Wprowadzanie różnych metod nauczania uwzględniając style uczenia się studentów pielęgniarstwa

Introduction of different teaching methods to take account of learning styles of nursing students

Barbara Donik, Mateja Lorber, Klavdija Čuček Trifković, Majda Pajnkihar, Barbara Kegl, Jadranka Stričević

University of Maribor, Faculty of Health Sciences, Institute of Nursing Care, Slovenia

AUTOR DO KORESPONDENCJI:
Barbara Donik
University of Maribor, Faculty of Health Sciences,
Institute of Nursing Care, Slovenia
E-mail: barbara.donik@um.si

STRESZCZENIE

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Wstęp. Opracowanie przedstawia jak ważne jest, aby nauczyciele pielęgniarstwa znali dominujące style uczenia się studentów, ponieważ mogą wówczas zaplanować i stosować różne metody nauczania.
Cel. Celem badań było poznanie dominującego stylu uczenia się studentów pielęgniarstwa oraz dokonanie charakterystyki różnych metod uczenia uwzględniających zidentyfikowane style uczenia się.
Materiał i metody. Przeprowadzono badania ilościowe z wykorzystaniem kwestionariusza ankiety Kolba dotyczącego stylów uczenia się (dostosowany przez: Maretič Požarnik, 1995). Wykorzystano statystyki opisowe: częstotliwość, wartości średnie i odchylenie standardowe. Dane zostały przetworzone przy użyciu programu statystycznego SPSS 16.0.
Wyniki. Badania pokazały, że dominującym stylem uczenia się jest „Diverger" (50,8%, n=90), a następnie „Assimilator" (23,7%, n=42). Wykazano istotną statystycznie korelację między rokiem studiów a stylem uczenia się (współczynnik kontyngencji = 0,216; p=0,008; V Cramera =0,222).
Wnioski. Dla zapewnienia wysokiej jakości nauczania w zakresie opieki pielęgniarskiej powinniśmy znać, analizować i dostosować się do różnych stylów uczenia się studentów pielęgniarstwa.

Słowa kluczowe: style uczenia się, nauczanie, opieka pielęgniarska

ABSTRACT

Introduction of different teaching methods to take account of learning styles of nursing students

Aim. In the study we presented how important it is that nursing care teachers are familiar with the dominant learning style of nursing care students, because they can then plan and use different teaching methods. The aim of the research was to find out the dominant learning style of nursing care students and to describe the use of different teaching methods according to the identified learning styles.
Material and methods. The research was based on quantitative methodology. Kolbl's questionnaire about learning styles was used. To analyse the data basic statistic parameters - frequencies, average values and standard deviation - were applied. The data was processed using the statistical program SPSS 16.0.
Results. The results showed that the dominant learning style is Diverger (50,8%; n=90), followed by Assimilator (23,7%; n=42). There was statistically significant connection between the year of study and learning style (contingency coefficient=0,216; p=0,008; Cramer's V=0,222).
Conclusion. For assuring quality teaching in nursing care we must know, consider and adapt to different learning styles of nursing care students.

Keywords: learning styles, teaching, nursing care.

INTRODUCTION

Today's generations of students – also called Generation Y or Millennials –identifying characteristics are optimism, ambition, demand for immediate feedback, rapid advancement, desire to achieve results, focus on teamwork and highly developed skills to handle the most modern technology. On the other hand, note that the students of this generation are

less mature are not ready to study and have doubts about their academic abilities [1]. Indicate that these students often have problems with communication in the traditional (verbal) way and do not like to read and write [2]. They do have the ability to do more tasks at the same time ("multitasking"), but this can represent a disability, because they can only focus on one activity.

We are observing that smaller numbers of students are present in classrooms. Students are not interested in active participation in delivering contents. We are therefore aware that in the future we must change and adapt our teaching methods.

Another specialty in the nursing care teaching is also that nursing care teachers must be able to demonstrate and to explain how to apply theoretical knowledge of nursing care in practice, which makes it them a challenge to select and apply an appropriate teaching approach.

Learning style could be defined as a combination of different study and learning strategies and approaches used by each student during studies. Students give priority to some approaches, styles and strategies which are in certain situations more or less useful.

Learning strategy is a specific combination of mental operations that is used according to the requirements of concrete learning situations. Many studies have proved an enhanced effectiveness of teaching if teaching methods were coordinated with individual learning styles. In the case of mismatch between learning styles and teaching methods efficiency was affected [3].

