

Assessment of the Nursing Students' Perception toward their Learning Style

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ABSTRACT

Background: Learning style has been defined by various scholars mostly as a signal for individual differences. These differences may manifest itself in 'life styles' and even in personality types. Baccalaureate nursing programs prepare professional nurses who can provide direct client care in a variety of health care settings and provides an emphasis on clinical practice to be more competent care givers. Several theoretical models have been proposed to explain learning style preferences and several instruments have been developed to diagnose these preferences, some of which are the Kolb experimental model, Canfield model, and Witkin's field independence-dependence model. **Aim of the study:** Assess the perception of nursing students toward their learning style at faculty of nursing in Menoufyia University. **Research Questions:** Are the nursing students independent learners? Is there a relationship between the student's learning style and their academic year? **Research Design:** descriptive research design was used. **Results:** The mean age of the sample was 19.9 ± 1.77 . The academic year of the sample; 20% were from first year, 20% from second year, 20% from third year, 20% from fourth year and the last 20% from internship year. Regarding learning style the highest percentage of students (55.2%) were independent learners and 44.8% were dependent learners. The study displayed highly statistical significant difference regarding the academic year and the learning style used ($P = *0.001$) and there was highly statistical significant difference regarding the age and the learning style ($P = *0.001$). **Conclusion:** more than half (55.2%) of nursing student perceive themselves as independent learners.

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Introduction

Learning is best conceived as a process, not in terms of outcomes. To improve learning in higher education, the primary focus should be on engaging students in a process that best enhances their learning process; that includes feedback on the effectiveness of their learning efforts. Today's changes in the health care need from nurse educators take actions to ensure the availability of skilled practitioners in adapting to this pace of change. Teachers, students and

curricula determine the quality of nursing education. In most nursing schools, emphasis is always on curriculum development, selection and organization of content, organization of teaching, and student evaluation. **(Mohamed & Helal 2012, Kolb 2005)**

Learning processes vary from person to person due to the presence of biological and psychological differences. There are some theorists or practitioners who believe that learning style is not an independent or individual concept that is totally free from the interaction of other elements or variables. Rather there are different elements that contribute in the constitution of a particular learning style. The concept of learning style is the combination of characteristic cognitive, affective, and psychological elements. These elements determine the way of perceiving, interacting with, and responding to the learning environment. They decide that how one particular individual will react to a specific situation and how he or she will behave in a unique or common learning situation **(Abidin et al 2011, Abu-Moghli et al 2005)**.

The diagnosis of learning style gives an advantage to educators in terms of facilitating them to analyze the performance of their students, motivate them in the better way, and guide their students in the school that how they can get maximum benefit in the instructional programs. The learning style diagnosis is considered a most powerful approach to education as well as an innovative and unique way of finding out learners' differences in term of learning. The knowledge of students' learning style helps a teacher in better teaching and modifying teaching strategies according to varied needs and preferences of learners. The asset of studying different learning styles is the improvement in teaching learning process; learning problems are frequently not related to the difficulty of the subject matter but rather to the type and level of the cognitive processes required to learn the material **(Keefe and Ferrell 1990, Sitt-Gohdes 2001)**

Several theoretical models have been proposed to explain learning style preferences and several instruments have been developed to diagnose these preferences, some of which are the Kolb experimental model, Canfield model, and Witkin's field independence–dependence model **(Cleverly 1994)**. Kolb developed a model of experiential learning and a learning style inventory based on the preferred learning mode. Reliance on a particular mode of learning results in a certain style. The four basic learning styles described by Kolb are:

A four-stage learning cycle. (Which might also be interpreted as a 'training cycle'). In this respect Kolb's model is particularly elegant, since it offers both a way to understand individual people's different learning styles, and also an explanation of a cycle of experiential learning that applies to us all. Kolb includes this 'cycle of learning' as a central principle his experiential learning theory, typically expressed as four-stage cycle of learning, in which 'immediate or concrete experiences' provide a basis for 'observations and reflections'. These 'observations and reflections' are assimilated and distilled into 'abstract concepts' producing new implications for action which can be 'actively tested' in turn creating new experiences. **(Abu-Moghli et al 2005)**

