




COMPETENCE IN INTERPERSONAL COMMUNICATION: RELATIONSHIPS WITH SOCIAL CHARACTERISTICS AND ANXIETY TRAIT¹

COMPETÊNCIA EM COMUNICAÇÃO INTERPESSOAL: RELAÇÕES COM CARACTERÍSTICAS SOCIAIS E TRAÇO DE ANSIEDADE¹

COMPETENCIA EN COMUNICACIÓN INTERPERSONAL: RELACIONES CON CARACTERÍSTICAS SOCIALES Y RASGO DE ANSIEDAD¹

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ABSTRACT

Objectives: to identify the interpersonal communication competence of students in the context of undergraduate Nursing and associate social characteristics and anxiety traits with competence in interpersonal communication. **Method:** quantitative cross-sectional study carried out with undergraduate Nursing students from two private higher education universities. In this study, three instruments were used: a survey participant characterization questionnaire, the Trait Scale component of the State-Trait Anxiety Inventory (STAI) and the Interpersonal Communication Competence Scale (ICCS). **Results:** the study sample consisted of 613 students with a mean age of 25.53 (± 7.93). The higher the family income, the greater tend to be assertiveness, handling interactions and controlling the environment. The longer the student is in the course, the greater the self-disclosure and control of the environment. Women tend to reveal themselves more and have more availability in interpersonal relationships. Evening students tend to be less available than morning students. The shyer and more anxious student, the less competent will be in interpersonal communication. **Conclusions:** there is an association between income and assertiveness, managing interactions and controlling the environment; the semester with self-disclosure and control of the environment; of sex with availability and self-disclosure; the period in which the student takes the course and availability. Shyness and anxiety were negative variables in relation to competence in interpersonal communication.

Keywords: Communication; Interpersonal Relations; Students, Nursing.

RESUMO

Objetivos: identificar a competência em comunicação interpessoal dos estudantes no contexto da graduação em Enfermagem e associar características sociais e traço de ansiedade com a competência em comunicação interpessoal. **Método:** estudo transversal quantitativo realizado com estudantes do curso de graduação em Enfermagem de duas universidades de ensino superior particulares. Neste estudo foram utilizados três instrumentos: um questionário de caracterização do participante da pesquisa, o componente da escala do Traço do Inventário de Ansiedade Traço-Estado (IDATE) e a Escala de Competência em Comunicação Interpessoal (ECCI). **Resultados:** a amostra do estudo foi composta de 613 estudantes com média de idade de 25,53 ($\pm 7,93$). Quanto maior a renda familiar, maiores tendem a ser a assertividade, o manejo das interações e o controle do ambiente. Quanto mais tempo o estudante estiver no curso, maiores a autorrevelação e o controle do ambiente. As mulheres tendem a se autorrevelar mais e a terem mais disponibilidade nas relações interpessoais. Estudantes do período noturno tendem a ser menos disponíveis do que aqueles que estudam no período matutino. Quanto mais tímido e ansioso o estudante, menor será a competência em comunicação interpessoal. **Conclusões:** existe associação da renda com a assertividade, manejo das interações e controle do ambiente; do semestre com a autorrevelação e com o controle do ambiente; do sexo com a disponibilidade e autorrevelação; do período em que o aluno realiza o curso e a disponibilidade. Timidez e ansiedade mostraram-se variáveis negativas em relação à competência em comunicação interpessoal.

Palavras-chave: Comunicação; Relações Interpessoais; Estudantes de Enfermagem.

RESUMEN

Objetivos: identificar la competencia comunicativa interpersonal de los estudiantes en el contexto de la carrera de enfermería y asociar características sociales y rasgos de ansiedad con la competencia en comunicación interpersonal. **Método:** estudio cuantitativo transversal realizado con estudiantes de graduación en enfermería de dos universidades privadas de educación superior. En este estudio, se utilizaron tres instrumentos: un cuestionario de caracterización de los participantes de la pesquisa, el componente de la Escala de Rasgos del Inventario de Ansiedad Estado-Rasgo (IDATE) y la Escala de Competencia en Comunicación Interpersonal (ECCI). **Resultados:** la muestra de estudio estuvo constituida por 613 estudiantes con una edad media de 25,53 ($\pm 7,93$). Cuanto mayor es la renta familiar, mayor suele ser el asertividad, el manejo de interacciones y el control del entorno. Cuanto más tiempo esté el estudiante en el curso, mayor será la autorrevelación y el control del entorno. Las mujeres tienden a revelarse más y tienen más disponibilidad en las relaciones interpersonales. Los estudiantes vespertinos tienden a estar menos disponibles que los estudiantes matutinos. Cuanto más tímido y ansioso es el estudiante, menor es la competencia en la comunicación interpersonal. **Conclusiones:** existe una asociación entre renta y asertividad, manejo de interacciones y control del entorno; el semestre con autorrevelación y control del medio ambiente; del sexo con disponibilidad y autorrevelación; el período en el que el alumno realiza el curso y la disponibilidad. La timidez y la ansiedad fueron variables negativas con relación a la competencia en la comunicación interpersonal.