There are many approaches to analyse and identify different learning styles, investigated by Dunn, N. Entwistle, David Kolb and many others. Among the most extensive and widespread is the system developed by the Dunn couple. They based their approach on the thesis that there is not one best learning style or best ways of learning, but that all the circumstances and individual characteristics of students should be considered. Instead of handing general recipes for learning it is better to help students to identify what suits them best theorized that four combinations of perceiving and processing determine one of the four learning styles that people prefer to adopt [4, 5]. Kolb believes that learning styles are not fixed personality traits, but relatively stable patterns of behaviour that are based on individual's background and experiences. Thus, they can be thought of more as learning preferences, rather than styles. Kolb's model therefore works on four-type definition of learning styles, (each representing the combination of two preferred styles, rather like a two-by-two matrix of the four-stage cycle styles), for which Kolb used the terms:

Diverging (concrete, reflective) – Emphasizes the innovative and imaginative approach to doing things. Views concrete situations from many perspectives and adapts by observation rather than by action. Interested in people and tends to be feeling-oriented. Likes such activities as cooperative groups and brainstorming.

Assimilating (abstract, reflective) – Pulls a number of different observations and thoughts into an integrated whole. Likes to reason inductively and create models and theories. Likes to design projects and experiments.

Converging (abstract, active) – Emphasizes the practical application of ideas and solving problems. Likes decision-making, problem-solving, and the practical application of ideas. Prefers technical problems over interpersonal issues.

Accommodating (concrete, active) – Uses trial and error rather than thought and reflection. Good at adapting to changing circumstances; solves problems in an intuitive, trial-and-error manner, such as discovery learning. Also tends to be at ease with people.

MATERIAL AND METHODOLOGY

The survey was based on quantitative methodology. Data analysis was performed using the computer program SPSS 16.0 and Microsoft Excel, using the basic statistical parameters (descriptive). For comparison between the discrete variables we used Pearson's $\chi 2$ test. Statistical significance was tested with 5% risk (p=0,05). The study included 177 nursing care students (86.1% females and 13.9% males) at the Faculty of Health Sciences on University of Maribor. Among the participants there were 37.4% (n = 65) of first year students of full-time study (representing 58.3% of the sample of students in first year full-time study on Faculty of Health Sciences; 3,5% of the sample of nursing care students in first year full-time study in Slovenia), 30.5% (n = 57) of students in the second year of full-time study (representing 52.3% of the sample of students in second year full-time study on Faculty of Health Sciences; 3% of the sample of nursing care students in second year full-time study in Slovenia) and 32.1% (n = 55) of students in the third year of full-time study (representing 54.5% of the sample of students in 3rd year full-time study on Faculty of Health Sciences; 3% of the sample of nursing care students in 3rd year full-time study in Slovenia). Most, 84.5% (n = 158) students were in the age group of 18-23 years. The analysis included all the proper and complete questionnaires (177) of 187 distributed, which means that we analysed 94.7% of all questionnaires.

Instrument used in this study was Kolb's 'Learning Style Inventory' (LSI). The LSI is a brief, forced-choice, self-descriptive inventory designed by Kolb to measure his learning style construct. For each of the nine sets of adjectives, respondents are asked to rank those most characteristic to those least characteristic of their learning style with corresponding marks. Scores are calculated for each of the two learning dimensions, abstract - concrete and activereflective.

RESULTS

The results showed that the dominant learning style of nursing care students regardless of the year of study is the divergent learning style (50,8%; n=90), followed by the assimilating (23,7%; n=42) (see Table 1). The other two learning styles are represented in small percentages.

In the survey we also wanted to know what is the relationship between the learning style and the year of study, between students' age and their learning styles, between previous obtained educational degree and learning styles, between gender and learning styles, between achieved average grade and learning styles and between dwelling at the time of study and learning styles. Using Pearson's $\chi 2$, non-parametric statistical test, we found that there is a statistically significant relationship only in two of these cases (see Table 2).

■ Tab. 1. Frequency distribution according to learning style and year of study

	Learning style				
	Diverging	Converging	Assimilating	Accommodating	all
1st study year	30	7	9	18	64
	46,9%	10,9%	14,1%	28,1%	100,0%
2nd study year	34	6	13	4	57
	59,6%	10,5%	22,8%	7,0%	100,0%
3rd study year	26	3	20	7	56
	46,4%	5,4%	35,7%	12,5%	100,0%
all	90	16	42	29	177
	50,8%	9,0%	23,7%	16,4%	100,0%

■ Tab. 2. Illustration of the relationship between various parameters and learning styles

	Phi	p	Cramer's V	Contingency Coefficient
learning style* year of study	0,314	0,008	0,222	0,216
students age * learning styles	0,369	0,063	0,213	0,347
previous obtained educational degree * learning styles	0,213	0,235	0,151	0,208
gender * learning styles	0,146	0,287	0,146	0,145
achieved average grade * learning styles	0,528	0,000	0,305	0,467
dwelling at the time of study * learning styles	0,267	0,201	0,154	0,258

