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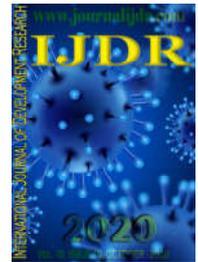
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RESEARCH ARTICLE

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HOW FAR UNDERSTANDING HEALTH COMMUNICATION GOES BETWEEN STUDENTS: A CROSS SECTIONAL STUDY

Fábio Morato de Oliveira^{1,*}, Gabriel Gonçalves Dutra², Luana Kronit Bastos², Mariana Sousa Rodrigues², Renata Dias Ferreira², Tamara Rodrigues Lima Zanuzzi³, Caroline Volpato Weyrich Maggioni⁴ and Edlaine Faria de Moura Villela¹

¹Professor, Medical School of the Federal University of Jataí, Brazil

²Student, Medical School of the Federal University of Jataí, Brazil

³Master's student, Graduate Program in Collective Health, Federal University of Goiás, Brazil

⁴Pharmacist, Federal University of Goiás, Brazil

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*Corresponding author:

Fábio Morato de Oliveira

ABSTRACT

Background: Communication skills training is recognized as an important component of the curricula for medical schools. In Brazil, according to the *National Curricular Guidelines*, some public medical schools have changed from an educational model based on training of almost exclusively devoted to technical abilities to a program consisting of knowledge, attitudes, and skills. Thus, given the importance of health communication, we aimed to evaluate the knowledge of first semester medical students about health communication and how basic disciplines may influence it. **Methods:** Undergraduate students, from a medical school in a Midwest Brazilian Public University, were invited to participate in a questionnaire-based study (n = 144). We developed and validated a questionnaire including fourteen questions regarding some important aspects and situations involving health communication. **Results:** The importance of health communication for the students become evident with our results. Thus, to support this finding is crucial to inform that our students, in the first semester-training, are inserted into integrative activities with the community, in line with the conduct of care primary attention. **Conclusion:** Although the experiences lived by students are only observational, we believe that in these "fields of practice" students come to recognize the importance of health communication.

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INTRODUCTION

Although medical schools are free to introduce its learning strategies related to areas, in some traditional schools the education program is frequently focused on the diagnosis and management of diseases (Association of American Medical Colleges, 1999). In this scenario, the ability to communicate effectively, both orally and in writing, with patients, patients' families, colleagues, and others with whom physicians must exchange information in carrying out their responsibilities almost always are not reached (Yedidia, 2003; Joekes, 2011). Important steps for medical communication skills require more than the unique exposure of medical environments. The built of a scenario that combine didactic and experiential learning, are crucial for the development of communicational skills for medical students, and qualified

clinicians (Aspegren, 1999; Smith, 2007). Communications and counseling strategies have a significant impact on patient care and outcomes and must be practiced increasing clinical competence of the future physician (Yedidia, 2003; Maguire, 2002). On the other hand, it is necessary to consider that the importance of effective communication is not just relevant to interactions that relate to patients in healthcare, but it is also primordial at the wider public health level. Thus, it is necessary to be focusing on broader public health education campaigns than on trying to influence behavior at the individual level (Rao, 2007). In Brazil, according to the *National Curricular Guidelines*, some public medical schools have changed from an educational model based on training of almost exclusively devoted to technical abilities to a program consisting of knowledge, attitudes and skills (Brasil, 2001;

Brasil, 2004). In this way, a couple of strategies denominated “problem-based learning” have been used, aiming to promote student autonomy, as a result. This new concept is represented by attitudes in which are established connections between education and health through initiatives and programs aiming the consolidation of the *Brazilian Unified Health System*, in Brazil. In this scenario, the health communication must be incorporated since the beginning of the undergraduate training. To develop communication skills during the undergraduate training, an important role is attributed to professor. The practicing of teaching should consider communication with families and professional colleagues, as well as written and oral presentations skills. Medical students’ ability to communicate is often assessed by the presentation of information they have obtained from a patient. This process could be improved if teachers stimulate students not only about differential diagnoses, but also about their patients’ knowledge and concerns about their health problems, how the problems affect their lives, and their expectations of medical care (Makoul).

Considering communication as an important link of clinical competence, both students and teachers should work together in medical environment by using reliable and valid instruments, for appropriate training communicational skills. This dynamic scenario would represent a powerful experience about the importance that medical schools place on health communication, to provide students a constructive feedback in medical physician-patient’s relationship (Stewart, 1999). Given the importance of health communication, we aimed to evaluate the knowledge of first semester medical students about health communication and how basic disciplines may influence it.