Palabras clave: Comunicación; Relaciones Interpersonales; Estudiantes de Enfermería.

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INTRODUCTION

Communication is a process of understanding the other through messages sent and received, exercising the messages themselves and the mode of interaction, directly influencing the behavior of the people involved in it, in the short, medium, or long term. In a conversation, people perceive their own and the other's reactions, as well as react according to their feelings and thoughts.¹

The communication process is composed of verbal (written or spoken) and non-verbal signals (gestures, facial expressions, body posture), used for the purpose of sharing information.² An important aspect to be considered in communication is the speech aspect, if this is clear, if there is interaction, understanding and if it is possible to understand it.³

Communicating assertively is a necessary skill for integral human development, including in the professional sphere. For this reason, it is expected that people, as relational beings, acquire concepts, principles, and skills for a good communication process.⁴

People with good interpersonal relationships are happier, healthier, less prone to illnesses and more productive at work, as good professional performance essentially depends on a set of personal skills and relationship skills.⁵

Improving the interpersonal competence of nurses contributes to teamwork, to the creation of favorable environments for decision-making and for solving everyday problems.⁶ In this sense, the interpersonal relationship represents an important element for the nurse-patient relationship and multidisciplinary health team.⁷

Interpersonal communication makes relationships deeper and more transparent, establishes mutual respect and favors decision-making based on critical and reflective thinking in areas of interest to Nursing.^{7,8}

In the context of training new nurses, the National Curriculum Guidelines (NCG) establish five general competencies and skills related to decision-making, leadership, administration, management, continuing education, and communication. For this study, competence is understood as a series of behaviors obtained by educational methods that develop knowledge, skills, and attitudes for the execution of professional practice from the initial training in Nursing.^{6,8}

A study on the teaching of communication in Nursing education showed that both students and teachers consider it important to develop communication skills for an efficient and competent practice, with graduation being essential for the improvement of this skill.⁹

Therefore, there is a need to develop communication skills during Nursing students' graduation, so that they understand the importance of interpersonal relationships and the appropriate use of communication in the context of care.^{3,9}

To develop communication skills, it is important to understand this process and reflect on the experiences of Nursing practice. For this to become effective and practical, university students need to develop critical thinking skills to become good communicators.⁷

Critical reasoning comprises an intentional assessment that allows interpreting, analyzing, evaluating, reflecting, contextualizing the evidence for solving problems in different situations and ensuring the good quality of care provided to individuals, families, and social groups.^{9,10}

The exercise of these social skills should be encouraged from graduation in Nursing and improved throughout professional life, in order to enable a powerful interface between assertive, respectful, and empathetic communication in favor of humanized care performed by the Nursing teams.^{10,11}

Thus, the development of social skills in the education of students is not only related to the academic environment and professional performance, including the dimension of the psychological well-being of university students. It is understood that students' difficulties in social interaction may be associated with an increase in psychological disorders, which may imply failure in academic activities and difficulties in finishing the chosen course.¹²

Another relevant aspect for competence in interpersonal communication is anxiety. Anxiety has a normal affectionate nature, but when increased it can lead to unpleasant feelings such as fear, mood disorders, behavior, thinking and physiological changes.¹³

The study of anxiety uses two relevant aspects: one of them is related to the unstable emotional state, differentiated by personal emotions of conflict, which can be intensified over time, being defined as state-anxiety. The other aspect refers to a moderately stable individual disposition to respond with anxiety under stressful conditions. It tends to observe conditions considered threatening to a greater extent and is defined as trait anxiety. This is the object of this study.¹³

The development of skills for interpersonal communication and the analysis of social characteristics and anxiety traits can support actions in undergraduate Nursing that contribute to future performance with the Nursing and health team, with individuals and families, in addition to other actors' relevant social issues.

Therefore, the objectives of this study were: a) to identify the interpersonal communication competence of students in the context of undergraduate Nursing; b) associate social characteristics and anxiety traits with competence in interpersonal communication.

METHOD

Quantitative cross-sectional study that has competence in interpersonal communication as a dependent variable, and social characteristics and anxiety traits as predictive variables.

