

ORIGINAL ARTICLE

Knowledge, Attitude and Practices Regarding Professional Indemnity Insurance among Dental Professionals in Teaching Institutes of Peshawar

Aamir Hameed¹, Babar Ahad², Zohaib Khan³, Saima Aleem^{3*}

¹Department of Community Dentistry, Peshawar Dental College, Peshawar, Pakistan

²Department of Community & Preventive Dentistry, Sardar Begum Dental College, Peshawar, Pakistan

³Office of Research Innovation & Commercialization, Khyber Medical University, Peshawar, Pakistan

Correspondence: saima.aleem@kmu.edu.pk

doi: 10.22442/jlumhs.2025.01239

ABSTRACT

OBJECTIVE: This study aimed to evaluate the knowledge, attitudes, and practices regarding dental indemnity insurance (PII) among dental professionals in teaching institutions in Peshawar.

METHODOLOGY: A cross-sectional study was conducted from July 2019 to March 2020 among 276 dentists holding a Bachelor's in Dentistry degree and practising in either government or private teaching institutions in Peshawar. Initially, proportionate sampling was used to allocate samples required across the seven study sites, and a random sampling technique was used to recruit samples from the sites. Data were collected using a validated questionnaire covering socio-demographic characteristics, awareness of PII, and perceptions regarding compensation for dental negligence, and were analyzed using SPSS version 23.0. Ethical approval was obtained, and written informed consent was secured from all participants.

RESULTS: Out of 274 respondents (99.8% response rate), 93.8% lacked knowledge of PII, and only 6.2% had insurance coverage. While 64.2% believed PII should be mandatory, 73% were unaware of its existence. Gender, age, and experience did not significantly influence awareness. The majority of participants (77%) had never been asked for compensation, but opinions on compensation amounts for negligence varied widely.

CONCLUSION: The study highlights a significant knowledge gap and low uptake of PII among dental professionals in Peshawar. Addressing barriers such as awareness, affordability, and regulatory enforcement is essential to ensure financial protection for practitioners and enhance patient trust.

KEYWORDS: Professional Indemnity Insurance, Dental Professionals, Awareness, Risk Management, Perceptions, Practices

INTRODUCTION

Dental care providers are constantly trying to understand their patients' needs better, but the ones who have control over their dental patients' needs are the patients themselves. It is today's dental patient who is driving the demand for changes in the dental profession. In this new dental reality, patients seek transparency and accountability across the board, from the front desk to the doctor's chair and everywhere in between. They want to know precisely what is happening at every step of the process and why. Patients also have the right to be informed and to make decisions about their dental health. This increase in patient awareness and advancement in technology has changed the dental dynamics. The rules and regulations governing dental practices are changing all the time. Policies and guidelines are introduced regularly to enhance the care dental patients receive and to safeguard their welfare. Despite a commitment to excellence, service provision can be hindered by factors such as the potential for human error, limitations in ongoing professional development opportunities, and constraints on available resources¹.

The increasing incidence of reported negligence cases has contributed to a decline in public trust in the healthcare sector². This is because patients are now more aware of their rights to high-quality health services, and social media and mobile phones provide an instant platform for reporting any case. Every year, many instances of medical and dental negligence are reported worldwide, resulting in a profound negative impact on patients' well-being and the practitioner's reputation³. A range of unintentional actions or inactions that jeopardize patient safety and treatment effectiveness are examples of human mistakes in dentistry⁴. These negligence or errors can take many different forms, including incorrect diagnoses, procedural errors, medication errors, and ineffective communication between patients and dentists. The most common factors behind human errors in dental clinics include fatigue, distraction, inadequate training or supervision, cognitive errors, and systemic defects in dental care delivery models.

