Review Article

Knowledge and awareness of the Consumer Protection Act among dental professionals in India: A systematic review

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INTRODUCTION

The practice of medicine is considered as the most pious profession worldwide. A doctor is given a place next to Almighty God in our society. The doctor-patient relationship relies on mutual trust and conviction. The sole objective of a doctor is to improve the quality of life of the people and to mitigate sickness and suffering. The medical profession is not based on any mathematical laws, but it is a service-oriented, liberal profession, having a self-regulating code of ethics.

The profession of dentistry imparts knowledge and skill that is used for the service of the people. A dental professional has a responsibility toward individual patients and society. This special status that society confers on the dental healthcare professionals requires them to behave in an ethical manner. This responsibility must be at the core of the dental professional’s ethical behavior. However, with an increase in commercialization in all spheres of life, this profession has come under public scrutiny. Earlier the role and service provided by the medical and dental professionals was considered noble and charitable. However, today with an increase in medical negligence and malpractices, this profession is looked upon with doubt and contempt. A dental professional may be charged for negligence, if he or she fails to provide the required information to the patient before obtaining proper consent for a particular interventional treatment.

Background: The medical profession has been included in the Consumer Protection Act (CPA), to protect the interests of the patients in case of any unethical treatment rendered by the doctor. The present systematic review was conducted to assess the knowledge and awareness of CPA among dental professionals in India. Materials and Methods: A systematic review of relevant cross-sectional observational studies was conducted regarding the level of knowledge and awareness of CPA among dental professionals in India. Five studies out of 44 were finally included in the present review, after conducting both an electronic and manual search of scientific databases. The potential biases were reported and appropriate data was extracted by the concerned investigators. Results: More than 90% of the study subjects in one of the studies were aware of the CPA, as compared to other studies. In two studies, when queried about the correct time period during which a patient can sue a doctor, very few subjects (18 and 23.2%) answered correctly. Almost 90% of the subjects were taking some form of consent in one of the studies. Private practitioners had more awareness as compared to academicians and combined practitioners. Conclusion: The results of the present review showed that a majority of the subjects were aware of the existence of CPA, but knowledge about the basic rules and regulations was lacking in a few studies. Therefore, dental professionals need to keep themselves updated on the various rules and latest amendments to save themselves from any litigation.

Key words: Awareness, consumer protection act, dental professional, knowledge, litigation

Abstract

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The Consumer Protection Act (CPA) is a comprehensive piece of legislation implemented in 1986 in India, which aims to provide a forum to safeguard the rights of the customers and establishes guidelines for the speedy redress of their grievances against unethical medical practices. All services rendered to a patient by a medical or dental practitioner is covered under the CPA, except when the service is provided free of cost, especially in charitable or governmental dispensaries and hospitals and primary health centers. Therefore, it becomes imperative for all healthcare professionals (including dentists) to be aware of such laws, which are valuable for patients, healthcare professionals, and the community as a whole. Moreover, studies on the knowledge and awareness among dental health professionals about laws related to the CPA have rarely been reported in literature, hence, the present systematic review was undertaken to:

- Report the knowledge and awareness level regarding CPA among dental health professionals in India
- Suggest possible measures to increase the knowledge among dental professionals if required.

**MATERIALS AND METHODS**

**Eligibility criteria for the studies**

The present systematic review was done on the knowledge and awareness regarding CPA among dental professionals in India. The following inclusion criteria were employed for selection of studies. (1) Studies conducted in India; (2) subjects had to be dental professionals working privately or employed in a teaching institution; (3) studies conducted on dental students; (4) published in the English language; (5) studies evaluating the knowledge and awareness regarding biomedical CPA and the outcome measures; and (6) observational cross-sectional studies. No limitation in terms of publication date was considered in the search strategy.

The studies that were excluded from the present review were: (1) Studies not conducted in India; (2) reviews; (3) studies involving medical practitioners only. The initial electronic and manual search yielded 44 references, only five of which were retained. Full texts of all the five articles were extracted by electronic and manual search from the library of the Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh, and the National Medical Library, New Delhi.

