



Texto & Contexto - Enfermagem

ISSN: 0104-0707

ISSN: 1980-265X

Universidade Federal de Santa Catarina, Programa de Pós
Graduação em Enfermagem

Bernardino, Amanda de Oliveira; Coriolano-Marinus, Maria Wanderleya de
Lavor; Santos, Alessandro Henrique da Silva; Linhares, Francisca Márcia
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INFLUÊNCIA NO PROCESSO DE ENSINO-APRENDIZAGEM1

Texto & Contexto - Enfermagem, vol. 27, núm. 1, e1900016, 2018

Universidade Federal de Santa Catarina, Programa de Pós Graduação em Enfermagem

DOI: <https://doi.org/10.1590/0104-070720180001900016>

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MOTIVATION OF NURSING STUDENTS AND THEIR INFLUENCE IN THE TEACHING-LEARNING PROCESS ¹

Amanda de Oliveira Bernardino², Maria Wanderleya de Lavor Coriolano-Marinus³, Alessandro Henrique da Silva Santos⁴, Francisca Márcia Pereira Linhares⁵, Ana Márcia Tenório de Souza Cavalcanti⁶, Luciane Soares de Lima⁷

¹ Article extracted from the dissertation – Motivation of nursing students to the teaching-learning process, presented to the Post Graduate Nursing Program, *Universidade Federal de Pernambuco* (UFPE), in 2016.

² M.Sc. in Nursing, *Programa de Pós-Graduação em Enfermagem*, UFPE. Recife, Pernambuco, Brazil. E-mail: amandaobernardino@hotmail.com

³ Ph.D. in Child and Adolescent Health. Professor, Nursing Department, UFPE. Recife, Pernambuco, Brazil. E-mail: wandenf@yahoo.com.br

⁴ Masters. in Biometrics and Applied Statistics. Professor, Nursing Department, UFPE. Recife, Pernambuco, Brazil. E-mail: alessandrohss@yahoo.com.br

⁵ Ph.D. in Nutrition. Professor, Nursing Department, UFPE. Recife, Pernambuco, Brazil. E-mail: marciapl27@gmail.com

⁶ Ph.D. in Child and Adolescent Health. Professor, Nursing Department, UFPE. Recife, Pernambuco, Brazil. E-mail: anapopita@gmail.com

⁷ Ph.D. in Health Sciences. Professor, Nursing Department, *Programa de pós-graduação em Enfermagem*, UFPE. Recife, Pernambuco, Brazil. E-mail: luciane.lima@globo.com

ABSTRACT

Objective: to analyze the motivation of nursing undergraduate students at a public university by means of the Academic Motivation Scale.

Method: a descriptive, cross-sectional study with a quantitative approach. The sample included nursing students from a public university located in the state of Pernambuco.

Results: the profile of the nursing students of the public university included the following aspects: a female majority, aged between 20 and 30 years of age, single, does not have children, does not work, lives in the metropolitan area, has a nuclear family and has a family monthly income less than R\$2,364. The highest mean score in intrinsic motivation was the Intrinsic Motivation for Realization, and the extrinsic motivation was the Intrinsic Motivation of External Control. The highest intrinsic and extrinsic motivation scores of the students were found in the third period, and the fourth period obtained the lowest scores of intrinsic and extrinsic motivations.

Conclusion: the students of this public university had high scores of motivation, these high scores were mainly evident in the intrinsic motivations that awaken the student's autonomy.

DESCRIPTORS: Motivation. Nursing students. Learning. Teaching. Third level education.

MOTIVAÇÃO DOS ESTUDANTES DE ENFERMAGEM E SUA INFLUÊNCIA NO PROCESSO DE ENSINO-APRENDIZAGEM

RESUMO

Objetivo: analisar a motivação de estudantes de Graduação em Enfermagem de uma Universidade Pública, por meio da Escala de Motivação Acadêmica.

Método: trata-se de um estudo descritivo, transversal com abordagem quantitativa. A amostra foi censitária com estudantes de Enfermagem de uma Universidade Pública, localizada no estado de Pernambuco.