In the landscape of all the medical and dental negligence, a risk management tool designed to safeguard the interests of dental professionals and patients is the Professional indemnity insurance (PII) principle⁵. Professional liability insurance is available in two primary forms: occurrence-based and claims-made policies⁶. The claims-made policy is the conventional type one can find in the contemporary era of insurance, although fewer companies sell occurrence policies. Professional indemnity insurance (PII) covers against a broad spectrum of circumstances, ranging from professional negligence (e.g., errors in work related to clients) to loss of documents or information, accidental breach of copyright or confidentiality, defamation and libel, and loss of goods or monetary value, whether such are owned by the insured or for which they are legally responsible⁷. It must be remembered, however, that the insurance mentioned above does not cover known before-the-event claims and circumstances, intentional loss or damage, contractual liabilities, terrorism or war-related perils, or insolvency cases in the insurance. Though the function of PII in minimizing economic risks and maintaining professional standards is well accepted, the extent to which dental practitioners, and more importantly those affiliated with teaching institutions in low- and middle-income nations, appreciate and engage in such a form of insurance is a field that has not yet been extensively studied⁸. The health care industry has seen a revolutionary shift towards greater responsibility, transparency, and protection of patients over the last few years. In the dental industry, this broad revolution has been supported through greater scrutiny of professional behaviour, increased patient expectations, and an increase in malpractice or negligence claims. Though the vital role of professional indemnity insurance in minimizing economic risks and promoting a culture of responsibility in the dental profession is fundamental, empirical data examining dental professionals' attitudes and practices, with

special reference to those in educational or teaching institutions, is sparse. In Pakistan, the acceptability of PII among dentists is heterogeneous and depends on levels of awareness, affordability, and regulatory requirements. While some professionals are aware of the necessity of PII in protecting their professional interests and establishing patient trust, others may view it as an additional economic burden or may not be cognizant of its importance. The regulatory framework for PII in Pakistan is in the process of evolving with efforts towards enhancing consumer protection as well as professional accountability. The medical, dental, and other regulatory authorities can make PII obligatory for professional licensure or registration, thereby ensuring compliance among healthcare professionals⁹. However, there are difficulties in enforcing and implementing the PII regulation, such as insurance affordability, accessibility, and insufficiency in coverage. Additionally, the absence of standard guidelines or mechanisms to monitor PII compliance may render the uptake as well as the enforcement heterogeneous by region or sites of practice. In this regard, the current study aimed to evaluate the knowledge, attitudes, and practices regarding dental indemnity insurance (PII) among dental professionals in teaching institutions in Peshawar.

METHODOLOGY

This cross-sectional study was conducted among dentists of seven public and private dental institutions in Peshawar, KPK, for the assessment of the perceived need, knowledge, attitude, and utilization for indemnity insurance for the dental professional from July 2019 to March 2020

A total of 276 dentists who had a bachelor's degree in dentistry and were practising in either private or government teaching institutions in Peshawar city were included in this study, and those not fulfilling the inclusion criteria and working in private clinics were excluded. The sample size of 276 was calculated using Openepi at a 95% confidence level, 5% margin of error, and a prevalence of awareness regarding professional indemnity insurance (PII) at 48.1% and the study population in Peshawar was 970.

Initially, proportionate sampling was used to allocate samples required across the seven study sites to ensure representativeness and minimize the selection bias. Considering the study population being homogenous in professional characteristics, following proportionate sampling, a simple random sampling technique was used to recruit samples from the sites to ensure every individual gets an equal chance of being selected and recruited in our study.

Ethical approval

Ethical approval for this study was obtained from the ethics board of Khyber Medical University (Ref # DIR/KMU-EB/PP/000712A). Before the initiation of data collection, institutional permission was obtained from the concerned authorities of all the institutions. An information sheet was designed containing all the information and details regarding the study and entailing participants' voluntary participation. The information sheet was shared with all the participants before data collection, followed by written informed consent duly signed by all the participants.

For the data collection, we used the PII questionnaire by "GLOBAL CHILD DENTAL FUND" available from their website (<http://www.gcdfund.org>). Following the ethical research practices, permission was obtained from the author regarding the use of the data collection tool. We ensured the contextual appropriateness, clarity of language, and content relevance through an expert validation process. A panel of five independent subject experts were invited to review the questionnaire, and their feedback was duly incorporated where necessary.

