# **Practitioner Section**

## **Original Article**

# KNOWLEDGE OF CONSUMER PROTECTION ACT AMONG DOCTORS FROM GOVERNMENT AND PRIVATE SECTORS OF UNION TERRITORY, CHANDIGARH

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# ABSTRACT

**CONTEXT:** Enough literature is not available on knowledge of the doctors regarding Consumer Protection Act (CPA). Lack of awareness of the treating doctors may make the entire hierarchy in the medical organization liable to the implications due to vicarious liabilities. AIM: A study was planned to benchmark the existing level of doctors' knowledge regarding CPA in selected public and private sector medical organizations in Chandigarh. SETTING AND DESIGN: Hospital-based cross-sectional study. MATERIALS AND METHODS: A total of 440 doctors working in various government and private hospitals of Chandigarh were given a pretested self-administered questionnaire. The questionnaire consisted of 35 closed-ended questions of which 25 questions were for knowledge assessment and 10 questions were for assessing the perceptions of the doctors on the implications of the act. STATISTICAL ANALYSIS: All the 25 knowledge questions were scored. Data analysis was done to describe the sub-group mean scores in univariate and multivariate analysis. RESULTS: The mean knowledge score of the respondents was 15.83 (range 4-24). It was 63.3% of the total achievable score. On multivariate analysis, keeping institution, designation, educational qualification, and sex as predictors in the model, private institution, associate professors, assistant professors, and medical officers scored significantly better independently than the others in the model. Some important observations with respect to perceptions of the doctors about implications of the act have been described in the paper. CONCLUSIONS: Knowledge of doctors about many aspects of CPA is not satisfactory. Practicing government and private doctors have better knowledge than the academicians. Regular planned teaching and training programs are required to keep the doctors updated about CPA.

Key words: Consumer protection act, doctors, knowledge, medical negligence, perceptions

#### INTRODUCTION

Government of India enacted Consumer Protection Act (CPA) 1986<sup>[1]</sup> to safeguard the interests of consumers against various types of exploitations and unfair dealing. Inclusion of medical professionals under the act raised many apprehensions among the medical fraternity. Despite best medical care, small percentage of treatment failures may occur, and it may hold the doctor guilty. Secondly, the ease with which a consumer case can be filed is likely to encourage frivolous and speculative complaints intended to exploit the consumer jurisdiction. These apprehensions of the doctors were addressed in various judgments of Honourable Supreme Court of India<sup>[2-4]</sup> to protect doctors against unnecessary litigations and also for speedy redressal of patient's grievances.

In view of the frequent amendments in the act, it is pertinent that medical doctors should remain updated about the act and the implications thereof, to not only protect themselves from medical negligence, but also for providing better medical care to the patients.

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Dr. Arun K. Aggarwal, Community Medicine and Additional Medical Superintendent, Postgraduate Institute of Medical Education and Research, Chandigarh, India. E-mail: aggak63@gmail.com As per the limited literature available on the subject, knowledge of doctors regarding CPA ranged from 68% to 93%. Knowledge level differed with respect to academic qualification,<sup>[5]</sup> private versus government doctors,<sup>[6]</sup> and age of the doctors.<sup>[7]</sup> Despite the high levels of overall knowledge score, performance was just fair for many aspects like doctor-patient relationships and vicarious liabilities.<sup>[5]</sup>

It is important for each medical institution to keep its doctors updated about the legal implications of the act. Lack of awareness of treating doctors may make the entire hierarchy in the medical organization liable to the implications due to vicarious liabilities. On the other hand, awareness about the act may alleviate these apprehensions and help in improving record keeping and patient-doctor communications. Thus, a study was planned to benchmark the existing level of doctors' knowledge regarding CPA across all levels of doctors (from junior residents to faculty) and in selected public and private sector medical organizations in Chandigarh. The study was also approved by the Institute Ethics Review Committee.

#### MATERIALS AND METHODS

#### Study design

This was a cross-sectional survey.

#### Setting

The study population consisted of faculty, and senior and junior residents of various specialities and super-specialities

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of Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh, Government Medical College and Hospital (GMCH), Sector 32, Chandigarh, Dr. H. S. Judge Institute of Dental Sciences; and doctors of Government Multi-Speciality Hospital (GMSH), Sector 16, Government dispensaries/hospitals of Chandigarh, and a private corporate hospital.