Improvement in students' achievement in cases where learning styles have been taken into account show that the way things are taught had a greater impact than the content covered in a course of study. It is believed that when teachers are able to analyze the differences and needs of their students, the educational process is likely to become optimized for both students and teachers **(Abidin et al 2011)**. Knowing the students learning style give the teacher certain indication about how instruction can be modified in terms of grouping, pacing, materials and teaching style to optimize learning performance. Moreover, individual learning styles affect not only academic learning but also broader aspects of adaptation to life, such as decision making, problem solving and life style in general **(Mohamed & Helal 2012)**

Faculty should assess preferred learning styles throughout the students' enrolment in the curriculum and should apply a variety of teaching approaches to effectively teach all students. As well, Teachers should adopt their educational approaches with learning styles of their learners as far as possible to achieve better and deeper learning. By matching the teaching style with the student's preferred learning style, content retention should improve, thus improving exam scores.

It is important for those responsible for teaching practicing nurses to understand that they may have to employ a variety of teaching styles to achieve maximum effectiveness and to meet the complex needs of registered nurses population. So, the present study is conducted to identify the learning style preferences of nursing students at faculty of nursing in Menoufia University.

Aim of the Study

Assess the perception of nursing students toward their learning style at faculty of nursing in Menoufia University.

Research Question:

- 1- Are the nursing students independent learners?
- 2- Is a relationship between the student learning style and their academic year?

Subject and Methods

Descriptive research design was used to assess the student perception regarding their learning style.

The sample was taken from faculty of nursing- Menoufiya university including four nursing years' students and internship year ; first year, 2nd year, third year, fourth year and internship year it was took from May -June 2012.

A convenient sample of 250 students were recruited; 50 students from first year, 50 students from second year, 50 students from third year, 50 students from fourth year and 50 students from internship year.

The questionnaire used for data collection was adopted from Abu-Moghli et al 2005 (Autonomous Learner Index (ALI)) . It was translated and modified by the researchers it consists of two parts: part (1) pertains to demographic data and part (2) included a list of 24 short statements that describe independent and dependent learning behaviors. In front of the statements is a five-point Likert scale ranging from strongly agrees to strongly disagree. Nine of the 24 statements indicate dependent learning and 15 indicate independent learning. The questionnaire was in simple Arabic language.

The data collected from the students who fill the questionnaire in about 15 to 20 minutes. Data collection took about two months, analysis of the findings was carried out using SPSS-16. It focused on the participants' demographic characteristics and their responses to items of questionnaire. The analysis was performed by obtaining descriptive statistics, frequencies and percentages for sample characteristics, as well as for measuring students' responses to items indicating students' learning styles; dependent/independent.

Human Rights and Ethical Considerations

The subjects were chosen after their informed consent was obtained to participate in the study. The researchers also reassured the subjects that their privacy would be protected, and any obtained information would be strictly confidential.

Statistical Analysis:

The collected data were coded for entry and analysis performed using (SPSS) statistical software package version 16. Data were presented using descriptive statistics in the form of frequencies and percentage. Quantitative variables were presented in the form of means and standard deviation, and tested by student t-test. Qualitative variables were compared using chi-square test. Statistical significance was considered at p-value <0.05 .

Results

As shown in table 1 the mean age of the sample was 19.9 ± 1.77 . Regarding to parents' education, the highest percentage of student's fathers (59.2%) were have university education while 42% mother's education were basic education.

Figure 1 illustrates that the highest percentage of the sample (55.2%) use independent learning style compared to 44.8% using dependent style.

Table 2 shows the distribution of the sample regarding the items of independent learning style; near to the half of sample (49.2%) reflected feelings of independence and give answer by agree regarding the item of "desire to learn new things". While (39.2%) give agree answer regarding the item of "have good study skills". About (42.4%) give answer strongly disagree regarding "need little assistance from teacher". Near two third of the sample (68.8%) answer by cannot decide regarding to "feel comfortable in independent learning". Slightly more than one quarter (28%) of the sample agree regarding to item of "curious to learn". This table also reveals that; the majority of sample (82.8%) also agree regarding the item of "work hard to find solutions". Regarding to the item of "find references for any subject" about (77.2%) of the sample answer by agree. While (71.6%) answer by strongly disagree regarding to item of "like doing research". About (45.2%) strongly agree regarding to "finish assignments before due date". And (47.6%) gives answer by agree regarding to "identify own goals independently". The