Resultados: o perfil do estudante de Enfermagem de uma Universidade Pública compreende os seguintes aspectos: maioria do sexo feminino, com idade de 20 a 30 anos, solteiro, sem filhos, não trabalha, mora na região metropolitana, com a família nuclear e possui uma renda familiar menor que três salários mínimos. A maior média de escore na motivação intrínseca foi a Motivação Intrínseca para Realização, e a na motivação extrínseca foi a Motivação Intrínseca de Controle Externo. Os maiores escores de motivações intrínsecas e extrínsecas dos estudantes foram encontrados no terceiro período, sendo que, o quarto período obteve os menores escores de motivações intrínsecas e extrínsecas.

Conclusão: a motivação dos estudantes de uma Universidade Pública mostrou-se com escores altos, principalmente as motivações intrínsecas que despertam a autonomia do estudante.

DESCRIPTORES: Motivação. Estudantes de enfermagem. Aprendizagem. Ensino. Educação superior.

MOTIVACIÓN DE LOS ESTUDIANTES DE ENFERMERÍA Y SU INFLUENCIA EN EL PROCESO DE ENSEÑANZA-APRENDIZAJE¹

RESUMEN

Objetivo: analizar la motivación de los estudiantes de la Graduación en Enfermería de una Universidad Pública por medio de la Escala de Motivación Académica.

Método: se trata de un estudio descriptivo, transversal y con abordaje cuantitativo. La muestra fue censitaria y con estudiantes de Enfermería de una Universidad Pública localizada en el estado de Pernambuco.

Resultados: el perfil del estudiante de Enfermería de una Universidad Pública comprende los siguientes aspectos: la mayoría es del sexo femenino y con edades de 20 a 30 años, solteros, sin hijos, no trabajan, viven en la región metropolitana en una familia nuclear y poseen una renta familiar menor que tres salarios mínimos. El mayor promedio de puntuación en la motivación intrínseca fue la Motivación Intrínseca para la Realización; y en la motivación extrínseca fue la Motivación Intrínseca del Control Externo. Las mayores puntuaciones de motivaciones intrínsecas y extrínsecas de los estudiantes fueron encontradas en el tercer período, siendo que el cuarto período obtuvo las menores puntuaciones de motivaciones intrínsecas y extrínsecas.

Conclusión: la motivación de los estudiantes de una Universidad Pública demostró puntuaciones altas, principalmente, las motivaciones intrínsecas que despiertan la autonomía del estudiante.

DESCRIPTORES: Motivación. Estudiantes de enfermería. Aprendizaje. Enseñanza. Educación superior

INTRODUCTION

Motivation is a word derived from the Latin “*movere*”, which means to move, “everything that can move”. Based on this concept, motivation is understood as something personal and individual, according to experiences, culture and needs, and relates to an objective that one wishes to achieve.¹⁻²

One of the theories used to study human motivation and its interfaces with education is the Self-Determination Theory. This theory focuses on improving motivation at work, interpersonal relationships and the teaching-learning process.³⁻⁷

This theory is divided into: Intrinsic Motivation (MI), Extrinsic Motivation (ME) and Demotivation.³⁻⁷ Intrinsic Motivation is linked to “doing something” intentionally because one feels satisfaction in doing so, without being rewarded, this is also known as Autonomous Motivation.⁷

Among the MIs are: Intrinsic Motivation to Experience Stimulus (MIVE) which means: to do something in order to experience sensations; Intrinsic Motivation for Realization (MIR): consists in accomplishing something through pleasure, personal fulfillment and discovery of new things and Intrinsic Motivation to Know (MIS): expresses a specific action, for the satisfaction of learning and understanding.⁴⁻⁸

Extrinsic Motivation, also considered to be unintentional, consists of “doing something” not for satisfaction, but by means of external regulation, in pursuit of a better future, to fulfill an objective or to obtain a reward, it is also known as Controlled Motivation.⁷