MATERIALS AND METHODS

Participants and Design: For this study, the participants were undergraduate medical students at the School of Medicine in a Midwest Brazilian Public University.

All professors are oriented to explore active methodologies during classrooms activities. We developed a cross sectional study, in which the students were not allocated to cohorts, but had access to medical school by regular admissions procedures. Data collection took place before the beginning of the activities, in the classroom, after explanations, where the students were invited to participate. Before preparing to answer the survey, students are asked to take dedicated a short time to reflect on personal responses to their experiences of speaking with the patient, the family, and the health professionals involved in the care. A period of 40min was offered to the students to respond the survey. A research consent form was signed by each student who volunteered participated in the study.

Questionnaire and Analysis: We developed and applied a questionnaire including the following sentences, according to the frame bellow:

RESULTS

The aim of our investigation was to assess the knowledge of medical students, in the first semester, concerning health communication. In addition, we also aimed how the basic courses can influence it. One hundred, forty-four young medical students were invited to participate in this study. All of them agreed with the terms of the investigation and signed the informed consent form. The distribution by age range was 42% of students were under 20 years old, 55% were between 20 and 30 years old, and only 3% were over 30 years old. When asked about the importance of health communication for the medical sciences/medical practices. Eighty-eight percent of participants considered it “very important” (Figure 1A). Regarding the possibility of health communication influencing their lifestyle, most of them answered “with certainty”, that somehow, mainly based on academic activities, communication would influence their lives (Figure 1B). In the academic environment, the influence of “health communication” among students showed a satisfactory result.

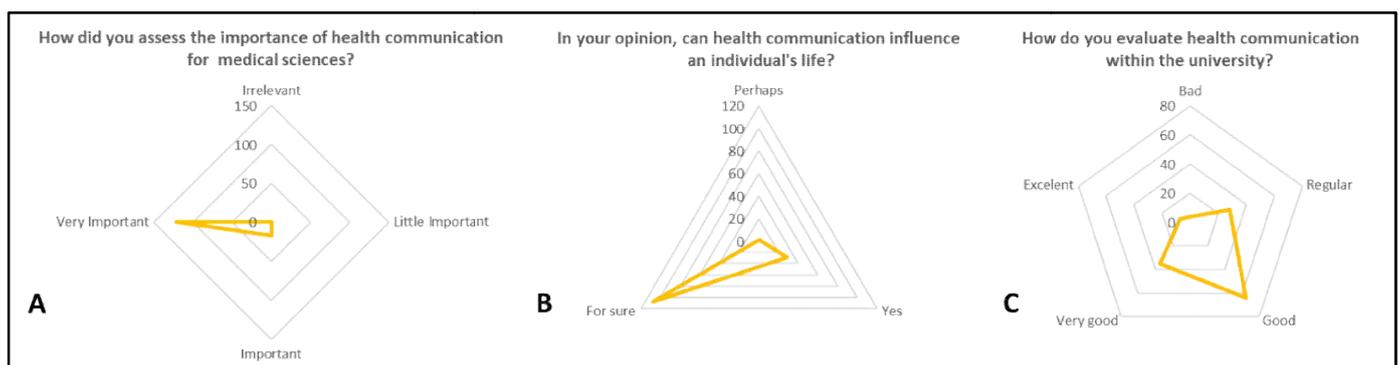


Figure 1. Distribution of student responses according to the survey. Students’ perceptions about the importance of health communication for medical sciences (1A); The influence of health communication in individuals’ life (1B), and evaluation of health communication in the context of the University (1C)

All students were invited to participate in a questionnaire-based study (n = 144 in total). The analysis time occurred in 2019. The sample was 59% female (n = 85), with a mean age of 18.0 years at baseline (standard deviation 2.0, range 18-32 years). In this new model of school of medicine, according to the *National Curricular Guidelines* (Brasil, 2001; Brasil, 2004), the curriculum in the first two years is focused on basic medical sciences, and additional observatory experiences at public health centers, related to primary/secondary health care.

Twenty-six percent thought that the topic was "very well" represented among students and 47% reported only "good" (Figure 1C). According to the new *National Curricular Guidelines* (Makoul; Stewart, 1999), for medical courses, the students are inserted in practical integrative community-teaching activities, since the first semester. Thus, when asked them about the importance of health communication in public health services, 55% informed that it was regular, neither good/bad. However, with chances to become better.



