

Nursing and Midwifery Students' Learning Styles in Tabriz Medical University

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Abstract: Identifying effective factors in learning is one of the important issues considered by researchers. The aim of this study was to determine nursing and midwifery students' learning styles in Tabriz University of Medical Sciences. In a descriptive study performed in 2005, 250 nursing and midwifery students were selected by census sampling method. The research tool was David A. Kolb's learning style inventory including 12 questions which was distributed and collected as group administered. The analysis of data based on LSI guide was done by SPSS. The majority of nursing and midwifery students were converger (54.2%). Also, 32.1, 7.5 and 6.2% of them were assimilator, accommodator and diverger, respectively. Considering the use of converger and assimilator learning styles among students, it is recommended that faculty members use visual method, diagrams, teacher's handouts, lecture and self-learning methods.

Key words: Learning styles, nursing, midwifery, student

INTRODUCTION

Identifying effective factors leading to learning is one of the important issues considered by researchers and learning styles, the habits of individuals' information processing, one of the effective elements in learning (Bastable, 2003; Katez *et al.*, 2004). Learning styles are cognitive, affective, characteristic and physiological behaviors which are the indicators of the qualification of perception, action, response to the learning environment with a comparatively form (Hsu, 1999).

Researchers believe that each learner has his own preferred methods to understand, organize and save information which is consistent and recognizable. According to Kolb, learning styles are formed due to heritable factors, life experiences and the demands existing environments and its base is rooted in people's nervous structure and their personalities. Although learning styles are rather consistent, qualitative changes may happen because of evolution, maturation and environmental stimulus (Stucliffe, 1993; Fowler, 2002; Karani, 2001).

Learners perceive the information through a spectrum of concrete experience and abstract conceptualization, then they reform and process the perceptual or obtained information of a spectrum of active experimentation to reflective observation.

Four different learning styles based on individuals' preferred information perceiving processing modes, are named as diverger, accommodator, converger and assimilator (Hsu, 1999). The preferred instructional

method in divergers are collective discussion and brain storming and in accommodators are role playing and computer's simulation, in convergers are visual methods, diagrams and teachers handouts and finally in assimilators are lecture and sample reading materials.

Nowadays the teachers are suggested to concern about differences among learners and pay attention to their learning styles so that the proper conditions to reach the optimum level for all learners can be available (Karani, 2001; Salehi *et al.*, 2000).

Nursing student's learning styles due to cultural conditions are reported different in various nations (Katez *et al.*, 2004; Hsu, 1999; Stucliffe, 1993; Fowler, 2002; Karami, 2001; Salehi *et al.*, 2000). There are few studies in our country (Iran). Nursing students learning style in Isfahan Medical University is reported mostly diverge and in Quazvin Medical University were assimilators (Salehi *et al.*, 2000; Sarchami and Hosseini, 2004).

The aim of this study was to determine the nursing and midwifery students' learning styles in Tabriz Medical University in 2005. This knowledge may be used to provide the proper educational condition.

MATERIALS AND METHODS

In a descriptive study performed in 2005, 250 students of Tabriz Nursing and Midwifery College were selected by census sampling method. The instrument of this study was Kolb's learning style Inventory Questionnaire.

It's content validity and reliability was formerly considered by Kolb and other nursing researches and Razzagh Karami in Tabriz Training College (Hsu, 1999; Stuccliffe, 1993; Fowler, 2002; Karami, 2001). Reliability in this study was considered among 30 students with Cronbach's Alpha method and the correlation coefficient was from 70-90% for modes and axes.

This questionnaire contains 12 items that each one has four phrases including concrete experience, reflective observation, abstract conceptualization and active experimentation. Totally four scores are obtained out of them, which indicate four learning modes. The first phrase in each question is concrete experience learning style (feeling), the second phrase is reflection observation learning style (watching), the third phrase is abstract conceptualization learning style (thinking) and eventually the fourth phrase, is active experimentation learning style (doing).

