



## **Learning Difficulties Among Dental Students- A Cross Sectional Study**

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### ABSTRACT

Background: Learning difficulties also known as the learning disabilities are the conditions that impact on an individual's ability to gain knowledge and skills. The common problem faced by dental students is learning subjects and doing practicals. Though many studies have been done on learning disabilities, this study gives detailed information on the problems faced by dental students. The main aim of this study is to create awareness on the difficulties faced by the dental students in learning the subjects and in doing practicals. An online survey was conducted among dental students to evaluate the learning difficulties. The study population are the 1st year dental students with a sample size of 100. 10 questions were circulated to the participants through an online survey link. Later the data was analysed and made into pie charts. From this study, when asked about learning difficulties, the majority of the result shows that they have difficulty in learning that is nearly 75% and the rest felt easier. Nearly half of the students who feel difficulty in learning are trying to overcome their difficulty. From this survey, it was evident that most of the students have difficulty in learning dentistry. This study creates awareness among the students about the benefits and importance of overcoming the difficulty in learning.

**Keywords:** Learning, difficulties, Dental students, problems.

### INTRODUCTION

Learning difficulties also known as the learning disabilities are conditions that impact on an individual's ability to gain knowledge and skills. The most common problem faced by dental students in learning is to learn subjects and doing practicals (Berch and Mazzocco, 2007). Well intentioned efforts to help struggling students by providing repetitions of the same experiences will help to overcome their difficulty in learning (Carpenter *et al.*, 2015). Educators need to be aware of the differences in students in order to provide the best and accountable ways of learning and teaching. They play a major role in overcoming the difficulties of students. Failing to find the appropriate ways to overcome the barriers might lead to declining levels of achievement (Riddick, 2009). The major factors for learning difficulties, which the students don't have are self regulation, motivation, self-efficacy and English proficiency. If students who are self determined learners, know how to optimise learning challenges to maximise their learning, they will be high in achievement (Berch *et al.*, 2007) And if those students also know how to optimise their adjustments to meet self determined goals, they will be high in self determination. Hence, achievement and self determination should correlate (Humphris *et al.*, 2002) Also the development of thinking is considered one of the main objectives that educators seek to achieve (Blackburn and Carpenter, 2012) Once these objectives are achieved, students are able to effectively address issues and crises in everyday life as well as the complications in studies (Asiry, 2016)

Many studies have been done on the difficulties faced by the students in learning the language, creative thinking, bullying. Compared with other studies, present study shows similar results (Sparks and Ganschow, 1993). A study which was done among the school students has concluded that, majority of students feels difficulty in learning the subjects, which may be due to teaching methods (Melhem and Isa, 2013) A survey was conducted among people in a university, saying that people who lack self determination and motivation face many problems in academics (Yunus *et al.*, 2013), (Acharya, 2003)

Though many studies have done learning disabilities in school students and others, this study aims to evaluate the learning difficulties in dental students (Korhonen, Linnanmäki and Aunio, 2014). Our team has extensive knowledge and research experience that has translated into high quality publications (Choudhari and Thenmozhi, 2016; Govindaraju, Jeevanandan and Subramanian, 2017; Ravi *et al.*, 2017; Vikram *et al.*, 2017; Gupta, Ariga and Deogade, 2018; Hannah *et al.*, 2018; Kavarthapu and Thamaraiselvan, 2018; Pandian, Krishnan and Kumar, 2018; Ramamurthy and Mg, 2018; Ashok and Ganapathy, 2019; Ramesh *et al.*, 2019; Sharma *et al.*, 2019; Venu, Raju and Subramani, 2019; Wu *et al.*, 2019; Samuel, Acharya and Rao, 2020)

this vast research experience has inspired us to research about Learning difficulties among dental students. The major purpose of this study is to explore detailed information on the difficulties faced by the dental students in learning the subjects and in doing practicals. Also this study creates awareness among the students about the benefits and the importance of learning and to make them realise their mistakes.

## MATERIALS AND METHOD

An online survey was conducted among dental students to evaluate the learning difficulties. The study population are the 1st year dental students with a sample size of 100. The participants did the survey voluntarily and no incentives were given to them. The survey was conducted in the month of November, 2019. Ethical approval and informed consent from the participants were obtained. The questions were prepared after extensive literature review. The questionnaire was reviewed and amendments were made to improve the clarity of pertinent questions and eliminate ambiguous responses. The survey methodology was a structured questionnaire with both open and close ended questions. It consists of a brief introduction regarding research objectives. 10 questions were circulated to the participants through an online survey link. Only completely filled online forms were included in this study. The filled responses were verified by two reviewers and collected data was entered on that same day. Later the data was analysed and made into pie charts.

