**Awareness and Perception towards Dental Ethics and Ethical Dilemmas among Dental Professionals -A Cross-Sectional Study**

**Abstract:**

Introduction**:** Dentists are one among the medical professionals who often encounter complex ethical issues. Playing the role of a health professional, business enterpriser and academician they often run into specific and conflicting ethical demands in practice and research. Methods: This cross-sectional study was conducted among dental professionals attached to educational institutions and private practitioners. A total of 95 participants including private practitioners, faculty members, post-graduate students were recruited. A pre-validated, questionnaire containing questions related to awareness and perception in dental ethics was administered. Descriptive statistics was done to report the level of awareness and perception of dental professionals. Results: About 65% of post-graduate professionals had awareness in clinical ethics when compared to under graduate professionals who had 58% awareness. However, 75% of under graduate professionals had awareness in research ethics compared to post-graduate professionals with 70% awareness. There was no difference in the perception level among under graduate and post graduate professionals. Conclusion: The awareness towards dental ethics varied among dental professionals. There is a need to introduce certain continuing dental educational (CDE) programs to promote knowledge on dental ethics and dental jurisprudence to save dentist and their patients from encountering uneventful situations.

**Introduction:**

The word “ethics” is derived from the Greek word “ethos”, which means character or conduct[1]. It is often interchangeably used with the word “moral”. Ethics is an unwritten code of conduct that encompasses both professional conduct and judgement. Ethics helps to support autonomy and self-determination and to protect the vulnerable, and promote welfare and equality of human beings. Dental ethics involves moral duties and obligations of dentists towards their patients, professional colleagues and society[2].

Now a day’s dentists face more complex ethical issues than those faced earlier. Being a health professional, business enterpriser and academician they often encounter specific and conflicting ethical demands in practice and research. On avoiding professional paternalism, today dental professionals are confronted with ethical dilemmas in making decision on best treatment options and respecting the choice of treatment of the patient[3]

A dilemma is a complex situation necessitating a choice between two equally undesirable alternatives which arise from fundamental conflicts among ethical beliefs, duties, principles and theories[4]. It is an apparent mental conflict between moral imperatives, which means obeying one would result in transgressing another. Since moral philosophy paradox plays an important role in debates on ethics, ethical dilemma can also be called as an ethical paradox[3,5]. As dentist often faces situations with varied ethical considerations and complexities, ethical dilemmas can be part in dental science[6]

Due to the development and growing use of advanced technology with greater complexity in dental practice, there is a need to address and educate dental students and dental health professionals on clinical ethical values[7]. Also the scope for oral health research is augmenting every day among faculties, under graduate and post graduate students in a fist full of dental institutions. Thus a limelight on research ethical values should also be placed. Concerns among research observers arise as there is no improvement in the individual and institutional research ethics capacities and capabilities in developing countries[8]. Ethical dilemmas in research converge on three topics such as protection of human study participants, conduct and management of research, including conflict of interest; and investigator integrity[9].

Thus to assess the awareness and perception of dental professionals towards clinical and research ethical principles, the present study was contemplated to include dental practitioners, academicians, and post-graduate students.

**Materials and Methods:**

A cross-sectional study was conducted among various dental colleges and private practitioners in Chennai from August 2019 to February 2020. This study was executed after obtaining ethical clearance from institutional review board of Saveetha Dental College and Hospital, Chennai.

A total of 95 subjects including private practitioners, faculty members, and post-graduate students from four dental institutions in Chennai were recruited using a non-probability purposive sampling method. The list of private practitioner with their contact details had been obtained from Indian Dental Association (IDA); Madras branch. Prior permission and voluntary informed consent from the institutions and the participants were obtained after explaining the purpose of the study.

A self-developed, self-administered questionnaire containing close ended questions was disposed. The questionnaire contained ten questions with eight clinical and two research ethical scenarios. This questionnaire was subjected to validation among dental public health stalwarts for face, content and constructs validity. The kappa value obtained was 0.77 which represents a good agreement between them. On fabricating few corrections suggested by the stalwarts, the questionnaire was then implemented to the study participants. As an overview to the ethical principles, the questionnaire contained a brief explanation about each principle in the beginning. The ten scenarios with their accompanying questions were presented in Appendix 1. The questionnaire had two parts. The first part contained socio-demographic information of the participants such as their level of education, the institution and department to which they belonged, and the duration of their practice. Whereas ten set of clinical and research scenarios and questions were included in the second part to assess the attitude and perception of participants towards ethics. The average time taken by the participants to complete the questionnaire was 15 minutes. Descriptive statistics in terms of frequency distribution was calculated and presented in tables.