Figure 2. Distribution of student responses according to the survey. Students' perceptions about the importance of health communication in the context of the *Unified Health System* (2A); The influence of health communication over communities (2B), and the importance of studying health communication in accordance with the *Brazilian national curriculum guidelines* (2C)

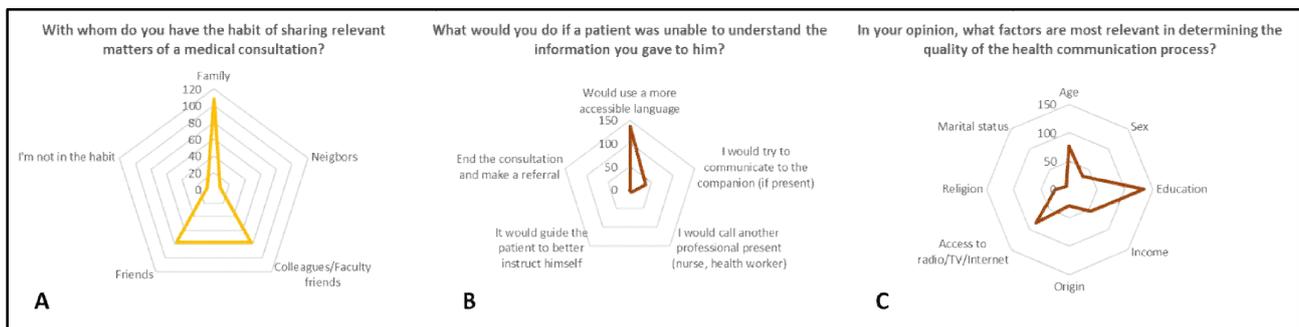


Figure 3. Distribution of student responses according to the survey. Students' perceptions about with whom, do they share medical consultation information (3A); What expected action students do in a situation in which a patient is unable to understand the information gave to him/her (3B), and which factors are relevant for the quality of health communication process (3C)

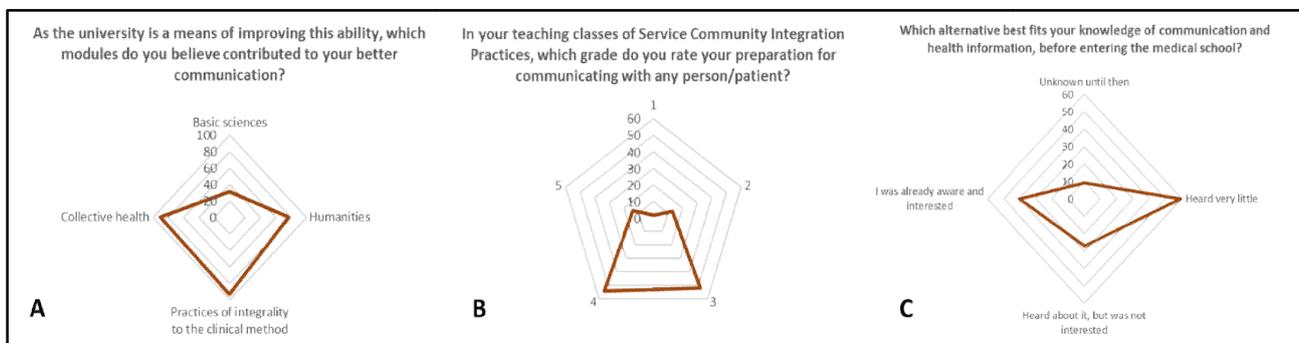


Figure 4. Distribution of student responses according to the survey. Students' perceptions about which courses contributes more for a better communication skills (4A); The influence of health communication during the classes of Service Community Integration Practices (4B), and the previous knowledge about health communication, among the students, before they get in the University (4C).

On the other hand, most students responded that, in some way, health communication would be able to change the social reality of the communities, experienced by students during their learning activities. There is a general consensus, among the students, that with the new recommendations of the *Brazilian national curriculum guidelines*, the importance of to devote into practices that lead to better improvement of health communication is essential (Figures 2A, 2B, 2C). Considering a new perspective on health communication, when students were asked about, as being patients at a health service, 78% informed that they usually share relevant subjects about a medical consultation, only with family members, and 22% usually share such information with friends and colleagues at the university (Figure 3A). On the other hand, when students were asked what to do when attending a patient that does not understand the guidelines given. All of them were unanimous in answer that "I'd use a more accessible language".

