

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

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## ABSTRACT

**OBJECTIVE:** To evaluate dental professionals' knowledge, attitudes, and practices regarding dental indemnity insurance (PII) at 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 better understand their patients' needs, but the ones who control their dental care are the patients themselves. It is today's dental patients who are driving the demand for change 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 technological advancements has changed the dental landscape. The rules and regulations governing dental practices are constantly changing. 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 resources.

The increasing incidence of reported negligence cases has contributed to a decline in public trust in the healthcare sector<sup>2</sup>. 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 cases of medical and dental negligence are reported worldwide, resulting in a profound negative impact on patients' well-being and practitioners' reputations<sup>3</sup>. A range of unintentional actions or inactions that jeopardize patient safety and treatment effectiveness are examples of human mistakes in dentistry<sup>4</sup>. 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 contributing to human errors in dental clinics include fatigue, distraction, inadequate training or supervision, cognitive errors, and systemic flaws in dental care delivery models.

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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) principle<sup>5</sup>. Professional liability insurance is available in two primary forms: occurrence-based and claims-made policies<sup>6</sup>. The claims-made policy is the conventional type found in 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 owned by the insured or for which they are legally responsible<sup>7</sup>. 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 has not yet been extensively studied<sup>8</sup>. 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 by greater scrutiny of professional behaviour, higher patient expectations, and a rise in malpractice or negligence claims. Although 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, particularly 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 to enhance consumer protection and professional accountability. The medical, dental, and other regulatory authorities can make PII obligatory for professional licensure or registration, thereby ensuring compliance among healthcare professionals<sup>9</sup>. However, there are difficulties in enforcing and implementing the PII regulation, including affordability, accessibility, and insufficient 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 dental professionals' knowledge, attitudes, and practices regarding dental indemnity insurance (PII) at 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 with a bachelor's degree in dentistry who were practising in either private or government teaching institutions in Peshawar city were included in this study; those who did not fulfil the inclusion criteria and were working in private clinics were excluded. The sample size of 276 was calculated using Openepi, based on a 95% confidence level, a 5% margin of error, and a 48.1% prevalence of awareness of professional indemnity insurance (PII) in a study population of 970 in Peshawar.

Initially, proportionate sampling was used to allocate the required samples across the seven study sites to ensure representativeness and minimize selection bias. As the study population was homogeneous in professional characteristics, following proportionate sampling, a simple random sampling technique was used to recruit participants from the sites to ensure every individual had 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 relevant authorities of all institutions. An information sheet was designed that contains all the details regarding the study and emphasizes participants' voluntary participation. The information sheet was shared with all participants before data collection, followed by written informed consent, duly signed by all participants.

For the data collection, we used the PII questionnaire by "GLOBAL CHILD DENTAL FUND" available from their website (<http://www.gcdfund.org>). In accordance with ethical research practices, permission was obtained from the author to 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 of experience in their respective fields. The second section of the questionnaire was specifically designed to assess respondents' knowledge and awareness of Professional Indemnity Insurance (PII) and the Consumer Protection Act (CPA). This part also explored their understanding of key aspects, including the financial compensation available in cases of professional liability cases 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 this study was 99.8%, with 274 of 276 dentists participating. 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 employed in private-sector dental institutions. In terms of professional experience, 61.3% (n=168%) of participants had 0-5 years of experience, 18.2% (n=50) had 5-10 years of experience, 7.3% (n=20) had 10 years of experience, 6.6% (n=18) had 10-15 years of experience, and 6.6%

**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%
10-15 years	18	6.6%
more than 15	18	6.6%

(n=18) had more than 15 years of experience as dental practitioners.

### **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 monetary compensation for dental malpractice or negligence during the provision of dental care, the majority (77%, n=211) reported that they had never encountered such a request. Conversely, 40 (14.6%) participants acknowledged having 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 asked about the appropriate amount of compensation to be paid to a patient in the event of an erroneous tooth extraction. The responses varied: 36.9% (n=101) of participants suggested that the compensation should range from 1,000 to 5,000 rupees, whereas 55 (20.1%) believed it should range from 5,000 to 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 participants' level of awareness of Professional Indemnity Insurance (PII), which protects 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.

### **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 mandatory for all practising dentists in the country, 176 (64.2%) agreed, advocating its necessity. In contrast, 76 respondents (27.7%) indicated 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 the insurance was 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 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%

## DISCUSSION

The current study aimed to evaluate the knowledge and practices of 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 2018<sup>10</sup> 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 by Gupta et al. in India indicated that 55.2% of participating dentists were aware of PII<sup>11</sup>. 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

**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%

is significantly lower compared to the research conducted by Gupta D et al.<sup>11</sup>, 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 study<sup>12</sup>. The low level of awareness and adoption of PII observed in our research could be attributed to the limited initiatives taken by the government, financial, and social sectors in Pakistan to promote and emphasize the importance 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, in which 41.8% of participants recommended that PII be compulsory for all dentists<sup>12</sup>. 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 sector<sup>11</sup>.

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 procedures<sup>13</sup>. These results indicate that a considerable gap exists between what individuals consider appropriate payment for instances of malpractice.

In addition, our research showed that the highest level of awareness of PII was observed among dentists aged 25-34 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 found that the lowest level of awareness of PII was among the younger respondents<sup>10</sup>. 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 2018<sup>10</sup> in India, an unprecedented 91% of dentists aged 35-44 years reported 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, leaving 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 reputational damage associated with lawsuits arising from cases of professional malpractice or negligence. This is one likely reason for this phenomenon<sup>14</sup>. 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 filed against practitioners<sup>15</sup>. 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 lawsuits within a healthcare environment defined by dynamic regulatory requirements and increasing patient awareness. In

addition, professional indemnity insurance not only shields those involved but also helps patients build trust by demonstrating sincere dedication to responsibility and rigorous adherence to ethical standards<sup>16,17</sup>. Since dentists practising in government facilities must follow strict departmental and institutional policies, the need for the same is more urgent among dentists with private practices<sup>18</sup>. It highlights the immediate need of develop awareness among dental surgeons<sup>19</sup>. 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.

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**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

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