DISCUSSION

Research on learning styles of nursing care students indicate that there is a statistically significant link between the year of study and learning styles (contingent coefficient = 0.216, p = 0.008). This relationship is medium strong (Cramer's V = .222). The dominant learning style is the diverge and is most represented in students in their second year of study (59.6%) [6]. Conclude that among students of nursing in Brazil and England the dominant learning style is the assimilator. In our study it was shown that the assimilator is the second most common learning style, it is typical for 23.7% (n = 42) students and is most present in the third study year [7]. Described that the predominant learning style among 217 RNs enrolled in online nursing courses was the accommodator. When years of nursing experience was cross-tabulated with learning style, the accommodator was the predominant learning style for nurses with 0–20 years of nursing experience. For those with over 20 years of experience, the predominant learning style was the assimilator.

In our study we found that there was a statistically significant link between the achieved average grade during the study and learning style (contingent coefficient = 0.467, p=0.000), and this relationship is medium strong (Cramer's V=.305).

We must be aware of the fact that people are different. It is useful to know how to recognize the differences between individuals and how to adapt to them.

The idea to establish students' learning style is attractive, but a critical review of such findings should arouse a bit of scepticism, as we must realize that the learning styles and approaches to study depend on various factors, which are interconnected and exert influence on each other. Those factors do not arise only from the students themselves, but are related to the whole of the learning situation, system of study, teaching methods and examinations.

In addition to lectures by the course instructor (for reflective observers, abstract conceptualizers and assimilators), university classroom learning situations should include large and small-group class discussions and student-led presentations (for concrete experiencers, active experimenters and accommodators). As well as the present primary topics listed in the course syllabus (for assimilators) there should be opportunities for students to choose their own corollary topics for classroom learning sessions (for accommodators). Every topic covered in a lecture, student presentation, or group discussion should be carefully introduced (for diverges), well explained (for assimilators), and applied to real-life examples (for active experimenters and converges) [8].

The results of some studies showed that students learn more when they learn in an environment that suits them best [4].

However, we cannot provide favourable conditions for learning to every student. For example, some students would prefer working in the group; others prefer listening to lectures and making short notes. However, it is difficult to satisfy different types of student [7]. Concluded in her study that knowledge of the learning styles can assist the online faculty member to foster learning and professional growth of all students. Faculty can coach and mentor students by acknowledging that the students may not be comfortable with a specific assignment or activity yet can support them in developing strategies that will promote learning. For example, the assimilator enjoys reading and viewing PowerPoint lectures, whereas the accommodator is action and people oriented and prefers trial-and-error approaches to learning. An alternative would be having the accommodator work in a group to develop a PowerPoint lecture on a topic rather than reading a prepared presentation. Some assignments may not be conducive to particular learning styles but explaining the educational outcome of the assignment is beneficial to students, especially when considering the generational differences in learning styles.

But still, the rule is that each student has to discover his learning style, which allows him to be more successful and active. We must always consider a number of factors (the individuality and personal characteristics of a student, study requirements, circumstances under which learning takes place, current situation etc.).

Teachers should encourage students to find their learning and cognitive styles. Identifying different learning styles will help teachers to apply transformative learning and teaching and so the monotony of the reproductive and transsmissive teaching during the lectures will decrease. This would also develop critical, creative, collaborative, multi-dimensional and flexible thinking, which is constantly open to new knowledge and creative combinations of different learning styles. Therefore it is necessary that nursing care teachers use a variety of styles and teaching methods (the method of demonstration, the method of practice, the method of promotion, individual work, working in pairs, group work, role playing, problem based learning, case study, encouraging critical thinking, reflective learning ...). In that case we may require from students to actively participate in lectures, seminars, laboratory and clinical practice.

CONCLUSIONS

Even in nursing the abundance of knowledge and information highlighted the need for competence of students which combines students' different abilities: from professional knowledge, monitoring and compliance, following changes and innovations in nursing, acquiring skills that students obtain in clinical practice, social skills, communication skills, team cooperation, organizational skills, to providing incentives and willingness to take responsibility. All this points to new challenges in the educational nursing process.

Teachers in nursing established that it is necessary to change the way of transmitting learning contents and practical skills. Bologna reform does not prescribe new teaching methods, but it does allow space for their introduction. Therefore, we believe that now is the time for introducing modern teaching methods that will encourage greater teacher autonomy and greater student involvement. The role of a nursing care teacher is changing as well. A nursing care teacher should guide a student and follow his study development.

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