PERCEPTION OF HANDWRITING SKILLS AMONG DENTAL STUDENTS

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ABSTRACT:
Background: One of the most debated issues among the parameters used for selecting dental students is basic manual skills. Manual skills form only a part of capabilities of future dentists, but it is a very important component. This research was based on the online survey that was conducted among dental students to know about their perception of handwriting skills. An online survey was conducted with a self-structured questionnaire comprising 13 questions. The questionnaire was designed using the online survey platform google forms and the link was circulated through the social networking platforms to the participants. The results were analysed and with the collected responses a descriptive statistical test was performed using the statistical software “SPSS version 20” and the result was represented in the pie chart form. Handwriting skills are important for dentistry. But handwriting is important for case reports and academics so it is better that everyone understands. In the present study, the perception of handwriting skills among dental students was analysed among the dental students, 79% perceive handwriting skills to be important in dentistry. Handwriting skills are important for not only dentists but for every doctor because everywhere the doctor's prescription is very difficult for the patient to understand and even for easy interpretation of the case history of the patient in between two doctors. Thus, most of the dental students are aware of their own handwriting skills.

Keywords: Knowledge, Awareness, Perception, handwriting skills.

INTRODUCTION:
Handwriting skills concerned with dentistry is one of the most debated issues among the parameters. Manual skill form is a part of the capabilities that a future dentist should possess and it is a very important component (Husbye and Dorner, 2017). Handwriting skills are important in the perception of Tests, such as perceptual motor ability, chalk carving, paper and pencil. Handwriting skills are used as a method in dental admission (Tin et al., 2018). Dentistry is one among the occupations that requires specific motor skills associated with good visual acuity. Handwriting is an important skill that
determines the students academic performance across all academic areas. The writing ability is important in a child’s behaviour and profession, but also, is an essential determining factor in gaining success in academic performance of handwriting (Bodle, 2019).

Prescription writing is one of the important ‘core’ competencies expected from a medical graduate. Decision Making and proper transcribing are quintessential attributes of writing an ideal prescription (Ariga et al., 2018; Bodle, 2019). Prescription not only indicates names of drugs, dosage and duration of treatment, but also acts as a legal document indicating instructions to patients, pharmacists and contains essential contact information of prescriber and patient (Website, no date). This information may come handy in case of adverse drug events. Any mistake in writing a proper prescription leads to prescription errors, in turn leading to medication errors. There is a knowledge and practice gap in using generic names while prescribing. There is discrepancy in patient instructions, discharge advice and contact details of prescriber in case of adverse drug events (Brits et al., 2017). An example of this was found within the British Medical Journal where it had been reported that a 42-year-old American died after the pharmacist issued Isordil which he interpreted as Plendil as a result of the doctor’s illegible handwriting. The doctor, a cardiologist, appeared in court and had to pay compensation to the family of the deceased. A study published in 1998 found that even when doctors were asked to write down as neatly as possible, their handwriting was still more illegible than those of individuals in other professions. In 2002, a study found that 15% of clinical notes were so illegible that the meaning was unclear (Charatan, 1999) (Lyons et al., 1998; Charatan, 1999).

Previously our department has published extensive research on various aspects of prosthetic dentistry (‘Evaluation of Corrosive Behavior of Four Nickel–chromium Alloys in Artificial Saliva by Cyclic Polarization Test: An in vitro Study’, 2017; Ganapathy, Kannan and Venugopalan, 2017; Jain, 2017a, 2017b; Ranganathan, Ganapathy and Jain, 2017; Ariga et al., 2018; Gupta, Ariga and Deogade, 2018; Anbu et al., 2019; Ashok and Ganapathy, 2019; Duraisamy et al., 2019; Varghese, Ramesh and Veeraiyan, 2019), this vast research experience has inspired us to research about the perception of handwriting skills among dental students. Our team has extensive knowledge and research experience that has translated into high quality publications (Danda, 2010; Robert et al., 2010; Neelakantan, Grotra and Sharma, 2013; Putchala et al., 2013; Ezhilarasu, Sokal and Najimi, 2018; Jeevanandan and Govindaraju, 2018; Dinesh et al., 2019; Ke et al., 2019; Ponnulakshmi et al., 2019; Rajeshkumar et al., 2019; Vignesh et al., 2019; Gomathi et al., 2020; Paramasivam, Vijayashree Priyadharsini and Raghunandhakumar, 2020; Saraswathi et al., 2020; Vairavel, Devaraj and Shanmugam, 2020).

MATERIALS AND METHOD:
An online survey was conducted with a self-structured questionnaire with a sample size of 100 participants consisting of dental students belonging to the age group 18 to 23 years. The questionnaire consists of two parts, the first part consist of questions related to socioeconomic status, questions related to the fact, questions that help in provoking awareness among the participants. The questionnaire is designed in a manner that consists of all types of questions correlating the perception among dental students regarding the handwriting skills. The questionnaire was validated in a standard manner. Measures such as the selection of participants randomly, placing restrictions over the participant population and age group are followed to minimise the sampling bias. The questionnaire was prepared using the online survey platform “google forms” and the link was circulated through social media to the respondents. The
responses were recorded and with the collected responses descriptive analysis was performed using the SPSS statistical software version 20 and the results of the analysis test carried out were represented in the form of pie charts.

**RESULT AND DISCUSSION:**

**FIGURE 1:**

In figure 1, it represents the year of study of the participants, where 84% belong to 1st year, 10% belong to 2nd year, 2% belong to 3rd year and 4% belong to 4th year.