**Appendix 1: Clinical and research scenario questionnaire**

|  |  |
| --- | --- |
| SCENARIO 1 | 1. Sathish visited a private dental practitioner, with a complaint of black discoloration in his lower right molar tooth. Doctor diagnosed it as a dental caries and convinced him for restoration. After the cavity preparation, the doctor found the filling material got expired and the doctor continues to do the treatment with the same material |
| SCENARIO 2 | 2. Arun was friend of Dr. Guru. They both met after long time in Guru's dental clinic. Suddenly, there came a patient to consult Dr.Guru for pain in her tooth. He started to consult the patient, without asking his friend to wait for some time in the waiting lobby. |
| SCENARIO 3 | 3. Jayanthi visited a private dental practitioner. After complete diagnosis the doctor informed that root canal treatment has to be performed for a carious tooth. The doctor usually charges Rs.3000 for the root canal treatment, since Jayanthi seems to be quite well off and the doctor told that the root canal treatment will cost Rs.5000 |
| SCENARIO 4 | 4. A 45 year old thin female visited a dental clinic for her oral health requirement, which included scaling, extraction of lower left impacted third molar. On routine examination which included all investigations, the doctor discovered that the patient was HIV positive. He did not reveal the health status to the patient and also denied to do dental treatment without explanation |
| SCENARIO 5 | 5. Ms. Praveena usually visits a dentist in her neighborhood for all her oral health care requirements where she got a restoration done for her sensitive tooth few weeks back. Suddenly she developed pain in the restored tooth. Her dentist was unavailable at that time so she consulted another dentist nearby. The second dentist examined the tooth and found overhanging margins which caused pain for the patient. The dentist informed the patient about the mistake done by the first dentist and tried to impress the patient. |
| SCENARIO 6 | 6. Dr. Rajesh was a dentist of repute and patient even from distant villages visited his clinic. One day a friend of him visited his clinic for treatment. Many patients had been waiting to consult the doctor for a long time but his friend entered the chamber first. Dr. Rajesh without informing the patients waiting, started to consult his friend |
| SCENARIO 7 | 7.Vikram, 27 year old visited a private dental clinic with a complaint of pain in lower right back tooth. The doctor diagnosed it as impacted mandibular right third molar. The doctor, who has no previous practice in performing impaction attended to do the treatment and landed with fracture of mandible. He did this with an intention not to lose his reputation by referring or consulting to an Oral surgeon |
| SCENARIO 8 | 8. Raja, a ten year old visited a dentist with his mother. The child had pain in mandibular first right molar that was causing serious pain. Dentist started to extract the tooth without explaining the treatment plan to Raja and his mother |
| SCENARIO 9 | 9. In the middle of a clinical trial, one participant decides to withdraw from the trial. But, the investigators pressurize the participant to continue in the study till it completes. |
| SCENARIO 10 | 10. In a clinical research, the researcher knowingly excludes recruitment of female participants without any compelling indications. Which of the following ethical principle does the investigator violates |

**Results**:

Table 1 shows the socio-demographic details of the study participants. Most of the participants (62.1%) belonged to 20-30 years age group. Females (70.5%) participated more when compared to males. About 69.5% of the participants have completed post-graduation (MDS). Most of them (67.4%) played dual role as an academician and clinician. About 57.5% of the participants were young graduates with ≤ 5 years of experience.

