







Medicine and spirituality: the profile of students and physicians at a Brazilian medical school

Medicina e espiritualidade: o perfil de estudantes e médicos de uma escola médica brasileira

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ABSTRACT

Introduction: Scientific research indicates that spirituality plays an important role in the daily life of most patients. Moreover, there are studies indicating that religious activities and beliefs may be related to better health and quality of life¹.

Objective: to evaluate the level of spirituality of medical students and graduated physicians, in addition to analyzing the teaching of the “Medicine and Spirituality” interface in medical school.

Methodology: A descriptive cross-sectional study was carried out by applying questionnaires to medical students and doctors at a Brazilian public medical school.

Results: a total of 234 participants were evaluated. Most believe in a higher power. Spirituality was higher among doctors who had already graduated and among females. Most believe that university education does not prepare doctors to address the topic with the patients. Despite this limitation, most have already discussed spirituality with their patients.

Conclusion: Doctors and medical students consider it important to contemplate spiritual aspects of patients using an ecumenical and respectful approach. Nevertheless, they consider they were not sufficiently prepared in medical school for this approach.

Keywords: Spirituality; Integrative Medicine; Medical Education.

RESUMO

Introdução: Pesquisas científicas indicam que a espiritualidade desempenha um papel importante na vida da maioria dos pacientes. Além disso, atividades e crenças religiosas podem, de acordo com algumas pesquisas, estar relacionadas à melhor saúde e qualidade de vida¹.

Objetivo: Este estudo teve como objetivos avaliar o nível de espiritualidade de estudantes de Medicina e de médicos já formados, e analisar o ensino da interface “medicina e espiritualidade” na escola médica.

Método: Realizamos um estudo transversal descritivo por meio da aplicação de questionários a estudantes de Medicina e médicos de uma escola médica pública brasileira.

Resultado: Avaliaram-se 234 participantes. A maioria acredita em uma força superior. A espiritualidade foi maior entre médicos já formados e entre pessoas do sexo feminino. A maioria acredita que a formação universitária não prepara o médico para abordar o tema com os pacientes. Apesar dessa limitação, a maioria já abordou a espiritualidade com seus pacientes.

Conclusão: Médicos e estudantes de Medicina consideram importante contemplar, de maneira ecumênica e respeitosa, aspectos espirituais dos pacientes. Apesar disso, consideram que não receberam preparo suficiente na escola médica para essa abordagem.

Palavras-chave: Espiritualidade; Medicina Integrativa; Ensino Médico.

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INTRODUCTION

Throughout the 20th century, more than 1,200 studies have assessed the relationship between religion and a variety of physical and mental health conditions. In the last two decades, in particular, the results of a growing number of studies show that, in most cases, religious beliefs and practices are related to better quality of life and health².

In the United States, there has been an increase in the number of medicine and spirituality courses in medical schools. In 1994, 17 schools offered the course³, and in 2004, this number increased to 84, of a total of one-hundred and twenty-six existing schools⁴. There is also a growing number of studies, increasingly more research and development of curricula related to the area of medicine, religion and spirituality in medical schools^{3,5}, such as, for instance, those developed by The George Washington Institute for Spirituality and Health.

Perhaps the best reason to point out the spiritual aspects of patients in medical practice is that the majority of patients are religious. Religious beliefs and practices are common among patients seeking medical care and even those who present themselves as non-religious often identify themselves as a spiritual being in some way⁶.

As a result, some studies have sought to verify what patients think about how doctors approach their religious and spiritual aspects. In a study published in the *Journal of General Internal Medicine*⁷, 66% of the interviewed patients considered that doctors should be more attentive to their patients' religious and spiritual beliefs. Maugans and Wadland, in a study of 135 outpatients in Vermont, found that 30% of the participants considered that their doctors should discuss religious matters with them⁸. Daaleman and Nease, in a study of 80 patients treated by clinicians or family doctors in Kansas, found that 41% of the sample considered that doctors should deal with issues of religion and faith together with their patients⁹.

