Innovations

Explaining risks to patients effectively- a dentist's outlook in Tamilnadu- a cross sectional survey

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Abstract-
Background*- Explaining risks to a patient is a critical element of an informed decision. Good communication aids in building trust between the patient and the dentist helps in greater satisfaction. Communicating risks to patients effectively is crucial in achieving a good outcome.* ***Aim-****The study aimed to assess the communication skills and knowledge of dentists while explaining risks to the patient.* ***Materials and Methods****- A cross-sectional online survey was performed among dental practitioners in Tamil Nadu. The survey execution was done using digital questionnaire as the tool and google forms as the survey provider. A structured questionnaire with 21 closed and 1 open ended questions validated by 10 experts from different institutions was used. "Online informed consent was acquired from all participants". The internal consistency of this study was evaluated using Cronbach's alpha. The statistical analysis was done using SPSS software.* ***Results****- Among the dentists, the faculty scored the highest. "There was no significant difference in the gender"* ***Conclusion-*** *Communicating risks to patients is a skill can be improved over time. An OSCE based assessment of skills could be used to assess risk explanation skills with a practical approach in real word.*

Keywords*: 1.Risk explanation, 2.Risk information, 3.Communication skills, 4.Dentists*

Introduction

Communication is an essential element of the relationship between patient and the dentist. The interaction between patient and the doctor may be a key process within the patient–clinician relationship from the initial consultation onwards and thus, this area of focus seems to be deserving of attention during undergraduate training for dentists. A doctor's communication and interpersonal skills has the capability to gather information in order to present accurate diagnosis, counsel and establish empathetic relationships with patients.[1,2]Dental schools are required to make sure that

undergraduates are appropriately trained in communication skills yet minimal evidence exists to suggest what constitutes appropriate training and the way competency are often assessed.[3]
Communication skills training can have a favorable effect on the self-worth of professionals on the betterment of services, and on the possibility of reducing flaws, which should be a prime concern, considering that such skills cannot be refined with just clinical experience. [4,5]

Risk communication is the open, two-way exchange of information and opinion about risk leading to a better understanding of the risk in question and promoting better (clinical) decisions about management. It is an essential part of shared decision making and ensuring that the consent is informed.[6]
Risk is the possibility that any action could have a harmful effect. In medicine, the concept of achieving zero risk is questionable. Even the simplest of procedures is associated with some amount of risk.
The manner in which a person views risk is subjective and with the right communication this can be altered. OSCE method of assessing skills in real time would be a more practical approach in the real world. Clinical communication skills training should be administered step-by-step, beginning with the early training of introductory knowledge such as pre-clinical stages of dental education with theoretical and practical classes, including the discussion of clinical scripts, as well as learning by modelling and supervised part-playing with peers. The next steps correspond of role-playing with simulated patients, through to the final step of training with actual patients. Experienced trainers haveto be present throughout the process to give feedback.[7]

Broadening communication skills training to all fields of healthcare demonstrates its significance for the clinician-patient relationship in a patient-centred model of care.[5] The research and guidance available in respect of communication skills training in dental profession is vast yet there appears to be little evidence relating directly to dental education.

Literature reveals that good communication helps in building trust between patients and professionals, leading to a greater patient satisfaction. There is a paucity of research in explaining risks to patient by a dentist. Hence, the study aims to assess the communication skills and knowledge of dentists while explaining risks to the patients.

Materials and methods

Ethics and Human considerations

The study was conducted in the state of Tamil Nadu and the study protocol was approved by the Institutional Ethical Committee (Institutional Review Board Reference Number: SRMU/M&HS/SRMDC/2021/PG/020) and was in accordance with Helsinki Declaration (2013).

Study design

The study was carried out for 1 month duration. A sample size of 384 was obtained for the questionnaire. A single stage random sampling was the sampling technique used. The questionnaire was circulated on a digital platform via google forms.

