



Original Article

Assessment of Visual, Auditory and Kinesthetic Style of Learning among Undergraduate Nursing Students of Sindh

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ABSTRACT

Learning styles refer to the ability of learner to perceive and process information in learning framework. Visual, Auditory, and Kinesthetic are modes by which students use three sensory perceptions to receive information. **Objective:** To assess visual, auditory, and kinesthetic learning style among nursing students. **Methods:** Cross sectional study among students of diploma in general nursing, of nursing schools of Jacobabad and Jamshoro- conducted during May- October 2017 with sample size of 88 via simple random sampling. After the approval, the data were collected from the concerned school with their permission. Data were entered into SPSS 23.0 version in which frequency, percentages were generated and chi square were applied. **Results:** Eighty-eight participated in among them 52(59.1%) were from SON-LUH (Female) Jamshoro and 36(40.9%) were from SON (Male) Jacobabad. Most of the students were from 2nd and 3rd year 34(38.6%) and 36(40.9%). Auditory style of learning was at the highest among male students 36.12% whereas females were at the highest in visual style of learning 34.62%. Forty years students learnt at the highest in visual and kinesthetic style of learning 3311%. **Conclusions:** Undergraduate nursing students of both gender & academic years were equally inclined towards all learning styles.

INTRODUCTION

Learning style is playing the most important role in learning and teaching methodology where teachers are commonly divides their students into visual, auditory learners [1]. Safety of clients is completely depending upon skills, and knowledge, significant gap has been reported among nurses in practice and education [2]. A recently study was conducted in which they had performed a kinesthetic analysis regarding to voice gesture through electromagnetic articulography which configure (blocks, revisions, and alter in fluency)[3]. Students are facing a lot of illness i.e. ASD where they feel hindrances in learning and interacting smoothly with faculty or siblings[4] The matter of prioritizing the learning style can be gained through

planning, leadership and management development [5]. Many researches have been conducted regarding Learning styles which have suggested the different ways in which to define and test how different students learn at maximum level, there is no one way is to define a learner and no one 'right' test to take to find out how you learn [6]. The Visual-Auditory-Kinesthetic learning styles model or 'scales', usually Abbreviated as VAK, which have been provided the simple explanation (learning styles of others) [7]. VAK styles are called to be mixture of all methods of teaching strategies. The three main VAK styles are described as follows; 1- Visual: Seeing and reading, 2- Auditory: Listening & speaking and 3- Kinesthetic: Touching and

doing [8]. There is a huge shortage of this study at local environment, this study fulfill the gap and objective of this study was to assess the Visual, auditory and kinesthetic learning style among nurses. [17]

METHODS

A cross-sectional study was conducted in six months among diploma in general nursing students of nursing schools of Jacobabad and Jamshoro-Sindh with sample size of 88 via simple random sampling. Students with sound health were included whereas having illness or on leave were excluded from the study. After the approval of title, the data were collected from the concerned school with their permission. Consent form was filled and complete autonomy was provided to samples regarding research ethics and policy. Data were encoded and decoded in SPSS-23.0 version in which frequency and percentages were generated. Tool; reliability and validity: VAK Learning style developed by Victoria Chislett & Alan Chapman in 2005. In which 2 sections were comprised of 1. Demographic, 2. VAK items of 30 multiple choices having Likert ranking A, B and C. Reliability of the questionnaire was determined through the use of test-retest approach. Chi-square test was used to check the association among the categorical variables [16].

RESULTS

Results of two institutes i.e., SON(M) Jacobabad and SON-LUH (Female) Jamshoro- Sindh were collected in which 36 (40.9%) male and 52 (59.1%) female nursing students responded among their 04 classes i.e. First 09(10.2%), Second 34(38.6%), Third 36(40.9%) and Fourth year 9(10.2%) were accordingly as in Table 1.

Table 1: Demographic Statistics

Variables	F (%)
Schools	
SON (Male) Jacobabad	36(40.9)
SON-LUH (Female) Jamshoro	52(59.1)
Total	88(100)
Gender	
Male	36(40.9)
Female	52(59.1)
Total	88(100)
Academic Year	
First Year	9(10.2)
Second Year	34(38.6)
Third Year	36(40.9)
Fourth Year	9(10.2)
Total	88(100)

When comparison of styles of learning were analyses among Visual, Auditory and Kinesthetic in between SON (Male) Jacobabad and SON-LUH (Female) Jamshoro; the students of SON (Male) Jacobabad were having auditory

style 13(36.12) and females of SON-LUH Female Jamshoro were visual style 18(34.62) whereas kinesthetic learning were at SON(Male) Jacobabad 11(30.55) and SON-LUH(Female)Jamshoro 17(32.69) as shown in Figure 1.

