

# An instrument to analyze secondary-level students' images about nurses\*

ELABORAÇÃO DE INSTRUMENTO PARA ANÁLISE DA IMAGEM DO ENFERMEIRO FRENTE A ALUNOS DO ENSINO MÉDIO

ELABORACIÓN DE UN INSTRUMENTO PARA ANALIZAR LA IMAGEN DEL ENFERMERO ENTRE LOS ALUMNOS DE LA ENSEÑANZA MEDIA

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## ABSTRACT

The objective of the present study was to perform a quantitative-descriptive pilot study, which would provide the support for a further construct validation of a data collection instrument to assess the perception of third-year secondary-level students about nursing. The data collection instrument was founded on Nursing History, Social Psychology, and Career Choice literatures, and was submitted to content validation by judges. The convenience sample consisted of 46 students, 28 of whom were women. Nursing occupied the eighth place in the ranking of social status among 14 professions. Regarding salary perception, nursing dropped to the ninth place. The association of Nursing with aspects that denote scientific knowledge suggests that the image of Nursing Practitioners should be updated among students in the city of Ribeirão Preto-SP.

## KEY WORDS:

Nursing.  
History of nursing.  
Attitude.  
Career choice.

## RESUMO

O objetivo do presente trabalho foi a realização de um estudo quantitativo-descritivo piloto, que apoiará a futura validação de constructo de um instrumento de coleta de dados para analisar a percepção de alunos do terceiro ano do ensino médio sobre a Enfermagem. O instrumento de coleta de dados teve como base a literatura de História da Enfermagem, Psicologia Social e Escolha de Carreira e foi submetido à validação de conteúdo por juízes. A amostra de conveniência foi constituída de 46 alunos, sendo 28 do sexo feminino. A Enfermagem ficou em 8º lugar no *status* social em um *ranking* de 14 profissões. Com relação à percepção salarial à Enfermagem caiu para o 9º lugar. A associação da Enfermagem com aspectos que denotam conhecimento científico sugere a atualização da imagem do Profissional de Enfermagem junto aos estudantes no município de Ribeirão Preto-SP.

## DESCRIPTORES:

Enfermagem.  
História da enfermagem.  
Atitude.  
Escolha da profissão.

## RESUMEN

El objetivo del presente trabajo fue realizar un estudio cuantitativo y descriptivo piloto que apoyará la futura validación de *constructo* de un instrumento de recolección de datos para analizar la percepción, de los alumnos del tercer año de enseñanza media, sobre la Enfermería. El instrumento de recolección de datos tuvo como base: la literatura de la Historia de la Enfermería, la Psicología Social y la Elección de una Carrera; fue sometido a la validación del contenido por jueces. La muestra por conveniencia fue constituida de 46 alumnos, siendo 28 del sexo femenino. La Enfermería quedó en 8º lugar en el *status* social en un *ranking* de 14 profesiones. Con relación a la percepción salarial la Enfermería cayó al 9º lugar. La asociación de la Enfermería, con aspectos que denotan conocimiento científico, sugiere la actualización de la imagen del Profesional de Enfermería junto a los estudiantes en el municipio de Ribeirão Preto-SP.

## DESCRIPTORES:

Enfermería.  
Historia de la enfermería.  
Actitud.  
Selección de profesión.

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## INTRODUCTION

Even in the 21<sup>st</sup> century, the nursing profession still faces problems in showing its true image. This context becomes a problem considering the global crisis of human resources in health, which has already affected Canada and the United States, causing an increasing immigration of practitioners, attracted by seductive advertisements. This, in turn, increases the crisis in their countries of origin.

In fact, America has turned its look to health professionals and named the period from 2006 – 2015 the *Decade of Human Resources in Health*, with the purpose of validating practitioners and improving access to health<sup>(1)</sup>. There is a need for immediate solutions to the evident recruitment problem in nursing. Many articles have addressed the social image of nurses; however, few are evidence-based, hence, the need for further studies in this area.

Though our experience leads us to Nursing History to justify the presence of negative stereotypes in today's society, one cannot disregard the cognitive process in the development of these myths. Hence, it is crucial to understand not only history itself, but also the construction of stereotypes and the career choice process in order to understand the current image of the profession. To better understand the phenomenon, marketing strategies could be designed for specific needs.

In the field of stereotypes, Social Psychology offers a great contribution. Within this subject, stereotypes are usually found in the construction of attitude, which can be defined as

a lasting organization of beliefs and general cognitions, filled with an affective load in favor of or against a specific social object that presumes action coherent with the cognitions and feelings related to this object.

