

## EDUCATION

## Sexual Health Teaching in Basic Science Courses Among Medical Students



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## ABSTRACT

**Introduction:** Sexuality is a multifaceted and makes up part of the lives of all individuals.

**Aim:** To evaluate the teaching of sexual health to students in the basic cycle of an undergraduate course in medicine.

**Methods:** A descriptive, cross-sectional study was conducted using primary data on the teaching of sexual health in the first 4 years of the course. The students were contacted personally and given a self-administrated questionnaire on the teaching of sexual health. The questionnaire was based on studies conducted with physicians and medical students regarding their educational background in sexual health. The degree of satisfaction regarding the learning process was determined using a ten-point scale; on which, a score of 1 to 5 indicated dissatisfaction and of 6 to 10 satisfaction.

**Main outcome measures:** The main outcome measure was a self-administered questionnaire addressing the teaching of sexual health in the first 4 years and how this knowledge affected relationships with patients.

**Results:** A total of 216 students answered the questionnaire. Only 27.27% and 22% of the students in the first and second years, respectively, reported having classes related to sexual medicine, whereas 38.1% (third year) and 54.40% (fourth year) had such classes. Regarding satisfaction, the weighted mean was 4.55 and the modes were 5 and 6. In the evaluation of their expectations about learning sexual health, 46 (67.6%) reported feeling non-confident, 18 (26.5%) did not answer the question, and 4 (5.9%) reported feeling confident.

**Conclusion:** This study revealed a gradual progression in the offer of content related to sexual medicine to students throughout the medicine course, with weighted means of 2.6 (first year), 2.82 (second year), 3.58 (third year), and 4.55 (fourth year). However, the findings indicate that the teaching of this subject remains deficient and students feel unsatisfied and unprepared for their future practice of medicine. **Teixeira Santos AU, Fava Spessoto LC, Fácio FN. Sexual Health Teaching in Basic Science Courses Among Medical Students. Sex Med 2021;9:100309.**

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**Key Words:** Teaching; Undergraduate Medicine; Sexual Health; Sexuality

## INTRODUCTION

Sexual identity, gender, orientation, behaviors, practices, the sociocultural context, relationships, reproduction, and pleasure are all aspects that make up the subjective, multifaceted concept

of human sexuality, which is directly related to general health.<sup>1</sup> Sexual disorders may reveal multiple undiagnosed pathologic conditions, such as cardiovascular disease, diabetes, hypertension, and hyperlipidemia, as well as depression and other psychosocial disorders.<sup>2</sup> The study of sexual health—understood as physical, emotional, mental, and social well-being related to sexuality—should be of interest to all healthcare providers, as it enables a more comprehensive understanding of patients that can assist in offering holistic care.<sup>3</sup>

Medical surveys conducted in Brazil report that 50–72% of urologists, gynecologists, general clinicians, and psychiatrists do not regularly analyze the sexual health of their patients. This may be owing to deficient knowledge on sexual health (15–28%), which implies insecurity (49%) with regards to addressing and

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treating sexual dysfunctions.<sup>4</sup> In a study conducted in 29 countries analyzing the search for help because of specific sexual problems, only 9% of the respondents reported that a physician had asked them about their sexual health during routine appointments in the previous 3 years.<sup>5</sup>

The difficulty in discussing the sexual health of patients emerges even before graduation. Studies report that 68.8% of medical students believe that it is important to address and treat sexual problems in their future medical careers, but only 37.6% feel adequately trained in this respect.<sup>6</sup> Thus, dealing with the sexual complaints of patients is a concern for students, especially during internship, which is when they see and treat patients. There is a notable deficiency of content addressing sexual health in the curricula of medical schools, such as a scarcity of programs that go beyond theory classes and seminars (programs centered on the learning and autonomy of the student), a lack of training in clinical skills (taking a sexual history, physical examination, behavioral counseling, and medical recommendations), as well as a lack of assessment regarding the acquisition of skills by students and the impact on patient satisfaction.<sup>7</sup> In a study evaluating 101 medical schools in the United States and Canada, only 31 schools reported having a specific course on human sexuality and 5 did not have a specific teaching format for this topic.<sup>8</sup>

Considering the importance of the subject of sexual health in medical school, the following hypotheses were tested: (i) the sexual health teaching of basic science courses among medical students was satisfactory and (ii) there is progression in the teaching of sexual health throughout the 4-year undergraduate course in medicine. Therefore, the aim of the present study was to investigate the sexual health teaching of basic science courses among medical students.

