

Left Or Right, Does It Matter?**Arjun D S¹, Vidya Babu¹, Sham S Bhat², Sundeep Hegde K³, Vidya S Bhat⁴**

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ABSTRACT:

Introduction: Handedness becomes important for students during their training period and also during their clinical practice.

Aim: The purpose of this study was to identify the problems faced by the left handed dental students and practitioners in their dental education as well as in their practice.

Materials and Methods: A descriptive cross sectional survey was conducted in various dental colleges and private dental clinics in Karnataka and Kerala. The study participants included left handed final year undergraduates, interns, post graduates and private practitioners. The participants were identified through a network of informants. Participants were informed about the purpose of the study and a questionnaire consisting of 15 questions were distributed to the participants. Questionnaire was sent to 84 participants.

Results: A total of 69 participants responded to the survey. 54.8% reported that their institution was not properly equipped to accommodate left handed students. 71% of participants felt difficulty in following instructions on the chair position and 64.5% faced difficulty during pre-clinical session. Majority felt that LH dentists were at a higher risk of developing musculoskeletal complications. 90.3% of participants felt the necessity of left handed dental chair in the dental colleges.

Conclusion: The left-handers had a right dental practice perspective and the result of the study indicate a need to address their issues empathetically.

Keywords: Dental practice, Dental students, left handedness, Musculoskeletal ailments.

INTRODUCTION

Laterality is a specific differentiation of the humans which reflects the asymmetric functional organization of central nervous system and expresses body awareness, assuming the completion of activities with greater strength, precision, preference, speed and coordination, which represent key aspects of school learning. The preference for using the right hand (RH) or the left (LH) is an example of laterality.^{1, 2} In a general population, left handed people ranges from 8% to 15%. Although handedness is determined by biological aspects, its manifestation is a product of biological and social factors, because child needs, to adapt to the use of objects designed for righties. Despite all the

social and technological changes, the contemporary world remains predominantly right-handed and left-handed frequency tends to decrease with age, possibly due to social pressure, adaptation, even though it decreased the tendency to force left-handed children to write with their right hand, which denotes an attitude of understanding for the biological characteristic and respect.³ Dentistry like many other professions consists of instruments and equipments which are designed for the right handed surgeons. Because of this, the left handed dentists are forced to adapt to these armamentarium which could lead to decrease in their efficiency thereby leading to increased discomfort. Also most of the dental colleges fail to provide left handed dental chairs to the

LH dentists due to which they are forced to work in a right handed dental chair. This increases the chairside time and can also affect the quality of treatment procedures. It has been reported that chairs designed for RH users result in manual discomfort for LH dentists.⁴ Difficulties in working conditions that might leave LH dentists with some manipulative disadvantage have also been reported.⁵

A left handed dentist has an increased chance of developing musculoskeletal ailments as compared to that of right handers.⁶

Dentists, and particularly general dentists, are at high risk for development of musculoskeletal disorders due to the high visual demands that result in the adoption of a fixed posture.^{6,7} The purpose of this study was to identify the problems faced by the left handed dental surgeons in their dental education as well as in their practice.

AIM

To identify the problems faced by left handed dental practitioners and dental students in their dental education as well as in their practice.

Objectives

To identify the problems faced by the left handed privatedental practitioners in their dental practice.

To identify the problems faced by the left handed dental students in their dental education.

METHODOLOGY

A descriptive cross sectional survey was conducted in various dental colleges and private dental clinics in Karnataka and Kerala. The study participants included left handed final year undergraduates, interns, post graduates and private practitioners. The participants were identified through a network of informants. Participants were informed about the purpose of the study and an online

questionnaire consisting of 15 questions were distributed to the participants. Questionnaire was sent to 84 participants.

STATISTICAL ANALYSIS

Descriptive statistical analysis was done.

RESULT

Among 84 students and practitioners to whom questionnaire were sent 69 responded with the mean age of the participants being 25.5 years.