#### Sample size

On the basis of literature review and pilot study using a pre-tested questionnaire,<sup>[7]</sup> it was assumed that 40% respondents would have adequate knowledge about CPA. At the worst acceptable level limit of 30%, at 95% confidence interval (CI) and 5% beta error, sample size was calculated to be 88 using Epi Info version 6 computer package. Using PPS sampling and considering that (a) "no response rate" would be lower in PGIMER compared to outside institutes and (b) there should be at least 20 persons in each category to generate hypothesis category wise, the sample size given in Table 1.

The sample size in Table 1 was considered sufficient to have overall estimates of all the doctors in the city, included in the sampling frame. However, to have valid estimate of knowledge level for each category in PGIMER, Chandigarh, the sample size was enhanced to 100 for each category - faculty, senior resident, and junior resident separately. Thus, the sample constituted of totally 440 participants.

#### Selection of study participants

Sampling frame was prepared for each category by obtaining the names of all doctors from each organization. By following systematic random sampling technique, requisite numbers of participants were selected from each category. Doctors who did not give consent to participate and those who had not responded to the questionnaire were excluded from the study. Ten doctors who participated in the pilot study and members of thesis review committee of the institute were also excluded from the sampling frame. A written informed consent was obtained from all the willing participants.

#### Study tool

A pre-tested questionnaire used in another study<sup>[7]</sup> was used for this study. Questions in this tool included those on socio-demographic variables, awareness about provisions of CPA as applied to doctors, aims and objectives of CPA, location of consumer forum at different levels, conditions for which a consumer is covered under CPA, time period for the patients to sue the concerned doctors, implication of the act on the doctors, patients and medical profession, etc.

The questionnaire consisted of 35 closed- ended questions. Of these, 25 questions were for assessing the knowledge regarding CPA. In addition, there were 10 questions to get the opinion of the doctors on the implications of the act. These questions were in a three-point rating scale format.

#### **Tool administration**

Permissions were taken from the concerned authorities to conduct the study in their hospitals. Consent from the selected doctors was taken individually, and they were given the questionnaire to fill at their earliest available time, preferably within a week. The participants who failed to fill the questionnaire in 1 week time were reminded once every week, till a maximum of three times, to get the filled questionnaire back. Participants who still failed to respond were dropped and the next participants were chosen from the list by systemic random sampling technique. A total of nine respondents failed to respond in the prescribed time.

#### Data analysis

All questions were scored. Each correct response was given a score of one. Overall mean score (95% CI) was calculated for all the doctors. Various statistical tests, *viz*. Chi-square test, *t*-test, analysis of variance (ANOVA), were used, and category-wise subgroup analysis was done to generate the hypothesis on whether knowledge differential exists among government and private doctors, among doctors of medical institutes and dispensaries, and among doctors at different levels, viz. junior residents, senior residents, and faculty.

Table 1: Sample size as per	participants' category and institutions
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Name of institution	Category	Total number available	Sample size required	Number of participants
PGIMER, Chandigarh	Faculty	310	16	100
	SR	490	25	100
	JR	542	28	100
GMCH-32, Chandigarh	Faculty	123	06	20
	SR	98	06	20
	JR	88	05	20
Government Multi-Speciality Hospital, Sector 16, Chandigarh	SMO/MO/Dental Surgeon	58	03	20
Dispensaries, Chandigarh	SMO/MO/Dental Surgeon	81	04	20
Dr. H. S. Judge Institute of Dental Sciences	Faculty	87	05	20
INSCOL Pvt. Hospital	Consultants	33	02	20

RMO: Resident Medical Officer, MO: Medical Officer, SMO: Senior Medical Officer, JR: Junior Resident, SR: Senior Resident, PGIMER: Post Graduate Institute of Medical Education and Research, GMCH: Government Medical College Hospital, GH: General Hospital

## RESULTS

There were a total of 440 respondents. Age, sex, educational qualification, designation, institution, and year of experience wise distribution of the respondents is given in Table 2. It was observed that 46% participants were in the age group of 20-30 years, 62% were males, 51% were postgraduates, 54% were resident doctors, 68% were from PGIMER, and 58% had experience up to 5 years.