## RESULTS AND DISCUSSION

In this study 100 dental students of Saveetha Dental College were given the questionnaire, the data was then analysed and tabulated along with the pie charts for each of the questions. When asked about learning difficulties, the majority of the result shows that they have difficulty in learning that is nearly 75% and the rest felt easier. Nearly half of the students who feel difficulty in learning are trying to overcome their difficulty. (Figure.1) shows that nearly 38% of students like Biochemistry, 29% like Physiology, 24% of students liked Dental Anatomy and only 9% of students liked Anatomy. Majority of students felt anatomy as a difficult subject. (Figure.2) shows the students' response to difficult one in dentistry. Here, 62.6% of students feel learning theory is more difficult than doing practicals which is 37.4%. (Figure.3) shows that 60% of students are comfortable in studying with gadgets, whereas 40% like to study using books. (Figure.4) shows that many of the people 64.6% study 4hrs a day, whereas 20.2% study 2hrs a day and 15.2% of students study less than 2hrs a day. From this, students can realise their mistakes. (Figure.5) represents the study pattern followed by the students while studying, majority of the students 61% are having a habit of writing notes after reading which helps them to remember for a long time. Few people 12% have a habit of making concept maps which are easy for them to revise. But some of the 27% of students are having a habit of only reading, which they may forget during exams. (Figure.6) shows that most of the people 52.5% feel comfort in making concept maps during their exams as it is not much time consuming and is creative also, whereas 47.5% of students liked writing as a paragraph. (Figure.7) represents the students' response, that 49.5% said that learning dentistry is easy when compared with medicine. But the majority 50.5% feels that dentistry is a very difficult task. (Figure.8) shows the factors that disturbs learning, major factor 58% disturbs learning is the Environment, and next 34% is the mobile phone, as the teenagers are very much addicted to this and 8% is the other factors, which may include their personal problems. (Figure.9) shows that most of the students 61.2% feel difficulty in drawing, whereas 26.65% of students felt difficulty in the identification of specimens or bones during practical exams. A few 12.2% felt difficulty in remembering. (Figure.10) shows that 70.7% of students feel that this survey was useful for them to realise their mistakes and to improve themselves, whereas 29.3% feel it was not useful.

From this study, it is understood that the majority of the students feel difficulty in learning. This study makes them realise their mistakes. Also to overcome their difficulties. Majority of the students 75% think that learning dentistry is difficult compared to other courses, a similar study conducted in Saudi Dental students, states that nearly 53% of students showed high levels of perceived stress in learning (Al-Saleh *et al.*, 2010), (Al-Saleh *et al.*, 2010; Al-Sowaygh, 2013). By comparing with other studies done on learning disabilities, this study gives similar results (Komerik, 2005). Also compared with a study which has been done on other course students, this study gives appropriate reasons for the difficulty in learning (Shenoy, Shenoy K and U P, 2013). Also this study explores detailed information about the common problems faced by the dental students in learning. Limitations of this study is that the sample size is small (Ayatollahi, Ayatollahi and Bahrololoomi, 2010). So, the results may vary with the large sample size and also accurate results can be obtained.

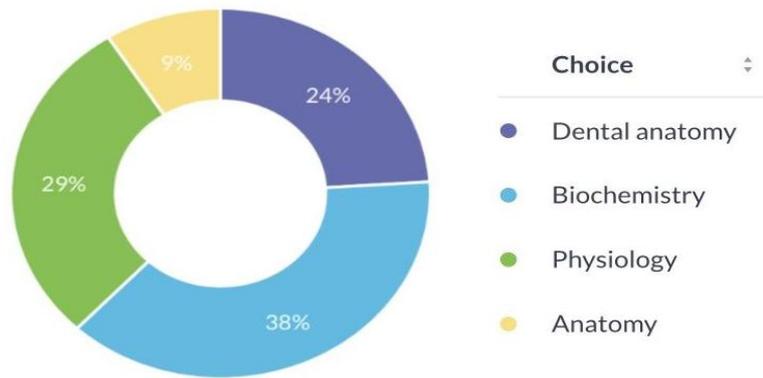


Figure.1 shows the response given by the participants. Here, 38% of students like Biochemistry (Blue), 29% like Physiology (Green), 15% like Dental Anatomy (Purple) and only 9% of students like Anatomy (Yellow). From this chart, it is seen that the majority of the students like Biochemistry.