The sample calculation was acquired through the standard deviation (± 7.90) and mean (62.36) of a previous validation study of the Interpersonal Communication Competence Scale.¹¹ The coefficient of variation was calculated ($CV=SD/mean$; $CV=0.126$). The maximum estimated error was considered by multiplying CV and SD (0.126×7.90), being equal to 0.99. The value coefficient was predisposed to 5% and the estimated minimum sample size for applicability of this instrument was 245 participants.

Participants were undergraduate Nursing students from two private for-profit universities located in the cities of Guarulhos (SP) and São Paulo (SP). From the legibility criteria, students duly enrolled in the undergraduate Nursing course from one to eight semesters from both researched institutions, aged 18 years or over, were included in the research.

The recruitment of participants began with the authorization of students at the beginning of the class for the researchers to enter the classroom. The researchers introduced themselves and explained the research objectives. There was no refusal. The research instruments were delivered collectively in the classroom in the morning, afternoon, and evening. The instruments applied were collected on the same day they were delivered and at two times: break and end of class. The period of data collection took place from March 2016 to March 2017.

For the present study, three research instruments were used: a participant characteristics questionnaire, the State-Trait Anxiety Inventory (STAI) and the Interpersonal Communication Competence Scale (ICCS).

The participant characteristics questionnaire was elaborated with 11 questions related to the sociodemographic profile, namely: age, gender, place of birth, emotional relationship, self-reported color, religion, current work, area of professional activity, family income, graduation semester and period.

The STAI is an instrument ordered by two subscales characterized by self-report that measures two different concepts of anxiety, these being the anxiety state (A-State) and the anxiety trait (A-Trait). In this study, the Trait subscale was used exclusively, which analyzes how the participant generally feels, being ordered by 20 questions measured with a four-point Likert scale (1- almost never; 2- sometimes; 3- frequently; 4- almost always). The range of the total score on the scale is from 20 to 80, and the higher the STAI score, the greater the degree of anxiety. This subscale contains 10 items established as uncomfortable emotions of tension and apprehension consciously perceived by increased autonomic nervous system activity. These items are reverse coded (items 3, 4, 6, 7, 9, 12, 13, 14, 17 and 18).¹⁴

The ICCS is a self-administered instrument ordered by 17 items and five domains of interpersonal communication competence: self-disclosure, assertiveness, interaction management, availability, and environmental control. The range of the scale's total score is from 17 to 85: the higher the ICCS score, the greater the subject's competence in interpersonal communication. In each statement, the participant indicated the answer that best reflects their communication with others: (5) it almost always represents; (4) generally; (3) sometimes; (2) rarely; (1) never. Two items have reverse coding (8 and 17): the higher the score, the greater the ability in interpersonal communication.¹⁵

Data were analyzed using the statistical program R Core Team 2016[®] (GPL, 2016, Vienna: Austria). Descriptive and inferential analysis was performed. To check the quantitative variables with the scores of the instruments, Spearman's correlation test was used; to associate categorical variables with scores, the Kruskal-Wallis test and the Wilcoxon Mann-Whitney test were used. The significance coefficient accepted in the tests was 0.05. When the association test was expressive, the p-values were evaluated in two-by-two checks using the Bonferroni criterion; groups distinct from each other are those with p-values smaller than the general one. Data missing from the psychometric instruments were assigned using the mode.

The development of the study complied with national and international regulations on ethics in research involving human beings, being approved by the Ethics and Research Committee of the IES. The Free and Informed Consent Form (ICF) was signed by all participants.

RESULTS

The study sample consisted of 613 students with a mean age of 25.53 (± 7.93). In high education institutions-HEI 1, questionnaires were collected from 211 (34.42%) students and in HEI 2, from 402 (65.58%). Most were female ($n=490$; 79.93%), born in São Paulo ($n=450$; 73.41%), working ($n=415$; 67.70%), without a steady partner ($n=364$; 59.38%), white ($n=319$; 52.04%), who studies in the morning ($n=340$; 55.46%).

Higher frequencies of Catholics ($n=256$; 41.76%), with income of up to three minimum wages ($n=140$; 22.84%), that is, R\$ 2,862.00, who work in the field of Nursing ($n=206$; 33.61%), who are attending the second semester of graduation ($n=225$; 36.70%) and third semester of graduation ($n=139$; 22.68%) at night ($n=246$; 40.13%).

