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Learning Styles through Visual, Auditory and Kinesthetic (VAK) Scale

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ABSTRACT

Background: Nursing students come from different colleges and settings when admitted to nursing colleges, they have different learning style preferences but as they progress in each levelthe preference of learning styles may change. This study enables the undergraduate nursingstudents to understand their learning style preference; this study will help undergraduate nursingstudents to get complete satisfaction of nursing education even though there have been severalresearches on studies concerning students learning style , there is no similar research conductedin nursing colleges in Pune city. More apparently, there is still need to analyze what is/arepredominant learning style so that nursing students can self-assess their learning stylepreference. Hence, the investigators were encouraged to undertake a study to determine thepreferred learning style among undergraduate nursing students.Aim: To Assess the LearningStyles through Visual, Auditory and Kinesthetic (VAK) Scale.Methods: From 9/5/2019 to19/5/2019, Non-experimental survey research design was used to assess the preferred learningstyle which was carried out among 150 nursing students of Symbiosis College of nursing, peoplewho met the inclusion criteria, were recruited by non-probability convenience sampling methodtechnique. Data was collected using a structured modified questionnaire and was analyzed byusing the cronbach alpha test.Results: Non-experimental survey research design was used toassess the preferred learning style which was carried out among 150 nursing students ofSelected nursing college students, were selected by non-probability convenience samplingmethod technique. Data was collected using a structured modified questionnaire consisting ofsection I & section II; section I was about demographic data and section II was furtherdivided into 3 areas in which each section consisting of questions related to different learningstyle i.e. visual, auditory and kinesthetic. Content validity was established by 7experts.Findings showed that total 150 samples under final data collection. In that 0% samples werefrom the age of 17 to 18 years, 10% sample from the age of 18.1 to 19 years and 41.3%samples from the age of 19.1 to 20 years. 30.6% of samples from the age of 20.1 to 21. 18%samples from 21 or above were from gender male, 28.6 % sample from gender female 71.3%.The total 150 samples under final data collection In that 26.6 % samples from the B.Sc firstyear , 29.3% sample from the B.Sc second year . 27.3% samples from B.Sc third year and16.6% sample from fourth year. Therefore it suggest that samples selected by researcher wereappropriate to their study according to their characteristics such as age , gender, religion ,academic year , board , parents income and social economic status in frequency andpercentage & on assessing preferred learning style it shows the preferred learning styleamong

undergraduate nursing students; in which visual is 40% , auditory is 8% , kinestheticis 27.3% , visual and auditory is 2% , auditory and kinesthetic is 6% , visual and kinestheticis 13.3% and multi-sensory learner 3.3% and association between demographic data andlearning style preference was done which showed that there is significance of religion inwhich R-value is 0.1981, and P-Value is .015096 and significance of academic year in whichR-value is 0.1894 and P-Value is .020541.Conclusion: The research concludes many students prefer visual learning style which wasassessed among nursing students of Symbiosis College of nursing, Pune. The selectedparticipants were comfortable and co-operative with the study.

Keywords: Assess, Visual, Auditory, Kinesthetic, Undergraduate nursing students

Introduction

According to Indian nursing council (1947), nursing students has been allotted more hours in clinical settings then in theory block. It depends on the student how they manage to study each subjects or they may also apply some learning method for each subject; for example few subject in nursing can't be learn only by visual, auditory or kinesthetic it may involve multimodal learning style.[1]Learning may be referred to as knowledge acquired through study, experience or being taught; whereas style refers to understand that every students learns differently, technically, and an individual learning style refers to the preferential way in which thestudent absorbed, processes, comprehend and retains information.Although study could related the roots of Learning style with philosophical commencement of learning but learning styles emergence may not be conditioned with philosophical.[3] Influence because learning theories but learning styles are product of Learning The learning styles inventory is intended to help or students understand how their learning style impacts upon problem solving, teamwork, handling conflict, communication and career choice; develop more learning flexibility.[7]

Methods

The main study was conducted from 9/5/2019 to 19/5/2019, among 150 samples that were selected by convenience sample techniques. The sample size was 150 .Sample were various college nursing students. Each subject took 15-20 minutes to complete the questionnaire.

Results

This study has been conducted to assess the preferred learning style and correlate the Learning Style through Visual, Auditory, Kinaesthetic scale among Undergraduate Nursing students of selected Nursing colleges of Pune city.