**Identification of the appropriate studies**

The present review of literature was carried out both electrically and manually. The search strategy is depicted in Figure 1. The present review was carried out based on the protocol and guidelines, and these were used for its preparation. A relevant literature search was carried out through a search of scientific databases like MEDLINE, EMBASE, Pubmed Databases, and a manual search, irrespective of the date of publication, using Medical Subject Heading (MeSH) terms, such as, ‘Consumer Protection Act’, and ‘India’. We identified 44 articles with this method. The various key words utilized in search strategy included, ‘CPA’, ‘knowledge’, ‘awareness’, ‘dentists’, ‘dental students’, ‘India’, ‘teaching institution’, and the like. Various combinations of key words were made using ‘and’ or ‘or’ as Boolean operators.

![Flow diagram of various studies included in the review](image-url)
Selection of studies
After retrieval of the references yielded by the searches and abstracts, the duplicates were identified and excluded by two authors (RSG and SS), who then screened the abstracts and titles to identify the publications fulfilling the inclusion criteria for the review. The reviews were not included, although their reference lists were searched in turn for any studies not retrieved by the electronic search. For the remaining studies, full text articles were recovered that met with the inclusion criteria. The selected studies were screened using the Strengthening the report of observational studies in epidemiology (STROBE) checklist for observational, cross-sectional studies.[10]

Control of bias assessment
The following issues were included in the risk of bias or quality assessment in the present systematic review: (1) Completeness of the reporting information regarding CPA, (2) selective outcome reporting, (3) choice of outcome measures (knowledge or awareness levels regarding CPA), (4) study design, and (5) conflict of interest in the conduct of the study. When all the criteria were met, the overall plausible risk of bias was estimated as low.

Collection and extraction of data
This review was done according to the guidelines set forth by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA).[11] Two of the authors (GS and VM) independently used a pre-determined data collection form to extract the following information: (1) Title of the study; (2) year of publication; (3) place of origin; (4) number of participants; (5) study design; and (6) knowledge and awareness level regarding CPA. Any kind of disagreement regarding article screening or extraction was sorted out by discussion with another author (PST). Experts in the concerned field and corresponding authors of the selected studies were also contacted through emails for obtaining a full text of the included studies and for missing or unclear data, whenever deemed essential.

RESULTS

Description of the selected studies
The original search identified 44 studies and only four studies were potentially eligible for the present systematic review after performing the necessary exclusions.[12–16] The study population in two of the studies comprised of medical and dental health professionals, as compared to another study, which engaged academicians and dentists engaged in private dental practice. There were two studies that involved postgraduate students as well [Table 1]. The five studies were conducted in four different Indian states (Uttar Pradesh, Karnataka, Gujarat, and Rajasthan). All the studies were cross-sectional in nature and used a closed-ended questionnaire for gathering the relevant data from the study subjects, regarding CPA.

Awareness regarding the Consumer Protection Act
Figure 2 depicts the knowledge regarding CPA among the study subjects. More than 90% of the study subjects in the study reports of Shenoy et al.,[16] had awareness regarding CPA, as compared to other studies. Quantitative information regarding awareness in terms of percentage of subjects was not provided in the study findings of Singh et al.[15] A statistically significant association was found when the level