The mean ICCS score in the studied sample was 61.84 (± 8.10). There were positive and statistically significant correlations between income and the ICCS assertiveness factor ($p\text{-value}=0.03$; $r=0.090$), with the management of interactions ($p\text{-value}=0.046$; $r=0.080$) and with environmental control ($p\text{-value}=0.002$; $r=0.127$). There was also an expressive correlation of the semester variable, which means time in the course, with self-disclosure ($p\text{-value}=0.029$; $r=0.088$) and with environmental control ($p\text{-value}=0.015$; $r=0.098$).

These results indicate that the greater the family income, the greater tend to be assertiveness, handling interactions and controlling the environment. The longer the student is in the course, the greater the self-disclosure and control of the environment.

The data showed that women tend to reveal themselves more and have more availability in interpersonal relationships compared to men. Night shift students tend to be less available than morning students, as described in Table 1 and Figure 1.

Note: Kruskal-Wallis Test. C: result of the two-by-two comparison using the Bonferroni method: morning *versus* night ($p\text{-value}$ 0.014).

By comparing the shyness variable with the ICCS factors, it was possible to establish that self-disclosure, assertiveness, managing relationships and controlling the environment are important skills that strengthen competence in interpersonal communication and decrease the more the person considers themselves shy (Table 2, Figure 2).

Statistically significant correlations were found when comparing the anxiety trait with the assertiveness, environmental control, and availability factors. Students with higher anxiety trait tend to be less assertive, have less control over the environment and availability in interpersonal relationships (Table 3, Figure 3).

Table 1 - Statistically significant associations between social variables and ICCS scale factors. Guarulhos, SP, Brazil, 2016 ($n=613$)

Test applied: Kruskal-Wallis/*Mann-Whitney	Availability			Self-disclosure		
	Mean	SD	p-value	Mean	SD	p-value
Gender			0.010			0.000
Female	12.7	2.09		13.8	2.87	
Male	12	2.31		13	3.09	

Shift in which the student takes the course	Availability		
	Mean	SD	p-value
			0.023
Morning	12.7	2.06	
Night	12.3	2.22	
Afternoon	12.9	2.33	

Source: elaborated by the authors.