In the field of studies involving the importance or the use of prayer by patients, it is interesting to note that some patients believe that prayer can influence the cure of their illnesses. Moreover, some patients would like their doctors to also be willing to pray with them^{10,11}.

Medicine and spirituality courses in medical schools and reading books or articles in the medical literature on this subject are examples of ways that provide better training for health professionals on the role of the patient's faith/religion in coping with diseases, the impact of religion on medical decisions and the social support that religious communities offer patients in restoring health¹².

Overcoming the discomfort in addressing spiritual issues with patients will be achieved through training and experience, through which it is possible to come to the understanding that

"obtaining the spiritual history" of the patient can contribute to more thorough medical care.

The aim of the present study was to describe the profile of conceptions, difficulties, demands and knowledge of medical students and doctors regarding issues involving medicine and spirituality.

METHODS

A descriptive cross-sectional study was carried out by applying questionnaires to students from the 2nd to the 6th year of the medical course and doctors at a Brazilian public medical school. The study was approved by the local ethics committee. All volunteers signed the free and informed consent form.

A specific questionnaire prepared by the authors and the DUREL questionnaire (DUKE Religiosity Scale)¹³ were applied. For the students, the questionnaires were administered in the classroom so as not to disrupt the students' routine (during breaks or after class). All students from the 2nd to 6th year of the Undergraduate Medicine course were invited to participate.

A sample of randomly chosen doctors was invited to participate in the research. They were approached to answer the questionnaires in their department rooms, in the medical cafeteria or after care activities in outpatient clinics. The average time needed to answer the questionnaires was five minutes.

The questionnaires were applied from March to December 2019. Groups: comparisons were made between groups of doctors and medical students.

Questionnaire prepared by the authors

The 16 questions that comprise the questionnaire were designed to obtain information about three thematic groups:

- Medical practice, the patient and spirituality: they assess whether participants consider that the patient's spirituality helps or harms them during treatment or when coping with their illness, whether they believe that intercessory prayer influences the treatment of patients or not, whether they have the habit of praying with patients, if they feel like addressing the topic of faith/spirituality with patients, if they usually approach it (if they do not, find out why) and if they believe they are prepared for it;
- Academic training and the topic of spirituality: they assess whether the participants consider that their current academic training provides them with sufficient information to address the topic of faith/spirituality with patients, whether they believe they should be prepared for that and how it could occur, whether the topic of faith/spirituality has ever been

addressed in the classroom/in medical practice and whose initiative it was;

- The spirituality of the medical student/doctor: they describe some aspects of the participants' religiosity (whether they believe in God or a higher power or not, whether they have a religion or not, their frequency of religious activities, whether they believe that the human being is made up of a physical body and a soul/spirit or not).

The Duke University Religion Index (DUREL) Questionnaire - Spirituality Measuring Instrument

Developed by Duke University, the DUREL scale consists of five items designed to measure participants' religiosity/spirituality¹³. This scale measures the three main domains of religiosity (organizational religiosity, non-organizational religiosity, and intrinsic religiosity or spirituality). The global scale has high test-retest reliability, high internal consistency and convergent validity with other measures of religiosity. The DUREL scale was translated into Portuguese¹⁴ and validated in the Brazilian population¹⁵. According to the author, three subscales are constructed: one for non-organizational religiosity (question 01) with a score ranging from one to six; one for organizational religiosity (question 2) with a score ranging from one to six and a group of 03 questions for spirituality (questions 3-5), with scores ranging from three to fifteen. The data are presented in such a way that the higher the score, the greater the religiosity/spirituality.

Statistical Analysis

Continuous variables were expressed as median and 25 and 75% percentiles. Comparisons between two groups were performed using the Mann-Whitney test and for more than two groups the Kruskal-Wallis test was used. Categorical variables were expressed as number and percentage and compared with the chi-square test. The p values were adjusted using the "false discovery rate" described by Benjamini and Hochberg¹⁶ and are depicted in the table 1 by the "q" value. Poisson regression was used to evaluate the DUREL Q3-5 domain (spirituality).