Table 1: Study characteristics of Consumer Protection Act included in the review

| Authors          | Year of publication | Study population | Sample size | Study area      | Outcome measure                                              | Results                                                                 |
|------------------|---------------------|------------------|-------------|-----------------|-------------------------------------------------------------|------------------------------------------------------------------------|
| Prasad et al.    | 2013                | Dental professionals and postgraduate students | 348          | Uttar Pradesh   | Awareness of Consumer Protection Act                        | 84.8% were aware about CPA, and the MDS faculty showed more awareness as compared to the BDS faculty and postgraduate students |
| Sikka et al.     | 2012                | Dentists in teaching institutions and dentists in private practice | 224          | Karnataka       | Assess and compare awareness of Consumer Protection Act     | Majority of DTI and DPP reported to be aware of CPA                     |
| Ajithkrishnan et al. | 2011              | Medical and dental health professionals | 245          | Gujarat         | Awareness of Consumer Protection Act and Professional Indemnity Claim | Majority of the dental professionals had poor awareness of CPA          |
| Singh et al.     | 2010                | Dental and medical health professionals | 448          | Rajasthan       | Assess and compare provisions of Consumer Protection Act    | Postgraduates and private practitioners had more awareness             |
| Shenoy et al.    | 2009                | Dental staff, postgraduates and interns | 146          | Karnataka       | Awareness of Consumer Protection Act                        | The subjects had a good awareness of CPA                                |

CPA: Consumer Protection Act, MDS: Masters in dental surgery, BDS: Bachelors in dental surgery, DTI: Dentists in teaching institutions, DPP: Dentists in private practice
of education of the subjects (undergraduates, postgraduates) was compared with the awareness levels in two studies,\cite{12,15} whereas, in the remaining two studies it was insignificant,\cite{13,14} However, only one study found a statistically significant association between awareness levels and gender (\(P = 0.001\))\cite{14} [Table 2].

### Time period in which patient can sue a doctor

Three studies provided information regarding the maximum time period in which the patient could sue a doctor.\cite{12,13,16} The other two studies did not reveal any details about the questions that were used to gather information regarding awareness of CPA from their study subjects. Figure 3 depicts the time period in which the study subjects felt that the patient could sue the doctor. Only 18% of the subjects in the study reports of Prasad et al.,\cite{12} and 23.2% of the subjects in the study findings of Sikka et al.,\cite{13} answered correctly in terms of the maximum time period in which a patient could sue a doctor. This was in contrast to study by Shenoy et al.,\cite{16} wherein, more than 70% of subjects knew the correct time period. Surprisingly, almost half of the subjects did not have any knowledge regarding the time period in the study reports of Sikka et al.\cite{13}

### Taking consent in daily practice

Consent forms an integral part of patient treatment and management. Consent taking in daily practice by the subjects was reported in three of the five studies [Figure 4].\cite{12,13} Almost 90% of the subjects were taking some type of consent before conducting any dental procedure in one of the studies\cite{12} and a majority of subjects in all the three studies relied on informed consent. However, subjects taking implied consent were very few in all the three studies. Moreover, Sikka et al.,\cite{12} found that a majority of the subjects were aware of the fact that for a patient under 15 years of age, consent for examination is taken from a parent or guardian, which was in contrast to the study findings of Shenoy et al.,\cite{16}

### Table 2: Comparison of awareness regarding CPA with level of education of subjects in four studies

| Studies          | Education level | \(P\) value | Education level | Gender (M/F) |
|------------------|-----------------|-------------|-----------------|--------------|
| Prasad et al.    | BDS faculty     | 0.001*      | MDS faculty     | 0.09         |
|                  | Postgraduate    |             | Postgraduate    |              |
| Sikka et al.     | BDS dentists    | \(P>0.05\)  | MDS dentists    | \(P>0.05\)  |
| Ajithkrishnan et al. | Graduates     | \(P>0.05\)  | Postgraduates   | NR           |
| Singh et al.     | Undergraduates  | 0.00*       | Postgraduates   | 0.001*       |
| Shenoy et al.    | Staff           | NR          | Postgraduates   | NR           |
|                  | Interns         | NR          |                 |              |

NR: Not reported in the study, *Statistically Significant. MDS: Masters in dental surgery, BDS: Bachelors in dental surgery, M/F: Male/Female
Comparison of awareness between academicians and practitioners
A more number of dentists in private practice (DPP) were aware of CPA, as compared to dentists in teaching institutions (DTI), in the study reports of Singh et al.,[13] however, the association was statistically insignificant \( (P > 0.05) \). Moreover, it was observed in the study reports of Singh et al.,[15] that private practitioners showed higher awareness scores compared to academic and combined practitioners, with a statistically significant difference \( (P = 0.00) \).