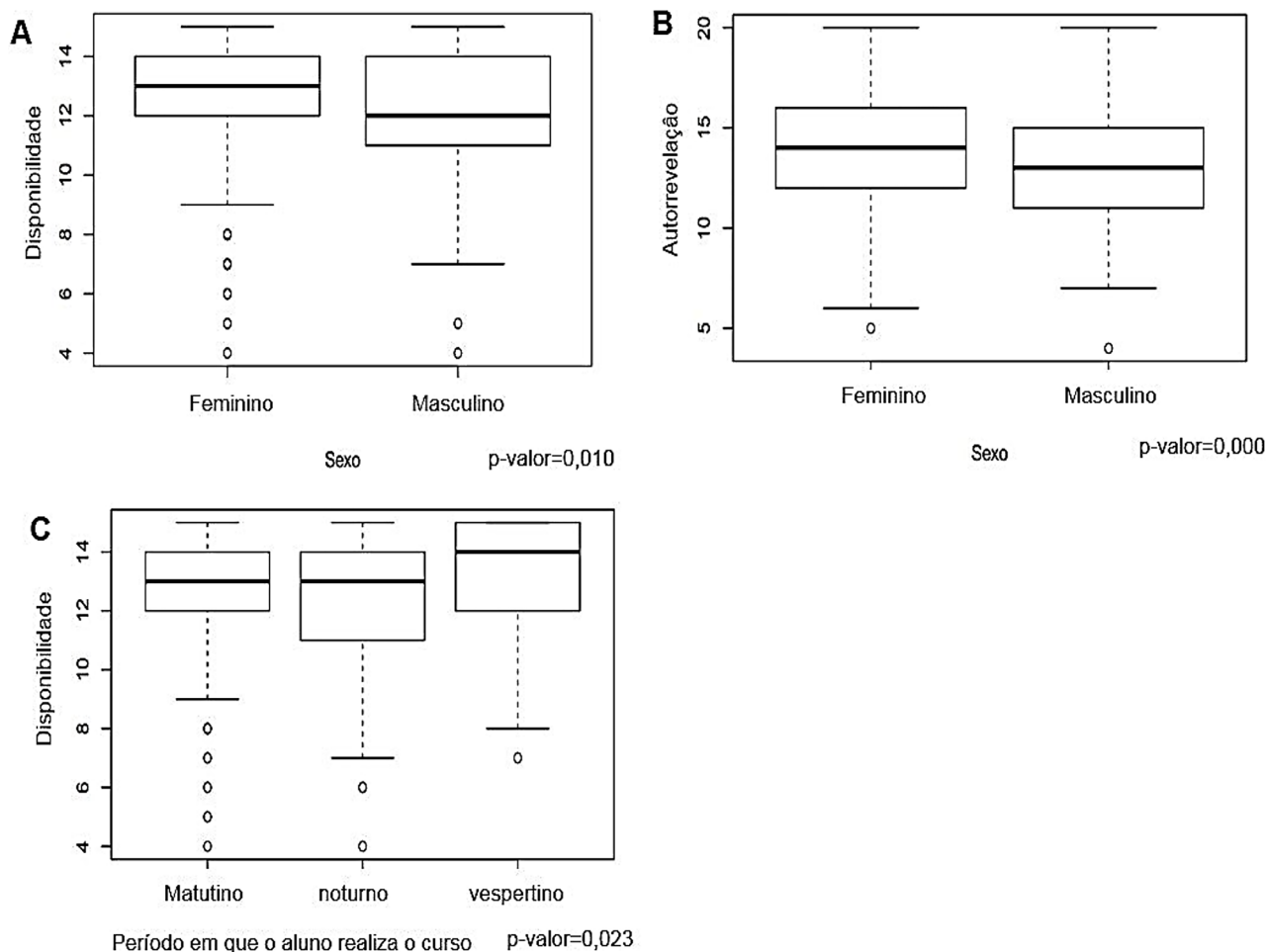


Figure 1 - Statistically significant associations between social variables and ICC scale factors. Guarulhos, SP, Brazil, 2016 (n=613)
 Note: Kruskal-Wallis Test. C: result of the two-by-two comparison using the Bonferroni method: morning *versus* night (p-value 0.014).

Table 2 - Statistically significant associations between the shyness variable and the ICCS scale factors. Guarulhos, SP, Brazil, 2016 (n=613)

Test applied: Kruskal-Wallis/ *Mann-Whitney	Self-revelation			Assertiveness			Interaction Management			Environmental Control			Availability		
	Mean	SD	p-value	Mean	SD	p-value	Mean	SD	p-value	Mean	SD	p-value	Mean	SD	p-value
How shy do you consider yourself			<0.000			<0.000			0.018			<0.000			<0,001
A little	14.6	2.84		15.6	2.56		7.69	1.52		14.9	2.46			12.9	1.78
Little	13.8	2.82		14.7	2.67		7.71	1.5		13.9	2.43			12.8	2.04
Much	13	2.86		14.1	2.72		7.45	1.42		12.4	2.84			12	2.24
Very much	13.5	3.34		13.3	2.77		8.12	1.55		10.5	3.15			12.1	2.69

Source: elaborated by the authors themselves.