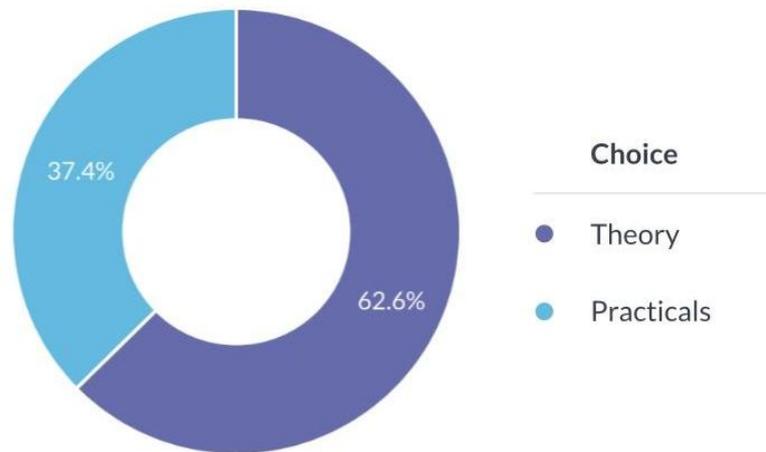


Figure.2 shows the students' response to difficult one in dentistry. Here, 62.6% of students feel learning theory is more difficult (Purple) than doing practicals which is 37.4% (Blue).

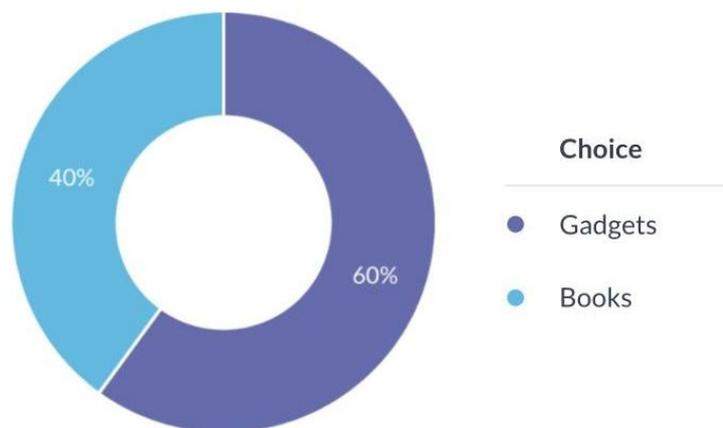


Figure.3 shows the students' response to comfortable things for studying. 60% of students responded that reading with gadgets is more comfortable (Purple) than the books (Blue).

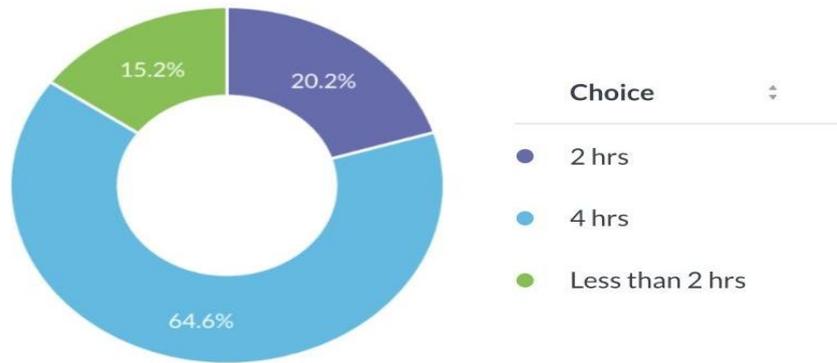


Figure.4 represents the response of students, nearly 64.6% of students study for 4hrs in a day (Blue), whereas 20.2% study 2hrs a day (Purple) and 15.2% of students study less than 2hrs a day (Green).

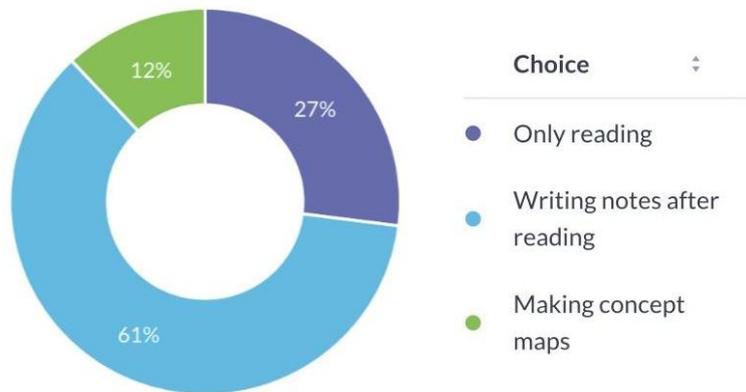


Figure.5 represents the students' response to the pattern of study they follow, some of the students 61% are having a habit of writing after reading (Blue). Few people 12% have a habit of making concept maps (Green). Whereas some of the students 27% are having a habit of only reading (Purple).