The questionnaire was structured into two distinct sections to ensure comprehensive data collection. The first section aimed to gather essential socio-demographic information about the respondents. This included variables such as gender, age, type of professional practice, and the number of years they had been engaged in their respective fields. The second section of the questionnaire was specifically designed to assess the respondents' level of knowledge and awareness regarding Professional Indemnity Insurance (PII) and the Consumer Protection Act (CPA). This part also explored their understanding of key aspects such as the financial compensation available in cases of professional liability and the premium amounts paid for indemnity coverage. The objective of this section was to evaluate the extent to which professionals are informed about these critical legal and financial protections in their practice.

RESULTS

Socio-demographic characteristics

The response rate of study participants was 99.8% for this study, as 274 out of 276 dentists participated in the study. Based on the data presented in **Table I**, the majority of the study population (62%) was female (n=170), and males were 38% (n=104). Of the total 274 study participants, a majority, accounting for 53.3% (n=146), fell within the age range of 25 to 34 years. In terms of employment distribution, 128 participants, representing 46.7% of the total, were employed in public-sector dental institutions. In contrast, a slightly larger proportion, comprising 146 (53.3%) of participants, were engaged in private-sector dental institutions. For professional experience, 61.3% (n=168) of participants had 0-5 years of experience, 18.2 % of participants (n=50) had 5-10 years of experience, 7.3% (n=20) had 10 years of experience, 6.6% (n=18) had 15 years, and 6.6% of participants (n=18) had more than 15 years of experience as a dental practitioner.

Table I: Socio-demographic Characteristics of Study Population

Gender		
Male	104	38.0%
Female	170	62.0%
Age		
18 to 24 years	72	26.3%
25 to 34 years	146	53.3%
35 to 44 years	42	15.3%
45 to 54 years	10	3.6%
55 to 64 years	1	.4%
65 to 74 years	3	1.1%
Working Sector		
Government Dental Institution	128	46.7%
Private Dental Institution	146	53.3%
Work Experience (years)		
0 to 5 years	168	61.3%
5 to 10 years	50	18.2%
10 years	20	7.3%
15 and more	18	6.6%
more than 15	18	6.6%

Awareness regarding dental compensations

A survey was conducted among study participants to assess their experiences and perspectives regarding compensation claims in cases of dental negligence. When asked whether patients had ever requested them to provide monetary compensation for any dental malpractice or negligence during the provision of dental health services, the majority (77%, n=211) reported that they had never encountered such a request. Conversely, 40 (14.6%) participants acknowledged that they had been asked to pay compensation at some point, while 23 (8.4%) could not recall any specific details regarding such incidents (**Table II**).

Furthermore, participants were questioned about their opinions on the appropriate amount of compensation that should be paid to a patient in the event of an erroneous tooth extraction. The responses varied, with 36.9% (n=101) of participants suggesting that the compensation should range between 1,000 and 5,000 rupees, whereas 55 (20.1%) believed that the amount

should be between 5,000 and 10,000 rupees. A significant portion, 43.1% (118), expressed the view that compensation for an incorrectly extracted tooth should exceed 10,000 rupees (**Table II**).

In addition to dental extraction errors, participants were also asked about the financial compensation they deemed appropriate in cases where the wrong medication was prescribed to a patient. According to the findings, 46.4% (127) of respondents recommended a compensation amount between 1,000 and 5,000 rupees, while 25.2% (69) suggested a range of 5,000 to 10,000 rupees. Meanwhile, nearly 78 (28.5%) participants believed that the compensation should exceed 10,000 rupees for such a medical error (**Table II**).

Additionally, the study sought to evaluate the participants' level of awareness regarding Professional Indemnity Insurance (PII), which serves as a protective measure for healthcare providers against malpractice claims. The results indicated that a significant proportion, i.e., 58.4% (n=160), lacked awareness regarding PII and its role in safeguarding dental professionals from legal and financial liabilities.