Non-experimental survey research design was used to assess the preferred learning style

which was carried out among 150 nursing students of Symbiosis College of nursing, people were selected by non- probability convenience sampling method technique. Data was collectedusing a structured modified questionnaire consisting of section I & section II; section I was about demographic data and section II was further divided into 3 areas in which each section consisting of questions related to different learning style i.e. visual, auditory and kinesthetic. Content validity was established by 7experts. Findings showed that total150 samples under final data collection. In that 0% samples were from the age of 17 to 18 years, 10% sample from the age of 18.1 to 19 years and 41.3% samples from the age of 19.1 to 20 years. 30.6% of samples from the age of 20.1 to 21. 18% samples from 21 or above were from gender male, 28.6 % sample from gender female 71.3%. The total 150 samples under final data collection In that 26.6 % samples from the Bsc first year , 29.3% sample from the Bsc second year . 27.3% samples from Bsc third year and 16.6% sample from fourth year. Therefore it suggest that samples selected by researcher were appropriate to their study according to their characteristics such as age , gender, religion , academic year , board, parents income and social economicstatus in frequency and percentage & on assessing preferred learning style itshows the preferred learning style among undergraduate nursing students; in which visual is 40% , auditory is 8% , kinesthetic is 27.3% , visual and auditory is 2% , auditory and kinesthetic is 6% , visual and kinesthetic is 13.3% and multi-sensory learner 3.3% and association between demographic data and learning style preference was done which showed that there is significance of religion inwhich R-value is 0.1981, and P-Value is.015096 and significance of academic year in which R-value is 0.1894 and P- Value is .020541.Therefore it suggest that samples selected by researcher were appropriate to their study according to their characteristics such as age , gender, religion , academic year ,board ,parents income and social economic status in frequency and percentage.

Analysis of data related to preferences of learning styles Section 1: Demographic profile of nursing students.

Table 1: Frequency and Percentage distribution of demographic data Demographic details

N=150

Srno	Items	Frequency	Percentage (%)
1	Age		
	17-18	0	0%
	18.1-19	15	10%
	19.1-20	62	41.3%
	20.1-21	46	30.6%

	≥21	27	18%
2	Gender		
	Male	43	28.6%
	Female	107	71.3%
3	Religion		
	Hindu	83	55.3%
	Muslim	8	5.3%
	Other	12	8%
4	Academic Year		
	First Year	40	26.6%
	Second Year	44	29.3%
	Third Year	41	27.3%
	Fourth Year	25	16.6%
5	Board (12th)		
	ICSE	2	1.3%
	CBSE	26	17.3%
	State Board	99	66%
	IB	8	5.3%
	Other	15	10%
6	Parent's Income		
	10,000-20,000	25	16.6%
	20,001-30,000	29	19.3%
	30,001-40,000	24	16%
	40,001-50,000	21	14%
	≥50,000	51	34%
7	Socio-Economic Class		
	Upper Class	7	4.6%
	Upper Middle	91	60.6%
	Lower Middle	45	30%
	Upper Lower	4	2.6%
	Lower	3	2%

Table: 1 shows the demographic details of total 150 samples under final data collection. In that 0% samples were from the age of 17 to 18 years, 10% sample from the age of 18.1 to 19 years and 41.3% samples from the age of 19.1 to 20 years. 30.6% of samples from the age of 20.1 to 21. 18% samples from 21 or above were from gender male, 28.6 % sample from gender female 71.3%. The total 150 samples under final data collection In that 26.6 % samples from the Bsc first year , 29.3% sample from the Bsc second year . 27.3% samples from Bsc third year and 16.6% sample from fourth year. Therefore it suggest that samples selected by researcher were appropriate to their study according to their characteristics such

as age , gender, religion , academic year , board , parents income and social economic status in frequency and percentage.

Section II: Preferred Learning Style

Table 2: Preferred Learning Style

N=150

Preferred LearningStyles	Frequency	Percentage
Visual	60	40%
Auditory	12	8%
Kinaesthetic	41	27.3%
Visual And Auditory	3	2%
Auditory And Kinaesthetic	9	6%
Visual And Kinaesthetic	20	13.3%
Multi-Sensory Learner	5	3.3%

Table 2: this figure shows the preferred learning style among undergraduated Nursing students; in which visual is 40% , auditory is 8% , kinesthetic is 27.3% , visual and auditory is 2% , auditory and kinesthetic is 6% , visual and kinesthetic is 13.3% and multi-sensory learner 3.3% .

