



Bulletin of the International Association for Paleodontology

Volume 19, Issue 1, 2025

Established: 2007

CONTENT

Hari Wibowo et al. / Prehistoric populations from Gua Bedug in the context of early-mid holocene of Java, Indonesia	1
Abdulla Al-Shorman et al. / Strontium isotope analysis of human dental enamel from a mass burial at Udhruh fortress, Southern Jordan: a paleomobility study	16
Arofi Kurniawan et al. / The applicability of Demirjian's and Nolla's dental age estimation methods for children in Surabaya, Indonesia	25
Prajakta Khelkar et al. / Palatal rugae pattern and tongue print as a potential tool for gender identification in forensic odontology: a cross-sectional study	33
Beta Novia Rizky et al. / Knowledge and awareness of medicolegal aspects among dental practitioners in rural, urban, and suburban areas of Indonesia: a cross-sectional study	42
Ananda Nandita Dewana et al. / Comprehensive review: update in age estimation of forensic odontology	48
Aminah Zahrah et al. / Microbiological analysis in forensic identification and machine learning: a review	55
Nisrina Saputri / Analyzing orocraniofacial structures for sex estimation using advanced imaging technologies in forensic odontology: a review	64
Georgi Tomov et al. / Bilateral odontogenic maxillary sinusitis due to advanced tooth wear in a female individual from late antiquity Philippopolis (Bulgaria)	70
Laura Vranješ et al. / Microdontia and hypodontia in two female skeletons from the Rovinj – St. Euphemia site	76
Sayem A. Mulla / Forensic odontology for edentulous cases – a diagnostic bereft.....	83

Reviewers of this issue:

Aspalilah Alias, David Bulbeck, Aman Chowdhry, Andrea Cucina, Jannick Detobel, Lorenzo Franceschetti, Laura Gonzalez-Garrido, Rakesh Gorea, Tamas Hajdu, Hebalbrahim Lashin, Matthew James Lee, Senad Muhasilović, Masniari Novita, Oskar Nowak, Amir Abdul Rahim, Rabi'ah Al-Adawiyah binti Rahmat, Kasia Sarna Bos, Ricardo H.A. Silva, Ana Maria Silva, Parul Sinha, Nurtami Soedarsono, Marlin Tolla, Leticia Vilela Santos, Selma Zukic.

We thank all the reviewers for their effort and time invested to improve the papers published in this journal.

Knowledge and awareness of medicolegal aspects among dental practitioners in rural, urban, and suburban areas of Indonesia: a cross-sectional study*

• Beta Novia Rizky (1,2), Ahmad Yudianto (2), An'nisaa Chusida (1), Aisyah Rachmadani Putri Gofur (3), Beshlina Fitri Widayanti Roosyanto Prakoeswa (1), Mahbengi Rizna (4), Shabrina Belva Yannora (4), Anand Marya (5), Arofi Kurniawan (1) •

1 - Department of Forensic Odontology, Faculty of Dental Medicine Universitas Airlangga, Surabaya, Indonesia

2 - Doctoral Program of Medical Science, Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia

3 - Departement of Dental Public Health, Faculty of Dental Medicine Universitas Airlangga, Surabaya, Indonesia

4 - Undergraduate Student Faculty of Dental Medicine, Universitas Airlangga, Surabaya, Indonesia

5 - Department of Orthodontics, Faculty of Dentistry University of Puthisastra, Pnom Penh, Cambodia

Address for correspondence:

Beta Novia Rizky, DDS., M.Sc.

Department of Forensic Odontology, Faculty of Dental Medicine Universitas Airlangga

Jl. Mayjend. Prof. Dr. Moestopo 47 Surabaya, Indonesia

Email: beta.novia@fkg.unair.ac.id

Bull Int Assoc Paleodont. 2025;19(1):42-47.

Abstract

Dental professionals need a comprehensive knowledge of both clinical and medicolegal aspects to effectively manage patient care. In Indonesia, various geographical and socioeconomic conditions in rural, urban, and suburban areas present unique challenges. This study assesses the knowledge and awareness of the medicolegal system among dentists in these varied practice settings. An observational analytical cross-sectional study was conducted with 274 dental practitioners from rural, urban, and suburban areas of Indonesia. Data were collected through an online survey that evaluated knowledge and awareness of medicolegal aspects in dental practice. Knowledge was measured with ten specific questions, with scores greater than 7.5 indicating satisfactory knowledge. Awareness was evaluated using 22 Likert scale statements, with scores over 66 reflecting high awareness. Statistical analysis, including the Chi-square test, compared knowledge and awareness across different regions and examined the correlations of these factors. The study did not find differences in medicolegal knowledge and awareness based on the location of the practice ($p>0.05$). 85.8% of the respondents had inadequate knowledge, while 65.7% demonstrated satisfactory awareness. Additionally, the workload did not significantly affect knowledge or awareness ($p>0.05$). Geographic location, workload, and gender do not significantly impact the medicolegal knowledge and awareness of dental practitioners in Indonesia. However, the study highlights a substantial knowledge gap, underscoring the need for better education and training in this area to improve the legal proficiency of dental professionals.

