

Predictive and associated factors with nursing students' satisfaction

Fatores preditores e associados à satisfação dos estudantes de enfermagem

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Students, nursing; Personal satisfaction; Education, nursing; Motivation; Educational measurement

Descritores

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Abstract

Objective: To identify predictors and factors associated with the satisfaction of nursing students regarding the curriculum and school activities, social/professional interaction, and environment of the undergraduate program.

Methods: Cross-sectional study, conducted with 123 nursing students of a public university. The Nursing Student Satisfaction Scale was the research instrument. Descriptive statistics, analysis of variance, and logistic regression analysis were used for data analysis.

Results: In the descriptive analysis, the curriculum and teaching dimension presented the highest mean (3.57), followed by the environment dimension (3.33), and social/professional interactions (3.28). Younger students and those who had children, more intensely acknowledged the curriculum and teaching dimension as a factor promoting satisfaction.

Conclusion: It is necessary to promote improvements in the education and training scenario, investing in curriculum issues and education, to contribute to a satisfactory academic experience through the reduction of barriers to academic education.

Resumo

Objetivo: Identificar os preditores e fatores associados à satisfação dos estudantes de enfermagem com as atividades de currículo e ensino, interação social/profissional e ambiente de aprendizagem do curso de graduação.

Métodos: Estudo transversal, realizado com 123 estudantes de enfermagem de uma universidade pública. O instrumento de pesquisa foi o *Nursing Student Satisfaction Scale*. Para a análise dos dados foi utilizada a estatística descritiva, análise de variância e análise de regressão logística.

Resultados: Na análise descritiva, a dimensão currículo e ensino apresentou a maior média (3,57) seguida pela dimensão ambiente de aprendizagem (3,33) e interações sociais/profissionais (3,28). Os estudantes mais jovens e que possuem filhos, percebem a dimensão currículo e ensino como um fator promotor de satisfação de forma mais intensa.

Conclusão: Faz-se necessário promover melhorias no cenário educacional e formativo, investindo-se nas questões de currículo e ensino, visando contribuir para uma experiência acadêmica satisfatória através da diminuição das barreiras que dificultam a formação acadêmica.

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Introduction

The economic and social changes promoted by globalization have substantially modified the relationship between man and work.⁽¹⁾ The search for expansion of production through efficiency demands better qualifications of the professional to meet the demands of the new reality.⁽²⁾ However, the increase the workload and the speed with which work is accomplished, which overlaps the needs of individuals, which can leave their aspirations in the background, reflected in the long term in worker dissatisfaction.⁽³⁾

In this sense, university admission can also promote discomfort, because of the numerous demands and requirements imposed by the new context of life and which may lead to stress in the student and to their withdrawal from a future profession.⁽¹⁾ Thus, what should be a beneficial environment for training and acquiring new experience, eventually becomes a place that repeatedly promotes potentially stressful life events.⁽⁴⁾

The condition of daily dissatisfaction triggers feelings of nervousness, anxiety, irritability and impatience, lack of interest and demotivation in issues related to the course, and can be observed by a drop in class attendance.⁽⁵⁾ The progression of this inadequate situation between requirements and the capacity of individuals to meet the demands leads to problems with students' health and quality of life,⁽³⁾ promoting feelings of introspection, translated into apathy and lack of motivation for performing academic activities,⁽⁶⁾ which results in academic dissatisfaction.

Thus, academic satisfaction can be understood as the perception of the individual with regard to the scope of their academic expectations, that is, the perception of success obtained in relation to educational performance. The satisfaction of an individual seems to be a consequence not only of how much s/he receives from the environment, but also the position she occupies in relation to her/his level of idealization.⁽⁷⁾ Considering that higher educational institutions play an important role in the development of scientific knowledge and in professional interaction and performance, these institutions should work on

ways of adaptation and development of behaviors that meet the students' expectations, promoting a satisfactory academic experience.

Thus, the quality and improvement of higher education are closely related to the identification and care of factors related to the level of quality of universities, such as: facilities, structure, academic services, social assistance programs, institutional evaluation policy, teaching qualifications, technical and administrative qualifications, teacher/student ratios, methodological processes of teaching, the existence of graduate programs.⁽²⁾ In this sense, the development of research regarding student satisfaction, allows for the recognition of the multiplicity of influences that promote failure or success within the educational process, thereby assuring the maintenance or restoration of the quality of education through the optimization of teaching, infrastructure, curriculum and programs.⁽⁸⁾

The objective of this study was to identify the predictors and factors associated with satisfaction of nursing students with the curriculum and teaching activities, social/professional interaction, and learning environment in the undergraduate course.