ME is divided into: Extrinsic Motivation External Control (MEXE): feeling pressured by something or someone; Extrinsic Motivation Introjection (MEI):

doing something because you are pressured to do; Extrinsic Motivation Identification (MEID): is when you have decided to realize and acknowledge its importance for future achievements.³⁻⁷

In addition to these, Demotivation or Absence of Motivation (DES) is when one does not feel the will or motivation to accomplish something.³⁻⁷

Intrinsic Motivation is fundamental for health science students since it can transform them into professionals with greater autonomy, with reflective and critical deepening. This deepening is necessary to find solutions to the problems that affect the community and the individual.¹⁰⁻¹²

A review of educational motivation shows that Intrinsic Motivation contributes to better learning outcomes, such as increased retention and learning depth. On the other hand, an increase in external pressure, has a negative influence on creativity.¹³

Currently, research aimed at establishing excellence in teaching in Higher Education Institutions has emphasized the active role of students in the teaching-learning process.¹³ In nursing, some studies¹³⁻¹⁵ have highlighted the importance of teaching strategies to increase motivation and learning. The increase of motivation through teaching helps students with low academic performance, so that the interest and the satisfaction for learning are awakened in them.

Nurses play a central role in the health care of individuals and communities, and the training of the nursing student acts as a guiding axis in the elaboration and implantation of the curricula, known as the National Curricular Guidelines, which highlights the relevance of training focused on the integrality of the human being, considering the complexity of the concept of health.⁹⁻¹¹

This concern with the training of professionals in the aforementioned area is not particular to Brazil, but an international concern. Training institutions have worked on reviewing strategies that lead to greater autonomy and involvement of the learner in the teaching-learning process, with proposals which should arouse interest and motivation for their professional training.¹³⁻¹⁴

From the relevance of motivation to a more autonomous and lasting learning, the objective of this study is to analyze the motivation of nursing undergraduate students of a public university by means of the Academic Motivation Scale.

METHOD

A descriptive, cross-sectional study with a quantitative approach. The research setting was the Nursing Department of a Federal University located in the Northeast of Brazil. The population consisted of a total of 340 students, as it included all nursing students who were enrolled and regularly attending the course.

The nursing undergraduate course of the referred institution has underwent a transition period after the curricular change implemented in 2011. Before, the course was organized into eight periods, and now it is organized in ten periods. At the time of the study, all the students included in the research were using the new curriculum, that is to say, the students in this study were from the 1st to the 8th period. As the curricular reform happened four years ago, no students of the ninth and tenth periods were interviewed.

Considering the inclusion criteria of the research (students enrolled in the new curriculum profile), they were excluded from the final sample due to the following justifications: 02 incorrectly filled out the questionnaire, 02 were no longer in the course, 01 were still enrolled in the course however were not actively participating in the course which made contact impossible 14 were on an academic break from the course, 06 were on academic exchange programs 18 were attending courses at different periods, and 32 were not found after three visits to their classroom and after attempting contact via telephone. From the mentioned exclusions, the study population consisted of 265 students.

Data collection was carried out during the academic period of 2015¹ during the classes, according to the prior agreement of the course professor and the coordinator of the course.

The data collection took place in the following way: firstly, two disciplines of each period were

selected. The selection of the subjects was according to the largest number of enrolled students so that the largest number of students could be analyzed in each period. Subsequently, previous contact with the program coordinator was made in order to request authorization for the application of the instruments during the classes. After the permission from the discipline coordinators were granted, a previous contact with the professors was established, which suggested the best time and date for completing the instruments during the hours of their classes.

Students who missed classes during data collection were sought on two more occasions. After this search, contact was made with the representatives of the groups to find the absentees, with the purpose of arranging the best time to participate in the research by telephone contact. After the third attempt in person, via class representative and by telephone, students who were not found were then excluded. The following data collection instruments were used: a semi-structured questionnaire containing socioeconomic, demographic and university-related variables; and The Academic Motivation Scale.^{5,6} and translated and validated in Brazil by Sobral.¹⁴ The author Sobral was contacted by e-mail and authorized the use of the scale.