Keywords: medicolegal; knowledge; awareness; dental practitioner; legal remedy

** Bulletin of the International Association for Paleodontology is a journal powered by enthusiasm of individuals. We do not charge readers, we do not charge authors for publications, and there are no fees of any kind. We support the idea of free science for everyone. Support the journal by submitting your papers. Authors are responsible for language correctness and content.*



Introduction

Like other medical professions, dentistry is mostly about serving people. Dentists employ their clinical knowledge and abilities to give the best possible care to patients, both individually and in the larger societal environment. This function has significant ramifications since the public has high confidence in medical workers and expects them to be competent and ethical (1).

In the modern digital era, public access to health information is becoming more accessible, particularly via the internet and social media. Patients with this illness are more critical of the treatments they receive, especially those provided by dentists. Consequently, dental practice is becoming more complicated, and dentists must be responsible for all activities throughout the treatment process (2). The relationship between dentist and patient is based on trust. However, if the patient is unsatisfied or disappointed, it may result in a legal case. Cases that often result in legal protection in dental practice include violations of competence, procedural mistakes, or noncompliance with relevant legislation in terms of communication, diagnosis, and treatment (3).

In Indonesia, the Indonesian Medical Discipline Honorary Council (MKDKI), which is under the Indonesian Medical Council (KKI), supervises medical and dental discipline practices. Since its establishment in 2005, MKDKI has handled various complaints related to disciplinary violations (4). Data from one dissertation shows that between 2006 and 2012, there were 136 alleged ethical violations involving 219 complainants, with 75 cases proven to have violated medical ethics (5).

The decline in public trust in medical personnel and the increasing number of lawsuits are often considered indicators of service failure. However, one of the roots of the problem that is no less important is the lack of understanding of medical practitioners regarding the legal aspects that regulate their profession. In fact, a good understanding from both parties—doctors and patients—of their respective rights and obligations is very important in preventing conflict (6).

As a result, dentists must be fully aware of and educated about the legal elements of their work. In addition to clinical abilities, knowing medicolegal problems is essential for safe and competent practice (7). For dental professionals to be able to handle the ethical and legal challenges of providing patient care, they must be

knowledgeable about medicolegal issues. While dental practitioners may have the requisite factual information regarding laws, regulations, and procedural guidelines (i.e., knowledge), there is a significant gap when it comes to the deeper understanding and recognition of these rules in everyday practice (i.e., awareness) (8). For dental professionals, Indonesia's varied geographic and socioeconomic circumstances in its rural, urban, and suburban locations provide unique possibilities and problems. This study examines the knowledge and awareness of medicolegal aspects among dental practitioners in Indonesia's rural, urban, and suburban areas.

Material and methods

This study utilized an observational analytic cross-sectional design to explore the knowledge and awareness of medicolegal aspects among dental practitioners in Indonesia. The research involved dental practitioners practicing in rural, urban, and suburban areas. A total of 274 participants were included in the study, 77 male and 197 female dentists.

Data collection was conducted through a structured online questionnaire distributed via Google Forms. The questionnaire was divided into demographic information, knowledge of medicolegal aspects, and awareness of medicolegal issues. The demographic section gathered details about the respondents' practice locations and workload.

To assess knowledge, respondents answered ten closed-ended questions related to medicolegal aspects of dental practice and scored on a Likert scale. A score above 7.5 indicated good knowledge. Awareness was evaluated through 22 closed-ended questions, each scored on a scale of 1 to 4. A total score above 66 was considered indicative of good awareness.

Statistical analysis, including the Chi-square test, was employed to compare knowledge and awareness scores across different regions (rural, urban, and suburban) and examine the relationship between knowledge and awareness among the respondents. The Ethics Committee of the Faculty of Dental Medicine, Airlangga University, reviewed and approved the study protocol with approval number 720/HRECC.FODM/IX/2022.