Table II: Awareness Level Regarding Compensation Money

Compensation money demanded by the patient for some negligence during treatment		
Yes	40	14.6%
No	211	77.0%
Don't remember	23	8.4%
Amount (in rupees) should be paid as compensation for the wrong tooth extraction		
1000 to 5000	101	36.9%
5000 to 10000	55	20.1%
more than 10000	118	43.1%
Amount (in rupees) should be paid as compensation for the wrong medicine prescription		
1000 to 5000	127	46.4%
5000 to 10000	69	25.2%
more than 10000	78	28.5%
Awareness of respondents about dental indemnity insurance		
Yes	70	25.5%
No	160	58.4%
Don't know	44	16.1%

Knowledge and Attitude Regarding Professional Indemnity Insurance (PII)

Among the study participants, 93.8% (n=257) did not know what Professional Indemnity Insurance (PII) was and didn't have any insurance, as presented in **Table III**. Similarly, 254 (92.7%) study participants had no means of acquiring knowledge about Professional Indemnity Insurance. When participants were asked whether PII should be a mandatory requirement for all practicing dentists in the country, 176 (64.2%) expressed their agreement, advocating for its necessity. In contrast, 76 (27.7%) respondents indicated that they were unfamiliar with the concept of PII, highlighting a significant gap in awareness among dental practitioners.

Furthermore, when dentists who did not possess PII were questioned about the reasons for not having it, a considerable proportion, 73% (n=200), revealed that they were unaware of the existence and importance of PII. Another 23 (8.4%) participants stated that their employer did not cover the cost of obtaining PII, while 5.1% (n=14) admitted that they found the insurance unaffordable. Additionally, 3.3% (n=9) of respondents perceived PII as unnecessary for their

practice, whereas 7.3% (n=20) acknowledged that they had not obtained PII simply because it was not a compulsory requirement. Lastly, a small fraction (2.9%) of dental practitioners (n=8) reported dissatisfaction with their previous PII provider, which influenced their decision not to renew or obtain a new policy.

Table III: Knowledge and Attitude regarding Professional Indemnity Insurance (PII)

Possess any knowledge about what dental indemnity insurance is, and have insurance		
Yes, I do	17	6.2%
No, I don't	257	93.8%
Means of knowledge about the dental indemnity insurance (if any)		
No	254	92.7%
Newspaper	5	1.8%
Local government	2	.7%
Professional friends	10	3.6%
State government	1	.4%
Professional friends from the medical fraternity	2	.7%
PII should be mandatory for all dentists working in Pakistan		
Yes	176	64.2%
No	16	5.8%
Don't know	76	27.7%
Only for those working in a private setup	5	1.8%
others	1	.4%
Reason for not having dental indemnity insurance		
Did not know about dental indemnity insurance	200	73.0%
Cannot afford insurance	14	5.1%
Employer doesn't pay for the insurance	23	8.4%
Do not need insurance	9	3.3%
It is not mandatory to have insurance	20	7.3%
Dissatisfied with the previous insurance plan provider	8	2.9%

DISCUSSION

The current study aimed to evaluate the knowledge and practices among dental practitioners at public and private sector dental institutes in Peshawar, KPK, Pakistan. Based on the study findings, only 6.2% had the insurance themselves, along with possessing a low level of knowledge and awareness (25.5%) in this regard. The study conducted in India by Bhanushali V 2018¹⁰ revealed that 48.1% of the participants were aware of Professional Indemnity Insurance (PII), out of which only 8% had obtained PII. Similarly, findings from another study carried out by Gupta et al. in India indicated that 55.2% of the participating dentists were aware of PII¹¹. These figures suggest a moderate level of awareness among dental professionals regarding indemnity insurance, though the actual subscription rate remains relatively low.

In the present study, only 3.6% of participants became aware of PII through their professional friends, which is significantly lower compared to the research conducted by Gupta D et al.¹¹, where 11.5% of the respondents reported professional colleagues as their primary source of information about PII. Another study conducted in India found that 63% of the participants were knowledgeable about PII, but only 35% had acquired it. Notably, their primary source of information regarding indemnity insurance was also their professional peers, similar to the findings of the current study¹². The low level of awareness and adoption of PII observed in our research could be attributed to the limited initiatives taken by governmental, financial, and social sectors in Pakistan to promote and emphasize the significance of such insurance policies among dental professionals.