The Academic Motivation Scale is composed of 28 questions and subdivided into seven groups. Each group corresponds to a different motivation, in this case, for each type of motivation, there are four questions in the scale following the same model by Sobral (2003).¹⁸ The final score can vary between 7 (the lowest) and 28 (the highest).

In order to analyze the data, a bank was built in the EPI INFO version 3.5.2 program, in which the validation was done through a double data entry for the correction of information inconsistency and, finally, the validation through the corrections of the differences.

To evaluate the distribution of academic profile and university access, the percentage frequencies were calculated and the respective frequency distributions were constructed.

The evaluation of student motivation was performed through the academic motivation scale mentioned above, and a score was calculated for each motivation evaluated. Motivation analysis was done by mean and standard deviation.

The normality of the score was done using the Kolmogorov-Smirnov test. In cases where normality was indicated, the ANOVA test was applied to compare the scores between the evaluated periods. In situations which the normality of the score was

not observed, the Kruskal-Wallis test was applied in the comparison of the distribution of the score between the evaluated periods.

All conclusions took the significance level of 5% into consideration. The research project was approved under the number CAAE 39191214.1.0000.5208 in the Ethics and Research Committee. All the students who participated in the research read and signed the Informed Consent Form.

RESULTS

Table 1 describes the distribution of the socioeconomic and demographic profile of nursing undergraduate students.

Table 1 - Socioeconomic and demographic profile of undergraduate students in nursing. Recife, PE, Brazil, 2015. (n = 265)

Variables	n=265	%
Sex*		
Male	25	9.5
Female	239	90.5
Age*		
< 20 years old	86	32.6
20 - 30 years old	166	62.9
> 30 years old	12	4.5
Municipality of origin*		
Metropolitan Region	184	70.8
Zona da Mata	33	12.7
Agreste	30	11.5
Sertão	4	1.5
São Francisco	1	0.4
Other state	8	3.1
Marital status		
Single	245	92.5
Married/ Civil Union	20	7.5
Employed		
Yes	19	7.2
No	246	92.8
Children		
Yes	14	5.3
No	251	94.7
Resides with whom†		
Nuclear family	210	75.0
Extended family	30	10.7
Friends	26	9.3
Alone	14	5.0
Family income *		
Up to R\$2,364	177	67.0
More than R\$2,364	87	33.0
Transport Method †		

Variables	n=265	%
Bus	177	63.7
Walk	36	12.9
Bus and metro	32	11.5
Car	29	10.4
Motorbike	3	1.1
Metro	1	0.4
Free time (per week)*		
< 3 hours	122	46.2
3 - 5 hours	75	28.4
5 - 8 hours	43	16.3
More than 8 hours	24	9.1

* Smaller sample due to the unanswered the question by the interviewees; † Multiple choice question, obtaining more than one response per individual.

Table 2 presents the mean and standard deviation of the Academic Motivation Scale, by type of motivation and the course period, it is verified that the motivation that obtained the highest mean score (24.6) was the MIR (doing something for pleasure, for the personal accomplishment of discovering new things), followed by MIS (23.9), (doing something to experience sensations) and MEXE (21.4) (feeling pressured by something or someone).

Regarding MEID (to do something because one decided to do so), the third period had the highest average (22.2) and the period with the lowest mean was the fourth period (18). The mean comparison test was significant in this type of motivation (p-value=0.003).

When MIVE (Motivation to Experience Stimulus) was evaluated, the group of students from the second period presented the highest average and the group from the fourth period presented the lowest mean (18.8 and 14.8 points, respectively). The mean comparison test was significant (p-value=0.003). As for the MIR (doing something for pleasure, for the personal accomplishment of discovering new things), the third period presented the highest average and the fourth period, presented the lowest mean (25.7 and 23.5 points, respectively). The mean comparison test was significant (p-value=0.045).