The mean knowledge score of the respondents was 15.83 (range 4-24). Mean score was 63.3% of the total achievable score. Knowledge score varied from 59% (>50 years age group) to 65% (31-40 years age group). The respondents in the age group of 31-40 years had higher knowledge than the respondents in the age group of more than 50 years (P = 0.054). With respect to years of service experience,

Table 2: Distribution of sample size as per age group, sex, educational qualification, designation, institution, and years of experience

Parameter	Frequency (%)
Age group in years	
20-30	201 (46.6)
31-40	150 (34.8)
41-50	55 (12.8)
>50	25 (5.8)
Information NA	9 (2)
Sex group	
Male	274 (62.3)
Female	157 (35.7)
Information NA	9 (2.0)
Educational qualification	
Graduate (MBBS/BDS)	142 (32.3)
Postgraduate (MD/MS)	227 (51.6)
Doctorate	67 (15.2)
Information NA	4 (0.9)
Designation	
Professor	34 (7.7)
Additional Professor	10 (2.3)
Associate Professor	22 (5.0)
Assistant Professor	74 (16.6)
SR	120 (27.5)
JR	120 (27.3)
SMO	10 (2.3)
МО	30 (6.8)
Private Consultant	11 (2.5)
RMO	9 (2.0)
Institution	. ,
PGIMER	300 (68.2)
Government Medical College and Hospital - 32	60 (13.6)
General Hospital - 16	20 (4.5)
UT, Chandigarh	20 (4.5)
INSCOL Hospital (Private)	20 (4.5)
Dr. H. S. Judge Institute of Dental Sciences	20 (4.5)
Experience in years	
0-5	255 (58.0)
5-10	94 (21.4)
10-15	33 (7.5)
15-20	18 (4.1)
>20	35 (8.0)
Information NA	5 (1.1)
SB: Senior Resident IB: Junior Resident SMO: 9	Senior Medical Officer

SR: Senior Resident, JR: Junior Resident, SMO: Senior Medical Officer, MO: Medical Officer, RMO: Resident Medical Officer, PGIMER: Post Graduate Institute of Medical Education and Research the knowledge score varied from 61% (>20 years of experience) to 65% (5-15 years of experience). Knowledge score was the highest for doctors of the General Hospital, Sector 16 (71%), followed by the private hospital INSCOL, Sector 34 (68%). INSCOL and GH-16 had significantly higher knowledge than PGI (P = 0.001). Males had marginally higher score than females. It was found that the doctorate degree holder respondents had the highest mean score of 16.37 (65%), followed by postgraduate respondents with a mean knowledge score of 15.89 (64%) and graduate respondents with a mean knowledge score of 15.67 (63%). Medical officers had significantly higher knowledge than professors (P = 0.025) [Table 3].

On multivariate analysis, keeping institution, designation, educational qualification, and sex as predictors in the model, private institution, associate professors, assistant professors, and medical officers scored significantly better independently than others in the group [Table 4].

Knowledge of the doctors about maintenance of medical records and preventive measures to be undertaken to safeguard the hospital from legal action was very good (score more than 90%). The knowledge was good about applicability of the act, liability of the doctor, and consent and its validity (score between 60 and 70%). However, knowledge was fair (score 59%) about the vicarious liability aspect of the act and was average (score between 40 and 50%) about the levels at which the redressal forums and commission exist, doctor-patient relationship, and medical negligence [Table 5].

# Implications of CPA on patients, doctors, and medical practice

When asked about the implications of CPA on patients, doctors, and medical practice, 300 (68%) doctors agreed that the CPA forces the doctors to communicate better with the patients and 207 (47%) agreed that the CPA gives rise to efficient patient care as the doctors are more conscious and careful in rendering the service. About three-fourth respondents, i.e. 321 (73%), agreed or partially agreed that CPA hampers the doctors from giving their best out of fear of mishaps, unwanted litigation, huge compensations, etc. Furthermore, 357 (81%) doctors agreed or partially agreed that the doctors will cease to rely on their clinical diagnosis and will resort to practicising defensive medicine.