Section III: Association between demographic details and Learning styles

Table 3: Association between demographic details and Learning styles

N=150

Srno	Demographic Variable	R-Value	P-Value	REMARK
1	Age	0.1192	.146943	Not significant
2	Gender	-0.1307	.112833	Not significant
3	Religion	0.1981	.015096	Significant
4	Academic year	0.1894	.020541	Significant
5	Board	-0.095	.247521	Not significant

6	Parents income	0.0443	.590379	Not significant
7	Socio economic class	0.0712	.387926	Not significant

Table 3: This section and above table deals with the association between demographic details and learning styles. Karl Pearson coefficient correlation method was used to find out the association between the demographic data and learning style in which we found out that there is significance of religion in which R- value is 0.1981, and P-Value is .015096 and significance of academic year in which R-value is 0.1894 and P-Value is .020541.

Discussion :

This study has been conducted to assess the preferred learning style and correlate the Learning Style through Visual, Auditory, Kinaesthetic scale among Undergraduate Nursing students of selected Nursing colleges of Pune city.The demographic variable selected in the study was age, gender, religion, academic year, board, parent's income and social economic status in frequency and percentage.[4] The frequency and percentage distribution of demographic variables shows total samples of 150 for final data collection; in which 0% samples werefrom the age group of 17 to 18 years, 10% sample were from the age group of 18.1 to 19 years and 41.3% samples were from the age group of 19.1 to 20 years. 30.6% of samples were from the age group of 20.1 to 21. 18% samples from were from age group of 21 or above were from gender male, 28.6 % sample were from gender female 71.3%.The total sample for final data collection was 150; in that 26.6 % samples from the Bsc first year , 29.3% sample from the Bsc second year . 27.3% samples from Bsc third year and 16.6% sample from fourth year.The findings of our research shows that most of the samples preferred visual learning style which is about 40% ,auditory is 8% , kinesthetic is 27.3% , visual and auditory is 2% , auditory and kinesthetic is 6% , visual and kinesthetic is 13.3% and multi- sensory learner 3.3% .There are studies which were conducted for medical students which showed some similar results are as follows:Radhwan Hussein Ibrahim Dhia-Alrahman Hussein conducted a research for department of College ofNursing in University of Mosul College of Nursing and University of Kirkuk; title of research was assessment of visual, auditory, and kinesthetic learning style among undergraduate nursing students it was conducted in the year 2016; the result was most of the student's preferred Visual, Auditory, and Kinesthetic learning style of the study sample was (40.0%), (29.5%), and 30.5%

respectively which is similar to our study because even our research got the same result as above as well it was conducted among nursing students were samples mostly preferred visual 40% ,auditory is 8% , kinesthetic is 27.3%.Anuradha Joshi, Anusha Prabhakaran, Jaishree Ganjiwale, and Deva shish Palka conducted research among MBBS students of a private college at western India; the study was conducted among 1st year students the results were as follows the students preferred kinesthetic (33%), followed by auditory (16%), then visual (14.6%), and lastly read-write (7.86%) where as in our research results were samples mostly preferred visual 40% ,auditory is 8% , kinesthetic is 27.3%.2 A. Alharbi conducted a research in department of German language college of foreign languages, Namik kennel university in the year 2017among nursing students in which the results were most of the students preferred visual (67.9%), followed by active (50%) and sequential (37.5%) learning preferences where as in our also most of the samples preferred visual learning style(40%).

These are studies which are similar to our study findings and it was conducted among nursing students and the possibility of the same results and findings are may be due to the reason is that samples are from nursing colleges and medical college and also sharing the same stream which deals not only with the theoretical part but as well as with the practical sessions which is in turn related to seeing the things and learning that is visual and also by demonstrations which is nothing but kinesthetic and in nursing or any other medical stream things aren't learned only by listening or by theory blocks but most of the things are learned by practical session.

Conclusion

The findings indicated that questionnaire was an effective strategy in bringing the preferred learning styles. The similar to our study findings and it was conducted among nursing students and the possibility of the same results and findings are may be due to the reason is that samples are from nursing colleges and medical college and also sharing the same stream which deals not only with the theoretical part but as well as with the practical sessions which is in turn related to seeing the things and learning that is visual and also by demonstrations which is nothing but kinesthetic and in nursing or any other medical stream things aren't learned only by listening or by theory blocks but most of the things are learned by practical session. The structured questionnaire was acceptable and useful method of assessing the preferred learning styles.

Conflict of interest: The authors declare that they have no conflict of interests

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