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**Teaching aids and teaching methods in Neuro- Physiology: Views of Post graduate students****Arati Amin,<sup>1</sup> Kumar Sai Sailesh,<sup>2</sup> Soumya Mishra,<sup>3</sup> Udaya Kumar Reddy,<sup>4</sup> Mukkadan J K<sup>5\*</sup>**<sup>1</sup> *Department of Physiology, PK Das Institute of Medical Sciences, Ottapalam, Kerala, India*<sup>2</sup> *Department of physiology, Little Flower Institute of Medical Sciences and Research, Angamaly, Kerala, India*<sup>3</sup> *Department of Physiology, JIPMER, Pondicherry, India*<sup>4</sup> *International Stress Management Association, India. (ISMA<sup>IND</sup>)*<sup>5</sup> *Professor & Research Director, Little Flower Medical Research Centre, Angamaly, Kerala, India*

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**ABSTRACT**

The present study was undertaken to evaluate the current teaching methods in Neuro- Physiology and to determine best teaching aid preferred by the students to implement and recommend to the teachers of physiology to make teaching more interesting and effective. The present cross sectional study was conducted in the Department of Physiology, Little Flower Institute of Medical sciences and Research. 30 female post graduate students with mean age  $22.3 \pm 2$  years were included in the study. Standard questionnaire described in literature was used to assess students preference about teaching aids and teaching methods. We conclude that most of the students preferred combination of black board and PPT and teaching followed by tutorials (small group discussion by the teacher). We recommend further detailed study with higher sample size and in multi centers to modulate teaching aids and methods according to the preference of the students for their better academic performance.

**Key words:** Teaching aids, teaching Methods, Neuro-Physiology.

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**Introduction**

Many modern methods of teaching was emerging which makes the teaching a easy task to the teachers. However, it is always necessary weather students are comfortable with the new methods of teaching. Regular feedback from the students is most essential to opt the methods of teaching for the benefit of students. Traditional methods of teaching physiology including chalk and board and (OHP overhead projector) are always beneficial to the students [1]. However, addition of other methods like audio visual methods along with traditional methods found more beneficial [2].

Along with the teaching, it is needed to involve the student actively in discussions, which found more beneficial as they improves communication skills of students and also helps them to reproduce the same effectively in examinations. Seth et al have concluded that the traditional chalk and board and power point better than OHP for better performance [4]. The present study was undertaken to evaluate the current teaching methods in Neuro- Physiology and to determine best teaching aid preferred by the students to implement and recommend to the teachers of physiology to make teaching more interesting and effective.

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\*Correspondence

**Dr. J K Mukkadan,**

Professor & Research Director  
Little Flower Medical Research Centre,  
Angamaly, Kerala, India

**Material and methods****Participants**

The present cross sectional study was conducted in the Department of Physiology, Little Flower Institute of Medical sciences and Research. 30 female post

graduate students with mean age  $22.3 \pm 2$  years were included in the study. The study was approved by institutional ethical committee and free, voluntary, written informed consent was taken from all the students prior to the study. Students who are regular to the classes and willing were included in the study.

### Methods

The students were asked to grade currently used teaching aids in teaching Neuro-Physiology, (Black board alone, OHP (Over Head Projector) alone, Power Point presentation (PPT) alone, Over Head Projector (OHP) + Black board, PowerPoint presentation (PPT) + Black board) as below [5].

A grade: most helpful to understand, remember and reproduce.

B grade: more helpful to understand, remember and reproduce.

C grade: helpful to understand, remember and reproduce.

D grade: not helpful to understand, remember and reproduce.

E grade: not at all effective

Further the students were asked to grade the following teaching methods:

- Teaching followed by assessment/test
- Teaching followed by tutorials (small group discussion by the teacher)
- Teaching preceded and followed by asking questions
- Teaching followed by self study/ group study.

**Data analysis** Data was analyzed by SPSS 20.0.

### Results

In teaching aids, 76.66 percentage of the students preferred combination of Power point and black board as most helpful to understand, remember and reproduce. In teaching methods, 83.33 percentage of students preferred teaching followed by tutorials (small group discussion by the teacher) as most helpful to understand, remember and reproduce.

**Table 1: Views among the participants in response to different teaching aids. Data presented in frequency and percentage**

Views of students	A grade	B grade	C Grade	D grade	E grade
Blackboard	5 (16.66)	6 (20)	18(60)	1(3.33)	0(0)
OHP	5(16.66)	20(66.66)	5(16.66)	0(0)	0(0)
Power Point	6(20)	18(60)	3(10)	2(6.66)	1(3.33)
OHP+Black Board	8(26.66)	7(23.33)	15(50)	0(0)	0(0)
PPT+ Black Board	23(76.66)	6(20)	1(3.33)	0(0)	0(0)

**Table 2: Views among the participants in response to different teaching methods. Data presented in frequency and percentage**

Views of students	A grade	B grade	C Grade	D grade	E grade
Teaching followed by assessment/test	12(40)	7(23.33)	8(26.66)	3(10)	0(0)
Teaching followed by tutorials (small group discussion by the teacher)	25(83.33)	1(3.33)	2(6.66)	2(6.66)	0(0)
Teaching preceded and followed by asking questions	4(13.33)	18(60)	5(16.66)	3(10)	0(0)
Teaching followed by self study/ group study	18(60)	10	2(6.66)	0(0)	0(0)

### Discussion

It was reported that students preferred PPT than other aids of teaching [1]. It was reported that according to the subjective assessment, most of the students preferred PPT teaching, however according to students' performance, the impact of traditional Chalk and Talk teaching was more than other methods. The combination of chalkboard with PPT or TOHP, enhanced student's preference and performance [5,6,7]. We agree with the earlier studies as we have observed the combination of PPT and black board were preferred by most of the students. When concerned with the teaching methods most of the students preferred teaching followed by tutorials (small group discussion by the teacher).

### Limitations

The major limitation of our study is low sample size and we didn't compare opinions of male and female students..

### Conclusion

We conclude that most of the students preferred combination of black board and PPT and teaching followed by tutorials (small group discussion by the teacher). We recommend further detailed study with higher sample size and in multi centers to modulate teaching aids and methods according to the preference of the students for their better academic performance.

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**Conflict of Interest: None**

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