With respect to the working in high-risk areas such as neurosurgery, trauma surgery, etc., 329 (74.8%) doctors agreed or partially agreed that they may think twice about this because of the act being applicable to them and 384 (87.2%) doctors agreed or partially agreed that creating a forum where the redressal is simple and speedy leads to all possibilities of filing false and vexatious complaints. Similarly, perceptions of the doctors on whether CPA minimizes commercialization in practice and reduces malpractice, whether CPA gives rise to an increased

Table 3: Mean and median knowledge score of the respondents based on their age, years of experience, institution, sex, and educational	al
qualification	

Parameters	п	Mean±SD	95% CI for mean		Mean score %	Median
Age group (years)						
20-30	198	15.62±2.6	15.2	16.0	62	16.0
31-40	149	16.34±2.5	15.9	16.7	65	16.0
41-50	55	16.11±2.6	15.4	16.8	64	16.0
>50	25	14.84±2.6	13.7	15.9	59	15.0
Experience (years)						
0-5	251	15.75±2.7	15.4	16.0	63	16.0
5-10	94	16.31±2.4	15.8	16.8	65	16.0
10-15	33	16.24±3.1	15.1	17.3	65	16.0
15-20	18	16.00±2.1	14.9	17.0	64	15.5
>20	35	15.29±2.6	14.3	16.2	61	15.0
Institution						
PGIMER	300	15.69±2.7	61.4	63.9	63	16.0
GMCH - 32	56	15.73±2.4	60.0	64.8	63	16.0
GH - 16	20	17.65±2.1	66.6	74.5	71	18.0
UT, Chandigarh	20	15.65±3.3	56.2	68.9	63	15.5
INSCOL Hospital - 34	20	17.10±1.9	64.7	72.0	68	16.5
Dr. H. S. Judge Institute	20	15.90±2.4	59.0	68.1	64	15.5
Sex						
Male	273	15.88±2.8	62.1	64.8	64	16.0
Female	154	15.87±2.4	61.7	64.7	63	16.0
Educational qualification						
Graduate	138	15.67±2.4	61.0	64.1	63	16.0
Postgraduates (MD/MS)	227	15.89±2.6	62.1	64.9	64	16.0
Doctorate (DM/MCH/PhD)	67	16.37±3.1	62.3	68.5	65	17.0
Designation						
Professor	34	14.94±2.4	62.5	64.5	60	15.0
Additional Professor	10	14.30±3.6	11.6	16.9	57	15.0
Associate Professor	22	16.27±2.5	15.1	17.4	65	15.0
Assistant Professor	73	16.30±2.3	15.7	16.8	65	16.0
SR	121	15.65±3.0	15.1	16.2	63	16.0
JR	116	15.62±2.4	15.1	16.0	62	16.0
SMO	10	14.80±3.5	12.2	17.3	59	14.0
MO	30	17.27±2.5	16.3	18.2	69	18.0
Private Consultant	11	17.73±2.1	16.2	19.2	71	18.0
RMO	9	16.33±1.4	15.2	17.4	65	16.0

RMO: Resident Medical Officer, MO: Medical Officer, SMO: Senior Medical Officer, JR: Junior Resident, SR: Senior Resident, PGIMER: Post Graduate Institute of Medical Education and Research, SD: Standard deviation, CI: Confidence interval, GMCH: Government Medical College Hospital, GH: General Hospital

Table 4: Multivariate anal	lysis for association of knowled	de scores with institute, desid	nation, educational qualification, and se	ex

Parameters	Coefficient	Standard error	t value	P>ltl	95% CI
Institute_2 (2=GMCH)	-0.009	0.376	-0.02	0.980	-0.748-0.729
Institute_3 (3=GH-16)	1.343	1.170	1.15	0.251	-0.956-3.643
Institute_4 (4=UT CHD)	-0.336	1.234	-0.27	0.785	-2.763-2.090
Institute_5 (5=HSJDISC)	-0.075	0.689	-0.11	0.913	-1.430-1.280
Institute_6 (6=INSCOL Private Hospital)	2.744	0.896	3.06	0.002	0.983-4.506
Designation_2 (2=Additional Professor)	-0.015	0.968	-0.02	0.987	-1.919-1.888
Designation_3 (3=Associate Professor)	1.423	0.744	1.91	0.057	-0.040-2.887
Designation_4 (4=Assistant Professor)	1.417	0.537	2.64	0.009	0.360-2.47
Designation_5 (5=SR)	0.716	0.508	1.41	0.160	-0.282-1.715
Designation_6 (6=JR)	0.249	0.939	1.33	0.184	-0.597-3.097
Designation_7 (7=SMO)	Dropped				
Designation_8 (8=MO)	2.078	1.040	2.00	0.046	0.0327-4.124
Designation_9 (9=Private Consultant)	Dropped				
Designation_10 (10=RMO)	-0.854	1.362	-0.63	0.531	-3.531-1.823
Educational qualification_2 (2=PG)	0.367	0.793	0.46	0.643	-1.191-1.926
Educational qualification_3 (3=Doctorate)	0.925	0.880	1.05	0.294	-0.805-2.655
Sex_2 (2=Female)	-0.165	0.269	-0.62	0.538	-0.694-0.363
Constant	14.457	0.935	15.45	0.000	12.617-16.296

