum will be beneficial?	Yes	215 (93.9%)	156 (96.9%)	371 (95.1%)
	No	14 (6.1%)	5 (3.1%)	19 (4.9%)
10. In what form do you think you'll prefer knowledge?	While posting in Public Health Dentistry Dept	57 (24.9%)	11 (6.8%)	68 (17.4%)
	Add in Public Health Dentistry curriculum	55 (24.0%)	6 (3.7%)	61 (15.6%)
	Separate lectures on CPA, indemnity & medicolegal practice	117 (51.1%)	144 (89.4%)	261 (66.9%)
11. Do you think students would really find it meaningful about this certain addition in the curriculum or is it extra for their undergraduate degree?	Yes, meaningful	203 (88.6%)	159 (98.8%)	362 (92.8%)
	No, extra burden	26 (11.4%)	2 (1.2%)	28 (7.2%)

Table 6: Perception Based Question Statistics

IV. DISCUSSION

The present study assessed the knowledge, attitude, and practice regarding medicolegal aspects of dentistry among final year BDS students and interns. Participants demonstrated moderate to good awareness, but lack of knowledge was observed in certain key practical legal areas by most participants.

High awareness regarding confidentiality, implied consent, and CPA was seen. This is encouraging and may reflect rise in exposure to ethical principles during clinical training. Such similar concerns regarding the importance of legal awareness in dental practice have been showcased in previous Indian studies. Goel et al. reported the growing importance of awareness about medicolegal aspects and CPA among the dental fraternity, while Gupta et al. pointed the need for an “alarm call” regarding medicolegal knowledge in dental practice. [1][2]

The study also showed moderate knowledge regarding professional indemnity insurance and poor awareness regarding record retention and written consent. This is important because indemnity and documentation are the main protectors for practitioners facing legal claims. Mahajan et al. described dental indemnity in India as a missing link, and the current study supports that concern by showing the lack of awareness in this domain remains even among senior students who are experienced in clinical practice. [4]

The CPA related was found out to be relatively high but this does not mean it is true everywhere as per the study of Swapna et al. which showed variability in CPA knowledge among dental fraternity. There should be focus on strengthening the knowledge about CPA. [3]

One of major finding was the association between education year of student and knowledge level which showed that higher the education year, better the knowledge i.e. interns showed better knowledge. This reflects that exposure to clinical procedures and experience in handling patients improves the student's knowledge. Also most students demanded for better medicolegal teaching and 95% students supported inclusion of medicolegal aspects in curriculum in the form of lectures. This also shows the concern regarding interns and students feeling underprepared in medicolegal matters.

The very low awareness regarding record retention and written consent is also alarming as it can serve as important evidence in medicolegal cases. These results shows that though the overall knowledge of all students is moderate to good but lack of knowledge in critical areas shows under preparedness.

V. LIMITATIONS

The study was based on questionnaire which depended on self reported response. Since the study population only included final year students and interns, it cannot be generalized for all levels on dental professionals. In addition, some questions especially attitude based questions were close to subjective. Some students might also have used AI to answer few questions.

VI. CONCLUSION

The present study found out that final year dental students and interns showed moderate to good level of medicolegal knowledge. Interns showed significantly better knowledge than final year students. Participants had high knowledge in areas like implied consent, confidentiality and CPA but weak knowledge in practical legal areas like record retention, professional indemnity insurance and written consent. Most participants believed that the current curriculum is insufficient to teach regarding medicolegal aspects and demand inclusion of medicolegal topics in the curriculum in the form lectures. This will help future dental professional to feel prepared regarding medicolegal aspects in dentistry which will help them practice more safely, ethically and confidently.

CONFLICT OF INTEREST

The authors declare there are no conflict of interest regarding the publication of this study.

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