MIS (doing something for curiosity and the desire to know and learn more) had a higher average in the third period (25.6 points) and lower motivation in the fourth period students. The mean comparison test was significant (p-value=0.001).

In all periods, the highest scores found, taking into account the various types of motivation, were in MIS and MIR intrinsic motivations, with MEXE appearing in the 4th, 5th, 6th and 7th periods, while in the 1st, 2nd, 3rd and 8th periods, the third place was taken by MEID.

The lowest scores of the MEI, which indicates that students put pressure on and blame themselves if they do not perform the activities proposed for their learning, were found in the 5th period (16.6)

and the higher score was found in the 3rd period (20.0). In general, demotivation had lower scores, with the highest scores found in the 7th period (7.9).

Table 2 - Mean and standard deviation of the Academic Motivation Scale, types of motivation in the different periods of the Undergraduate Nursing Course. Recife, PE, Brazil, 2015. (n=265)

Evaluated Motivation	General	Course Semester								p-value
		1st	2nd	3rd	4th	5th	6th	7th	8th	
Intrinsic Motivation to Know	23.9 (4.1)	23.9 (3.8)	24.8 (3.4)	25.6 (.9)	21.6 (5.7)	23.6 (4.4)	23.2 (3.5)	24.3 (3.7)	23.6 (3.6)	0.001*
Intrinsic Motivation for Realization	24.6 (3.3)	24.4 (3.8)	25.0 (3.1)	25.7 (2.3)	23.5 (4.2)	25.3 (2.7)	23.8 (3.2)	24.2 (3.5)	24.6 (3.3)	0.045*
Intrinsic motivation to experience stimulus	17.1 (5.4)	17.6 (5.1)	18.8 (5.0)	18.7 (5.1)	14.8 (5.2)	16.2 (6.3)	15.4 (3.6)	16.5 (5.9)	18.5 (5.0)	0.003*
Extrinsic Motivation Identification	20.5 (5.0)	20.1 (5.1)	22.1 (5.1)	22.2 (4.7)	18.0 (5.4)	20.0 (5.0)	19.2 (4.8)	20.9 (3.7)	20.7 (4.8)	0.003 [†]
Extrinsic Motivation Introjection	18.0 (6.3)	16.9 (6.2)	19.3 (6.6)	20.0 (6.8)	17.2 (7.0)	16.6 (5.4)	17.6 (5.6)	18.1 (6.7)	17.4 (4.6)	0.188*
Extrinsic Motivation External Control	21.4 (5.2)	21.4 (6.5)	21.9 (4.3)	22.5 (5.0)	20.5 (5.5)	21.8 (4.6)	20.9 (5.0)	22.0 (4.4)	18.8 (5.6)	0.211*
Demotivation or absence of motivation	6.4 (3.9)	5.4 (2.4)	6.2 (3.9)	5.4 (2.4)	6.9 (3.8)	6.8 (5.0)	6.5 (3.5)	7.9 (4.8)	6.5 (5.1)	0.101 [†]

* p-value of the ANOVA test (If p-value <0.05 the degree of motivation of the domain evaluated differs between the evaluated periods);

† p-value of the Kruskal-Wallis test.

Table 3 presents the descriptive analysis of the global motivation score according to period. The period with the highest overall motivation average was the second period (mean=81.9 points), followed by the third (mean=81.6 points) and fourth period (mean=7.2).

The self-evaluation of the 4th period had the third highest mean in the overall motivation score,

however, they presented lower scores in the MIR, MIS, MEID and MIVE.

Higher overall motivation scores were found in the 2nd to 4th period, showing a reduction in the mean of global motivation after this period. When applying the comparison test of average academic motivation according period, there was no relevance between the periods (p-value 0.117).