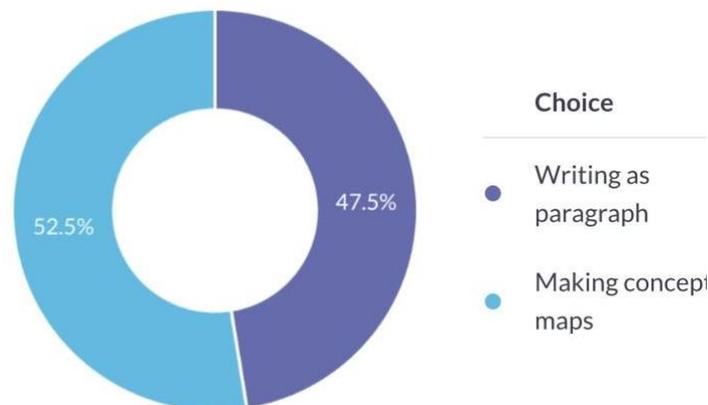


Figure.6 shows the response of students to shows that most of the people (52.5%) feel comfort in making concept maps during their exams (Blue), whereas (47.5%) of students liked writing as a paragraph (Purple).

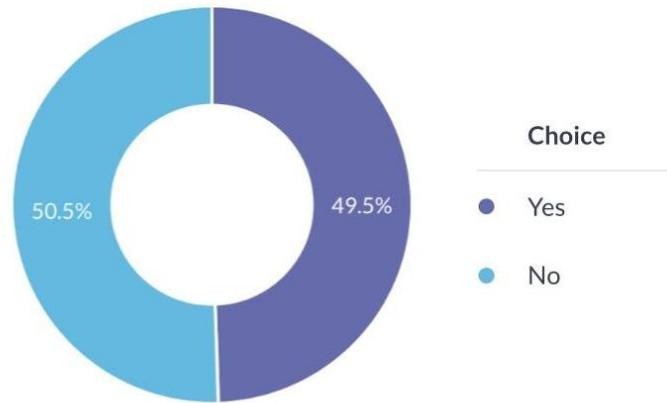


Figure.7 represents the response of students, where 49.5% said that learning dentistry is easy (Purple). But majority 50.5% feels that dentistry is a very difficult task (Blue).

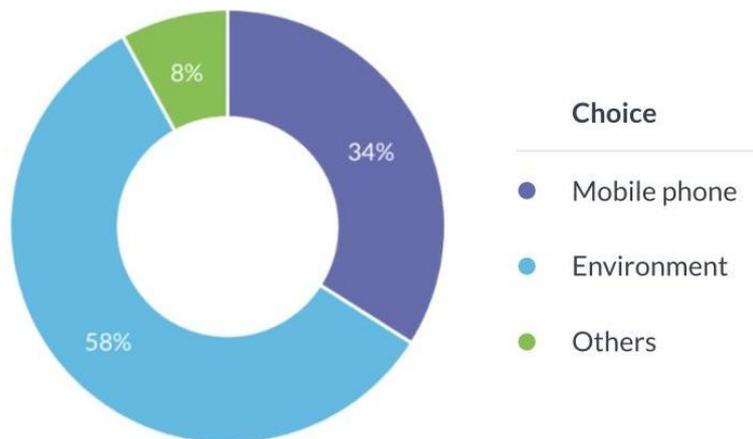


Figure.8 shows the factors that disturbs learning, major factor 58% disturbs learning is the Environment (Blue), and next 34% is the mobile phone (Purple) and 8% is other factors (Green), which may include their personal problems.

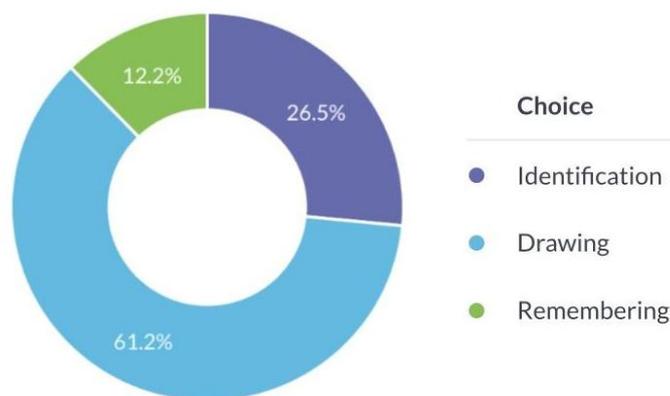


Figure.9 shows that most of the students 61.2% feel difficulty in drawing (Blue), whereas 26.65% feel difficulty in identifying the specimens or bones during practical exams (Purple). A few 12.2% felt difficulty in remembering (Green).



**Figure.10 shows that 70.7%of students feel that this survey was useful (Purple), whereas 29.3% said, this study was not useful (Blue).**

## CONCLUSION

From this survey, it was evident that most of the students have difficulty in learning dentistry. This study creates awareness among the students about the benefits and importance of overcoming the difficulty in learning. Future studies has to be done on the other factors affecting the learning by including the IQ levels of the students within the study.

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## CONFLICT OF INTEREST

None declared.

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