SR: Senior Resident, JR: Junior Resident, SMO: Senior Medical Officer, MO: Medical Officer, RMO: Resident Medical Officer, CI: Confidence interval, GMCH: Government Medical College Hospital, GH: General Hospital

insurance coverage by the doctors and patients, whether CPA will cure unethical medical practice, e.g. cut practice in medical practice, and whether government and professional bodies had established clear standards for regulation of health care services are given in Table 6.

# DISCUSSION

All medical professionals must fully understand CPA. However, not many studies are available on this subject in the indexed literature. Therefore, this study was conducted among doctors of Chandigarh across government and private organizations to map their knowledge and perceptions about CPA. We found that the overall mean knowledge score in our study was 63% of the total scores. Scores were comparable to Bangalore study,<sup>[7]</sup> where the mean knowledge score of doctors for CPA was 68% of the total achievable score. It was lesser than the mean scores achieved by medical professionals at Udaipur.<sup>[5]</sup>

This study has generated some important differentials in the knowledge scores. Respondents above 50 years of age, professors and younger academic faculty members, and females scored lesser than the middle-aged professionals, middle-level faculty members, and males. General duty medical officers and private consultants also scored higher than the academic professionals.

Findings are comparable to the Bangalore study,<sup>[7]</sup> where younger doctors' knowledge was better than the senior doctors without any gender difference. Similar observations were made in the Udaipur<sup>[5]</sup> study, where the mean score of postgraduates was higher than that of undergraduates,

Table 5: Doctors' awareness about certain other aspects like medical negligence, applicability of the act, and other liabilities of the doctors

Variable	Total score	Mean score	Mean score %
Limitation period of the act	1	0.43	43
Levels at which the redressal forums and commission exist	2	0.94	47
Doctor-patient relationship	1	0.50	50
Negligence	4	1.98	50
Vicarious liability	2	1.17	59
Consent and its validity	5	3.71	62
Applicability of the act	2	1.39	70
Liability of the doctor	3	2.1	70
Maintenance of medical records	3	2.69	90
Preventive measures to be undertaken to safeguard the hospital from legal action	1	0.93	93

males had slightly higher awareness of CPA compared to females, and the mean scores were lower among academic professionals compared to the private doctors. However, in the Bangalore study, females scored marginally higher compared to males. Further, in our study, participants from PGIMER were from both clinical and non-clinical departments, whereas in the Udaipur study, participants were from clinical departments. It is possible that knowledge scores of clinicians might be higher than the non-clinicians.

Better knowledge scores in some categories compared to others could be because of greater exposure to the subject in the former compared to the latter. This exposure can be due to better teaching and training or/and practical exposures. As general duty medical officers and private consultants are not exposed to formal academics, but are dealing with the patients exclusively, it can be derived that better knowledge about CPA among the medical officers and private consultants probably comes from the practical exposure. In the Udaipur study also, private consultants had scored better than the academic doctors, and it was argued that it may be because of better socioeconomic status of clients in the private sector, which forced the doctors to remain updated. However, in our study, the knowledge scores of general duty medical officers, who cater to poor and middle-class population, was high. This indicates that knowledge scores are probably not related to differences in the profiles of the patients, but may be associated with the work profile of the doctors.

It can be argued similarly that faculty members in the middle of their career have higher knowledge due to cumulative practical exposure. Lesser knowledge scores among senior professors is difficult to explain. It may be because of lesser sample size. It is also possible that medical officers and private consultants attend more Continuing Medical Education programs that they organize themselves to meet their specific needs.