A significant proportion of dentists (64.2%) in our study believed that dental indemnity insurance should be made compulsory for all practicing dentists in Pakistan. In contrast, only 1.8% of respondents thought that it should be mandatory exclusively for dentists working in private institutions. These perspectives align with findings from an Indian study where 41.8% of participants recommended that PII should be compulsory for all dentists¹². Additionally, another study conducted in India reported that 28% of respondents believed indemnity insurance should be mandatory for all dental practitioners, whereas 29.4% supported its necessity for professionals working in the private sector¹¹.

When assessing the financial aspects of compensation in cases of malpractice, particularly in instances of incorrect tooth extraction, 43.5% of the participants in our study suggested that patients should receive compensation exceeding 10,000 rupees. In contrast, findings from an Indian research indicated that 52.5% of the participants recommended compensation of more than 100,000 rupees for patients affected by incorrect dental procedures¹³. These results note a considerable gap that exists among what individuals conceive as appropriate payment for instances of malpractice.

In addition, our extensive research also showed that the highest level of awareness about PII was significantly seen among dentists aged between 25 and 34 years. However, it is notable here that no statistically significant difference was seen among the different age groups when they were quantified in terms of their awareness about indemnity insurance, with the p-value of 0.42 showing this lack of significance. Interestingly, another study in the same research domain showed that the lowest level of awareness about PII was seen among the younger respondents of that study¹⁰. Regarding the willingness to obtain PII, an unprecedented majority, which consisted of 93% of the dentists aged between 25–34 years in our study, showed apparent willingness to obtain PII. Contrariwise, in a study conducted by Bhanushali V 2018¹⁰, in India, an unprecedented 91% of dentists aged between 35 and 44 years showed their willingness to obtain indemnity insurance. These results clearly show that while awareness of PII is indeed growing among dental professionals, the actual rate of adoption is relatively low, and therefore, there is a gap between awareness and practice.

Professional indemnity insurance is a key defence mechanism for dental professionals, providing them with outstanding protection against the financial costs and reputation damage involved in lawsuits resulting from cases of professional malpractice or negligence. This is one likely reason behind this phenomenon¹⁴. Given that the dentist's line of work consists of a series of complex operations in addition to patient-specific treatment, it is most likely for issues to arise or for the patient to complain - both of which eventually lead to expensive lawsuits being sought after practitioners¹⁵. This form of insurance offers a valuable safety net that helps dental practitioners to concentrate on the delivery of quality patient care free from the always-present threat of lawsuit within a healthcare environment defined by dynamic regulatory requirements and increasing patient awareness. In addition, professional indemnity insurance not only shields those who are involved but also helps patients to create trust by showing a sincere dedication toward responsibility and rigorous adherence to ethical standards^{16,17}. Since the dentists practicing in government facilities have strict departmental and institutional policies to follow, the need for the same is required more vigilantly among dentists with private practices¹⁸. It highlights the immediate need for the development of awareness among dental surgeons¹⁹. Investment in professional indemnity insurance is not only a wise choice but also a necessary first step towards preserving dentistry in a manner that is respectable and secure in Pakistan, where the legal environment is progressively demanding and strict.

CONCLUSION

The study identified a significant knowledge gap and inadequate utilization and uptake of PII among dentists in Peshawar. To ensure dental practitioners' financial protection and enhance patients' trust, the barriers, including lack of awareness, affordability, and regulatory enforcement, must be addressed.

Ethical Permission: Khyber Medical University, Peshawar, Pakistan, ERC letter No. DIR/KMU-EB/PP/000712A.

Conflict of Interest: The author states no conflict of interest.

Financial Disclosure/Grant Approval: No funding agency was involved in this research.

Data Sharing Statement: The corresponding author can provide the data proving the findings of this study on request. Privacy or ethical restrictions bound us from sharing the data publicly.

AUTHOR CONTRIBUTION

Hameed A: Concept development, data collection, and integrity of research.

