



Knowledge, attitude and perception regarding intellectual property rights among general dental practitioners of Chennai

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ABSTRACT

The aim of this study was to assess the knowledge, attitude and perception of intellectual property rights among general dental practitioners of Chennai, Tamilnadu. Intellectual Property Rights (IPR) has piqued the interests of many dentists, due to the extensive amount of research being done in the field and as there are bounteous amount of competitors in the field, the dentists have turned towards IPR for the protection of their intellectual works such as patents and researches. This was a questionnaire-based study that was done using an online survey platform in the month of April. The questionnaire was circulated among the general dental practitioners of Chennai, Tamilnadu. A total of 150 dental practitioners took part in this survey. Of which 46% (69) were female dentists, while the rest 54% (81) were Male dentists. The dentists were categorized based on age into 21-30 years of age 13% (17). 31-40 years of age: 15% (23). 41-60 years of age: 43% (65). >60 years of age: 9% (14). The dentists were further divided based on the years of experience, 11% (17) dentists had less than two years of experience. 15% (23) dentists had 2-4 years of experience. 12% (18) dentists had 5 to 10 years of experience, and 61% (92) dentists had more than ten years of experience. 16.67% (25) of the female dentists had good knowledge on IPR, while only 12.67% (19) of the Male dentists had good knowledge on IPR. 53% (43) of the Male dentists had a positive attitude while only 46% (32) of the female dentists had a positive attitude towards IPR. Male dentists had 48.67% (73) good perception while 37.33% (56) female dentists and good perception.



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INTRODUCTION

In a developing country like India wherein research and development has been occurring expeditiously there is a general lack of awareness on intelligent property rights. Intellectual property is a generic term that refers to the creations of the intellect. Just as corporeal, physical property needs protection intellectual property requires similar protection (Burgstaller, 2019). In order to achieve this, the United Nations has created a separate agency, called the WIPO - World intellectual property organization,

which has been entrusted with the tasks concerning intellectual property and intellectual property rights, on a universal Spectrum. Intellectual property can be divided into two types; which are literary, scientific, artistic and industrial (WIPO 2004). According to WIPO in 2004, Intellectual property can be divided into four main fields: the industrial, scientific, literary or artistic fields” (Harms and World Intellectual Property Organization, 2018). In the field of dentistry, Intellectual property rights awareness is paramount in mandatory as a dentist in recent times have been taking part in the field of research and development, and it’s essential that the dentist are aware of IPR as it’s important in the field of research in the patenting of their inventions and research developments (Sulekha, 2018).

Due to the lack of awareness about the laws governing intellectual property rights, researchers often become victims of plagiarism. As most students are doing research in their UG and PG levels of the Dental career, researches show that plagiarism has become very common among the student researchers, intentionally and unintentionally. Previously, all over the world, a handful of studies have been done on the awareness, practice, perception of intellectual (Kumar and Vijayalakshmi, 2017) property rights among school students, university students, scholars of the University and librarians. The drawbacks of the previous researches were the small sample sizes (Sulekha, 2018; Prabakar *et al.*, 2018; Mathew *et al.*, 2020).

Previously our team has conducted various randomized clinical trials (Prabakar *et al.*, 2018; Pratha and Prabakar, 2019; Samuel *et al.*, 2020; Khatri *et al.*, 2019), along with cross-sectional studies (Prabhakar *et al.*, 2011; Neralla *et al.*, 2019; Kumar and Preethi, 2017; Prabakar *et al.*, 2016), and an in vitro study (Mohapatra *et al.*, 2019; Pratha and Prabakar, 2019) along with an epidemiological survey (Kannan *et al.*, 2017) and systematic reviews (Pavithra and Jayashri, 2019; Harini and Leelavathi, 2019) in the last four years. The idea for this present survey stemmed from the current interest in our community. This study was a pilot attempt at assessing the knowledge, attitudes and perceptions of Intellectual property rights among the dental practitioners. The aim of this study is to assess the knowledge, attitudes, perception of intellectual property rights among the general dental practitioners of Chennai, Tamil Nadu.

MATERIALS AND METHODS

Study Design

This was a cross-sectional survey study done to com-

pare the knowledge, attitudes and perception of intellectual property rights among the dental practitioners of Chennai. The online questionnaire was distributed via Google forms. The questionnaire validation was done by circulating the questionnaire to 10% of the study population as a pilot study.

Study Population And Sample Size

The sample size was calculated by the G power software; the power was set at 95. Since the non-response rates were increased in an online setting, 15% of the primary sample size was added, and a total of 150 dentists had taken part in the survey. The participation was completely voluntary.

Sampling Method

Simple random sampling method was used. The DCI registered dental practitioners formed the sampling frame.

Ethical Clearance

The ethical board clearance was obtained from the IERB of Saveetha Dental College and Hospitals, Chennai.