Perception statements	Agree (%)	Partially agree (%)	Disagree (%)	No reply (%)
CPA forces the doctors to communicate better with the patients	300 (68.2)	98 (22.3)	31 (7.0)	11 (2.5)
CPA gives rise to efficient patient care as the doctors are more conscious and careful in rendering the service	207 (47)	177 (40.2)	49 (11.1)	7 (1.6)
CPA hampers the doctors from giving their best out of fear of mishaps, unwanted litigation, huge compensations, etc.	156 (35.5)	165 (37.5)	108 (24.5)	11 (2.5)
Doctors will cease to rely on their clinical diagnosis and will resort to practicing defensive medicine	168 (38.2)	189 (43)	74 (16.8)	9 (2)
Doctors may think twice about working in high-risk areas such	171 (38.9)	158 (35.9)	101 (23)	10 (2.5)
As neurosurgery and trauma surgery because of the act being applicable to them				
Creating a forum where the redressal is simple and speedy leads to all possibilities of filing false and vexatious complaints	207 (47)	177 (40.2)	49 (11.1)	7 (1.6)
CPA minimizes commercialization in practice and reduces malpractice	253 (57.5)	138 (31.4)	40 (9.1)	9 (2.1)
CPA gives rise to an increased insurance coverage by the doctors and patients	256 (58.2%)	114 (25.9%)	55 (12.5%)	15 (3.4%)
CPA will cure unethical medical practice, particularly cut practice in medical practice	200 (45.5)	152 (34.5)	73 (16.6)	15 (3.4)
Government and professional bodies have established clear standards for regulation of health care services	194 (44.1)	146 (33.2)	66 (15)	34 (7.8)

CPA: Consumer Protection Act

This study has given further insight into the domains of CPA where doctors performed well and those where significant gap exists. We have also found out the perceptions and apprehensions of the doctors about CPA implementation and the actions that should be taken to deliver better patient care and protect themselves and the organizations.

As per the doctors' perceptions, health sector is well regulated by the government agencies, as 77% of the doctors fully or partially agreed that government and professional bodies have established clear standards for regulation of health care services. But it seems that these regulations have not percolated well and there is huge implementation gap. This is because most physicians get involved in a medical malpractice case sometime in their career due to lack of due care, lack of informed consent, vicarious liability, negligent supervision; injury to third parties, etc.<sup>[8]</sup> Medical negligence occurs due to either inappropriate technical care or non-communication or miscommunication with the patients or improper record keeping. In Mexico,<sup>[9]</sup> 36% of complaints related to malpractice were due to technical reasons. Lack of skill accounted for 67% of those cases. In another study,[10] 33% of the issues pertained to inadequate treatment and inadequate diagnosis and 11% to delay in the treatment. Most of these complaints could have been averted with better regulation of health care service.

Further, we found that the mean score of the doctors for medical negligence was only 50% of the total scores. Lack of knowledge among the doctors about CPA and increased awareness and expectations among the patients about their rights are probably leading to deterioration of doctor-patient relationship in our country. Since the passing of the CPA in 1986, litigations against doctors are on the increase and the concept of "defensive medicine" has emerged.[11] We found that 72% doctors fully or partially agreed that CPA hampers the doctors from giving their best out of fear of mishaps, unwanted litigation, huge compensations, etc. So much so that 81% fully or partially agreed that doctors will cease to rely on their clinical diagnosis and will resort to practicing defensive medicine. In another study,<sup>[12]</sup> 69% of the respondents strongly agreed that inclusion of medical practice under the purview of CPA has made it defensive medicine. In New Zealand,[13] it increased the investigation and referral rate. Although it also increased active identification of the patients where problem could have arisen, it led to over-documentation and consenting and altered the approaches to time and workload. It also led to withdrawal from the doctor-patient relationship and particular fields of practice.

In USA,<sup>[14]</sup> by the age of 45 years, up to 36% of physicians in low-risk specialties and 88% for high-risk specialties had faced their first claim. This increased to 75% and 99%, respectively, by the age of 65 years. Doctors are getting discouraged in practicing high-risk areas such as neurosurgery and trauma surgery because of the act being applicable to them. In the current study also, majority of the respondents echoed the same view as 75% fully or partially agreed that doctors may think twice about working in highrisk areas such as neurosurgery and trauma surgery.