**DISCUSSION**

The focus of the present systematic review was on the knowledge and awareness regarding CPA among dentists in India. The review utilized various parameters in order to accumulate important information regarding CPA, which was evident from the results. A majority of subjects in all the studies were aware of the existence of CPA, however, the basic awareness regarding rules and regulations was found to be low and showed contrasting results in different studies. This could be attributed to a variation in the sample size and different study settings. A self-reported questionnaire was used for gathering information from the subjects regarding CPA in different studies. This could increase the risk of bias, while evaluating studies on knowledge and awareness. All the studies used a close-ended questionnaire to obtain information from their subjects, on various aspects linked to CPA. The advantage of using a close-ended questionnaire was that it reduced recall bias and such questions were easy to analyze and could achieve a quicker response from the subjects.

A statistically significant association was found between the level of education and the awareness scores in a couple of studies.[12,16] This might be because an increase in knowledge led to an increase in awareness. A patient could only sue a dentist within a definite time period after the procedure had been performed on him/her. After the expiry of this period, the dentist was not liable for any compensation under CPA.[17] In two studies,[12,13] it was very surprising to note that only few subjects were aware of the maximum time period within which a patient could sue the concerned dentist. This indicated the lack of complete understanding about CPA among dental professionals.

It was reported in one of the studies that more than 90% of the dentists were taking consent in some form before the start of treatment.[12] This could be because there was a higher chance that patients seeking treatment from dental professionals were inclined to claim compensation in case of a mishap or negligence. Moreover, two studies showed that private practitioners were reported to have more awareness, as compared to subjects engaged in academics or in combined practice.[13,15] This could be related to the higher socioeconomic status of the patients who preferred to seek treatment from a private sector.

The present review had some limitations as well. It was based on a review of previous studies, which were conducted in different time periods, by different authors. Therefore, the generalizability might be inaccurate. Some of the articles that passed the inclusion criteria during the initial search were available only on payment, mails were sent to the journals/authors requesting a waiver of the same, but no response was received, as the study was not funded. These articles were not included. The present review compared and discussed only those aspects regarding CPA, which a dental professional had to be aware of, as it was not practically possible to discuss and compare the findings of every study. Moreover, the sample in each study comprised of different types of subjects; three studies compared the knowledge levels of undergraduates and postgraduates,[12,15,16] while the other studies compared the awareness levels of private practitioners and academicians.[13,15] Therefore, this type of sample could account for different levels of knowledge and awareness. Moreover, no attempt was made to compare the knowledge and awareness of dental professionals with medical professionals, as the main focus of the study was on dental professionals.

The present systematic review involved the electronic and manual search of multiple scientific databases, with no restriction regarding the year of publication. The reference lists of literature reviews were searched for other studies that could also be included. However, it was possible that some relevant data could have been left behind in terms of fugitive literature (Conference proceedings, Dissertations, Technical reports, etc.). This could have accounted for some publication bias and some important information would have undoubtedly been overlooked with the type of literature search strategy that was used to conduct the present review.
CONCLUSION AND RECOMMENDATIONS

The results of the present review showed that a majority of subjects in all the studies were aware of the existence of CPA. However, a basic awareness regarding the rules and regulations of CPA was found to be low in a few studies. Therefore, dental professionals need to update their knowledge and understanding on CPA and its amendments to be on a legally safer side. The following recommendations have been put forth:

- Compulsory orientation programs regarding CPA should be organized for postgraduate students after joining any postgraduate course in the medical or dental profession
- Compulsory Continued Medical Education (CME) Programs on CPA should be arranged frequently.
- Awareness should be spread about the Professional Indemnity Claim
- Medical professionals should internalize equality-assured health standards in their routine professional duties, to ensure protection of customer rights.

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