RESULTS

A total of 169 students and 65 doctors participated in the study, with 66% of the participants being female (Table 01). Of the students, 21% were aged between 17 and 20 years and 79% were 21 years old or over. Among the students, 69% and 85% of doctors said they believed in God or in some "higher force". Moreover, 70% of the students and 83% of the doctors believe that the human being is made up of the union between a body and a soul/spirit.

Organizational religiosity and spirituality were higher among doctors when compared to students (Graphic 1 and Table 1).

Applying Poisson Regression to the results obtained by the DUREL scale, we observed greater spirituality (increase of 14%) among female participants (0.86, CI: 0.79 – 0.94; p < 0.001

Graphic 1. Comparative DUREL questionnaire between students and doctors.

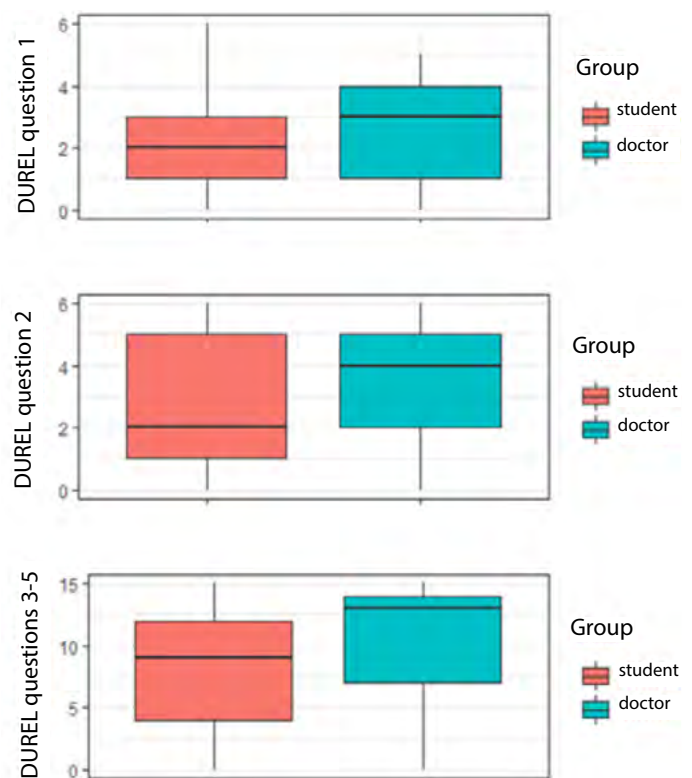


Table 1. Gender and Religiosity and Spirituality Score assessed by the DUREL scale.

	All (n=234)	Students (n=169)	Doctors (n=65)	p	q
Male gender	102 (44)	78 (46)	24 (37)	0.2	0.2
Non-organizational religiosity	3 (1;3)	2 (1;3)	3 (1;4)	0.073	0.1
Organizational religiosity	3 (1;5)	2 (1;5)	4 (2;5)	0.012	0.023
Spirituality	10 (5;13)	9 (4;12)	13 (7;14)	<0.001	<0.001

Male gender: number and percentage.

Religiosity and Spirituality: DUREL score: median and 25 and 75% percentiles.

for males). Moreover, we also found a higher level of spirituality (increase of 25%) in doctors when compared to students (1.25, CI: 1.14 – 1.37; $p < 0.001$).

There was no difference among students when comparing the years of undergraduate school (Graphic 2).

Regarding medical practice and the training they received from the educational institution, 86% of the students and 80% of the doctors believe that the current university training does not provide satisfactory training for an adequate approach to the topic with patients. Despite this, 86% of the students and 69% of the doctors said they had already discussed this topic with patients. (Table 2).

