ORIGINAL RESEARCH PAPER
VOLUME-6 | ISSUE-7 | JULY-2017 | ISSN No 2277 - 8179 | IF : 4.176 | IC Value : 78.46
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

: "LEARNING STYLE PREFERENCES AMONG FIRST YEAR M.B.B.S. STUDENTS"

Physiology

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ABSTRACT

Background: There is a strong need to improve learning and retention during undergraduate education Aim & objectives: To determine learning style preferences in first year M.B.B.S. students. Methodology: Study participants were 92 {50(54.35%) male & 42(45.65%) female} first year M.B.B.S. students. Students have individual learning style preferences including visual (V; graphs, charts, and flow diagrams), auditory (A; speech), read-write (R), and kinesthetic (K; learning from touch, hearing, smell, taste, and sight). These preferences can be assessed using the VARK questionnaire. The responses were tallied and assessed for learning style preference. Results: Majority of students had multimodal preferences. Of 92 students 32(34.78%) had unimodal predilection, 24(26.09%) had bimodal prediliction, 12(13.04%) had trimodal predilection and 24(26.09%) had predilection towards all 4 modes. No significant difference in learning style preference between male and female students was seen. Conclusion: Majority of students preferred multimodal instruction.

KEYWORDS:

Auditory; Read-write; Kinesthetic.

INTRODUCTION

The quality of undergraduate education is vitally important whether students are preparing for a career or transitioning to medical post graduate courses. Employers and educators presume that graduates have a certain set of knowledge and skills that will serve them well in their chosen career or in postgraduate education [1,2]. In addition, during undergraduate training, instructors of higher-level courses presume that students have learned material in prerequisite courses and will carry this information with them into future courses.

Therefore, there is a strong need to improve learning and retention during undergraduate education to ensure that students are prepared to handle the challenges that they will face both in future courses and after graduation. Instructors need to find ways to improve instruction at all levels of education. One way to improve student motivation and performance is to adapt teaching approaches to meet the different learning style preferences of our students[3].

Learning style preferences are the manner in which, and the conditions under which, learners most efficiently and effectively perceive, process, store, and recall what they are attempting to learn [4]. Knowing the students' learning style preferences will aide in the development o f the most effective teaching approaches [5].

AIM AND OBJECTIVE:

To know the different learning styles preferences in students and test the hypothesis that males and females have different learning style preferences.

METHODOLOGY:

The study was carried out on 92 consenting first year M.B.B.S. students including 50(54.35%) males and 42(45.65%) females at Government Medical College, Nagpur. Non consenting students were excluded from the study.

Students have individual learning style preferences including visual (V; graphs, charts, and flow diagrams), auditory (A; speech), read-write (R), and kinesthetic (K). These preferences can be assessed using the VARK questionnaire. The responses were tallied and assessed for learning style preference.

VARK questionnaire developed by Fleming was administered to first year MBBS students.6 VARK was selected due to its ease of use (a simple 16- question survey), its free availability online for both students in this study and for readers of this article who may wish to use this tool in their classroom, and its simplicity of online usage for students and instructors to learn more about their own, or their students', learning styles

RESULTS

The study was carried out on 92 {50 males (54.35%), 42 (45.65%) female} students. Of 92 students; 32 (34.78%) had unimodal predilection, 24 (26.09%) had bimodal prediliction, 12 (13.04%) had trimodal predilection and 24 (26.09%) had predilection towards all 4 modes. No significant difference in learning style preference between male and female students was seen.

The salient observations of the study are given in following figures.

Figure 1. Learning style preferences of Females and Male

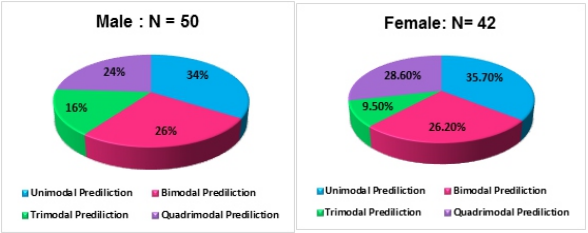

Figure 1 shows learning style preferences among study participants. Out of 50 males 34% had unimodal prediliction while 26% had bimodal prediliction. Trimodal prediliction was seen in 16% whereas 24% had quadrimodal prediliction. Among 50 females 35.70% had unimodal prediliction while 26.20% had bimodal prediliction. Trimodal prediliction was seen in 9.50% whereas 28.60% had quadrimodal prediliction. No significant difference was observed between males and females ($p > 0.05$).