Table 1: Socio-demographic profile

|  |  |  |  |
| --- | --- | --- | --- |
| **Variables** | **Categories** | **Frequency** | **Percentage** |
| Age | 20-30 years | 59 | 62.1% |
|  | 31-40 years | 27 | 28.4% |
| 41-50 years | 9 | 9.47% |
| Gender | Male | 28 | 29.5% |
| Female | 67 | 70.5% |
| Degree | BDS | 29 | 30.5% |
| MDS | 66 | 69.5% |
| Professional Excellence | Clinician | 15 | 15.8% |
| Academician | 16 | 16.8% |
| Both | 64 | 67.4% |
| Years of Experience | ≤ 5 years | 55 | 57.9% |
| > 5 years | 40 | 42.1% |

**Table 2: Awareness towards clinical ethics among study participants**

|  |  |  |  |
| --- | --- | --- | --- |
| **SCENARIOS** | **OPTIONS** | **Post graduates (in %)** | **Under graduates**  **(in %)** |
| **Scenario 1** | Autonomy | 4.5 | 20.5 |
| Non-Maleficence | 71.2 | 65.5 |
| Beneficence | 24.2 | 13.8 |
| **Scenario 2** | Justice | 18.2 | 37.9 |
| Veracity | 57.6 | 51.7 |
| Autonomy | 24.2 | 10.3 |
| **Scenario 3** | Beneficence | 15.2 | 13.7 |
| Justice | 65.2 | 62.7 |
| Veracity | 19.7 | 24.1 |
| **Scenario 4** | Autonomy | 12.1 | 10.3 |
| Beneficence | 31.8 | 41.3 |
| Veracity | 56.1 | 48.2 |
| **Scenario 5** | Justice | 37.8 | 44.8 |
| Autonomy | 30.3 | 31.1 |
| Veracity | 31.8 | 24.1 |
| **Scenario 6** | Autonomy | 12.1 | 17.2 |
| Non-Maleficence | 15.1 | 17.2 |
| Justice | 72.7 | 65.5 |
| **Scenario 7** | Justice | 7.5 | 13.7 |
| Beneficence | 28.7 | 34.4 |
| Non-Maleficence | 63.6 | 51.7 |
| **Scenario 8** | Beneficence | 9.1 | 6.8 |
| Autonomy | 74.2 | 62.1 |
| Justice | 16.6 | 31.1 |

**TABLE 3: Awareness of participants towards research ethics**

|  |  |  |  |
| --- | --- | --- | --- |
| **SCENARIOS** | **OPTIONS** | **Post graduates ( %)** | **Under graduates**  **(in %)** |
| **Scenario 9** | Justice | 15.1 | 6.8 |
| Autonomy | 63.6 | 82.7 |
| Beneficence | 7.5 | 6.8 |
| Non-Maleficence | 13.6 | 3.4 |
| **Scenario 10** | Justice | 56.1 | 58.6 |
| Autonomy | 21.2 | 34.4 |
| Beneficence | 12.1 | 6.8 |
| Non-Maleficence | 10.6 | 0 |

In table 2, for scenario 1, 71.2% post graduates and 65.5% under graduates answered correctly. About 57.6% post graduates and 51.7% under graduates answered correctly for scenario 2. Similarly for scenario 3, the correct ethical principle was opted by 65.2% and 62.7% post graduates and under graduates respectively. For the clinical scenario 4, about 56.1% of post graduates and 48.2% under graduates answered correctly. Among the participants 44.8% under graduates and 37.8% post graduates opted correctly for scenario 5. The correct answer for scenario 6 was given by 72.7% post-graduates and 65.5% under-graduate participants. About 63.3% post-graduated and 51.7% under-graduated opted correct ethical principle. For scenario 8; 74.2% of post graduated and 62.1% of under graduated selected the correct moral principle.

Table 3 shows the attitude of participants towards research ethics. The correct ethical principle for scenario 9 was provided by 63.6% post-graduated and 82.7% of under-graduated participants. For scenario 10; 56.1% post-graduated and 58.6% under-graduated opted correctly. Table 4 shows the perception of the participants towards the ethical principles for the same clinical and research scenarios. There found to be no difference in the perception for above stated scenarios among under graduated and post-graduated professionals. They all perceived that the dentist had done unethical practice in those scenarios.