Among the participants who stated they did not feel prepared to address this topic with patients, the reasons reported were: fear of imposing religious views on patients (28% of students and 12% of doctors), lack of training (19% of students and 6% of doctors) and lack of knowledge (17% of students and 3% of doctors).

Most participants (65%) believe that medical students should be trained, during undergraduate medical school, to discuss the topic of faith/spirituality with patients, with 26% believing that it should be in the form of a curricular subject (28% of students and 22% of doctors) and 39% as extracurricular (28% of students and 42% of doctors).

DISCUSSION

This study assessed a total of 234 people, including doctors and undergraduate medical students, showing that the majority believe in a superior being. Spirituality was higher among doctors and among females. Most of those interviewed believe that university education does not prepare doctors to address the topic with patients. Despite this limitation, perhaps precisely because they realize the importance of this aspect for the patient, often as an instrument for coping with illnesses, most have already discussed spirituality with their patients.

Although for centuries science and religiosity have followed different and often divergent paths, the last two

decades have shown a clear tendency towards rapprochement between these two areas of human knowledge¹⁷.

Studies disclose a high level of religious involvement and a tendency towards religiosity in the Brazilian population. This is a striking characteristic of the Brazilian people, as 95% of the population have a religion, 83% consider it very important in their lives, interest in the study of religiosity and its relationships with physical and mental health has progressively increased and 37% participate of some religious service at least once a week^{18,19}. Specifically in times of serious health impairment, patients, especially elderly ones, express the great need for religious assistance. In this sense, for these aspects to be covered, it is essential that health professionals have acquired communication and intervention skills in the area of religion and spirituality, as this can be considered another instrument of assistance to sick individuals²⁰.

The present study also showed a high degree of spirituality among its participants (students and medical

Graphic 2. Spirituality Score by year of undergraduate school ($p > 0.9$).

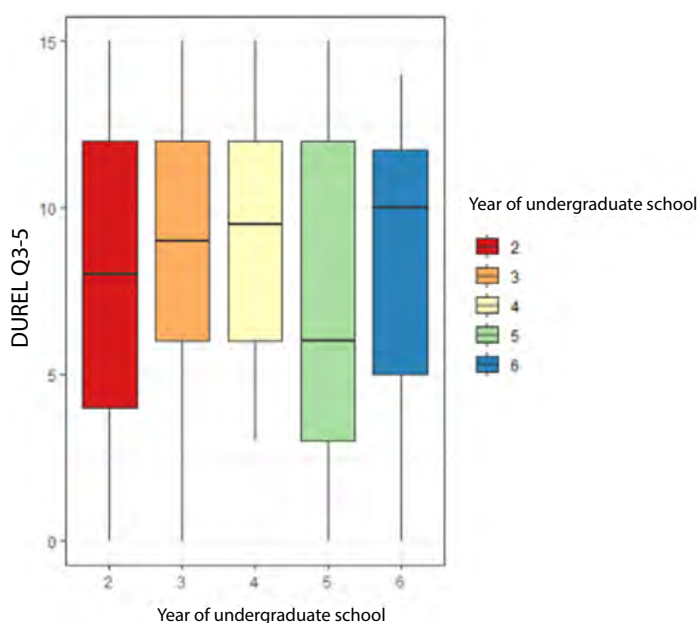


Table 2. Spirituality and medical practice among students and doctors.

	All (%)	Students (%)	Doctors (%)	p
Believes (yes) that, for the patient, faith/spirituality has a positive influence in coping with the disease	58	57	60	0.9
Believes (yes) that intercessory prayer positively influences the treatment of the disease	69	66	77	0.4
Is willing (yes) to address the topic of faith/spirituality with patients	77	76	78	0.2
Has already addressed the topic of faith/spirituality with patients	81	86	69	0.008
Feels (yes) prepared to talk about the topic of faith/spirituality with patients	55	53	60	0.3
It has occurred (yes) to pray or say a prayer together with patients	20	16	31	0.02

professionals), with more than 70% saying they believed in God or “some higher being”.