highest percentage of the sample (40.8%) strongly agree regarding to the item of “use study time efficiently”. This table displays more than half of the sample (52.4%) strongly disagree regarding to “enjoy problem solving”. While near two thirds of the sample (62 %) agree regarding to “feel independent during theory courses”. Regarding to “feel independent during clinical courses” about two thirds of the sample (67.6%) give agree answer. Finally (30.8%) and (42.4 %) of samples strongly agree and agree respectively regarding to item of "I am an independent learner".

Table 1: Sociodemographic characteristics of the samples

	No	%
Age X±SD	19.9 ± 1.77	
Father education		
Illiterate	21	8.4
Basic	28	11.2
Secondary	52	20.8
University	148	59.2
Post graduate	1	0.4
mother education		
Illiterate	30	12
Basic	105	42
Secondary	66	26.4
University	49	19.6
Academic year		
First	50	20
Second	50	20
Third	50	20
Fourth	50	20
Internship	50	20

Table3 shows the distribution of the studied sample regarding the dependent learning style variables. The highest percentages of sample strongly disagree regarding to the items of dependent learning style; which are, “Difficulty adjusting resources to needs”, “Cannot concentrate”, “Prefer help to solve my problems”, and “Finish assignments only for a due date” representing (58.9%), (64.0%), (77.2%) and (48.4%) respectively. Regarding to the item of “Prefer sequenced stable activities”, the highest percentage of students answer disagree by (28.0%). More than two thirds of the sample (74.8%) strongly agree regarding the item of “ Do the minimum for any course”. About more than three quarters of the sample (81.6%) cannot decide regarding to item of “Prefer textbook course”. Also more than half of the sample (57.6%) strongly agree regarding “Study only for exams”. Only the minimum percentage (3.2%) perceive themselves as dependent learners by giving strongly agree answer while the highest percentage of sample (40.4%) strongly disagree regarding to this item “I am a dependent learner”.

Table 4 displays highly statistical significant difference regarding the academic year and the learning style preferred ($P < 0.001$). The fourth year nursing students were more independent learners (29.7%) followed by third year (28.3%), internship year (23.8%), second year (13.8%) and (4.3%) in first year. Also this table shows no statistical significant difference regarding parent education (father, mother education) and learning style ($p = 0.835, 0.395$). And there was no statistical significant difference regarding the residence and its relation to the learning style ($p = 0.058$). But this table shows highly statistical significant difference regarding the age and the learning style ($P < 0.001$).

Figure 1: Distribution of the samples regarding the learning style

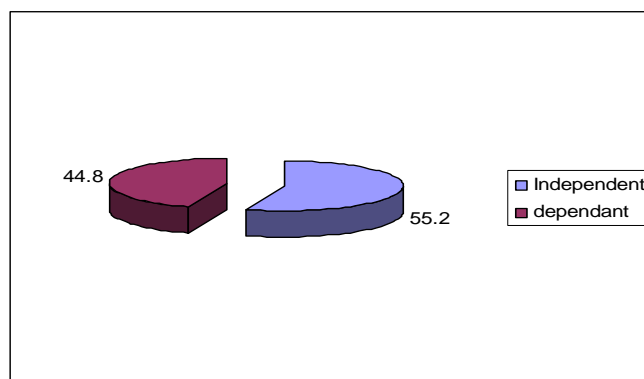


Table 2: Distribution of Studied Sample Regarding Independent Learning Style Variables