Methods

This was a cross-sectional study conducted in a public, federal university, located in southern Brazil. The study included 123 nursing students enrolled during the second semester of 2014. A non-probabilistic convenience sampling for was used as sample selection criterion, so that participants were selected convenience according to their presence and availability on the site and moment of data collection.

This instrument was administered collectively, at one time, during school hours assigned for this research. The *Nursing Students Satisfaction Scale* (NSSS) - Brazilian version,⁽⁹⁾ culturally adapted and validated for the national context, was the instrument used. The scale was operationalized as a 22 question, five-point Likert scale that aimed to analyze the satisfaction of nursing students across

the dimensions: curriculum and teaching; social/professional interaction, and environment.

Data were subjected to factor analysis, grouping the results into three groups of responses known as constructs, entitled: social/professional interaction, curriculum, and, teaching and learning environment. The instrument's reliability level was calculated using Cronbach's Alpha, which showed a value of 0.934. The coefficients of the constructs presented alpha values between 0.88 and 0.89, proving the reliability of the categories generated.

The results were obtained using descriptive statistics, analysis of variance (ANOVA), and regression analysis. Data analysis was performed using the Statistical Package for the Social Sciences (SPSS), version 22.0. The use of the data collection instrument was authorized by the researchers responsible for its validation, and by the author of the original English version of the instrument.

The development of the study followed national and international standards of ethics in research involving human subjects.

Results

The sociodemographic profile of the 123 nursing students was: 91.05% female, 79.7% single, 81.3% without children, a mean age of 25 years, ranging between 18 and 50 years of age. Participation in extra curricular activities was reported by 59.4%, and among those 49.6% had a scholarship. Most students (77.2%) were not working, but 13.8% reported working in health care. The nursing major was the first choice for 72.6% and 61.8% reported they had never considered withdrawing from the major.

With regard to the results obtained by descriptive analysis (Table 1), the curriculum and teaching dimension was the one with the greatest mean (3.57) on the instrument, showing that this factor was perceived by students as the biggest promoter in the perception with satisfaction in their major.

The environment dimension showed the second highest mean on the instrument (3.33), followed

Table 1. Factors perceived by nursing students as determinants of personal satisfaction

Factors	n	Mean
Social/professional interaction	123	(3.28)
Were positive role models of professional nursing	122	3.16
Felt comfortable asking questions of nursing faculty	123	3.20
Was respected by the nursing faculty	123	3.44
Were fair/unbiased in their assessment of my learning	120	2.95
I have positive professional interactions with my nursing faculty	119	3.50
Made an effort to make their topics interesting	123	3.12
Effectively explained essential concepts	121	3.63
Well qualified in their area of expertise	122	3.50
Collaboratively worked with each other in their teaching	122	3.02
Curriculum and Teaching	123	(3.57)
Enhanced my problem solving skills	123	3.53
Prepared me to become a professional nurse	121	3.61
Prepared me to use the nursing process in my clinical practice	121	3.64
Helped me improve my communication skills	121	3.81
Was relevant to current nursing practice	122	3.57
Progressed logically from simple to complex concepts	120	3.45
Feel confident about my ability to practice in clinical settings	122	3.40
Environment	123	(3.33)
The equipment in the nursing lab are in good repair	122	3.45
The equipment in the nursing lab was up to date	122	3.35
There was sufficient equipment in the nursing lab	122	3.30
The nursing lab had ample space	122	3.34
Library resources were adequate	122	3.11
Effectively used technology to enhance my learning	120	3.43
General satisfaction		
My overall satisfaction with the nursing undergraduate major from my school is:	123	3.58

Table 2. Relationship between the personal satisfaction dimensions, sociodemographic and academic variables - ANOVA Variance Analysis

Factor	Curriculum and teaching			Social professional interaction			Learning environment		
	n	μ	ρ	n	μ	ρ	n	μ	ρ
Children			0.37			-			-
No	100	3.61		-	-		-	-	
Yes	23	3.38		-	-		-	-	
Age			0.11			-			-
≥ 25	54	3.37		-	-		-	-	
< 25	60	3.73		-	-		-	-	
Withdrawal thoughts			0.14			-			-
No	76	3.74		-	-		-	-	
Yes	45	3.28		-	-		-	-	

All variables shown in the table had a significative difference of 5%

by the social/professional interaction factor (3.28). The dependent variable, general satisfaction, had a mean response of 3.56, indicating that students, in general, perceived themselves as neither satisfied nor dissatisfied with their major.

The ANOVA variance analysis (Table 2) allows for the relation of dimensions of professional satisfaction with socio-demographic variables, indicating that younger students and those who have children recognized the curriculum and teaching dimension as a more intense promoter of satisfaction than the others.