Attitudes consist of three components: 1) cognitive, 2) affective, and 3) behavioral<sup>(2)</sup>. The functions of attitude include an instrumental function (specifically expressing wanting rewards and avoiding punishments); knowledge function (helping to understand the world and to organize schemes); expression of values; an ego defense function; and a social adjustment function (help individuals see themselves as part of a social community)<sup>(3)</sup>.

Prejudice can be defined as hostile or negative attitudes against certain groups, not necessarily implying hostile actions, and being created and perpetuated by culture and society<sup>(2-3)</sup>.

Building an attitude requires having a cognitive representation of the social object, which corresponds to beliefs and other cognitive components, such as one's view and knowledge about the object. The cognitive component of prejudice is called a stereotype; therefore, stereotypes are the beliefs about individual aspects that one attributes to certain groups or individuals. The justification given to the construction of stereotypes is the excessive information we

are submitted to everyday. By stereotyping, we are simplifying our *view of the world* and saving energy<sup>(2)</sup>.

For this reason, just the fact of seeing stereotypes as a cognitive component of an attitude, we see the relation between cognitive, affective, and behavioral components as something connected and changeable at points with possible intervention strategies (i.e. by changing the social beliefs it is possible to change attitudes). With regard to nursing, changes would be in the negative beliefs, towards favorable changes in the attitude of *choosing the career* so as to accept this possibility, and also increase its value in society.

The three attitude components, however, are not independent from a series of external factors, which can promote a behavior opposite to the individual's beliefs. Therefore, understanding these external factors and acting on them could promote significant changes. In nursing, special attention should be given to the cultural factor in particular<sup>(2)</sup>.

Culture exerts a strong influence in the construction of stereotypes. Therefore, it is possible to evaluate cultural influence on the profession through the analysis of Nursing History and its place in the historical and socio-political context in the world.

The image of nursing comprises:

a network of social representations of nursing, which, through a group of concepts, statements, and explanations reproduces and is reproduced by the ideologies that originate from social practices, internal/external to it. The professional image refers to professional identity per se, in its entwined network of meanings than mean to be exclusive and, thus, inherent to that profession. Hence, the professional image consubstantiates in the representation of professional identity itself, which in itself is a historical, social, and political phenomenon<sup>(4)</sup>.

In a bibliographic review about nurses' images, most studies refer to Nursing History and the female role over time. This phenomenon has implications for today, causing anachronism and hindering the process of defining nurses' professional identity<sup>(5)</sup>.

The negative stereotypes related to the nursing-medicine professional interaction, as a submissive relationship, are very clear in society. Patients believe physicians are the ones capable of solving their problems, because nursing is seen as a mere complement to medical actions<sup>(6)</sup>.

This interaction can also be discussed in the gender sphere, since the conflicts for spaces of power between nursing and medicine also occur in the gender sphere, socially considered feminine and masculine domains, respectively. Once the connotation of feminine domain has been attributed, it bears the social connotations of that gender, such as the stereotypes related to domestic work.

However, some studies have observed the presence of stereotypes about the career among nursing students and practitioners. These beliefs usually refer to the beginning

of the career, when students bring beliefs acquired from the media and their families, which are gradually replaced by the reality of the profession throughout the course<sup>(7-8)</sup>.

In a study with 25 nurses/mothers from a hospital in the city of Rio de Janeiro, the practitioners described nursing as multi-valued, low-paid, and with reduced acknowledgement for the work performed. The lack of incentives, among other aspects, can cause work dissatisfaction in practitioners<sup>(9)</sup>.

An analysis of 278 nursing students from two different colleges in the State of São Paulo revealed that only 39.9% had the nursing career as their first option, and 32.8% would change professions if possible. The study also points out that a wrong career choice can cause fragility in the process of socializing values like status, incorporating professional competencies, and valuing the career<sup>(10)</sup>.

These data are concerning because, if the initial pre-judgments are dissonant from the profession, students tend to drop out. In this situation, support from faculty and practitioners, through a good interpersonal relationship, has a crucial role in maintaining students who are going through a dissonance process, helping them in the quest for their own concept about the profession, improving their self-esteem, improving their awareness and criticism about its social importance<sup>(7)</sup>.

Moreover, the dissonance of individuals who believe that the social image of their profession is inferior to the image that they have of themselves as professionals can have a negative effect on their work satisfaction, self-esteem and self-concept<sup>(11)</sup>.

In terms of career choice, for young people, image is a fundamental component. To solve recruitment deficiency, it is essential to identify the image that these young individuals have about the profession. This type of study should take place before initiating any marketing campaigns, saving financial resources and time, and it is possible to achieve central stereotypes that need to be changed<sup>(12)</sup>. Students tend to choose careers they have affinity with, and this occurs through the knowledge, understanding, and image that the student has of a certain profession.