**Table 4: Perception towards clinical ethics among study participants**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SCENARIOS** | **Post graduates ( %)** | | **Under graduates**  **( %)** | |
| **yes** | **no** | **yes** | **No** |
| **Scenario 1** | 1.5 | 98.5 | 0 | 100 |
| **Scenario 2** | 9.1 | 90.9 | 10.3 | 89.7 |
| **Scenario 3** | 13.6 | 86.4 | 13.8 | 86.2 |
| **Scenario 4** | 1.5 | 98.5 | 0 | 100 |
| **Scenario 5** | 22.7 | 77.3 | 6.9 | 93.1 |
| **Scenario 6** | 6.1 | 93.9 | 10.3 | 89.7 |
| **Scenario 7** | 4.5 | 95.5 | 3.4 | 96.6 |
| **Scenario 8** | 3.0 | 97.0 | 6.9 | 93.1 |
| **Scenario 9** | 18.2 | 81.8 | 24.1 | 75.9 |
| **Scenario 10** | 7.6 | 92.4 | 3.4 | 96.6 |

Table 3 shows the perception of participants towards clinical and research ethics. for scenario 1, 98.5% post graduates and 100% under graduates answered what the doctor did was wrong. About 90.9% post graduates and 89.7% under graduates answered NO for scenario 2. Similarly for scenario 3, 86.4% and 86.2% post graduates and under graduates answered what the doctor did was wrong. For the clinical scenario 4, about 98.5% of post graduates and 100% under graduates answered correctly. Among the participants 93.1% under graduates and 77.3% post graduates opted NO for scenario 5. The correct answer for scenario 6 was given by 93.9% post-graduates and 89.7% under-graduate participants. For scenario 7, about 95.5% post-graduated and 96.6% under-graduated opted NO. For scenario 8; 97% of post graduated and 93.1% of under graduated selected the correct option of what the doctor did was wrong.

The answer NO for scenario 9 was provided by 81.8% post-graduated and 75.9% of under-graduated participants. For scenario 10; 92.4% post-graduated and 96.6% under-graduated opted correctly. There found to be almost no difference in the perception for above stated scenarios among under graduated and post-graduated professionals except for scenario 5 and scenario 9, where in for scenario 5 most under graduates found that what the dentist did was wrong whereas for scenario 9, majority was among post graduates who found what the dentist did was wrong.

**Discussion:**

The day-to-day decisions made by dental professionals in practice have a signiﬁcant inﬂuence on oral health of the population. Contemporary codes of practice direct dentists to provide patients with all the necessary information and to offer them guidance so that they can select the appropriate treatment. This study was conducted to assess the awareness and perception of dental professionals towards clinical and research ethics.

For the eight clinical scenarios provided, post graduated participants chose correct ethical principles compared to under graduated participants. This implies that post-graduated dentists are more informed and aware of the ethical principles than under-graduated dentists. Since most of the participants were young practitioners and academicians, an awareness towards ethical principles have to be inculcated which will be retained throughout the life. Similarly for two research scenarios, both post-graduated and under-graduated participants were well aware of the ethical principles.

In scenario 4, more than half the participants responded that the patient should be informed about his illness as it is the dentist’s duty to inform the patient before he/she either refuses to provide the treatment or provides the treatment. Since the disease is transmissible, the dentist should inform the patient but not to his relatives as this will breach conﬁdentiality.

Negativity among the dental professionals is often encountered due to competitiveness among them. In scenario 5, the practising dentist faces the problem of deciding on the right option in treating a maltreated patient. Degrading the work of colleagues is again; violating the professional ethics. Most dentists do not like to denigrate their colleagues. Though acting according to the patient’s wish comprises autonomy, sometimes patients are not aware of the good and bad outcomes of the treatment, so the doctor or dentist should inform them about these and guide them to take an appropriate decision.

The 8th scenario created a conﬂict between the principles of truthfulness and beneﬁcence. To overcome the dilemma, it is better to breach the principle which will be benefit the patient.

In the dental profession, it is diﬃcult at times to decide which principle to follow. Ethical principles are meant to guide the healthcare provider with the aim of serving humanity. As there is a hairline difference between the various principles, following one can mean violating another. This results in moral distress, which has been deﬁned as knowing the ethically correct thing to do but feeling unable to act [10-12].

**CONCLUSION:**

The survey explores the ethical dilemmas encountered by dentists in clinical practice in Chennai. The responses of the dental professionals regarding awareness towards ethical problems varied. However many of the under-graduated practitioners with less years of experience were unaware of the principles. This necessitates providing a deep understanding and education not only towards ethical principles but also towards dental jurisprudence which will save the dentist and their patients from any uneventful situations.

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