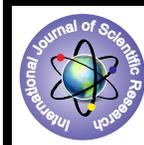


## Learning Preferences Among Freshmen and Sophomore Students of General Nursing and Midwifery and Baccalaureate Nursing Programmes



### Nursing

**KEYWORDS :** GNM, BSc nursing, VARK questionnaire, freshmen, sophomores

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### ABSTRACT

**Background:** Each individual student learns in different ways to attain their desired objectives of the course. Freshmen and sophomores of nursing college and school determine the fame and destiny of the institution and students. An assessment on these students would help us know their learning styles to get ready with well-designed teaching strategies.

**Aim:**

This study aimed to assess the learning preferences of freshmen and sophomores of General Nursing and Midwifery and baccalaureate nursing programme and identify the differences in learning preferences in selected nursing college and school at Chennai.

**Methods:**

A cross sectional descriptive study was conducted using VARK questionnaire by enrolling a total 140 students from nursing school and college. Permission obtained for using VARK questionnaire and study was conducted with prior permission and informed consent from the study participants.

**Results:**

Overall, 20(14.28%) nursing participants have preferred single mode of learning; eight GNM and 12 BSc participants were "unimodal" who had the preference to auditory learning. The rest 120(85.72%) preferred learning through multimode. GNM students preferred kinesthetic mode as their first choice of learning mode comparing to BSc participants who opted aural mode. This difference was statistically significant ( $p < 0.05$ ). In general sophomores preferred multiple modes than freshmen nursing participants.

**Conclusion:** Most preferred learning style of GNM nursing participants was kinesthetic in comparison to aural learning preferred by BSc nursing participants. As the levels increase students opt for multiple learning modes more frequently.

### Introduction

Learning preferences are means or modes through which people learn. People utilize their senses for learning. Learning style has been defined by many experts as a platform for the teachers to know the individual differences among the students whom they teach. At any given point of time it is possible to witness students of a class room differ in their learning preferences. Great awareness on this would provide an adequate input in designing "teaching learning strategies." In 1979 Keefe categorized learning styles as cognitive, affective, and physiological factors that are indicators of how learners perceive, interact with, and respond to a learning environment. (Nahla M. Moussa, 2014). Learning styles are those educational conditions under which a student is most likely to learn (Stewart and Felicetti, 1992). According to Vorhaus (2010) learning style is an individual's preferred mean to learn and how an individual learns, perceives, interacts with, and responds to the learning environments".

In most class rooms students are physically present though they are not interested. This becomes teachers/educators' responsibility to keep abreast of students' interest. Neil Fleming, Lincon university of New Zealand developed the VARK Questionnaire in the year 1987. VARK questionnaire helps in recognizing preferred learning styles of students to plan and accordingly develop the teaching methodologies to enhance the teaching learning process and thereby the quality of education. (Fleming, N., & Baume, D. 2006) This scale assesses the outcome in a learner to plan for future. A simple intervention such as administering a learning style inventory can increase a student's learning. (Marcy, V. 2001) There is an unproved assumption and open say in nursing that the general nursing and midwifery (GNM) students outperform in the practical field than the baccalaureate nursing students (BSc).

### Materials and methods

This study had the objectives of assessing the learning preferences of freshmen and sophomore students of general nursing and

midwifery (GNM) and baccalaureate nursing students (BSc) and find the difference between their learning preferences. A cross sectional descriptive design was used to conduct the study.

Fleming and Mills developed a modal preference questionnaire known as VARK to enhance students learning based on their preferences. VARK stands for visual, aural, read/write, and kinesthetic. All these refer to the senses through which people prefer to learn. Visual learners use pictures/charts for learning or explaining. Students who prefer read/write look for using printed items for teaching and learning; their major focus is on reading and writing exercises. Aural learners prefer to be attentive in listening. Kinesthetic learners are skill oriented and go for hands on experience.

Permission obtained from Fleming to use VARK tool. VARK standardized questionnaire consists of 16 multiple choice questions; each question is with four answers. The cronbach's alpha coefficient of VARK questionnaire for reliability was  $\alpha = 0.86$ . Participants can choose one or more options based on their learning preferences. Study was conducted with a prior permission from college research committee. This study was conducted in M.A. Chidambaram School and College of nursing. The institution runs Diploma in general nursing and midwifery programme of 3 and half years duration and BSc nursing programme of 4 years period. Freshmen (first year) and sophomores (second year) were enrolled as study participants after receiving prior written consent. Using purposive sampling technique a total of 40 students comprising of 20 freshmen and 20 sophomore students from nursing school and a total of 100 students comprising of 50 freshmen and 50 sophomore students from nursing college were included in the study. All enrolled participants, 140 took part in the study.

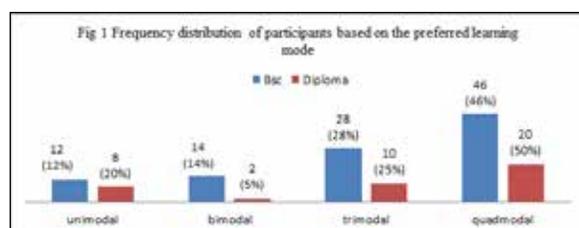
After obtaining written consent VARK questionnaire "7.1 version" was administered as paper and pencil test. Participants were asked to tick as many responses as they prefer for each question. Participants took 15 to 30 minutes to complete the questionnaire. The completed tests were immediately collected by the researcher.