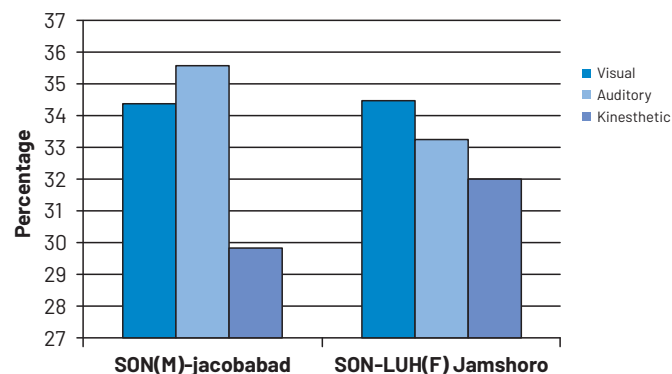


Figure 1: VAK Learning Style in between SON (Male) Jacobabad and SON-LUH (Female) Jamshoro

When class wise styles of learning i.e., Visual, Auditory and Kinesthetic Learning Style among academic years of students of SON (Male) Jacobabad and SON-LUH (Female) Jamshoro were tabulated in which the students of first and fourth years were Auditory and Kinesthetic style as 10(13.6) respectively while as second year at kinesthetic style were 10(11.04). To find out association in between gender, academic year and institute vs visual, auditory and kinesthetic style of learning, chi square was applied in which no significance was found among dependent and independent variables as shown in Table 2.

Table 2: Association in between variables (Chi Square test) N (%)

Variables	Visual	Auditory	Kinesthetic	p- value	
Gender	Male	12(13.6)	13(14.8)	11(12.5)	0.944
	Female	18(20.5)	17(19.3)	17(19.3)	
Academic Year	1st	3(3.4)	3(3.4)	3(3.4)	0.958
	2nd	11(12.5)	13(14.8)	10(11.4)	
	3rd	13(14.8)	10(11.4)	13(14.8)	
	4th	3(3.4)	2(2.3)	4(4.5)	
Institute	SON(M)	12(13.6)	13(14.8)	11(12.5)	0.944
	SON(LUH)	18(20.5)	17(19.3)	17(19.3)	

DISCUSSION

This study was conducted in between two nursing colleges of Sindh, having 36 male of School of Nursing Jacobabad and 52 females of LUH School of Nursing Hyderabad with sample size of 88(100%) accordingly with 100% respondent rate. in our study 30 (30.33%) visual style, 30 (30.33%) auditory style, and 28 (31.8%) were their concept that they were good at gaining information through kinesthetic style of learning, in a previous study which was conducted in which Visual, Auditory, and Kinesthetic learning style were 54%, 26.9%, and 19.1% respectively, this study little bit supporting the result of our study [5] and one more another study conducted among secondary school students which

is revealing that Visual, Auditory, and Kinesthetic learning style as 33.5%, 28.5%, and 38% [6], the results of this study is more nearer to the results of our study. The results of our study also categorized in the result section according to the class wise in which 3(3.4%) in each similar and equal results were found in visual, auditory and kinesthetic style of learning among both students of nursing colleges where a study was conducted by Ahmed J, which is revealing the results like 49 students (23 males & 26 females) in which unimodal learning method were performed among them 2(.3%) preferred visual, 17(36.5%) auditory, 7(11.1%) read-write and 23(49.2%) had priorities kinesthetic learning [7]. While categorization gender wise among males 12(13.6) visual, 13(14.8) and 11(12.5) were found interested in such method of learning and among females 18(20.5) in visual, 17(19.3) in auditory and 17(19.3) in kinesthetic style of learning were declared while in a previous study reveals that females are early quitter of learning in which result reveals that 54% females and only (12.5%) males have one method of learning style. Various previous studies have clarified learning according to age wise and gender wise as a study conducted by Jackson in which gender had played vital role in learning process [8]. VAK Style of learning questionnaire was used in our study while a study conducted by Wehrwein *et al.*, has described styles of learning and same questionnaire used by them in their used in which results revealed that no significant correlational were found in between either gender [9-11]. Our study has more inclination towards visual style of learning while in a previous study conducted at Malaysia in which 207 males and 199 females were participated in which females' priorities visual style of learning, this study is also supporting the result of our study [12-14]. Chi-square test was used to confirm association between gender, academic year and institute with auditory, visual and kinesthetic learning style in which no association were found among them, a previous study also supporting our research in which almost same p-value has been notified in the analysis [15-17]. In our study three methods of learning styles were mentioned and it is very difficult for a faculty member to use all methods simultaneously and also it is very hard for someone to modify their method of teaching for this cause and in a previous study is also announced that a few people hardly modify their method of teaching. A surveyed among university students regarding learning styles in which, result reveals that their academic standard varies learning styles [18-20].

CONCLUSION

Undergraduate nursing students of both gender and academic years were equally inclined towards all learning styles.

Authors Contribution

Conceptualization: LS, MA

Methodology: FS

Formal Analysis: MGM

Writing-review and editing: LS, MA, FS, MGM, MIA

All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflict of interest.

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