By subtracting these styles two of them with two others, that is abstract conceptualization from concrete experience and active experimentation from reflective observation, two scores are obtained. And these two scores are put on coordinates axes, concerning positive or negative. Vertical axis is concrete experience to abstract conceptualization and horizontal axis is reflective observation to active experimentation that will be recognized learning style by these (Fowler, 2000; Karani, 2001).

The questionnaire was administered by distribution-collection method. In a way that after teachers' instructing and obtaining students' satisfaction, they were given some explanation about the aim of study and the way to answer it. Then questioners were distributed and immediately collected after being completed. The analysis of data based on first guide line tool was done by SPSS. It was presented due to the guide tool and analysis the frequency distribution of student's learning styles.

RESULTS

All students completed the questionnaire. One hundred and forty three nursing students (57.2%) and 107 midwifery ones (42.8%) participated in this study. Students' frequency out of 1, 3, 5 and 7 semesters were 18, 14.8, 32.4 and 34.8%, respectively. The majority of them were day (59.6%) and 40.4% were night students.

The absolute and comparative frequency distribution of Nursing and Midwifery students learning styles has been presented in Table 1 and indicates that the majority of learners have assimilator and converger styles in both groups.

DISCUSSION

The results of present study showed that most students in Nursing and Midwifery College have converger and assimilator learning styles, which suits with the study results (Stutsky and Laschinger, 1995). Another study conducted among Quazvin Nursing students has shown that most students have assimilator (53.8%) and converger learning styles (28.9%) (Sarchami and Hosseini, 2004). Also majority of Medical students have been assimilators (Karami, 2001), but finding the present study doesn't match with the study shown the majority of nursing students were divergers (Salehi *et al.*, 2000). Meanwhile Kolb claims that most nurses tend to be diverger (Myrick and Yeng, 2004). And other studies have indicated that most nurses have diverger and accommodator learning style (Haislett *et al.*, 1993; Riddey *et al.*, 1995).

However, the high rate of converger and assimilator learning styles among nursing and midwifery students in this study can be related on receiving information through making symbols out of experiences, dealing with concepts and abstract ideas, more than working with individuals. As a result they may lose something concerning the feeling of experience.

The greatest convergers' strength is practical usage of ideas and in assimilators it is capability in creating theoretical models. So, although each mode or style of learning has its own strength points, weak aspects of learning cycle may remain weak, if ignored (Smulders, 2004).

Some acceptable indications of transformation possibility in learning style have been presented after graduation (Stuccliffe, 1993). Most teachers have done numerous studies about the effects of instructional method, in learners' learning style and reported different results (Slehi *et al.*, 2000; Joyce, 1996).

Regarding to the students' learning style in present study, it is suggested that faculty members use visual methods, diagrams, teachers' handouts and individual teaching, lecture and self learning with sample reading materials.

Table 1: Absolute and comparative frequency distribution of learning styles of Tabriz Nursing and Midwifery students (2005)

	Converger	Assimilator	Diverger	Accommodator	blank	In all
Nursing	74(53.2%)	44(31.7%)	7(5%)	14(10.1%)	4	143
Midwifery	56(55.4%)	33(32.7%)	8(7.9%)	4(4%)	6	107
Total	130(54.2%)	77(32.1%)	15(6.2%)	18(7.5%)	10	250

Since nursing and midwifery are communicative occupations, people centered and academic fields (Stucliffe, 1993; Sarchami and Hosseini, 2004), paying attention to students' learning style can encourage nursing teachers to help learners about needed aspects, so by using of different instructional strategies, they can response instructional requirements and proceed to obtain or enable the essential empowerments in real instructional and occupational environments in future.

Therefore, performing studies leading to determine application possibility of this tool, is suggested as screening test for weak points in learning cycle and the possibility of presenting individual recommendations to improve students' learning process.

In the other hand, performing experimental studies in order to apply instructional strategies, regarding to learning style, is useful to improve students' learning.

CONCLUSION

The majority of Nursing and Midwifery students in this study used converger and assimilator learning styles. It is recommended hat faculty members mostly use visual methods, diagrams, teachers' handouts, lecture and self learning in their instructional methods.

ACKNOWLEDGEMENT

This article is resulted of a research project supported by Tabriz Medical Sciences University's Research Deputy.

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