A study in Hong Kong among 19 students (10 women and 9 men) from three schools analyzing the perception of secondary-level students about nursing, reported that the activities attributed to nurses included: helping patients with hygiene and medication; helping the doctor; obeying orders; cleaning; and teaching new nurses. The profession was also identified as being stressful and dangerous (physical contamination)<sup>(13)</sup>.

In Ribeirão Preto, in the 1960s, a survey was performed about the image of nurses among 202 individuals to understand the low number of candidates at the University of São Paulo at Ribeirão Preto College of Nursing. Answers to the following question were analyzed: *In your opinion, what are the activities that a nurse performs?* The following was found: female-gender-related activities (lovability,

tenderness, patience, sympathy, self-denial, caring, and some related to the mother role), activities with a religious nature (missionary work), arduous and distressing work, low intellectual level, dependent, having less initiative than men, but with no mentions about morals<sup>(14)</sup>.

The issue regarding the social image of nurses is a global phenomenon, as are articles about the subject and the concern with young people, which corresponds to the field of professional recruitment in Brazil. However, in most articles about nurses' social image, the discussion is held in the light of theory, and does not present study results.

For this reason, it is necessary to develop directive actions to improve student recruitment and awaken true vocations for modern, scientific nursing. Marketing campaigns could promote the social acknowledgement of the professionals, improving their self-esteem, for a more effective recruitment that will transmit trustworthy information. Nevertheless, the negative stereotypes found in society and among professionals evoke discussions necessary in both spheres.

To improve nurses' social image is to intervene in the social image of nursing that exists in the general public and among professionals of this area. The lack of research on this theme, however, shows that nursing is still in the process of understanding the phenomenon; and the lack of analysis instruments scientifically validated for the Portuguese language hinders this advancement even more.

In the attempt to contribute to this advancement, this study investigates the first stages in the construction of a data collection instrument for Brazilians.

In most articles about nurses' social image, the discussion is held in the light of theory, and does not present study results.

## OBJECTIVE

To analyze the perception about nursing among third-year secondary-level students from public schools and develop hypotheses about the presence or absence of negative stereotypes.

## METHOD

This was a quantitative-descriptive pilot study to provide support for a further construct validation of a data collection instrument developed to study the theme *the social image of nursing*. The questions used to design a formal quantitative instrument were derived from clinical experience, theory, or a previous study. These items were then submitted to rigorous tests<sup>(15)</sup>.

The instrument items are designed based on Social Psychology literature, in terms of some variables, which influence the construction of attitudes, stereotypes, career choice, and on Nursing and Nursing History literature about stereotypes found in society through time.

The data collection instrument consists of two questionnaires (A and B), which are filled out either separately or subsequently. Questionnaire A consists of 24 closed and open questions referring to age, gender, career choice, factors of interest for choosing a career, exposure to the chosen profession, social and economic *status* of 14 professions (nine of which are from the health field, including nursing and 5 are among the courses most applied for at FUVEST - University Foundation for Entrance Exam, 2004), family relationship and their familiarity with gender roles.

Instrument B contains eight closed and open questions (five with sub-items) referring to factor-based questions, which influence the development of stereotypes reported in the literature, the differentiation between nursing practitioners, contact with the practitioner (quantity and quality), nurse's attributions, and the identification of stereotypes reported in the literature.

The instrument was tested for content validity, which consists of asking evaluators/experts to answer if each item evaluates a characteristic or dimension of the theme under study<sup>(16)</sup>. To do this, a group of four professional experts: two psychologists (one professor with a Ph.D. degree and one expert, due to their knowledge in social psychology and career choice), one nurse (professor with a Ph.D. degree and Nursing History researcher), and one mathematician (professor with a Ph.D. degree, experienced in opinion polls). The judges were informed about the study objectives and ethical procedures, and signed an informed consent form. The judges also received an instruction guide that stated the objectives of the question and data from the literature, and were asked to evaluate if the item measured what the researcher was proposing, and if the item would be clear to a group of third-year secondary-level students.

The study population consisted of regular students enrolled in the third year of a secondary-level municipal school, studying in the daytime in the city of Ribeirão Preto, Sao Paulo, Brazil, in 2005. After the judges had approved all items, an intentional sample consisting of two schools (A and B) was selected, considering their location in the city's central area. Authorization to perform this study was obtained from the Ribeirao Preto Municipal Education Secretary and from the schools. After contacting the schools, School B was excluded because all third-year students were enrolled in night classes and, thus, did not meet the desired population profile.