Study participants

The inclusion criteria for the study were dental graduates in Tamil Nadu, which were further categorized as postgraduates, private practitioners, faculty and both private practitioners and faculty. The exclusion criteria were BDS students and those who were not willing to participate.

Technique

The questionnaire consisted of 22 questions in total with only 1 open ended question. All the questions were designed in English. It included questions based on their designation, gender, years of expertise, history taking, introducing themselves to the patient, providing information to the patient, use of visual aids, doctor's knowledge, shared decision making, structural consultation and non-verbal communication. The validated questionnaire was uploaded through Google forms online and was circulated through mails and social networking platforms.

Satistical analysis
All the responses obtained were assessed using Microsoft Excel software. Mean, standard deviation and ANOVA was used to describe the data. The questionnaire was validated by 10 experts and was pilot tested with n=50 for internal consistency using Cronbach's alpha with a value of 0.84.

Results
A total of 385 responses were received from the google link. The inclusion of mandatory fields in the online survey form assured that there was no acceptance of incomplete responses. The study included 260 female and 125 male dental professionals (Graph 1). There was no age restriction. Their years of experience were recorded. Those less than or equal to 5 years were 65, less than or equal to 3 years were 212, less than or equal to 10 years were 53, greater than 10 years were 55
The essential data included the demographic data. Among the participants, 38 were faculty and 180 were postgraduates; 117 were private practitioners, and 50 were both private practitioner and faculty (Graph 2).
Knowledge about risk explanation was assessed on various categories such as history taking, introducing themselves to the patient, providing information to the patient, use of visual aids, doctor's knowledge on risk, shared decision making, structured consultation and non-verbal communication. The data revealed that both male and female doctors had good knowledge about explaining risks to a patient. The questionnaire used is displayed in Table 1 . Among the dentists, faculty had most knowledge compared to the other groups of dentists (Graph 3). 73% of dentists felt that it was necessary to introduce themselves to the patient. 19% of dentists had a strategy to introduce themselves to the patient. It involved making the patient comfortable by enquiring their name and well-being. 85% of dentists felt that it is necessary to establish the reason for consultation. 92% agreed that assessing the patient's knowledge of the condition is important. 87% of dentists focused on the history of the condition. 44% of dentists always assessed on how much information is required for the patient. 82% agreed that setting an agenda for providing information is crucial. 52% of dentists felt that using technical terms with a patient depended on the patient's background. 87% of dentists agreed that visual aids help understand a condition better for a patient but 45% of dentists that the use of visual aids depended on the patient. 55% of dentists recommended the usage of descriptive terms. 65% of dentists considered using percentages instead of frequencies while explaining risks the patients. 91% agreed that sharing own insight and medical perspective assists with decision making. 49% consider negotiating with a patient and agree with a shared plan. 55% of dentists always invited further questions from a patient. 78% of dentists agreed on structured consultation by adequately covering ideas, concerns along with summarizing and screening. 66% of dentists agreed on recognizing a patient's facial expression and phrase sentences accordingly. 76% of dentists consider using non-verbal behavior in their practice as it builds trust with the patient.

Discussion
Risk communication is a challenging task with uncertainties and dimensional needs to be taken into account in treatment protocol. A good strategy for effective risk communication is required for the doctor to display both competence and care. The doctor should discuss risks in a context that would enable the patient to have the best chance of understanding those risks. Risk communication is gaining importance as the patients awareness about dentistry is improving and are more inquisitive and to know the prognosis of treatment. Their expectations are more from doctor. The skills of risk explanation are thus necessary to evaluate and improve in this arena. Questionnaires offer an objective means of collecting information about people's knowledge, beliefs, attitudes, and behaviour.[8] It forms the basis of an exploratory research study.