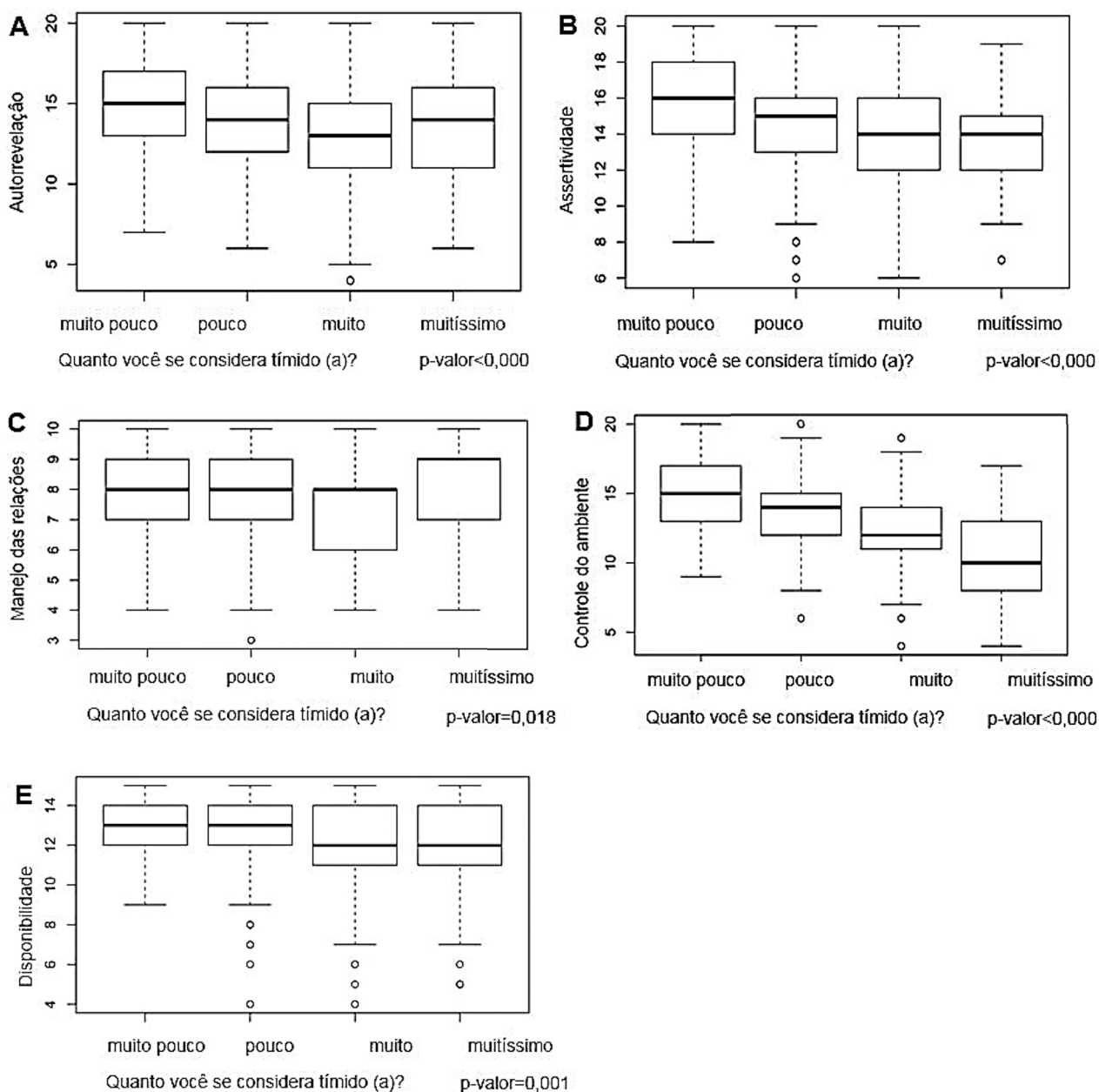


Figure 2 - Statistically significant associations between the shyness variable and the ICCS scale factors. Guarulhos, SP, Brazil, 2016 (n=613)
 Note: Kruskal-Wallis test. A: result of the two-by-two comparison using the Bonferroni method: very little *versus* very much (p<0.000). B: result of the two-by-two comparison using the Bonferroni method: very little *versus* much (p<0.000), very little *versus* very much (p<0.000), little *versus* very much (p<0.000). C: result of the two-by-two comparison using the Bonferroni method: much *versus* very much (p=0.003). D: result of the two-by-two comparison using the Bonferroni method: very little *versus* little (p-value<0.000), very little *versus* much (p-value<0.000), very little *versus* very much (p-value<0.000), little *versus* much (p-value<0.000), a little *versus* very much (p-value<0.000), much *versus* very much (p-value<0.000). E: result of a two-by-two comparison using the Bonferroni method: very much *versus* a little shy (p=0.003).

Table 3 - Descriptive analysis of the total score of the STAI (A-Trait) and ICCS instruments used in this study. Guarulhos, SP, Brazil, 2016 (n=613)

	No. of Items	Score variation	Mean point	Mean	Standard deviation	Minimum	Median	Maximum
ICCS	17	17-85	51	61,84	8,10	36	62	84
STAI (A-Trait)	20	20-80	50	42,21	9,08	21	41	70

Source: elaborated by the authors themselves. Items that are reverse encoded have already been re-coded in this table.