Table 3 - Global Motivation Score of the different periods of the Nursing Undergraduate Course. Recife, PE, Brazil, 2015. (n = 265)

Evaluated Period	Evaluated measurement			
	Minimum	Maximum	Mean±standard deviation	IC*
1st	5	100	72.6±20.8	65.2 – 80.0
2nd	7	100	81.9±20.3	75.1 – 88.8
3rd	25	100	81.6±17.5	76.4 – 86.7
4th	16	100	77.2±21.9	69.9 – 84.6
5th	4	100	74.8±21.9	67.0 – 82.6
6th	7	100	73.0±20.4	65.7 – 80.4
7th	0	100	71.3±26.0	61.0 – 81.6
8th	18	99	68.2±25.0	56.4 – 79.9

* Reliability Index

DISCUSSION

The profile described in this study resembles studies that analyze the distribution of nursing students in other Brazilian institutions. A study conducted in three public universities and a private university in the South and Southeast regions of the country,¹⁵ found a profile in which women accounted for 90.5%,¹⁵ similar to another study, which was 87.9%. In a study performed almost two decades ago, in Fortaleza, Ceará, the percentage of women in the sample was 88.8%.¹⁶

The reason for the majority of female students is due to history, as in the history of nursing, care was initiated by women with groups of children and the elderly, and later, other age groups began to receive care. Care was given by religious and family members, who were also women,¹⁷ however, although the contingent of women still predominates in the profession, this profile has been discretely modified, with a greater interest in the activity by males.¹⁵

The predominant age group was between 20-30 years of age (62.9%), similar to another study in which the age group with the highest concentration was between 20-29 years (63.4%).¹⁸ In a study carried out in Fortaleza, 66% of the sample was in this age group.¹⁶ This characteristic shows that the young population enters the course soon after leaving high school in order to continue their studies in higher education courses, not always knowing or completely understanding the profession. This can also be justified by the modality of admission to the public university.

The number of single persons was (92.5%), different from the study in the South and Southeast of the country, which had a sample of (76.9%).¹⁵ Regarding the existence of children, 94.7% of the students did not have children, while in a study conducted in the South and Southeast of the country 83.1%,¹⁸ did not have children. Regarding employment and work activity, (92.8%) did not work in the research scenario, while in another study (74.2%)¹⁵ did not work. It is noteworthy that in the study in the South and Southeast of Brazil, there was a higher frequency of students who claimed to be married, have children and work, and who also studied in private institutions. The study resembles the data presented, which are students of a public university.¹⁵

This is due to the fact that these students have a greater necessity to study in order to enter the public university, in addition to other responsibilities such as: children, spouses and work, which could hinder this entrance, since the concerns with

expenses and daily responsibilities would possibly compromise the student's performance.¹⁸⁻¹⁹ The fact that only 7.2% of students work is justified because the course is full-time, making it impossible to perform most paid activities. Regarding this situation of paid employment, in a survey conducted at UERJ, 15% of the students had some paid activity.¹⁸

The fact that most are not married and do not have children contribute to the admission to the public university, which, in turn, requires a good income, as well greater dedication of time to study. This would be impracticable if the student were married and had children, as the student would need to divide their time with such responsibilities.¹⁶

Residing with the nuclear family composed of parents, wives, siblings and children and extended family (grandmothers, uncles, cousins) was frequent, reported by 85.7% of the participants. This data corroborates another study, in which 90.3% lived with the nuclear or extended family,¹⁶ which reflects an exemption from the personal and financial obligation of these students and with an exclusive commitment to the studies.¹⁸

The fact that most students come from the Metropolitan Region of Recife (70.8%) may have a possible explanation: the expansion of Higher Education to the suburbs of the Brazilian states in the last decade. Public and private institutions have increased significantly in the last decades, which favored the permanence of young people in their hometown and which avoided migration to large centers in search of work.¹⁹ In Fortaleza, 15% of nursing students came from other states, while in the present study, only 3.1% of the students come from other states.