**FIGURE 2:**

In figure 2, it represents the year of study of the participants, where 84% belong to 1st year, 10% belong to 2nd year, 2% belong to 3rd year and 4% belong to 4th year.
In figure 2, it represents the importance of handwriting skills for dental students, where 79.2% said yes and 20.8% said no.

FIGURE 3:

![Pie chart showing handwriting skills](image)

In figure 3, it represents the neatness of the participant’s handwriting, where 70% said good and 30% said bad.

FIGURE 4:
In figure 4, it represents the rating of the participant’s handwriting, where 22.4% said it was bad, 49% said that it was neither bad nor good and 28.6% said that it was good.

FIGURE 5:

In figure 5, it represents the ability to understand the participant’s own handwriting, where 100% of the participants said yes.

FIGURE 6:
In figure 6, it represents the writing style of handwriting by the participants, where 85.7% said that they write in running letters and 14.3% said that they write like digital words.

FIGURE 7:

FIGURE 8:

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In figure 7, it represents the view of the participants on the importance of handwriting skills in dentistry, where 22% said that it is not needed, 46% said that it was needed and 32% said that it was very much important.

FIGURE 9:
In figure 9, it represents the ability to understand the handwriting of the participant’s by others, where 82% said yes and 18% said no.

FIGURE 10:

In figure 10, it represents the influence of handwriting skills in examination marks, where 70.8% said that it does have an influence and 29.2% said that it does not have an influence.

FIGURE 11:
In figure 11, it represents the influence of handwriting skills in the interpretation of case history and case notes that the doctors make while treating patients, where 76% said yes and 24% said no.

Handwriting skills are important for dentistry. But handwriting is important for case reports and academics so it is better that everyone understands. In this study, 102 dental college students were given the questionnaire, the data was then analyzed and had been tabulated along with the charts for each question.

In figure 1, it represents the year of study of the participants, where 84% belong to 1st year, 10% belong to 2nd year, 2% belong to 3rd year and 4% belong to 4th year. In figure 2, it represents the importance of handwriting skills for dental students, where 79.2% said yes and 20.8% said no. In figure 3, it represents the neatness of the participant’s handwriting, where 70% said good and 30% said bad. In figure 4, it represents the rating of the participant’s handwriting, where 22.4% said it was bad, 49% said that it was neither bad nor good and 28.6% said that it was good. In figure 5, it represents the ability to understand the participant’s own handwriting, where 100% of the participants said yes. In figure 6, it represents the writing style of handwriting by the participants, where 85.7% said that they write in running letters and 14.3% said that they write like digital words. In figure 7, it represents the view of the participants on the importance of handwriting skills in dentistry, where 22% said that it is not needed, 46% said that it was needed and 32% said that it was very much important. In figure 8, it represents the worst case of the participant’s handwriting, where 61.2% said that it was bad while making notes, 18.4% said that it was bad during examinations, 10.2% said that it was bad while writing prescriptions and 10.2% said that it was bad in other cases. In figure 9, it represents the ability to understand the handwriting of the participant’s by others, where 82% said yes and 18% said no. In figure 10, it represents the influence of handwriting skills in examination marks, where 70.8% said that it does have an influence and 29.2% said
that it does not have an influence. In figure 11, it represents the influence of handwriting skills in the interpretation of case history and case notes that the doctors make while treating patients, where 76% said yes and 24% said no.

Previous studies show the investigations done on the importance of good handwriting for doctors, comparison of clinical grades with academic performance, writing legibility of prescription and medicolegal issues, motor skill assessment with academic performances. In the study by Sulieman Al-Johany in 2011, evaluation of the handwriting and drawing skills of the dental students showed a significant correlation with dental skills. The observation indicates that there is a clear relationship between non cognitive level, as measured by handwriting with drawing tests, and manual ability of the dental students. This differs from the majority of earlier studies which assessed the practical aspect and concluded that it is more difficult to predict motor skill performance than academic performance. (Al-Johany et al., 2011). A study done by Phipps et al concluded academic performance cannot be related to clinical performance of students, a study by Moore and Peel in their investigation showed that it is not correct to rely entirely on theoretical examination in selection of dental students. In a published study by Deubert used paper and pencil psychometric tests to know the performance skills on operative courses which had shown success. (Phipps, Fishman and Scott, 1968) (Deubert, Smith, Downs, et al., 1975; Deubert, Smith, Jenkins, et al., 1975). Our institution is passionate about high quality evidence based research and has excelled in various fields (Pc, Marimuthu and Devadoss, 2018; Ramesh et al., 2018; Ezhilarasan, Apoorva and Ashok Vardhan, 2019; Ramadurai et al., 2019; Sridharan et al., 2019; Vijayashree Priyadharsini, 2019; Mathew et al., 2020). We hope this study adds to this rich legacy.

CONCLUSION:
This study concludes that most dental students are aware of their own handwriting skills. The study conducted also depicts that the perception of handwriting skill among dental students matches with the needs of the general population. Handwriting skills are important for not only dentists but for every doctor because everywhere the doctor's prescription is very difficult for the patient to understand and even for easy interpretation of the case history of the patient in between two doctors. Future study focuses on determining the impact of handwriting skills caused in the academic side among dental students.

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CONFLICT OF INTEREST:
The authors have none to declare.

REFERENCE:


Website (no date).