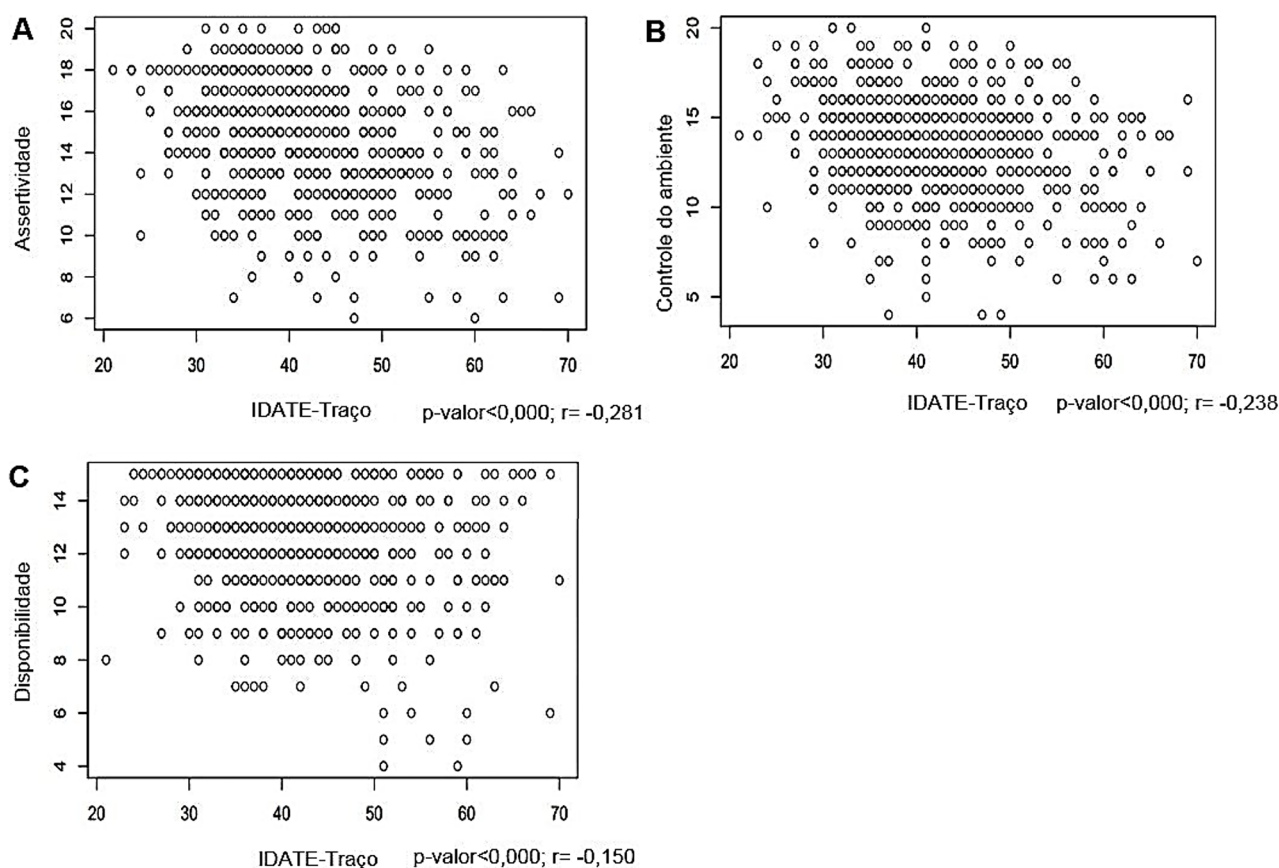


Figure 3 - Statistically significant correlations between ICCS factors and AGE (A-Trait). Guarulhos, SP, Brazil, 2016 (N=613)

Note: STAI (A-Trait): Trait and State of Anxiety Inventory - Trait subscale. r: Spearman correlation ratio. p-value: level of significance. Spearman's correlation test.

DISCUSSION

In this study, direct relationships were found between family income, student time in the course, course period and gender and the student's competence in interpersonal communication in the academic context, that is, having higher family income, more student time in the course, studying in the morning and being female were variables that positively affected this competence.

Other authors also point out that the family's economic situation can influence student performance, both from an academic and relational point of view. More and more young students are entering universities under the influence of the socioeconomic context or due to the family being asked to help with expenses, arousing in them feelings of fear, stress, and anxiety, in addition to making them more vulnerable when dealing with the demands and situations they experience. in everyday university life.¹⁶

The relationship between the period of the course and competence in interpersonal relationships can be exemplified by a study that aimed to understand the conditions of the worker/student of higher education at night. Studying at night and working during the day is, for many students, the only option to continue their studies. Tiredness, sleepiness, and lack of time make them less available to develop the proposed activities in the classroom and to practice interpersonal skills, including with colleagues, among other common activities for undergraduate students.¹⁷

Researchers claim that family support and income can be determining factors in student performance.¹⁸ Academic performance and interpersonal skills were considered associated factors in a study that aimed to differentiate the social behavior of young people with and without learning difficulties. The authors identified that young people without learning problems reported having more acceptance by their peers, more willingness to assert themselves and less performance difficulties; male students reported being more welcoming by their peers and more likely to have learning problems than female students.¹⁹

The authors identified that a good interpersonal relationship with classmates helped to delay university dropouts. Furthermore, low academic involvement during graduation and poor perceived relationship with teachers were identified as negative factors. These results found revealed the need to favor more academic involvement among students, as well as reflection on the role and influence of teachers in the development of students' careers.²⁰