Parameter	Strongly agree	Agree	Cannot decide	Disagree	Strongly disagree
Desire to learn new things	46 (18.4%)	123 (49.2%)	22 (8.8%)	36 (14.4%)	23 (9.2%)
Have good study skills	49 (19.6%)	98 (39.2%)	45 (18%)	31 (12.4%)	27 (10.8%)
Need little assistance from teacher	46 (18.4%)	20 (8%)	6 (2.4%)	72 (28.8%)	106 (42.4%)
Feel comfortable in independent learning	14 (5.6%)	23 (9.2%)	172 (68.8%)	22 (8.8%)	19 (7.6%)
Curious to learn	41 (16.4%)	70 (28%)	43 (17.2)	46 (18.4%)	50 (20%)
Work hard to find solutions	22 (8.8%)	207 (82.8%)	9 (3.6%)	11 (4.4%)	1 (0.4%)
Find references for any subject	2 (0.8%)	193 (77.2%)	1 (0.4%)	21 (8.4%)	33 (13.2%)
Like doing research	21 (8.4%)	12 (4.8%)	3 (1.2%)	35 (14%)	179 (71.6%)
Finish assignments before due date	113 (45.2%)	70 (28%)	4 (1.6%)	25 (10%)	38 (15.2%)
Identify own goals independently	105 (42%)	119 (47.6%)	6 (2.4%)	10 (4%)	10 (4%)
Use study time efficiently	102 (40.8%)	93 (37.2%)	3 (1.2%)	13 (5.2%)	39 (15.6%)
Enjoy problem solving	20 (8%)	68 (27.2%)	3 (1.2%)	28 (11.2%)	131 (52.4%)
Feel independent during theory courses	13 (5.2%)	155 (62 %)	9 (3.6 %)	33 (13.2 %)	40 (16 %)
Feel independent during clinical courses	20 (8 %)	169 (67.6%)	9 (3.6 %)	40 (16%)	12 (4.8%)
I am an independent learner	77 (30.8%)	106 (42.4 %)	4 (1.6%)	35 (14%)	28 (11.2%)

Table 3: Distribution of Studied Sample's regarding to dependent Learning Variables

Parameter	Strongly agree	Agree	Cannot decide	Disagree	Strongly disagree
Difficulty adjusting resources to needs	19 (7.6%)	18 (7.2%)	27 (10.8%)	39 (15.5%)	147 (58.9%)
Cannot concentrate	21 (8.4%)	20 (8.0%)	3 (1.2%)	46 (18.4%)	160 (64.0%)
Prefer help to solve my problems	25 (10%)	0 (0%)	3 (1.2%)	29 (11.6%)	193 (77.2%)
Finish assignments only for a due date	16 (6.4%)	79 (31.6%)	2 (0.8%)	31 (12.4%)	122 (48.4%)
Prefer sequenced stable activities	64 (25.6%)	39 (15.6%)	11 (4.4%)	70 (28.0%)	66 (26.4%)
Do the minimum for any course	187 (74.8%)	30 (12.0%)	17 (12.0%)	15 (6.0%)	1 (0.4%)
Prefer textbook course	0 (0.0%)	2 (0.8%)	204 (81.6%)	16 (6.4%)	28 (11.2%)
Study only for exams	144 (57.6%)	78 (31.2%)	4 (1.6%)	11 (4.4%)	13 (5.2%)
I am a dependent learner	8 (3.2%)	20 (8.0%)	29 (11.6%)	92 (36.8%)	101 (40.4%)

Table 4: Relationship between Learning Style and Sociodemographic Characteristics of the Samples

Parameter	Independent =138		Dependant =112		Chi square	P value
	No	%	No	%		
Academic year						
First	6	4.3	44	39.3	71.1	*0.001
Second	19	13.8	31	27.7		
Third	39	28.3	11	9.8		
Fourth	41	29.7	9	8.0		
Internship	33	23.8	17	15.2		
Father's level of education:						
Illiterate	13	9.4	8	7.2	1.45	0.835
Basic	15	10.8	13	11.6		
Secondary	27	19.6	25	22.3		
University	82	59.4	66	58.9		
Post graduate	1	0.7	0	0		
Mother's level of education						
Illiterate	19	13.8	11	9.8	2.981	0.395
Basic	62	44.9	43	38.4		
Secondary	32	23.2	34	30.4		
University	25	18.1	24	21.4		
Residence						
Urban	71	51.4	71	63.4	3.59	0.058
Rural	67	48.6	41	36.6		
#Age X±SD	20.59± 1.16		19.25± 2.11		6.35	*0.001

student t test

Discussion

Baccalaureate nursing students in the present study seem to have a preference for the independent learning style. This might be because baccalaureate nursing students are engaged in an educational pursuit to provide a complex nursing care requiring specialized skills and problem-solving techniques as demonstrated by (Dobson, 2009). This result also is in an agreement with Abu-Moghli et al., 2005 who used the Autonomous Learner Index (ALI) to identify Jordanian baccalaureate nursing students' perception of their learning styles. On the same line Lohri-Posey (2003) sought to determine the learning style preferences among baccalaureate nursing students and the results of this study showed 65% of students were active learners.