This is the first study to assess the knowledge of dentists about explaining risks to the patients. As no validated questionnaire was available, a comprehensive questionnaire including all dimensions were prepared and evaluated by 10 experts. A sample size of 385 was obtained. South India, especially Tamil Nadu, with the majority of dental graduates was chosen as the ideal sample for assessing the knowledge of risk explanation at different stages of dentistry.[9]

The purpose of the study was to assess the knowledge of dentists in explaining risks to the patient. Our findings suggest that all the groups had sufficient knowledge about explaining risks to a patient. Among the four categories, the third group (faculty) scored the highest compared to the others.

Every dental institution follows an elaborate protocol with a multidimensional approach to provide a holistic treatment when treating a patient This could be attributed to the quality of teaching in dental institutions as well as the years of experience with their responsibility of being a teacher .Gender did not have any significant role in explaining risks to the patient. Althoughthe number of female dentists outweighed males in our study, the teaching techniques are well balanced that the gender variation did not hold a significance.Most dentists felt the need to introduce themselves to the patient by asking their name and wellbeing. The manner of introduction may be subjective to the dentists, and it could be customized for each patient. Most dentists feel that it depends on patient's needs and expressions. Peter Gillen et al., measured the rate of introduction by both consultant and non- consultant hospital doctors and to establish whether such practices were associated with patient perceptions of the doctor/patient interaction and have summarized that definitive evidence of introduction made a positive difference in healthcare visit.[10]Most dentists preferred to establish the reason for the patient's consultation. Establishing reasons for consultation can help dentist understand the concern of the patient using a direct approach. Marium Zaheer et al. study, the practical skills of dentists were assessed in terms of history taking, examination and advising laboratory investigations and it was found to be adequate.[11]Our study is in agreement with this as most of the dentists focused on history taking.

Most dentists agreed on setting an agenda for providing information to the patient by assessing their knowledge about the condition and prompting patients to ask for further questions and clear doubts pertaining to the condition. The dentists understand that patients are anxious and they may feel it is better to clear any doubts pertaining to the condition. B J Keulers et al. conducted a study to determine the opinions of both surgeons and patients about issues of surgical information. Surgeons underestimated the patient's desire for receiving extensive information prior to a surgical procedure of any complexity.[12]

J.L.J. Yek et al, conducted a study to define reasonable patient standard and preference for shared decision making among patients undergoing anesthesia and have found that age and educational level can influence medical decision-making.[13] In our study, about less than half of the dentists assessed how much of information is required for the patients. Regardless of the patient's knowledge, the dentists may feel the need to mention about the complications without filtering risk information helping in decision-making. Despite the patient's age and education standards, they may have issues in comprehending quantitative risk in terms of probabilities, percentages and frequencies. The information of risk when presented in probabilities could be viewed as less threatening[13]. While in the study conducted by Thomas Haigh et al., patients preferred the use of percentages on discussing probabilities during medical consultation. Patient perception of descriptive terminology was not according to medical standards.[14] In our study, most dentists preferred to quote risks in percentages as well while about half the dentists preferred to use descriptive terminology due to the patient's educational background.

In spite of majority of the dentists admitted that the use of visual aids helps in better understanding of the condition of the patient ,a few felt that the usage of visual aids depended on the patient. It could be due to the demands of the patient and that not every condition or risk needs to be explained via visual aids. Pushpa Momin et al., assessed the use of visual aids to improve understanding and motivation in periodontal patients. One hundred percent of patients preferred the explanation using visual aids.[15]
Although maximum number of dentists agreed that sharing own insights and medical perspective assists with decision making, only about half of them actually considered negotiating with the patient and establish shared decision making. Despite the patients having knowledge about the condition due to the lack of professional experience, the dentists are skeptical about shared decision making.Anshu Ankolekar et al., have described the practioner's view on shared decision-making implementation. They have concluded that applying shared decision making in clinical practice represents a major shift in mindset for clinicians. Planning shared decision making begins with an understanding of the underlying behavioral mechanisms and may escalate the probability of successful implementation.[16]