Table 1 Distribution of responses on preferred learning mode

Preference	BSc	GNM	Total	
Visual	196	31	227	$\chi^2 = 11.27$ $P < 0.05$
Auditory	508	35	543	
Read and write	262	21	283	
Kinesthetic	324	31	355	
Total	1290	118	1408	

## Results

Excel and SPSS version 17 were used to analyze the data. Descriptive and inferential statistics were used. A total of 140 nursing students participated in the study. Out of which 100(71.43%) were from nursing college and 40(28.57%) were from School of nursing (Table1). All enrolled participants took part in the study; the response rate was 100%. Of total 140 students 20(14.28%) preferred single mode of learning, who were unimodal and rest 120(85.72%) students were multimodal who preferred more than one learning mode. Among 20(14.28%) participants who were unimodal, all have chosen aural mode of learning.



Twelve (12%) from BSc and 8(20%) from GNM preferred only one learning style (unimodal). Fourteen (14%) of BSc were bimodal against 2(5%) of GNM participants; twenty eight (28%) and 10(25%) from BSc and GNM respectively were trimodal.(Fig 1) The remaining participants, 20(50%) GNM and 46(46%) BSc preferred all four (quadmodal) learning modes. We could note that there is a 4% difference between GNM and BSc nursing students in preferring quad mode of learning.

All 12 unimodals of BSc nursing preferred aural learning. Among 14 bimodal 10(71.4%) preferred auditory learning, 3(21.4%) preferred visual learning 1(7.2%) preferred Kinesthetic learning as their first choice. Out of 28 trimodals 15(53.57%) preferred aural learning as their first choice and rest 32(1.4%) and 14(2.8%) preferred kinesthetic and visual mode as their first priority. Among quadmodals of BSc nursing participants 20(43.47%), 13(28.26%), 7(15.21%) and 6(13.04%) preferred aural, kinesthetic, visual and read-write as their first choice respectively.

## Discussion

Participants of BSc nursing gave first preference to aural learning. Among GNM participants 8 were unimodal and preferred only auditory learning. The rest of them (32) were distributed to bi, tri and quadmodal: All preferred Kinesthetic as their first choice of learning mode. There was a difference found in responses on preferences for learning modes between GNM and BSc nursing students (Table1) and was statistically significant. ( $\chi^2 = 11.27$  ( $p < 0.05$ ))

Among freshmen 20(28.57%) preferred single mode of learning against no one opted for it in sophomores (second year). Sixteen (22.85%) freshmen preferred bimodal whereas none preferred bimodal in sophomore. Fifteen (21.42%) freshmen and 23(32.85%) sophomore preferred trimodal learning. Nineteen (27.14%) and 47 (67.14%) have chosen quad modal in freshmen and sophomore respectively.

This indicates that as the seniority or levels of education increases nursing students preferred to use various modes for learning. This corresponds with Esraa AlKhasawneh's statement that the learning preferences of nursing students' significantly differed from the first academic to the third academic year.(2013).

Neil Fleming's VARK questionnaire would be a hand's on tool to assess the preferred learning styles of students and design teaching methodologies accordingly. There is a wide spoken unproved assumption that GNM students outperform BSc nursing students when they enter in to practical field. The study findings reveal that majority of GNM students preferred kinesthetic learning as their first priority comparing with other modes. It was surprising to note that unimodal learners of both GNM and BSc nursing participants preferred only aural learning. Kinesthetic learning mode was found to be dominant as first choice of learning among GNM students. Aural or auditory learning was dominant first choice among BSc participants. It was interesting to note that GNM students gave preference to aural learning next to kinesthetic mode. But BSc students preferred kinesthetic mode as their second choice. Read and write was better opted over visual learning as third choice among both the groups.

Overall, 20(14.28%) nursing participants have preferred single mode of learning. The rest 120(85.72%) of them preferred learning through multimode. This similar finding is noticed in a study conducted among medical students: 86.8% of students were multimodal, and 12 students (13.8%) were unimodal in their learning style. (Prithishkumar I J., & Michael S A.,2014) This is close to the findings of Marcy. V.(2001), which highlighted 72.22% of participants preferred for multimodal learning. In present study 14.28% were unimodal and 11.42%, 27.14% and 47.14% have preferred bi, tri and quad modals respectively.

## Limitations

Some of the probable limitations of this study are: The study included participants from only one nursing college and school with limited sample size. Though the results are statistically significant with chosen sample size, it may not imply generalizability until and unless another study is carried out with bigger sample size choosing more colleges and schools. Bigger samples would help us generalize GNM nursing students' great interest in kinaesthetic learning mode.

## Conclusion

Higher education in nursing starts with freshmen level where students start to get exposed to different teaching learning experiences as an ongoing activity. As students climb in the ladder of educational levels they get opportunity to get acquainted with various teaching and learning strategies. Students who prefer to learn through multimode will always look for different teaching methodologies in the class room and in the clinical field. If the learning tastes of the students are not met adequately they get bored and may show disinterest in their learning. To avoid this teacher needs to take extra efforts enhancing their teaching strategies to meet the needs of the individual learners. Assessing freshmen (first year) candidates to know their preferred learning styles will help the educators plan appropriate teaching strategies.

## Acknowledgement

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**Conflict of interest**

This study was not funded and has no conflict of any kind.

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