Regarding family income, 67% stated that they had a monthly income of up to R\$2,364, 33% had a monthly income higher than R\$2,364. In an analysis that described the profile of students from public and private institutions in the South and Southeast of Brazil, the majority of students had a family monthly income R\$2,364 (52.6%)¹⁹, while in this study, this percentage was 67%. This is worrying fact, as the maintenance of the student in the institution is expensive. Even in a public university, it is necessary spend money on travel, food, educational materials, among other basic necessities.¹⁸

The fact that the majority of students have an monthly income of less than R\$2, is an aggravating aspect, since the nursing course at this university is full-time, which makes it impossible for the academic to perform paid employment. It is worth mentioning that most of the work is full-time, which may contribute to evasion, although public universi-

ties currently supply student assistance programs aimed at student maintenance.

The most commonly used means of transport for students is the bus (63.7%). However, there are different data in a study that evaluated the quality of life of nursing students, i.e., the number of students who used the bus was 26.15%. Such a number is relatively low in comparison with this study, which is due to the fact that the study on quality of life was evaluated in a university whose subway was near. When evaluating public transport, in the survey on quality of life, this number rose to (52.3%). Therefore it can be said that buses, subways and other means of public transportation interfere with the student's quality of life.¹⁶

It is important to note that such transport methods are tiring for students. In Brazil, public transport is unsatisfactory, compared to private transport and that of other countries, especially European countries. Undoubtedly, deteriorating public transportation creates discomfort and can affect quality of life and motivation for learning.¹⁹⁻²⁰

Weekly leisure time was considered, for the most part it was less than three hours per week (46.2%). Therefore, little time reserved for leisure can directly influence the quality and lifestyle of these students, causing them to neglect self-care and become emotionally overwhelmed, since the lack of leisure can influence the quality of life and motivation in the teaching-learning process.²⁰

When examining Table 2, it is possible to observe that the third period has the highest score in different types of motivation (MIS, MIR, MEID, MEI and MEXE), with significant differences for the intrinsic motivations.

This data shows the concomitance of high scores for intrinsic type motivations and externally controlled motivations such as MEID, MEI and MEXE. Possible explanations can be given in relation to the subjects studied, for example: the types of subjects covered in this period and the teaching-learning strategies experienced. Studies show that the teaching-learning methodology correlates with students' attitudinal, cognitive and technical skills.^{15,21-23} One example is laboratory simulations, which, according to a study in Canada,²¹ makes students feel more autonomous and safe after a simulation, as well as, less stressed and pressured in the practical class.²¹

Because the simulation strategy is focused on the autonomy of the learner, it is believed that this aspect may contribute to higher scores in intrinsic motivations.

In the context investigated in the third period, the students have the first contact with disciplines that characterize the fundamentals of the nursing profession. They participate in practical laboratory classes that simulate technical procedures such as: different types of dressings and insertion of nasal, nasogastric and vesical catheters. This acquired knowledge is probably related to expectations and motivation for students, which can contribute to the enjoyment of learning and enhancement of intrinsic motivations.

The high scores of partially controlled motivation of the MEID type demonstrate that students need to learn in order to be able to interrelate theoretical and practical knowledge in nursing care in the future. This concern is evidenced by the nurse after the university period is completed. The leadership demanded by the work highlights that the professional must perform his work with theoretical and practical foundations, since, as leader, he is an example to be followed. In a study carried out in a city in the South of Brazil, the lack of motivation in the nurses for leadership in primary health care was identified.^{14,21-25}

The third period of the nursing course of the studied scenario is one of those that have more disciplines: there are 10 in total. These disciplines, for the most part (6), belong to the basic cycle, that is to say, they are responsible for describing the scientific fundamentals of the biological, physiological and pathological processes. Contained in the training axis, for the most part, the disciplines are coupled with strategies of teaching and learning externally regulated by teaching centered on the teacher figure and evaluated from a summative perspective, with requirements such as: grades, which supposedly explains the high levels of extrinsic or self-determined motivations (MEXE and MEI), which refer to "feeling pressured by others" and "self-pressure".²⁴⁻²⁵

In a study²⁵ based on students' perceptions regarding active methodologies and traditional methodologies, the difficulty that students have to adapt to the active method was identified. It is important to point out that they have used the traditional teaching method during school education over the years, and there is also a need for teaching practices that enable teachers to do this. In active methodology, students feel less pressured by the medium and are less pressured as they actively participate in their learning process.