In our study, majority of dentists agreed to give a probable diagnosis by structuring consultation and adequately covering ideas. Viraj Bhise et al., evaluated the patient perspectives on communication of diagnostic uncertainity by physicians. They concluded that the patients react negatively in terms of physician's confidence and trust when a broad differential diagnosis or possible diagnosis is given. Patients preferred when the doctors gave a possible diagnosis or differential diagnosis when compared to no diagnosis at al.[17]

Alapan Bandyopadhyay et al., identified that emotional facial expressions had a role in practice. Male participants evaluated emotions better from male faces, while females evaluated positive emotions better from female faces and negative ones from male faces.[18]Although there was no gender difference in our study, majority of the dentists were able to identify the expressions and preferred to rephrase their sentences accordingly to ease and comfort the patient without giving a false hope.
Most dentists supported the concept of nonverbal communication as reported in our study.Raheela Hanif et al., assessed that the patient's attitude towards physician's nonverbal communication helps in strengthening the doctor-patient relation as patients do appreciate positive touch and eye contact from their physicians.[19]

The limitations of this study is that this being a questionnaire survey was conducted only in Tamil Nadu. Another limitation was that the risk explanation skills based on their speciality was not assessed. Harden et al., proposed the objective structured clinical examination (OSCE) in medical school as a method of solving assessment issues and escalating the quality of clinical performance of the students. An OSCE based evaluation would have been a better tool for assesement.[20]

Conclusion
Communicating risks to patients is a skill that can be built and developed over time. The field of risk explanation requires more focus so that a validated protocol can be prepared and brought into use. A multi-centric approach could provide more insight in explaining risks to the patients. The risk explanation skills based on their speciality could give a more precise opinion. An OSCE based assessment of skills could be used in assessing risk explanation skills with a more objective approach.

Declaration of patient consent
The authors certify that they have received all necessary patient consent forms. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but
anonymity cannot be guaranteed.

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Conflicts of interest
There are no conflicts of interest