Results

The comparative analysis did not reveal significant differences in knowledge and awareness of medicolegal aspects between

dental practitioners according to their location of practice ($p>0.05$). Regarding knowledge, 85.8% of respondents in all regions were found to have poor knowledge of medicolegal aspects. On the contrary, 65.7% of the respondents demonstrated good awareness of the medicolegal aspects of their practice. The Chi-

square test also did not indicate a significant relationship between the level of knowledge and awareness of medicolegal aspects among dental practitioners surveyed ($p>0.05$).

Table 1. Dental practitioner's knowledge and awareness about medicolegal in Rural, Urban, and Suburban areas

Area	Knowledge		Awareness	
	Good	Poor	Good	Poor
Rural	19.2%	80.8%	57.7%	42.3%
Urban	15.5%	84.5%	69.6%	30.4%
Suburban	10.0%	90.0%	60.0%	40.0%
All-Region	14.2%	85.8%	65.7%	34.3%

Table 2. Distribution of dental practitioners' workload and their knowledge and awareness of medicolegal aspects

Knowledge and Awareness		Workload			
		Light	Moderate	Heavy	Very Heavy
Knowledge	Good	2.6%	74.4%	20.5%	2.6%
	Poor	11.5%	66.8%	17.0%	4.7%
Awareness	Good	7.2%	67.8%	19.4%	5.6%
	Poor	16.0%	68.1%	13.8%	2.1%

Table 3. Distribution of dental practitioners' gender and their knowledge and awareness of medicolegal aspects

Knowledge and Awareness		Gender	
		Male	Female
Knowledge	Good	9.1%	16.2%
	Poor	90.9%	83.8%
Awareness	Good	68.8%	64.5%
	Poor	31.2%	35.5%

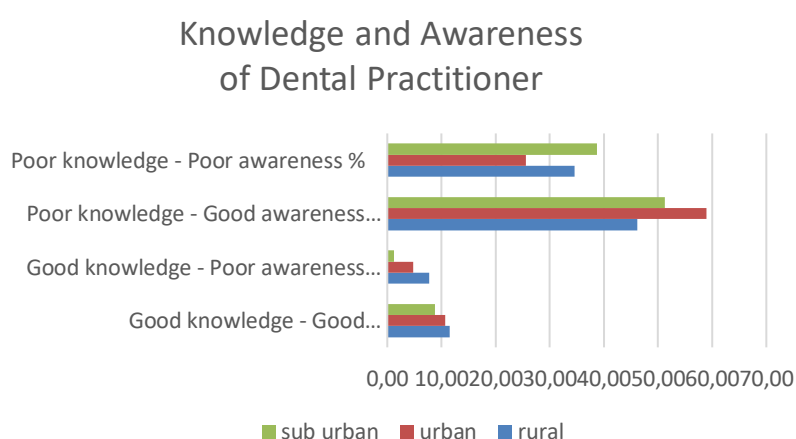


Figure 1. Knowledge and awareness of Dental practitioners about medicolegal aspects

Furthermore, the comparative analysis showed that dental practitioners' workloads did not significantly affect their knowledge or awareness of medicolegal aspects, regardless of whether they were practised in rural, urban, or suburban areas. The findings indicate that workload differences do not contribute to variations in medicolegal competency among dentists in different geographic settings ($p>0.05$, Tables 1 – 3).

Discussion

This study found that 85.8% of dental practitioners exhibited poor knowledge of medicolegal aspects, with no significant differences based on geographic location ($p>0.05$). This implies that medicolegal knowledge levels among Indonesian dentists are unaffected by geographical differences between rural, urban, and suburban locations.

Previous research, like Tahani et al. (2021) and Birang et al. (2009), revealed poor medicolegal awareness among dentists in many countries, especially on malpractice litigation and professional regulations (9,10). One possible explanation is the standardized dental education system, such as Indonesia's national curriculum regulated by the Indonesian Dental College (KDG), which ensures consistent training across regions (11). However, limited integration of medicolegal education in curricula and insufficient dissemination of legal knowledge may contribute to persistent gaps (12).

Progress in digital technology and the availability of knowledge via online courses, webinars, and continuing education programs ensure that dentists, irrespective of their practice location, have access to identical tools and information. This has facilitated the reduction of disparities in professional knowledge across various locations. A Pew Research Centre research revealed that, despite disparities in wealth and political perspectives, people across urban, suburban, and rural regions often exhibit comparable levels of knowledge on diverse topics (13).