Figure 2. V, A, R, K distribution out of possible 2256 marks

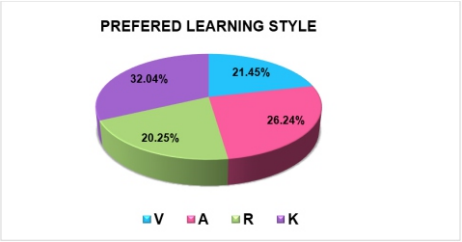

Figure 2 shows distribution of preferred learning style among study participants. About 21.45% participants preferred Visual (V) style, 26.24% preferred Auditory (A) style, 20.25% preferred Read & write (R) style and 32.04% preferred Kinesthetic (K) style for learning.

Figure 3 Percentage wise V, A, R, K Male and female differ entiation

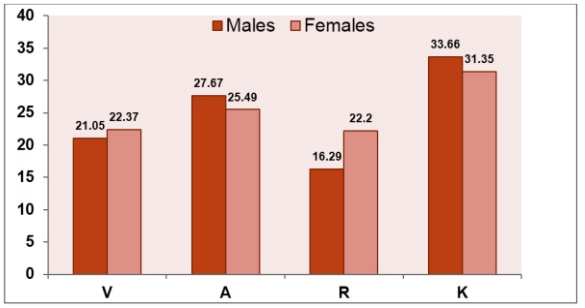

Figure 3 shows percentage wise V, A, R, K differentiation among male and female. Among 92 study participants, 21.05% males and 22.37% females preferred Visual (V) style, 27.67% males and 25.49% females preferred Auditory (A) style, 16.29% males and 22.20% females preferred Read & write (R) style whereas 33.66% males and 31.35% females preferred Kinesthetic (K) style for learning.

DISCUSSION

This study was performed as a follow-up to Lujan and DiCarlo's assessment of learning styles preferences among first-year medical students, which showed that among medical students, only 36.1% of the students preferred a single mode of information presentation. In contrast, most students (63.8%) preferred multiple modes of information presentation [7]. In that study, the authors suggested that gender differences in learning preferences be assessed. To address this important issue, the VARK questionnaire was administered to MBBS students enrolled in Governmemt Medical College, Nagpur and students voluntarily provided gender information.

The responses were tallied and assessed for gender differences in learning style preferences. Majority of students preferred multiple modes of presentation however 35.7% females and 34% males had predilection for unimodal preference. Moreover if individual learning style was compared kinesthetic mode was the most preferred modality A similar study done in Michigan showed that 87.5% of males but only 45.8% of females preferred multiple modes of presentation. Thus, in contrast to females, the majority of males preferred multiple modes of information presentation. The majority of female students (54.2%) preferred a single mode of information presentation, either V, A, R, or K. Finally, only 12.5% of males preferred a single mode of information presentation[8].

There is a clear trend in university teaching to instruct all students in the same way (i.e., a straight lecture format). Educators use this lecture format because of the relative ease of information passing, the need to cover the content, a long history of traditional lecturing, and perhaps due to their own preferences in learning.

The results of the VARK questionnaire should convince teachers to use multiple modes of information presentation. This may require instructors to stray from their own preferred mode(s) of teaching and learn to use variety of styles, which will positively affect learning. By using a variety of teaching approaches, teachers will reach more students because of the better match between teacher and learner styles In some cases, it may be difficult to tailor coursework to the individual learning styles of each student. However, in these situations, by being aware of their learning style, the students may contribute to their academic success by promoting self-awareness and their use of learning strategies that work for their learning style. It is essential that an instructor's teaching style provide access for students with different learning styles during the experiences of a course.

CONCLUSION

Majority of students preferred multimodal instruction with 35.7% females and 34% males showing predilection to unimodal preference. It is the responsibility of the instructor to address this diversity of learning styles and develop appropriate learning approaches.

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