Among the alternatives provided for them were: "I'd inform to the companion (when present)"; "I'd call another health professional for assistance"; "I'd recommend the patient to become better his/her education" and, finally, they "I'd finish the medical consultation" (Figure 3B). Still in this context, for most students, education represents the most relevant factor for the quality of health communication. Although some students reported that access to the internet, radio and TV could also contribute (Figure 3C). Although, the majority of students consider that knowledge areas, as for example, *collective health*, *humanities* and *practices of the integrality of the clinical methods* more effectively to improve skills in communicational practices in health, only 40% of them, feel that they are partially prepared to offer a satisfactory communication. Still based on our results, only 43% of the students informed that they had a *brief knowledge of health communication*, before entering university (Figures 4A, 4B, 4C).

1. How do you evaluate the importance of communication in health for the medical sciences?	<input type="checkbox"/> Little important <input type="checkbox"/> Very important
2. In your opinion, can health communication influence an individual's life?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Do not know
3. How do you evaluate health communication within the university?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Do not know
4. How do you evaluate health communication within the public health system?	<input type="checkbox"/> Bad <input type="checkbox"/> Regular <input type="checkbox"/> Good <input type="checkbox"/> Excellent
5. Do you believe that health communication is able to change the reality of your community?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Do not know
6. With whom do you have the habit of sharing relevant matters of a medical consultation?	<input type="checkbox"/> Family <input type="checkbox"/> Neighbors <input type="checkbox"/> Colleagues/College <input type="checkbox"/> Friends <input type="checkbox"/> I don't have this habit
7. Where do you share this information (medical consultation)?	<input type="checkbox"/> Church <input type="checkbox"/> Social events <input type="checkbox"/> Bus <input type="checkbox"/> Internet via blog <input type="checkbox"/> At the University
8. What factors are most relevant in determining the quality of the health communication process?	<input type="checkbox"/> Age <input type="checkbox"/> Sex <input type="checkbox"/> Education <input type="checkbox"/> Financial income <input type="checkbox"/> Origin <input type="checkbox"/> Radio /TV/Internet <input type="checkbox"/> Religion <input type="checkbox"/> Marital status
9. What would you do if a patient could not understand the information you gave him?	<input type="checkbox"/> I would use a more accessible language. <input type="checkbox"/> I would try to communicate to the companion (case present). <input type="checkbox"/> I would call another professional present (nurse, health agent). <input type="checkbox"/> I would guide the patient to better instruct himself. <input type="checkbox"/> I would terminate the consultation and make a patient referral.
10. In your Integrated teaching of health and community practices, what grade do you rate your preparation to communicate with any person /patient?	<input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5
11. Since the university is a means of improving this aptitude, which modules do you believe have contributed to your better communication?	<input type="checkbox"/> Healthy human body <input type="checkbox"/> Humanities <input type="checkbox"/> Practices of integrality to the clinical method <input type="checkbox"/> Collective health
12. On a scale of 0 to 5, how much do you think health communication and information impacts on in other areas of life (university, church, family relationships)?	<input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5
13. Which alternative best fits your previous knowledge about health communication, before your entry into medical school?	<input type="checkbox"/> I did not know until then <input type="checkbox"/> Heard very little <input type="checkbox"/> Heard about it, but he was not interested <input type="checkbox"/> Already had knowledge and was interested
14. Based on the new curricular guidelines, which seeks greater humanization of the medical professional, what is the importance of the study of communication and health information for the benevolent doctor-patient relationship?	<input type="checkbox"/> No interference <input type="checkbox"/> It is reasonably important <input type="checkbox"/> It is beneficial <input type="checkbox"/> It is essential

DISCUSSION

Communication skills represent an important component, during the training of medical students. A good health communication ensures for the future physician the confidence and compliance of patients and helps build an efficient relationship between doctor and patient. On the hand, ineffective communication skills are associated with complaints and misconduct proceedings and medication errors (Stewart *et al.*, 1999; Stewart, 1995; Levinson, 1997; Nobile, 2003; Kohn, 1999). Competency in interpersonal and communication skills is required at all levels of medical training. In this sense, medical schools should recognize the importance of this competency in the training their students as programmatic curricula, by incorporating the formalized instruction of interpersonal communication skills (Liaison Committee on Medical Education, 2004; Rider, 2006). In this study, we aimed to become clear the knowledge of medical students in the first semester about health communication and how the basic disciplines can influence it.