With regard to having considered withdrawing from the major, students who said they had never considered giving up more intensely considered the curriculum and teaching dimension than students who experienced thoughts of withdrawal from the major. The grade level variable did not have statistical significance ($\rho = 0.02$), demonstrating that in the context in which this study was conducted, this variable did not represent a factor that promoted academic satisfaction. The social/professional interaction and environment dimensions did not achieve statistical significance in the correlations with socio-demographic and academics factors.

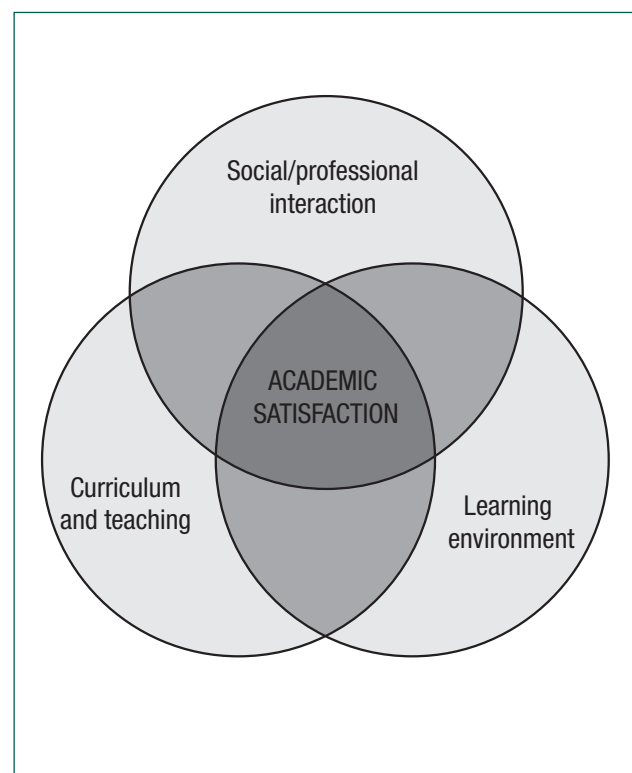
The assessment of the effects of the three constructs, in relation to the satisfaction factors using simple linear regression analysis, had general satisfaction as a dependent variable; the results identified significant relationship at the 5% level for all the constructs. The test with the adjusted determination coefficient obtained a value of 0.54, representing a value that explained 54% of the factors related to personal satisfaction, according to table 3.

Table 3. Linear regression analysis of personal satisfaction factors

Variable	Beta (β)	Sigma (ρ)
Curriculum and teaching	0.518	0.000
Social/professional interaction	0.330	0.000
Learning environment	0.052	0.493

Significance level 5%

The statistical analyses show that nursing students perceive the curriculum and teaching and the social/professional interaction dimensions to be major predictors of personal satisfaction (Figure 1).

**Figure 1.** Correlation between the factors that contribute to personal satisfaction

Discussion

The limitation of this study was the specific population of students in a public university in southern Brazil, which does not allow for the generalization of its results since the sample, although representative possibly does not characterize the multiple university contexts existing in Brazil.

The results of this study enabled the understanding of the phenomenon of personal satisfaction, as well as the factors that cause demotivation throughout the formative period, in the specific context of Brazilian nursing students. In this sense, through the knowledge of institutional dimensions that predict personal satisfaction of nursing students, it is possible for institutions of higher education to reassess their training processes, aimed at educational quality.

This research showed that students perceive curriculum and teaching dimensions, learning environment, and social/professional interaction as the main factors associated with personal satisfaction. Thus, personal satisfaction can be described as the harmony between the different areas that comprise university life: affective and interpersonal relationships, available environmental resources, the result of expectations linked to the satisfaction of personal and professional life.⁽¹⁰⁾ Thus, in view of the different factors that can influence personal satisfaction of nursing students, it is necessary to evaluate satisfaction in higher education as a way to enhance learning, through the diagnosis of situations that promote academic dissatisfaction.⁽¹¹⁾

Among the dimensions perceived by students as major promoters of personal satisfaction, the construct of curriculum and teaching was highlighted; also, issues relating to teacher qualifications, use of appropriate methodologies, updated didactic, distribution of curriculum content, and consistency of the subjects were perceived by students as major promoters of academic satisfaction or dissatisfaction.

The teaching method used directly influences the satisfaction of nursing students. The activities that stimulate active participation of students in problem solving allow for the development of respon-

sibility and initiative, increase autonomy, control, independence and security, while they build themselves along their way⁽¹²⁾ In this sense, older students perceive themselves less satisfied with curriculum issues and education than younger students, possibly because they have been in the training environment for a longer period, both the theoretical and practical, and have a more comprehensive and critical view of the teaching-learning process.