In the fourth period, the results were different from the third one: students showed lower intrinsic motivation scores (MIS, MIR, MIVE) and

lower extrinsic motivation (MEID), in addition to a high motivation score (6.9). Although the average motivation was close between the periods, it was significant. This may explain the fact that in the previous period, the students experienced nursing practices with simulation and laboratory practices aimed at performing procedures. In the fourth period, when the first contact with the population occurs, this encounter is carried out in the primary health care scenario, causing students not to practice what was practiced in the previous semester.²⁴ This reality may be one of the factors that explains the type of motivation found in this period.

The decrease in expectation that was created in the laboratory during the third period and not performed in practice, when these students are in the fourth period, produces less satisfaction at the time of actual practice. A study²⁶ on the practical class shows the challenges of teachers and students to use this strategy better. The articulation of theoretical learning with practice is a concern for teachers and institutions.

In the second semester, MIVE was the highest among the periods, this factor can be explained due to the close relationship with specific subjects of the area, being considered as the student's first real contact with subjects related to the profession. Besides being one of the first periods of the course, this initial contact with the profession generates expectations and the students find themselves open and enthusiastic for new stimuli and experiences.²⁷

In the global motivation score, it is possible to note that the means/averages between the periods of the nursing undergraduate program in the context investigated are close, but the second and third periods presented the highest points in the overall motivation. These were also those that had higher averages in the types of intrinsic motivations.

The data presented in the context of motivation of nursing students highlight the institutional need to improve didactic strategies and student-teacher support that maintain interest in learning new things (MIS). Stimulation is imperative in order to carry out activities, to mobilize creativity, executive functions (MIR) and openness to experience impulses and new situations of learning (MIVE); considering that in these two periods at the beginning of the course, these types of motivation presented higher averages.²⁷

The support to the autonomy of the individual constitutes a relevant factor to be implanted for the development of self-determined motivation. It is relevant to speculate that didactic strategies that

favor this autonomy in the university student can be favorable, both for a high level of intrinsic motivation and for more effective learning.²⁸

Intrinsic or autonomous motivation, when compared to extrinsic or controlled motivation, has been better associated with learning, academic success and less exhaustion. Some authors suggest the need to support autonomy, which is important for autonomous motivation. Such autonomy support refers to the choices students make during learning.

They address some of the paths to more effective learning such as small group teaching, problem-based learning, and a gradual increase in student responsibility, decision making among patients under their care, and opportunities to attend elective courses and conducting research activities.⁶⁻⁷

A study on medical students in Amsterdam highlights the correlation between the quality of motivation (self-determined motivations) to influence good performance among medical students through a significant study strategy and increased effort. These data highlight that investments to increase Autonomous Motivation can favor a positive attitude towards learning, increased effort and finally a good performance among students.⁹

CONCLUSION

Motivation is one of the determining factors for increasing learning, as well as being a precursor to the reflection and criticality of the subjects addressed. Studies on motivation should be encouraged in nursing. They are considered as *feedback* for teachers and educational institutions about motivation and how this aspect influences the teaching-learning process.

The data should be cautiously evaluated, since the overall motivation score expresses the quantification of the motivation in the student's point of view, without separating the Self-Determined Motivation from the Motivation Regulated by External Sources. In addition, the cross-sectional design of the study outlined a panorama in relation to the different periods, with heterogeneity being evaluated in the various classes; therefore they are relevant cohort studies that give an account of assessing the monitoring of motivation with greater depth and reliability throughout the course.

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Correspondence: Amanda de Oliveira Bernardino
Av. Prof. Moraes Rego, 1235
50670-901- Cidade Universitária, Recife, PE, Brasil
E-mail: amandaobernardino@hotmail.com

Received: June 14, 2016
Approved: June 08, 2017

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