A convenience sample consisted of every third-year secondary-level student enrolled in School A, who could participate in the single-day data collection, avoiding communication between students and the possibility of causing changes in their attitudes. There were four third-year classes, but it was not possible to perform the collection in one of the classes because it would be the final class of the day (when students were already quite tired and anxious to go home) or physical education class (an activity that students look forward to and can thus cause a negative re-

action towards the study). Therefore, three classes took part in the pilot study.

Efforts were made so as to maintain neutrality by not revealing the researcher's profession or the profession focused on in the study, trying to assure there was no influence from the parents while filling out the informed consent form, or any influence caused by the researcher's profession. Since questionnaire A presents nursing among other professions and without any exclusive questions about the career, the student could not discover that nursing is focused on. This protocol was used as an attempt to eliminate any previous influence from parents on questionnaires A and B, and of the researcher on questionnaire A, since questionnaire B focuses exclusively on nursing, a moment when students realize the focus on this profession. This protocol was carefully justified and approved by the Research Ethics Committee, the school board, and by the students' parents through the informed consent form.

Students from School A were informed about the purpose of the study, which would address aspects about choosing a career and what they thought about a specific profession. The researcher presented herself as a master's degree student from the University of São Paulo, and explained the reasons why she would not reveal her profession before the data collection stage. A quick talk about the university entrance exam and nursing was carried out with the students, after completing the data collection, to provide important information on the topic. At that moment, the researcher revealed her profession and explained, once again, that students could change their minds about participating if they wished to. All students remained in the study.

## RESULTS AND DISCUSSION

Of all 69 students present on the collection day, 46 (67%) participated in the study, 28 (60.9%) of whom were women. A student did not provide a date of birth or gender, so that his or her identification was not possible. When asked about perspective regarding studies in the following year, 28 students (60.9%) stated they wished to go to university. The most desirable courses were: Law: 5 students (10.9%), Psychology: 5 students (10.9%), Business Administration: 3 students (6.5%), Mathematics: 3 students (6.5%), and Medicine: 3 students (6.5%).

The most important factors for career choice reported by the students were personal fulfillment, the job market, salary, few work hours per week, and family support, respectively. Social prestige ranked sixth.

A study performed in the city of Campinas, in the same Brazilian state, in the 1990s, with fundamental and secondary-level students from two schools, one public and one private, showed that public school students tended to assign more value to social prestige and the economic factor of the professions, maybe due to an expectation that the profession would provide for the individual's social rise<sup>(17)</sup>.



**Table 1** - Ranking of the professions per social status/reputation, according to secondary-level students - Ribeirão Preto - 2005

Profession	Mean
1. Medicine	1.8
2. Law	3.1
3. Engineering	4.9
4. Dentistry	6.2
5. Business Administration	6.8
6. Psychology	7.0
7. Physiotherapy	7.3
8. Nursing	7.7
9. Computer Science	8.2
10. Pharmaceutics	8.8
11. Languages	9.2
12. Speech Therapy	9.8
13. Social Service	11.4
14. Nutrition	11.5

Regarding the social reputation of professions (Table 1), nursing ranked 8<sup>th</sup>. When students were asked to rank the professions per salary, few changes occurred, and it was observed that nursing lost the 8<sup>th</sup> place to computer science. This result suggests that there has been a change in social roles of the profession over the last 40 years, considering that, in a similar study performed in the same city in the 1960s, nursing was below every university-level profession and above occupations<sup>(14)</sup>.

As to the mothers' education level, 20 (43.5%) had completed secondary-level studies and only one of every five mothers had university-level education. Two of every five mothers were housewives. This factor indicated the possibility of high indexes for gender stereotypes, because many students grew up in an environment in which the mother looked after the house and the father worked. The family environment is pointed out by social psychology as an important variable in accepting gender roles, especially for the female gender<sup>(1)</sup>.

This information is important because the identification of a profession can be linked to the individuals' experiences with their family during childhood and their life story<sup>(18)</sup>.

Table 2 shows the subjects' perception as to the feminine or masculine nature of professions. The students' opinions were neutral for most professions, which could be a sign that, hypothetically, there was a reduction in the acceptance of gender stereotypes concerning professions in this city. Only nutrition and engineering received a gender classification by most students. Interestingly, the professions with most indications as appropriate for the male gender had high ranking positions regarding salary, except for computer science. However, most professions that received indications as female were inferior in the salary ranking.