The assessment of organizational religiosity (frequency at religious meetings) showed that 44% of all participants attended religious services once a month or more. This score, in addition to that of intrinsic religiosity (spirituality), was higher among the interviewed doctors compared to the students.

A study conducted by Anadarajah assessed, through the application of questionnaires, the attitudes and skills of medical students regarding the interaction of spirituality and medical practice, aiming at helping to develop the curricular grid in this area. Although 88.5% of the students were aware of the relationship between spirituality and medicine and 40% of the students reported having had experience in clinical practice involving spiritual matters, only 23% had prior training or instruction for this purpose²¹.

Also in this same study, it was found that, although 77% of the students are aware that spirituality is important for many patients, only 53% are aware of the evidence in the medical literature about the association between spirituality and physical and mental health. For 80% of them, doctors must take into account the physical, mental and spiritual well-being of their patients. At the conclusion of the study, the author emphasizes that the assessed medical students have positive attitudes towards the inclusion of spirituality into medical practice and that many students, as well as many doctors, show a lack of specific knowledge and skills regarding spirituality in medical care.

Curlin et al. conducted a study that aimed to understand the religious characteristics of 2000 American doctors through a questionnaire. He found that 55% of respondents (n=1144) reported that their religious beliefs influence medical practice and 76% said they believe in God. Around 49% of the doctors said they had never discussed religious or spiritual issues with patients and 10% did it frequently or always. When asked about the barriers that prevented them from addressing these issues with patients, 48% reported the lack of time, 40% were concerned about the possibility of offending the patient, 26% claimed insufficient training or knowledge, and 23% felt uncomfortable when discussing religious issues. However, 73% of the doctors encouraged patients in their religious beliefs and practices²².

The lack of time is something to really be considered, requiring careful management to fulfill responsibilities. However, it is not the main factor that inhibits doctors from evaluating their patients' spiritual history. In our study, only 6% of the students and 11% of the doctors reported lack of time as a reason for not addressing this issue. The spiritual history does not need to be taken from every patient and at every

appointment. It can be partially assessed in one appointment and completed in another. When time is restricted, the spiritual history may consist of “How are you doing spiritually? Is there any interest or problem in this subject?”²³. This way, the patient would already feel an “openness” on the part of the professional to explain a need in this area. Eventually, the “Hospital Chaplaincy” team (in hospitals that have this service) could also be mobilized to provide care to patients who signal this need²⁴.

A 2011 publication, which evaluated the opinion of 53 medical professors, also through the application of questionnaires, showed that 72% of the professors believed that faith or spirituality could influence patient treatment, 62% reported that they already felt the desire to address spirituality aspects of patients they had followed, although only 43% reported feeling prepared for this approach. A total of 50% believed that it would be important for medical schools to prepare students for this approach. Only 27.8% said they had already mentioned this subject in their classes and 92.3% considered that Brazilian medical schools are not offering the necessary information in this field²⁵.

CONCLUSION

Students and trained doctors have a high level of spirituality and recognize this aspect as being important for patients, despite considering that they did not receive adequate training in medical school.

The conclusions of the present study can contribute to provide support for an educational proposal that aims to guide students, and future doctors, not to neglect such an important aspect in patients' lives. In addition to teaching, in an ecumenical and respectful manner, the most appropriate way to approach the patient's spirituality.

AUTHORS' CONTRIBUTIONS

Vanessa Burgugi Banin: study planning, bibliographic search, data analysis and final writing of the manuscript. Douglas Inomata Cardoso da Silva, Laís Gonçalves Moreira, Luis Gustavo Langoni Mariotti: data collection and tabulation (application of questionnaires), bibliographic search and data analysis. Niura Aparecida de Moura Ribeiro Padula: study orientation/planning, data analysis and writing of the manuscript. Luis Gustavo Modelli de Andrade: study orientation/planning, bibliographic search, data analysis and final writing of the manuscript.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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