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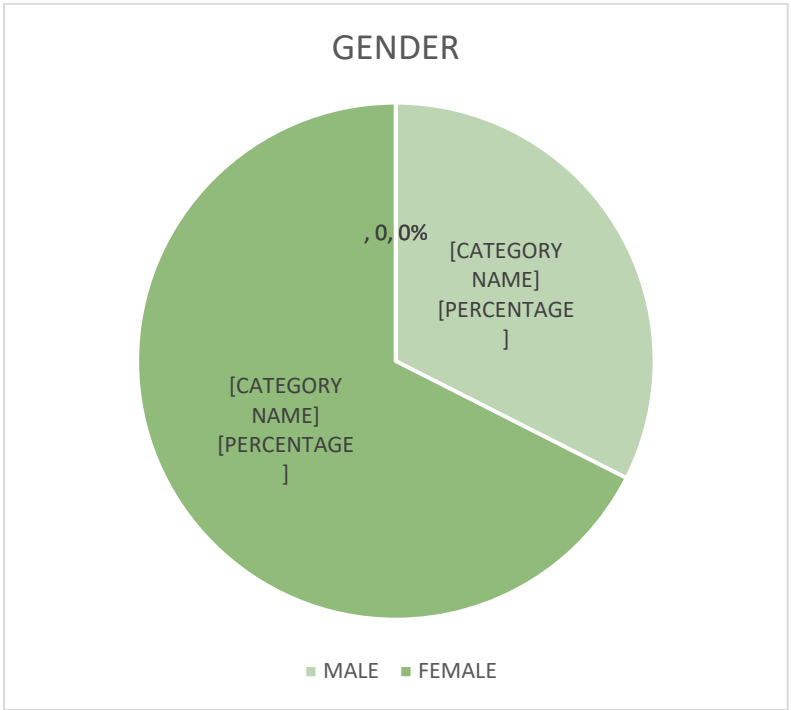
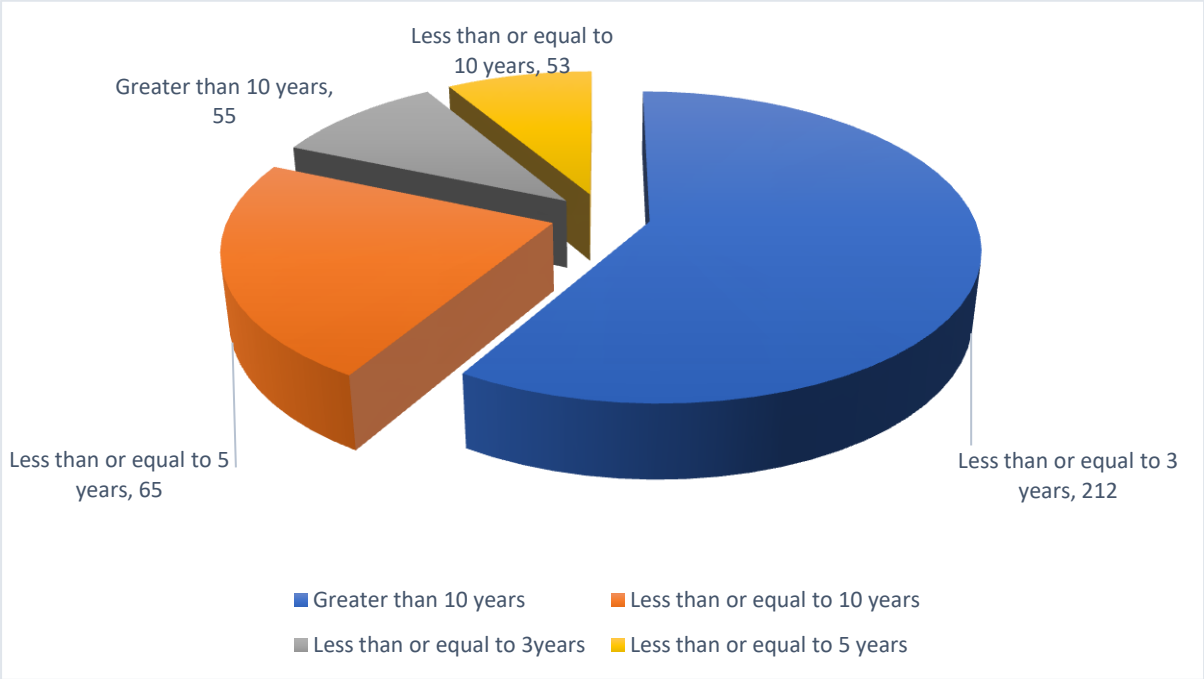
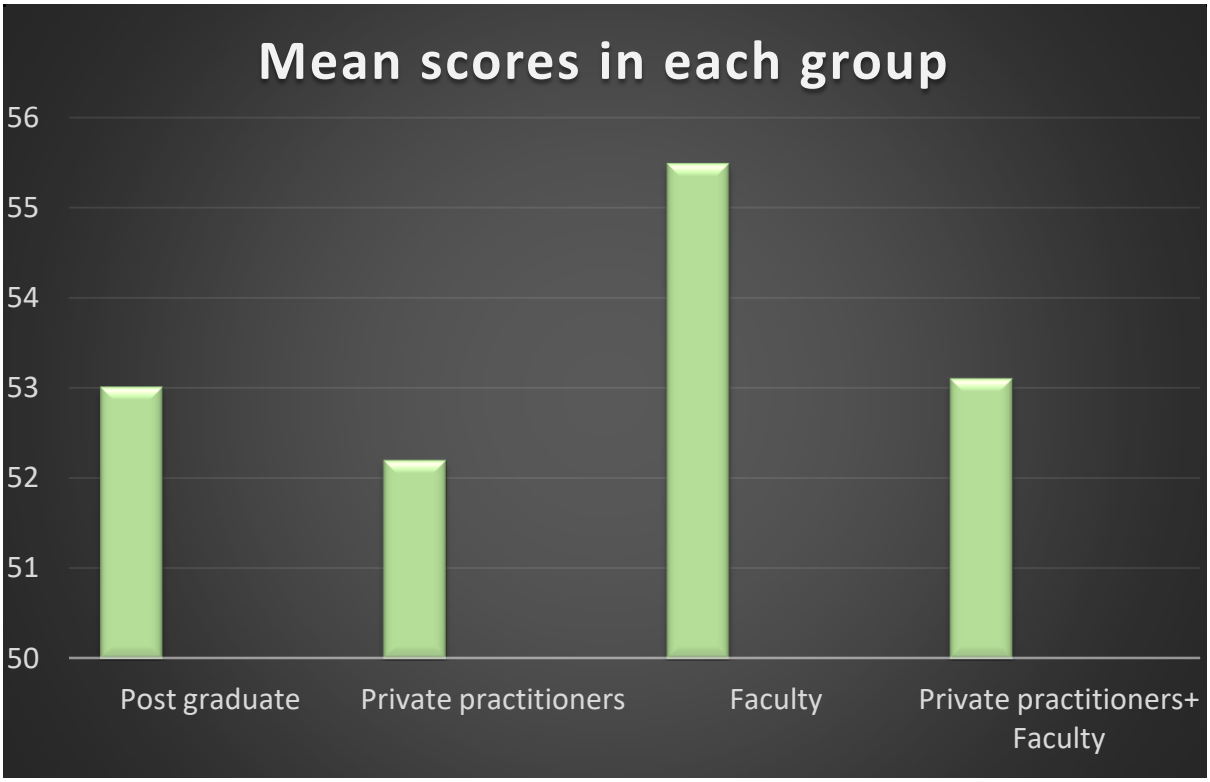
Figures