Ahad B: Data entry, Data analysis

Khan Z: Concept development, proofreading, and final approval of manuscript

Aleem S: Literature search, manuscript writing

REFERENCES

1. Sameera V, Bindra A, Rath GP. Human errors and their prevention in healthcare. *J Anaesthesiol Clin Pharmacol*. 2021;37(3):328-35. doi: 10.4103/joacp.JOACP_364_19.
2. Kane S, Calnan M. Erosion of Trust in the Medical Profession in India: Time for Doctors to Act. *Int J Health Policy Manag*. 2017 Jan 1;6(1):5-8. doi: 10.15171/ijhpm.2016.143.
3. Dahlawi S, Menezes RG, Khan MA, Waris A, Saifullah, Naseer MM. Medical negligence in healthcare organizations and its impact on patient safety and public health: a bibliometric study. *F1000Res*. 2021 Mar 3;10:174. doi: 10.12688/f1000research.37448.1.
4. Padmanabhan V, Islam MS, Rahman MM, Chaitanya NC, Sivan PP. Understanding patient safety in dentistry: evaluating the present and envisioning the future-a narrative review. *BMJ Open Qual*. 2024 May 7;13(Suppl 2):e002502. doi: 10.1136/bmjopen-2023-002502.
5. Smith D, Paynter K, Donley S. Professional Indemnity Insurance. In: *The Global Insurance Market and Change*. 1st ed. Informa Law from Routledge; 2023:41. doi:10.4324/9781003319054-12.
6. <https://www.investopedia.com/terms/p/professional-liability-insurance.asp>
7. Kanchana A, Jayalath C. A review on professional indemnity insurance for quantity surveyors. In *Proceedings of International Conference on Business Management*. 2020; 17: 1947-1975.
8. Bhanushali V, Shivakumar KM, Patil S, Kadashetti V. Knowledge, attitude, and practice of professional indemnity insurance among dental practitioners in Maharashtra state, India. *J Int Clin Dent Res Org*. 2018 Jan 1;10(1):17-22.
9. <https://www.pmc.gov.pk/Documents/law/PMDC%20Code%20of%20Ethics%202018.pdf>
10. Bhanushali V, Shivakumar KM, Patil S, Kadashetti V. Knowledge, attitude, and practice of professional indemnity insurance among dental practitioners in Maharashtra state, India. *J Int Clin Dent Res Org*. 2018;10(1):17-22.
11. Gupta D, Thomas S, Dagli R, Solanki J, Bhateja GA, Mahajan R. Professional indemnity insurance used among graduated and post-graduated dental surgeons in Mumbai city, India. *J Health Res Rev Dev Ctries*. 2014 May;1(2):44-48.
12. Yashoda R, Puranik MP, Kumar V, Farhanaz F. Dental practitioners' perspectives about the consumer protection act, informed consent, and professional indemnity insurance in Bengaluru city: a cross-sectional study. *J Indian Assoc Public Health Dent*. 2017 Jul;15(3):225-229.
13. Veeresh DJ, Yavagal PC, Das A, SR MS, KM MS, John MS. Knowledge and attitude of dental practitioners about professional indemnity insurance in Davangere District: a cross-sectional survey. *Int J Curr Sci Res Rev*. 2022 Sep;5(9):3302-3306
14. Hwui Lyn CC, Hong LY, Mohd Anuar MN, Mohammad Nasim NF, Nambiar P. Selecting the ideal professional indemnity insurance: What to look out for by the dental practitioner? Anil Aggrawal's Internet J Forensic Med Toxicol. 2021;22(1)
15. Westgarth D. Assessing the landscape of dental indemnity. *BDJ In Practice*. 2023 Jul 10;36(7):14-8
16. Ajemunibohun S. Awareness and patronage of healthcare professional indemnity insurance: empirical evidence among medical practitioners in Lagos, Nigeria. *Acta Univ Danubius Econ*. 2020 Aug 28;16(5):186-202
17. Cover your admin. Why do dentists need professional indemnity insurance? 2024 Nov 4 Available from: <https://www.coveryou.in/blog/why-do-dentists-need-professional-indemnity-insurance/>
18. Lewis K. Private dentistry: Risk and the cost of professional indemnity. *BDJ In Pract*. 2022;35:26-27. Available from: <https://doi.org/10.1038/s41404-022-1025-3>.
19. Selvarathi K, Mary AV, Kesavan R, Bhasakaran BM. Dental practitioners' comprehension of dental insurance policies: A cross-sectional study among dentists in India. *Int J Appl Dent Sci*. 2024;10(4):269-272.