Data Collection

The data from the Google forms were collected and tabulated in the excel sheets. The data tabulated was exported to SPSS software by IBM version 25.00 for window OS for statistical analysis.

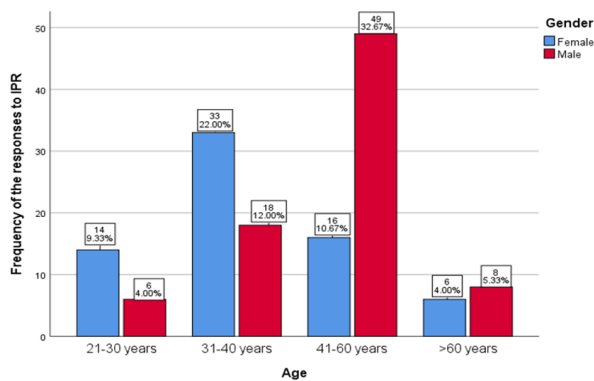
Statistical Analysis

The statistical analysis was done using SPSS software by IBM. The independent variables were the age, gender, years of experience, additional qualifications of the dental practitioners. At the same time, the dependent variables were the knowledge, attitude, perception of intellectual property rights. Association between variables was tested using the chi-square test between the variables along with standard deviation and mean between the groups and within the groups. Any P value less than 0.05 was considered statistically significant.

RESULTS AND DISCUSSION

Male participation was higher than female dentists participation, 54% (81) were males, remaining 46% (69) were female dentists. Graph 1 shows that 43% (65) of the dentists belonged to the 40-60 years age group. She was followed by 34% (51) of the dentists in the 31-40 year age group. 13% (20) belonged to the 21-30 year age group. And the least amount of dentists who participated in this study was 9% (14) belonging to the >60 years of age. 61% (92) of the dentists who participated in this study had over ten years of experience. Graph 2 shows that followed by

15% (23) of the dentists with 2 to 4 years of experience. 12% (18) of the dentists had 5 to 10 years of experience, and only 11% (17) of the dentists had 0 to 2 years of experience. Graph 3 shows that 44% (8) of the dentists with 5 to 10 years of experience had good knowledge, while 35% (6) of dentists with 0 to 2 years of experience had good knowledge. Only 22% (13), 27% (25) of the dentists with 2 to 4 years and > 10 years of experience had good knowledge. The overall good knowledge was 29% (44). Overall good knowledge was 29%, (44) fair knowledge was 46% (69), and poor knowledge was 24% (37). 56% (10) of the dentists with 5 to 10 years of experience had a positive attitude, while only 47% (8) of the dentists with less than two years of experience had a positive attitude.

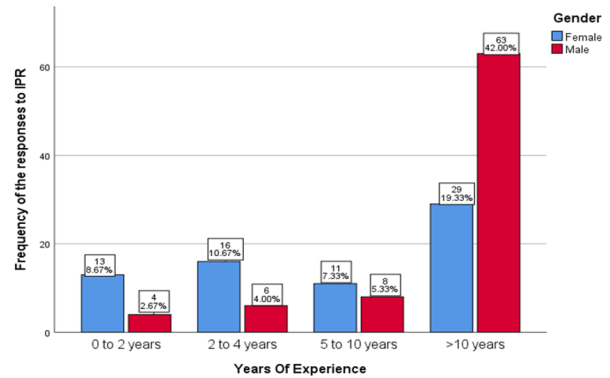


Graph 1: This graph represents the distribution of the study population based on age and gender.

52% (12) dentists with 2 to 4 years of experience had a positive attitude. 49% (45) of the dentists with more than ten years of experience had a positive attitude. Graph 4 shows that the Male dentists, 53% (43) had a positive attitude towards IPR, while only 46% (32) of the female dentists had a positive attitude towards IPR. Overall, 50% (75) of the dentists had a positive attitude towards IPR. 37.33% (56) of the female dentists had a good perception, while 48.67% (73) of the Male dentists had good perception. Dentists with less than two years of experience had 100% (17) good perception of IPR, while 87% (20) of the dentists with 2 to 4 years and >10 years of experience had a good perception, only 67% (12) of the dentists with 5 to 10 years of experience had good perception. The overall good perception of dentists towards IPR was 80% (129).

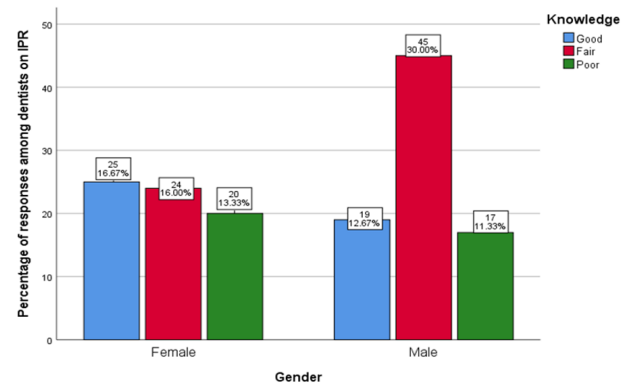
Intellectual property rights are important in the fields of research and development. In the recent years, Intellectual Property Rights (IPR) has piqued the interests of many dentists, due to the extensive amount of research being done in the field and as there are bounteous amount of competitors in the

field, the dentists have turned towards IPR for the protection of their intellectual works such as patents and researches.