In parallel, curriculum issues were also perceived by nursing students as important, such as: distribution of curricular content; consistency of the offered disciplines; similarity of the content with the practice reality, and curricular capability to promote training that is consistent with market demand.⁽⁸⁾ Still, in relation to the curriculum, the students who worked perceived themselves to be less satisfied than students who did not work. As the majority of students worked in health care, it gave them the perception of the discrepancies between the teaching of theory and practice and the caring reality of the profession.

The curricular inadequacies that were perceived, such as insufficient training hours for practice activities, and a lack of professionals to meet the expectations and demands of students, were highlighted as recurring situations by nursing students.⁽¹⁾ Increased work time in the practice disciplines provided students with increased safety and confidence in their knowledge acquired during the formative period.⁽¹³⁾

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Thus, the nursing students perceive these courses as factors contributing to the enhancement of professional identity by increasing the experience and clinical knowledge promoted by the curricula and quality of instruction, which not only includes specific knowledge, but also promotes a global view, leading the student to professional independence through the progressive development of critical

thinking and clinical reasoning.⁽¹³⁾ The environment dimension was also perceived by students as a promoter of academic satisfaction, demonstrating that issues related to infrastructure, support facilities, acquisition and maintenance of equipment, are relevant to the perception of satisfaction with the nursing major.

The investment in structural improvements can increase the efficiency and productivity of students. This readjustment of the environment can be seen as an effective strategy for achieving organizational goals, as it considers the institution's needs and also the expectations and personal ideals of students by eliminating or preventing the negative effects of dissatisfaction with the educational environment and the nursing major.⁽¹⁴⁾ In this sense, investment in the area of information and communications technology deserves attention, more specifically informatics, in which computer programs promise to optimize the issues of quality management, the development of the faculty, provide greater accessibility of content through online sharing of new teaching methods, and greater interaction among students and teachers from different grade levels.⁽¹⁵⁾

The adoption of new environment of online classes positively influences interest and academic performance. These technologies, as well as benefiting knowledge construction, also promote the satisfaction of nursing students by generating updated teaching methods.⁽¹⁶⁾ However, it is not just communication and information technologies that are important for promoting an environment consistent with students needs: the physical structure of the institutions also deserves attention, since this is indicated by students as a determining factor of satisfaction with the major.⁽¹⁷⁾ In this sense, students identify the support facilities, computers, libraries with updated collections, and laboratories with equipment in good condition, as well as the physical structure of classrooms, as fundamental to the satisfaction with the major.⁽⁸⁾

It was evident that satisfaction levels are defined not only by the experiences of students in relation to their interactions with teachers and institutional support, but also the modernization of technological learning methods that provide an increase in

the exchange of information. So, the quality of the physical structure promotes support and encouragement of the student, acting as supports for the theoretical and practical deepening of knowledge acquired during the educational process.⁽¹⁷⁾ Another factor evidenced by nursing students as a promoter of satisfaction with the major was the social/professional interaction dimension, demonstrating that relational difficulties are the third leading cause of personal dissatisfaction. The development of a positive relationship of exchange between all involved in the educational process promotes personal, academic and professional growth of these students, and prepares them to become future nurses.⁽¹⁴⁾

Studies reported that students develop negative attitudes when they are not satisfied, often negative symptoms due to relationship difficulties, rivalry with colleagues, interpersonal problems, hostile work environment, among others.^(12,18) In this sense, near the end of the undergraduate studies, the students perceive themselves to be less satisfied with the issues related to social/professional interaction, which can be explained by the greater exposure of students to clinical environments and conflicts of work teams.

Interpersonal difficulties experienced by students in the learning environment hinder the articulation of theoretical and practical knowledge that depend on harmonious interaction between teachers, students and staff.⁽¹³⁾

Thus, the interrelationships established in the educational environment were perceived as important predictors of personal satisfaction of nursing students associated with a positive perception of faculty support, encouragement from their social networks of friends, and the solicitude of the professionals in the instructional environments.⁽¹⁹⁾

Conclusion

Curriculum and teaching were the factors perceived as major predictors of academic satisfaction with the major, followed by the social/professional interaction, and environment dimensions. Thus, in view of the multiple determinants of academic satisfaction,

it is necessary to promote specific improvements in the educational and formative scenario, that enable an adaptation of institutions to the needs of these students, in order to contribute to a satisfactory academic experience by decreasing the barriers to academic education.

Collaborations

Hirsch CD, Barlem ELD, Barlem JGT, Silveira RS and Mendes DP declare that they contributed to the project design, analysis and data interpretation, critical review of the relevant intellectual content, and final approval of the version to be published.

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