Knowledge and awareness of medicolegal concerns among dental practitioners did not show a significant association. This implies that information alone does not dictate one's consciousness. Although the medicolegal knowledge of most dentists in urban, suburban, and rural settings is poor, their levels of awareness were good (Table 1, Figure 1). Similar results have been found in other research; for instance, even if dentists knew about the

Consumer Protection Act, their knowledge and application of legal requirements were insufficient (14). Practical experience, peer discussions, and exposure to malpractice cases have been suggested as important contributors to building medicolegal awareness (15). Furthermore, Mehrotra et al. (2019) noted that even when awareness exists, confidence in applying forensic and legal knowledge remains low, highlighting the need for targeted training (16).

In Figure 1, the second-largest group of respondents exhibited poor knowledge and awareness of medicolegal concerns. A survey conducted in Gujarat, India, revealed that most dentists were uninformed, with 53% lacking knowledge of the Consumer Protection Act and 81.33% ignorant of the regulations of dental record preservation (17). Another evaluation emphasised a considerable deficiency of knowledge among dental personnel and patients, which hinders the provision of efficient dental care. The study emphasized the significance of ethics, consent, carelessness, and liability, concepts often poorly understood by dentists (18). Research conducted by Kumari et al. (2015) and Gupta et al. (2015) underscored the need for dental practitioners to undergo training in legal medicine to protect against lawsuits (15,19).

This study revealed that disparities in workload do not affect the variability in medicolegal skill among dentists across various geographic locations ($p>0.05$). Most participants reported a moderate workload, independent of their knowledge or awareness levels. Gender differences were also not statistically significant, although female dentists showed slightly better knowledge, while male dentists demonstrated higher awareness levels. These trends are consistent with findings from Tahani et al. (2021), Haripriya et al. (2014), and Singh et al. (2010), where greater clinical exposure among male practitioners due to longer working hours may influence awareness (9,20,21).

Conclusion

Dental practitioners are essential to patient care, and their respected position requires high ethical standards and responsibility. Dissatisfaction among patients can lead to legal proceedings for malpractice or regulatory violations. Awareness and knowledge of medicolegal factors are essential for managing possible patient lawsuits. This research did not identify the correlation between knowledge and awareness. Dental practitioners can exhibit high awareness but lack

sufficient information about medicolegal aspects. The geographic location, workload, and gender did not substantially influence these results. The findings highlight a substantial gap in medicolegal knowledge, despite generally satisfactory awareness. To address this, there is a critical need for the development of structured medicolegal education programs within undergraduate dental curricula. Furthermore, focused continuing education programs must be carried out to strengthen legal awareness among working dentists. Strengthening medicolegal training can not only improve the competence and confidence of dental practitioners but also help to better patient protection and lower legal risks within Indonesia's dental healthcare system.

Declaration of interest

None

Author contribution

BNR and AZZA contributed to the study's conceptualization. BNR, MR, and SBY contributed to collected data sample. BNR, BFRWP, AC, and AY contributed to writing the original draft of the manuscript. ARPG contributed to the statistical analysis. AK, AZZA, and AM are the study supervisors. All authors have contributed and approved the final draft of the manuscript.

Statement on the use of artificial intelligence in manuscript preparation

Artificial intelligence was utilized for grammar correction during the manuscript preparation process.

Acknowledgement

We appreciate the financial support provided by the Faculty of Dental Medicine, Universitas Airlangga (grant agreement No.557/UN3.1.2./PT/2022)