It can thus be argued whether CPA is leading to commercialization and malpractice or discouraging it. Whereas 88% of the doctors fully or partially agreed that CPA minimizes commercialization in practice and reduces malpractice, in Ahmedabad<sup>[6]</sup> study, 79% thought that the act will lead to moderate to high increase in doctors' fees and over 91% of the respondents thought that cost of the diagnostics will increase moderately to significantly, although in the same study, 65% of the respondents believed that CPA was effective in protecting patient's interests and 45% thought that doctors will pay more attention to treatment of emergency cases. The other positive outcome of the act is that it reinforces the ethical practice among the doctors, as 81% of the doctors fully or partially agreed that CPA will cure unethical cut practices prevalent in the medical sector.

It is encouraging to note that in our study, doctors scored more than 90% for maintenance of records and preventive measures to be undertaken to safeguard hospital from legal action. This is a very good sign as "poor records mean poor defense, no records mean no defense"<sup>[15]</sup> and lack of medical records and consent obtained from a patient can establish medical negligence on the principle of *res ipsa loquitur*.<sup>[16]</sup> In a teaching medical college of Orissa,<sup>[12]</sup> 84% of participants believed that proper consent and documentation can prevent a charge of negligence. But still, 20% of them were either not taking or reluctant to take proper consent before any examination or procedure.

Lack of communication between patients and doctors is another important cause of the increased litigations.<sup>[9-10,17-20]</sup> Doctors do have a tendency to reservedly disclose medical information and withhold it, if it is deemed potentially harmful.<sup>[21]</sup> In our study, the mean score for patient-doctor relationship was 50% of the total and about consent and its validity was 62% of the total, reflecting a huge gap that needs to be bridged.

Nonetheless, it seems CPA has put pressure on the doctors for better communication and efficient patient care, as 68% agreed that CPA forces the doctors to communicate better with the patients, and 47% of them agreed that CPA gives rise to efficient patient care as the doctors are more conscious and careful in rendering the service. CPA was considered beneficial to the patients in getting their grievances redressed.<sup>[22]</sup> In Orissa, 82% of the participants were aware of what makes a practitioner negligent in the view of the patients, and 85% of them were taking proper precautions to prevent litigations.<sup>[12]</sup> In spite of an increasing trend of litigation and compensation suits against the practitioners, only 35% of the total practitioners had insured themselves, and 16% of them were ignorant about the self-insurance in practice. It seems that the coverage of doctors under medical indemnity insurance and of patients under health insurance will increase as 58% of the doctors agreed and 26% of the doctors partially agreed that CPA gives rise to an increased coverage by the doctors and the patients.

Doctors lacked in knowledge about the level at which the redressal forums and commission exist and the limitation period of the act. About 87% doctors fully or partially agreed that creation of a forum with simple and speedy redressal can lead to filing of false and vexatious complaints. The belief of majority of the respondents that CPA will lead to an increase in the number of litigations against them is substantiated by the findings of another study.<sup>[23]</sup>

Major strength of our study is that our sample size was representative of all medical professionals of Chandigarh. It included private as well as government doctors and covered different levels of seniority and age groups. Thus, it will serve as an important benchmark for knowledge of CPA among the medical professionals. Subgroup analysis scores and differences generated in the study should be absorbed with caution, as sample size was not calculated for this subgroup analysis, and thus was not sufficient for valid interpretations. Nonetheless, this explorative analysis has shed some important clues for further research and interventions. Firstly, as probably doctors are learning about CPA from their practical exposure rather than formal teaching, it is pertinent to address this issue through well-planned formal sessions. CPA should be made part of the MBSS curriculum. Annual seminars on CPA should be conducted so that doctors across all levels of seniority can learn about the act and can keep themselves updated about the amendments and important judgments that can influence the patient care. It should be made a mandatory topic of induction training of the doctors. Governments should introduce mandatory certifications at periodic intervals. Each practicing doctor should possess valid certificate of having sufficient knowledge on CPA. Further, a system of regular medical audit should be instituted to document whether doctors are practicing as per CPA. Periodic check of medical records should be made mandatory. Doctor-patient communication and patient satisfaction assessments should also be institutionalized.

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