According to our results, most interviewed students recognized the importance of the health communication. However, many of them also affirmed that heard extraordinarily little about this theme before getting in they got into the University. The "acceptance" about the importance of health communication was notorious and can be explained. In comparison to other schools of medicines, and in view of the need to adapt learning standards in accordance with the *Brazilian national curriculum guidelines* (Brasil, 2001; Brasil, 2004), our students, in the first semester, are inserted into integrative activities with the community, in line with the conduct of care primary attention. Although the experiences lived by students are only observational, we believe that in these "fields of practice" students come to recognize the importance of health communication. Based on local knowledge, a program of education, prevention, and support can be designed to offer for medical students a great chance to learn (Droz, 2019; Carmo Menegaz, 2015). However, according students' perception is higher the level of educational values/knowledge among some professors than others. Unfortunately, depreciating moral values of some

professors and health professionals, against students, impair the development of communication skills. This suggests that, although changes are desired within the Brazilian health education, individual self-work continues being taught for students, with little communication, integration with the teams, and only small stimulus for autonomy. Another aspect noted in our study is related to health communications within the *Brazilian Unified Health System*. For students, this communication was considered regular. This can be explained by the fact that the health system used for medical students had never received medical students before. Thus, it was necessary to build new interpersonal relationships between health professionals and students. Despite potential barriers have arisen between health professionals and students, the good news is that, both sides recognized the necessity to assist each other. In this sense, we noted that over time a successfully relationship created an effective collaborative and integrated communication between students and health professionals. However, sometimes, inefficiencies in the basic training of professors, and a lack of policies for professor training in the context of education for *Brazilian Unified Health System*, promoting the development of knowledge of educational themes, may reflect and act in this context.

On the other hand, students in general notice them when they understand the ongoing processes of change since they are the primary target of all interventions (Carmo Menegaz, 2015). "Education" was considered by the interviewed students, the main factor behind an effective health communication. Considering that these essential communication skills can be learned during the formative years and practiced to perfection over the years, we offered a semesterly optative course named *Clinical communication in medical practice*. In this scenario, all students received the same classroom-based training in breaking bad news, focusing on empathy, communication skills, and reflections on professional development. Students worked together in the same small groups during the course. Strategies using a realistic simulation scenario were used, followed by reserved time for debriefing. The role-playing exercises were recorded and reviewed with the students, who were offered an additional opportunity for learning based on their performance (Wright, 2006). In accordance with Aspegren & Beme (1999) (Aspegren, 1999), communication skills can be taught at courses, but are easily forgotten if not maintained by practice. The most effective point in time to learn these at medical school is probably during the clinical posting. After a short training, doctors can be effective as teachers (Aspegren, 1999). This training brought skills to life and allowed students and faculty to see their relevance of health communication (Aspegren, 1999) Wright *et al.*, studied students attitude toward learning these skills and compared the attitudes in first and fourth year students, found that that fourth year medical students do not differ from first year medical students in terms of attitudes toward communication skills training, but they have significantly higher confidence scores about communicating with patients (Deveugele *et al.*, 2005). At institutional level, medical schools might use methods to teach communication skills to medical students. The pedagogical planning of a medicine course must be built to improve medical students' communication skills during the undergraduate years (Deveugele *et al.*, 2005; Haq, 2004). In the view of the students, the present study showed us that courses as for example, *collective health, humanities, and practices of integrality to the clinical method* were of great importance for teaching communication skills to medical

students. However, it is important to consider that unfortunately some professors, who are essential in the process of change, have pedagogical disabilities in the health communication, exhibit poor knowledge about the *Brazilian National Curriculum Guidelines*, and sometimes, exhibit a resistance to the new educational model (Rodrigues, 2009; Oliveira *et al.*, 2008). Initiatives that seek to incorporate a continuous and structured training in communication skills during the early phase of medical studies, evidence significantly higher satisfaction in medical encounters among patients. Thus, it is notable the importance to introduce courses, devoted to communication skills during undergraduate graduation (Karlberg, 2004). In our experience, since we are inserted in a new medical course, we still aimed to promote significant changes in pedagogical planning, to better explore communicational skills among the students.

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