References

- Kumar P, Kumar P, Dupare R, Gupta V, Khattar A. Significance and prospective of "Consumer Protection Act" deliberations for the dentist. *Muller J Med Sci Res*. 2013;4(1).
- Thomas TE, Magendran J. Awareness of medicolegal issues among medical college health professionals. *Medico-Legal Updat*. 2020;20(1).
- Zamanzadeh M, Rayani A, Moosazadeh M, Mazidi E. Frequency of Dental Complaints Filed in the Medical Council Organization of Three Selected Cities of Mazandaran Province. *J Res Dent Maxillofac Sci*. 2022;7(2).
- Aprilianto S. PERAN MAJELIS KEHORMATAN DISIPLIN KEDOKTERAN INDONESIA (MKDKI) TERHADAP DUGAAN KELALAIAN MEDIS DOKTER. *Yuridika*. 2015;30(8).
- Kertahusada AH. Pelanggaran Etika Kedokteran dalam Hubungan dengan Pelanggaran Disiplin dan Hukum [Internet]. *Gadjah Mada*; 2015. Available from: <https://etd.repository.ugm.ac.id/penelitian/detail/82098>
- Aziz NM. Laporan Penelitian Hukum tentang Hubungan Tenaga Medik, Rumah Sakit, dan Pasien. *BPHN Puslitbang*. 2010;(November 2010).
- Bedi R MA. Dental Indemnity in India-A Missing Link. *Dentistry*. 2014;04(09).
- Kallianpur R, Pereira T, Shetty S, Gotmare S, Pereira C, Anjali AK. Knowledge, attitude, and practice of dental practitioners toward the medicolegal system. *Muller J Med Sci Res* [Internet]. 2022 Jan;13(1):35–9. Available from: https://journals.lww.com/10.4103/mjmsr.mjmsr_17_22
- Tahani B, Tashakor A, Mousavi SA. Professional legislation knowledge of dentists and psychological effects of negligence. *J Forensic Leg Med* [Internet]. 2021 Jul;81:102199. Available from: <https://linkinghub.elsevier.com/retrieve/pii/S1752928X21000846>
- Birang R, Gheshlaghi F, Yazdani K, Khosravi B. Evaluation of awareness of dentists about their professional and occupational rules and laws in Isfahan city. *J Isfahan Dent Sch* [Internet]. 2009;5(1):30. Available from: <https://www.magiran.com/p656274>
- KDGI. KDGI - About Us [Internet]. 2017. Available from: <https://kdgi.or.id/artikel/6>
- Bridgman A, Collier A, Cunningham J, Doyal L, Gibbons D, King J. Teaching and assessing ethics and law in the dental curriculum. *Br Dent J*. 1999;187(4).
- Pew Research Center. What unites and divides urban, suburban and rural communities. *Pew Res Cent*. 2018;(May).
- Sikka M. Consumer Protection Act-Awareness? *Int J Med Dent Sci* [Internet]. 2012 Jan 1;1(1). Available from: http://ijmds.org/wp-content/uploads/2014/10/ijmds.org_1-8-RA-Consumer-protection-act.pdf
- Kumari HA, Ananda SR, Jithesh J, Abhishek KN. Knowledge of legal issues and consumer protection act among dentists. *Int J Dent Heal Sci* [Internet]. 2015;2(1). Available from: <https://www.google.com/url?sa=i&url=https%3A%2F%2Fnebula.wsimg.com%2Fa560ed468e498568a>



- da8bb1aa773ff5c%3FAccessKeyId%3D44189AF8BC7E3D5EEFEF%26disposition%3Do%26alloworigin%3D1&psig=AOvVaw3kimodzQKmU2mLX2gMz0L&ust=1727588285049000&source=images&cd=vfe&opi=
16. Mehrotra V, Mishra G, Sachdev R, Garg K, Mukherjee S, Saxena S. Perception of dental practitioners in and around Kanpur city towards forensic odontology: a cross sectional study. *Int J Res Med Sci* [Internet]. 2019 Jun 28;7(7):2732. Available from: <https://www.msjonline.org/index.php/ijrms/article/view/6663>
 17. Bhatia GA, Shah AR, Sharma DJ, Nakhuda FM, Mehta DG, Sodani V. Knowledge, attitude and practice among dentists of Gujarat regarding medico-legal issues. *Int J Community Med Public Heal* [Internet]. 2023 Feb 28;10(3):1103–7. Available from: <https://ijcmph.com/index.php/ijcmph/article/view/10739>
 18. Bhadauria US, Dasar PL, N. S, Mishra P, Godha S. Medico-legal Aspect of Dental Practice. *Med Pharm Reports* [Internet]. 2018 Jun 24;91(3):255–8. Available from: <https://www.medpharmareports.com/index.php/mpr/article/view/764>
 19. Gupta V V., Bhat N, Asawa K, Tak M, Bapat S, Chaturvedi P. Knowledge and attitude toward informed consent among private dental practitioners in Bathinda city, Punjab, India. *Osong Public Heal Res Perspect*. 2015;6(2).
 20. Haripriya A, Haripriya V. Knowledge about medical law and its negligence among doctors: A cross-sectional study. *Int J Sci Res Publ*. 2014;4(5).
 21. Singh K, Shetty S, Bhat N, Sharda A, Agrawal A, Chaudhary H. Awareness of Consumer Protection Act among Doctors in Udaipur City, India. *J Dent (Tehran)*. 2010;7(1).