Considering the result found on the relationship between the student's time in the course and interpersonal skills, one can cite the study that aimed to analyze the possible relationships between social skills and academic adaptation. The authors concluded that a good set of social skills provides interpersonal interactions and academic performance, favoring the student's adjustment period to university, and that academic responsibilities promote learning opportunities, not only academic, but also interpersonal, benefiting progress of social skills, so relevant to the student.²¹

A study carried out with students from the Psychology course found that social relations at the university are relevant for adaptation, experience and obtaining academic gains. In general, students expressed difficulties in interpersonal relationships in the academic context. In the teacher-student relationship, problems with the teacher's didactics were identified. Among the situations described as easy, the students' admiration for the teachers, the tolerance for differences, socialization, and acceptance to work with colleagues stood out.²²

Authors claim that students can use their interpersonal skills in order to achieve better academic performance, motivating themselves to continue the chosen course. Therefore, universities need to recognize and analyze the expectations of students to make them more compatible with reality, providing a more welcoming environment and reducing the frustration generated by an expectation that is far from reality.²³

Converging with the results of the current study, authors^{20,21} also found a more positive relationship between females and the acquisition of interpersonal skills. Research carried out with Nursing students found that women tend to be more empathetic compared to men.²⁴

Another survey conducted at a university in Italy with healthcare students also inferred that female students were more empathetic. Empathy influences the interaction with the other; in addition, more empathetic people tend to be more reflective and willing to understand the experiences and perceptions experienced in interpersonal relationships.²⁵

Research with a sample of 112,000 profile photos from nine regions of the world posted on a popular social networking site showed that women favor dyadic relationships (between two people), while men prefer larger, male groups. These apparent quality-quantity differences for friendships suggest a universal and fundamental difference in the function of close friendships between the two genders.²⁶

This study also found inversely proportional relationships between shyness and anxiety with competence in interpersonal communication, that is, more shy and anxious students showed less competence in relation to interpersonal relationships.

The negative relationship of shyness in the individual's social skills may be present since childhood. Researchers have examined underlying processes and conditions that contribute to shy children's school adjustment. The results revealed that, when children exhibited shy behaviors, they also reported more depressive symptoms, which, in turn, were associated with worse academic performance, less school satisfaction and more dropout. The conclusion was that shyness is an important risk factor for worse academic performance, school dissatisfaction and social adjustment among children.²⁷

Researchers, when comparing the attitudes and stress levels of medical students with the acquisition of communication skills, found that there was also a significant negative correlation between the levels of anxiety and attitudes towards learning communication skills in general, as well as the teaching and learning process.²⁸

Other authors found that factors such as shyness, low voice and fear of being insecure are considered communication barriers and hinder social relationships. Nursing undergraduates who participated in a study stated that presenting communication skills and difficulties is directly associated with the particularities of each student, their individuality and personality. During the study, better communication skills were also observed among university students with more theoretical knowledge about health concepts, communication references and who had more opportunities to experience interpersonal relationships in health environments during training.²⁹

One research identified a medium to high level of anxiety in most university students enrolled in courses in the health area. The anxiety trait is related to the particular qualities of each student and how they face the varied events related to life and the academic environment, which can directly influence the academic performance and social relations skills of the future professional.³⁰

The importance of developing competence in interpersonal communication even in university education is directly related to the responsibility of the future nurse in managing the team and health services. Communication is used in various care situations and is part of the entire Nursing process.³¹

Among the limitations of the study, it is worth mentioning: the study design, cross-sectional, in which it was possible to make associations and not establish causality; the period of data collection with the number of the sample collected in each HEI – through the proposed associations, the number of the study could have been higher; and the distribution of participating students is more uniform compared to the different Nursing undergraduate semesters.

However, as an advantage of this study, the high descriptive potential, the promptness of the collection followed and the representativeness of the researched population can be highlighted, bringing as a research result significant associations in relation to social characteristics, anxiety traits and communication competence.

CONCLUSION

There is an association between income and assertiveness, managing interactions and controlling the environment; the semester with self-disclosure and control of the environment; of sex with availability and self-disclosure; the period in which the student takes the course and availability.

There was also an association of the shyness variable with the five ICCS factors, showing that this variable tends to define students' competence in interpersonal communication. There were negative correlations of the anxiety trait with assertiveness, control of the environment and availability in interpersonal relationships. Shyness and anxiety were negative variables in relation to competence in interpersonal communication.

In summary, the current study presents relevant subsidies to instill organizational changes in the teaching methods applied by Nursing professors for the development of skills related to competence in interpersonal communication and analysis of social characteristics and anxiety traits. The purpose is that, during the training process, students learn to deal with various situations related to life and the academic environment, contributing to improve academic performance and to make nurses safe and prepared for professional training.

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