Graph 2: This graph represents the years of experience of the dentists, gender-wise.

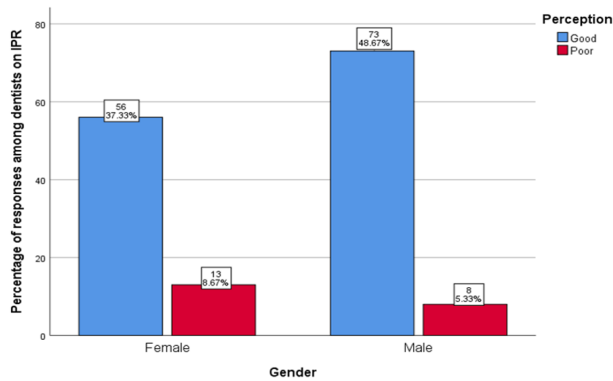
The field of dentistry has become a vast market of innovations that required protection. Though there are various patents and research grants in dentistry in other countries, India by large is still lacking in terms of patents and research grants in dentistry. This can be attributed to the fact that dentists in India do not have a proper understanding about the IPR, which should be improved upon, in such a way that it empowers their work in the field of research and development.



Graph 3: This bar chart depicts the association between the gender of the dentists and knowledge of IPR.

In the previous studies by Hway Boon Ong et al., among Malaysian undergraduate students, belonging to 18-25 years of age, the perception and awareness of intellectual property rights among the students were moderate (Ong et al., 2012). In the study, Dr D. Gnasekaran et al., on 647 stakeholders in Chennai done in 2014 to assess the awareness of IPR it was concluded that the stakeholders had fair knowledge on the intellectual property rights. The Male

stakeholders had good knowledge on the "Trademark" act followed by "Copyright" act whereas the female participants had more knowledge on 'Copyright' act followed by "Designs" act (Gnanasekaran and Balamurugan, 2014). According to the results obtained by Sulekha et al., conducted on 50 scholars of Kurukshetra university, the male scholars were 54% (27), 46% (23), it was concluded that they were not aware of the intellectual property rights (Sulekha, 2018; Gnanasekaran and Balamurugan, 2014).



Graph 4: This bar chart depicts the association between the gender of the dentists and perception of IPR.

In a previous study conducted in 2011 to assess the awareness of 60 PhD and M.Phil students about plagiarism in Islamabad, Pakistan, it was concluded that the students were partially aware of the concept of plagiarism (Sulekha, 2018; Mahmood, 2010; Gnanasekaran and Balamurugan, 2014). In this present study, the overall good knowledge about IPR was 29% (44). The main reason for the variations in the results obtained could have been because the study population of the previous studies were different from the study population of the present study. In this present study half of the dentists had positive attitudes while the other half had a negative attitude towards intellectual property rights. The Male dentists had a more positive attitude towards intellectual property rights in the female dentists and the dentist with 5 to 10 years of experience and a better attitude towards intellectual property rights than their senior and junior counterparts no previous research studies were done to assist the attitude of IPR.

The Perception of IPR in dentists with less than two years of experience was good. In this study, the overall perception of IPR among the dentists was good. In the previous research conducted in New Zealand by Martina (2014), the students had widespread knowledge (Sulekha, 2018). This was similar to the

results obtained by the present study.

The limitations of this present study are the limited sample size. The survey was done in one geographical location that is tonight. This can be rectified by including a wide range of study population within the state and outside the state to obtain more responses. In the future, more similar studies ought to be done in a pan India level among dental practitioners and medical practitioners as a multi-centred approach instead of a single centred approach. The study of intellectual property rights must be promoted in all the institutions of higher learning. Implementation of intellectual property rights in research careers, especially in UG and PG levels, should be done combined with the further training in IPR for a better career in the field of research and development. Workshops and further training should be conducted in universities and schools along with the provision of practical knowledge on plagiarism and on the usage of copyright material. Furthermore, the students and the professionals should be educated about the consequences due to the violation of the laws of Intellectual property rights.

CONCLUSION

The aim of this study was to assess the knowledge, attitudes, perception of intellectual property rights among general dental practitioners of Chennai. Within the limits of the study, it was found that the overall knowledge was fair among the practitioners. Dentists with less than two years of experience have a good perception of intellectual property rights when compared to their senior counterparts.

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Conflict of Interest

The authors declare that they have no conflict of interest for this study.

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