The highest percentage of the present study nursing students is (Curious to learn). This conforms to the fact that nursing is a profession in which ongoing learning is required (Gallagher, 2006). Similarly, Paul et al. (1994) reported that most students preferred to learn when they were given clear and specific direction objectives and assignment. Moreover, this result is in the same line with Abu-Moghli et al., 2005 who reported that the majority of nursing students indicated that they had desire to learn new things and curious to learn.

Also students reported that they (Work hard to find solutions) (enjoy problem solving) and (feel independent during clinical courses), these findings are in an agreement with the Crannell & Witte (2012) study which reported that there are many areas of clinical practice open to registered nurses that require considerable amounts of information processing, the ability to act on the information that has been processed and the ability to evaluate the outcome of the actions taken. All areas of nursing require the ability to analyze symptoms and patient responses to provided therapies. Additionally, Callister et al. (2000) indicated that students are more concerned about harming patients, which motivates them to prepare before the clinical experience with relevant learning activities facilitated by faculty. This finding is inconsistent with that of Ostmo et al. (1984) who reported that nursing students preferred learning strategies that were traditional in nature, teacher directed, and highly organized.

More over students reported that they (identify their own goals independently). The idea is that the adult learner has particular goals in mind when undertaking a learning process has been well established (Dunn & Dunn, 1998; James & Blank, 1993; Saransin, 1999). This result is in the same line with Abu-Moghli et al., 2005 who reported that the majority of nursing

students indicated that they could identify their goals independently. This is true of an individual embarking on the journey to become a registered nurse (**Crannell & Witte, 2012**). **Merritt (1983)** reported contradictory results and indicated that baccalaureate nursing students were not particularly concerned with having an opportunity to set their own goals or pursue their own learning interest.

Results of this study also revealed that, statistical significant difference was found between learning style and the age of nursing students and the students at the senior level “third, fourth and internship” seem to prefer independent style of learning compared to the junior students “first and second”). These finding might be because those senior nursing students in the third, fourth and internship years of their nursing education go to the hospital more often than the previous years and encounter patient more frequently. This finding is supported by (**Keller, 1987**) who suggested that, older adult learners prefer instructional situation that, emphasize practical, experience-related learning opportunities and assists them to be actively involved in increasing their competence to perform the developmental tasks of various social roles; and allows them to be self directing and independent in pursuing their individual learning needs. This finding is in the same line with **Paul et al. (1994)** who reported that students tend to shift toward more independence in learning as they move to the clinical setting. Moreover, **Pedrosa de Jesus et al (2004)** and **Rusian, (2005)** discovered “as students proceed in their learning process, they can discover new and better ways of learning” and therefore vary their learning styles. A learning style or preference may stay the same over time or it may change with each new situation or experience (**Cassidy, 2004**). **McDonough and Osterbrink (2005)** agreed stating, “learning styles are not static and may change as a result of the type of instruction to which the student is exposed”.

Conclusion

Based on the results of the present study, more than half (55.2%) of nursing student perceive themselves as independent learners. There was statistical significant difference was found between learning style and the age of nursing students and the students at the senior levels “third, fourth and internship” seem to prefer independent style of learning compared to the junior students “first and second”.

Recommendations

- Nurse educators should encourage students for active participation in the learning process, which will stimulate continued self-direction as well as they should incorporate a style of teaching that focuses on critical thinking skills where it is very important to meet the complex needs of registered nurses who are working in a dynamic hospital environment.
- Nurse educators need to be aware of their own teaching styles, and to develop skills to adopt their educational approaches with learning styles of their learners as far as possible to achieve better and deeper learning.
- Nurse educators in collaboration with those who are at the administrative levels should act as facilitators of learning and should ensure the availability of resources and opportunities for practice.

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