**Table 2** - Secondary-level students' perception about professions socially considered as feminine or masculine professions - Ribeirão Preto - 2005

Profession	Masculine	Feminine	Both	Does not know	Total
1. Medicine	6	1	39	0	46
2. Law	7	2	37	0	46
3. Engineering	29	0	17	0	46
4. Dentistry	3	2	41	0	46
5. Business Administration	8	3	35	0	46
6. Psychology	1	17	27	1	46
7. Physiotherapy	2	11	33	0	46
8. Computer Science	22	0	24	0	46
9. Nursing	2	16	28	0	46
10. Speech Therapy	2	19	21	4	46
11. Pharmaceutics	4	4	38	0	46
12. Languages	2	12	32	0	46
13. Nutrition	1	30	15	0	46
14. Social Service	2	19	24	1	46

Many studies have appointed an over-valuing of family for the female gender, presuming that this is the place for women. This was reflected in the professions discriminated by the professional's gender. One result is that women tend to choose feminine professions. Hence, these professions become devalued and have a low remuneration because men tend to underestimate these careers in their professional choice, contributing to these *feminine* courses becoming less competitive in the university entrance exams<sup>(19)</sup>.

However, the current job market change for women and the increasing exposure of strong female leaders in the media combine to change this scenario. Women are entering areas that were previously dominated by men, a fact that entails consequences for nursing in the long term, causing a recruitment crisis for both genders.

As for the contact with the nursing professional, most students had been seen at health service locations and over 35 students (76%) considered the service competent, sympathetic and considerate, which is in agreement with the good position of nursing in the status ranking. The positive contact with nursing professionals can affect a reduction in the level of stereotypes in the population, since every time an individual is confronted with the reality of the social object, he or she can rebuild or maintain the existing stereotypes.

Some studies point at this line of thought: the theme was addressed in 1999, in a sample of 24 third-year secondary-level students, and the index for negative stereotypes in the pre-test did not reach statistical significance. However, the stereotype percentage dropped to almost zero after an educative action that consisted of a speech and a visit to a nursing college<sup>(20)</sup>.

In the present study, 14 students (30.4%) knew that nurses have a higher educational level than nursing auxiliaries and nursing technicians, 17 students (37%) answered that, in terms of education, nurses working at hospitals completed secondary education, followed by a technical course; however, 25 students (54.2%) answered correctly. When asked about the low rates of men in the nursing profession, most students answered that the profession is more attractive to women, with no stereotype of an effeminate nurse.

Students were also asked to give their opinion about 21 characteristics, stating which ones referred to medicine, nursing, or both. Most students who answered the question (excluding those who did not know) assigned the following characteristics as being mainly of physicians: *prescribing medications, leadership/leader, knowledge about diseases and diagnoses, manager/management, authoritarian*. The characteristic *Obeying orders from other professionals* was pointed out by 22 students (47.8%) as being an isolated characteristic of nursing. However, another 22 students (47.8%) answered that *Obeying orders from other professionals* is characteristic of nursing and medicine, which suggests the hypothesis of greater visibility assigned to the work of multiprofessional teams and removes the focus on *cure* as an action exclusive of medicine.

Most students (except those who did not know) appointed the following characteristics as pertaining to nursing and medicine: *skills to perform physical exams, work manager, guides family and patient when returning home, fast reasoning, knowledge about eating, knowledge about anatomy and physiology, knowledge about bandages, prescribing care; dominion of math calculations, humanitarian/humanitarianism, knowledge about medications*, all of which show the importance they give to nursing, since the majority of the sample recognized their knowledge.

## CONCLUSION

It should be noticed that it is a small sample, which might not be representative of the population. Therefore, the

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study conclusions should not be interpreted as an inference for the population, but rather as a hypothesis to be tested in a future study, with a sample that is statistically representative of the population.

Most of the students lived in traditional family environments: stay-home mothers and working fathers. Nonetheless, most professions were rated neutrally in terms of gender, even though, apparently, a higher status value was assigned to careers with a masculine social connotation.

In the profession ranking, nursing held an important position (8<sup>th</sup> in status and 9<sup>th</sup> in salary), and most students attributed important characteristics regarding knowledge detention as belonging to nursing and medicine. However, it is observed that, in the sample, there is a confusing comprehension about the nursing team components and nurses' education level. Although this does not refer to the majority of the students, it is an index that deserves intervention (over 30%). It should also be highlighted that medicine is seen as a coordinator of health work.

Therefore, the present study points to the following hypotheses:

- An update about the social image of nurses is taking place in the population;
- Students are still unaware of the nursing team categories, and;
- Students assign the coordination of health work to medicine.

In this sense, we intend to continue this study with a sample that is representative of secondary-level public school students in Ribeirão Preto, thus completing the validation of the instrument and beginning a broad study of the effectiveness of professional marketing with pre-university-candidates, wherever this need is indicated by evaluation results based on the instrument.

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