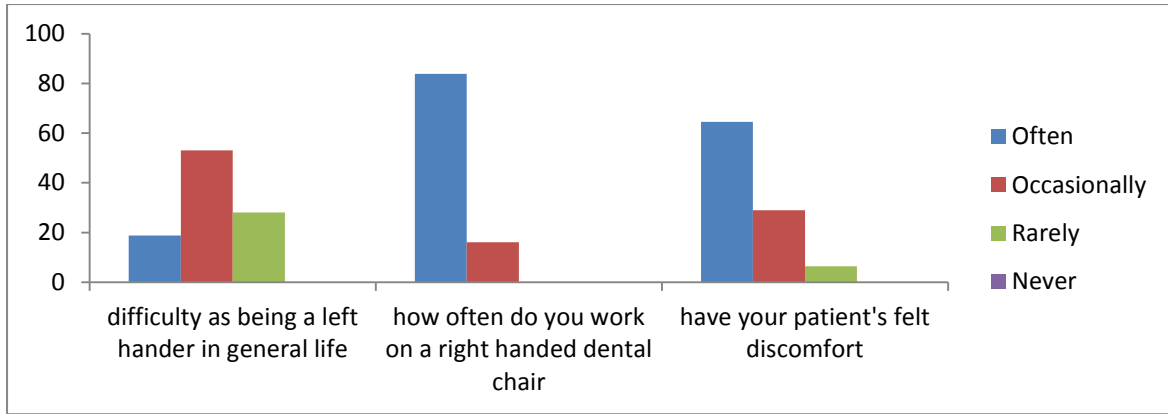
The participants included

- 51.6% Post graduates
- 22.6% Private practitioners
- 12.9% undergraduates
- 12.9% Interns

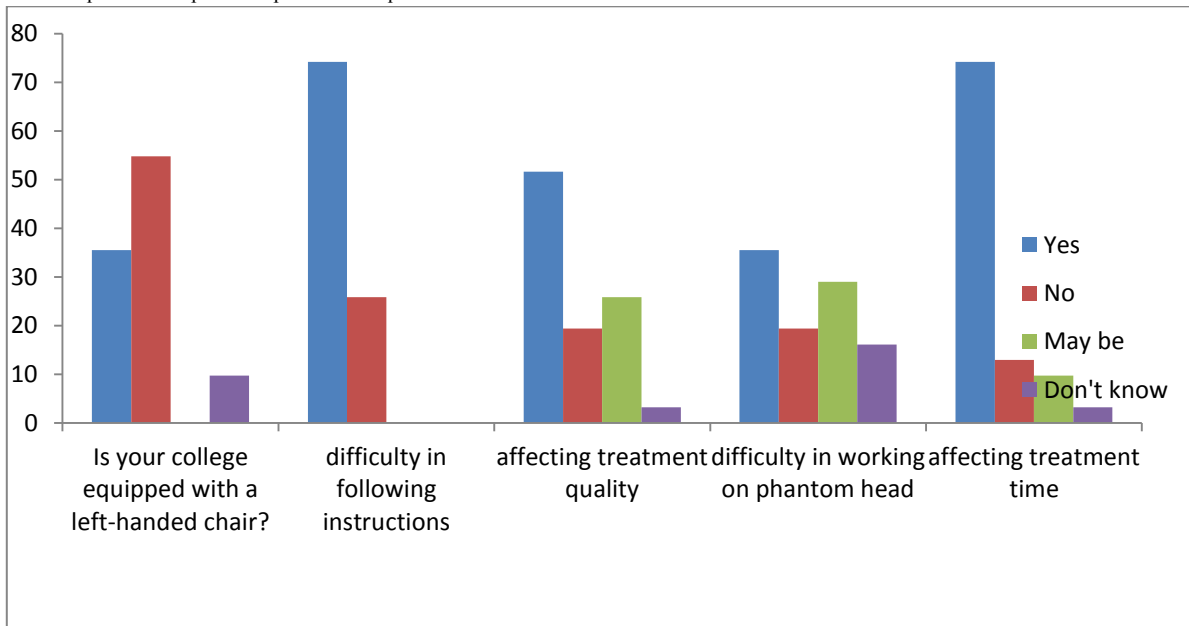
54.8% of the participants responded that their institutions were not equipped with left-handed dental chair and 83.9% often worked on right handed dental chair. 71% of the participants felt difficulty in following instructions on the chair position of the operator.

64.5% of participants had faced difficulty on phantom head during their pre-clinical sessions.