Graph 1: The graph depicts the percentage of females and males dentists



Graph 2: The graph depicts the years of experience of the dentist



Graph 3: The graph depicts the mean scores in each group

Table 1:The table shows the questionnaire used

Questionnaire	Response(In %)
• 1. Which of the following do you belong to ?	
a. Private practitioner	30.4%
b. Post graduate	46.8%
c. Faculty	9.9%
d. Private practitioner+Faculty	13%
• Gender	
a. Male	32.5%
b. Female	67.5%
• Years of expertise	
a. Less than or equal to 3 years	55.1
b. Less than or equal to 5 years	16.9%
c. Less than or equal to 10 years	13.8%
d. Greater than 10 years	14.3%
• Do you think it is always necessary to introduce yourself to every new patient?	73%
• Do you have a strategy in the way you introduce yourself to a patient ?	19%
• Do you think it is necessary to establish a reason for consultation?	85%
• Assessing the patient's knowledge of the condition is important.	92%
• How often do you focus on history taking ?	87%
• Do you assess how much of the information is too much for the patient pertaining to his/her condition?	44%
• Setting an agenda in providing information to the patient is crucial.	82%
• How often do you use technical terms with a patient?	52%
• Visual aids help understand the condition better for a patient.	87%
• How often do you use visual aids for providing information?	45%
• Are usage of descriptive terms recommended?	55%
• While explaining risks to a patient which of the following would you consider?	
a. Using frequencies	34.8%
b. Using percentage	65.2%
• Sharing own insight and medical perspective assists with decision making.	91%
• Would you consider negotiating with the patient and agree with a shared plan ?	49%
• Do you invite further questions from the patient on your own ?	55%
• Structuring consultation involves information gathering, physical examination, explaining and planning the next steps. Do you structure the consultation ?	78%
• Do you recognize a patient's facial expression and phrase your sentences accordingly?	66%
• Non-verbal behavior majorly comprises of eye- contact, body language, gesture and posture. Would you consider using non-verbal behavior in your practice?	76%