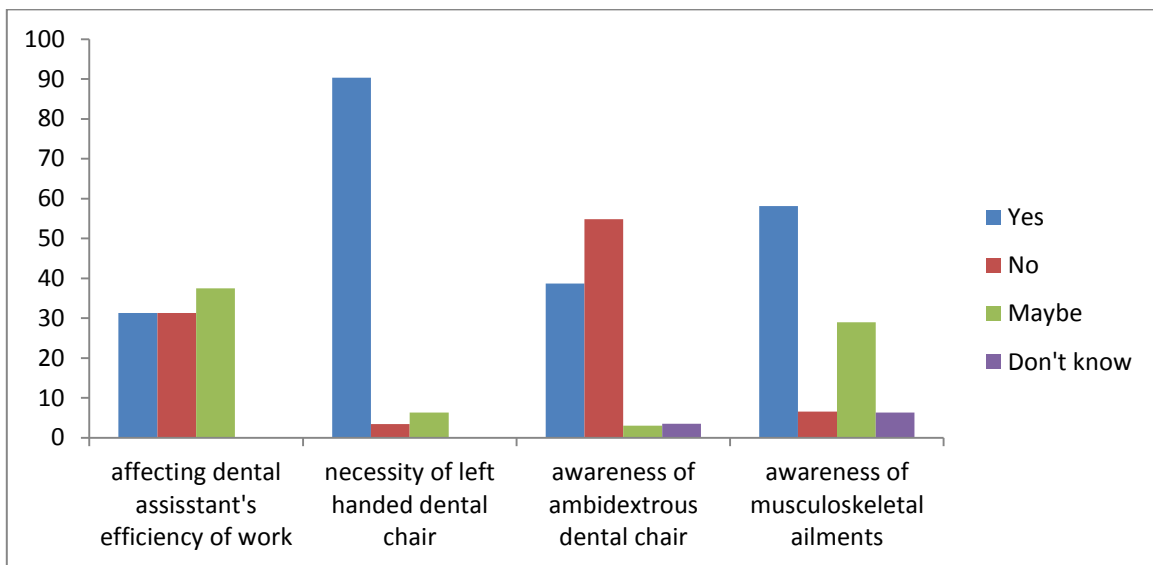
Impact on practice outlook: Occasionally patient discomfort has been reported to 64.5% participants in the study. 53.1% of participants believe that working on a right handed dental chair can affect the quality of treatment provided for the patients. 74.2% of the participants felt that working on right handed dental chair can adversely affect the chair side time. 59.4% of participants stated that working on right handed dental chair can lead to musculoskeletal ailments. 90.3% of the participants felt the necessity of left handed dental chair in the dental college. 54.8% of participants are not aware of the ambidextrous dental chair available in the market.



Graph 1: Participant's response to the questionnaire



Graph 2: Participant's response to the questionnaire



Graph 3: Participant's response to the questionnaire

DISCUSSION

Since earlier days, sinistrality was a problem for children during their growth period. It is generally thought that there is an increased incidence of difficulties and injuries in left handed people because we live in a right handed world and have done so for many centuries.⁹ In dentistry the scenario is never different for the left handed dentists. High degree of manual dexterity of the dentist plays a major role in maintaining the discipline of dentistry.

The current study aimed to identify the problems faced by left handed dental students and practitioners in their dental education as well as in their practice.

54.8% of the participants reported the unavailability of left handed dental chair in their institutions which is in accordance with Shivam et al who have stated that 37% of institutions in Bangalore were not properly equipped to accommodate left hand students.¹⁰ Kaya and Orbak in their study reported that when working on the left side of the patient, the performance of left handed students was significantly better compared to the work done by these students when positioned on the right side of the patient, which corroborate the findings of the current study.⁸

In the present study 71% of the participants felt difficulty in following the instructions given by right handed instructors. This could be due to the difficulty of the right handed instructors to teach a left-handed student some techniques that may require certain modifications or to adjust to their left hand station for the evaluation of their work (Sulaiman S 2013).¹¹

Left-handed students especially suffered from neck and shoulder pain when compared with the right handed students (Tezel et al 2005).⁷ The left handed dental students presented higher percentage of pain in the lumbar and neck/cervical regions.¹² In the current study 58.1% of the participants believe that working on right handed dental chair can lead to musculoskeletal ailments.

Almost all the participants felt the necessity of left handed dental chair in the college. Moreover, the manufacturers could construct right-sided dental units more portable in a manner that spittoon block and reflector light attachment would be mounted to the right side of the dental unit easily. However, there is a need for a guideline from the regulatory agencies regarding left sided dental equipment in dental institutions for an improved quality of training and ergonomics.

CONCLUSION

This work showed that there exists some difficulties and problems for left-handed dentists, be it in the quality of treatment provided, chair side timing and even in their general health. This is caused by the inadequacy of equipments and supplies. Colleges, as well as teachers, should be aware of the existence of this group to better guide and tailor the equipments to their needs, thus promoting a better teaching for these students. The ambidextrous chair available in the market should be installed in every department in the colleges in consideration to overcome the challenges faced by the left handed dentists.

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