## PARTICIPANTS AND METHODS

A prospective investigation was performed involving 216 students in the first ( $n = 44$ ), second ( $n = 41$ ), third ( $n = 63$ ), and fourth ( $n = 68$ ) years of the undergraduate course in medicine of a higher education institution in the State of São Paulo, Brazil. This study received approval from the Human Research Ethics Committee of the institution (certificate number: 10684919.1.0000.5415). All students received clarifications regarding the objectives and importance of the study and those who agreed to participate signed a statement of informed consent.

A descriptive, cross-sectional study was conducted with students in the basic cycle of the undergraduate course. The students were contacted personally and given a self-administrated

questionnaire on the teaching of sexual health during the course and preparation for addressing sexual issues with patients.

Data were collected using a self-administered questionnaire addressing the teaching of sexual health in the first 4 years of the course and how this knowledge affected relationships with patients. The questionnaire specifically addressed the way sexual health was taught. The questionnaire included biological, social, and cultural aspects of sexuality based on studies conducted with physicians and medical students regarding their educational background in sexual health.<sup>7,9</sup>

The questionnaire addressed the teaching of sexual health during the undergraduate course, such as classes on the topic, teaching activities, and aspects of sexuality, how the students evaluated the content of the classes, and the impact on their education.

The degree of satisfaction regarding the learning process during and at the end of the course was determined using a ten-point scale; on which, a score of 1 to 5 indicated dissatisfaction and a score of 6 to 10 indicated satisfaction. Data analysis involved the calculation of descriptive statistics (mean, SD, median, minimum, and maximum values). Content analysis was used for the discursive answers. The frequency distribution was calculated based on the number of students who answered each question, and the database was organized in Microsoft Excel 2007 (Microsoft Corp., USA).

## RESULTS

216 medical students (67.5%) participated in the present study and were divided into 4 groups for the analysis of the profile of each year. 44 students from the first year (55%), 41 from the second year (54.66%), 63 from the third year (73.25%), and 68 from the fourth year (90.66%) answered the questionnaire. [Tables 1](#) and [2](#) show degree of satisfaction regarding sexual medicine classes and confidence in discussing the sexual problems of patients, respectively.

### First Year

Among the 44 participants, 25 (56.81%) reported not receiving classes in sexual medicine, 12 (27.27%) had classes, and 6 (13.63%) did not know how to answer. The most cited disciplines that addressed sexual topics were anatomy (20.45%), medical psychology (18.18%), and embryology (13.63%). Regarding the activities used to address the topic, 20 students (45.45%) cited theory classes, 2 (4.54%) cited the use of films, and 1 (2.27%) cited a seminar. The main aspects addressed were reproduction (54.55%), organic diseases (34.09%), and mental disorders (20.45%) ([Figure 1](#)).

**Table 1.** Degree of satisfaction regarding sexual medicine classes received during graduation

Degree of satisfaction	First year	Second year	Third year	Fourth year
Mean	2.6	2.82	3.58	4.55
Mode	1	1	3	5 and 6

**Table 2.** Distribution regarding the confidence in discussing the sexual problems of patients

Feeling	First year	Second year	Third year	Fourth year
Non-confident	36 (81.8)	34 (82.9)	49 (77.8)	46 (67.6)
Confident	0 (0.0)	0 (0.0)	3 (4.8)	4 (5.9)
No answer	8 (18.2)	7 (17.1)	11 (17.4)	18 (26.5)

The values in parentheses correspond to the percentage.

The students were asked to indicate their degree of satisfaction with the classes that addressed sexual medicine up to the period in which the present study was conducted. The weighted mean was 2.6 and the mode was 1. The students were also asked if they believed that the classes taught so far gave them confidence in discussing the sexual problems of patients; for which, none of the students answered affirmatively, 36 (81.81%) reported not feeling confident, and 8 (18.18%) were not able to answer the question. When the first-year students assessed their expectations with regards to learning about sexual health throughout the undergraduate course, the weighted mean was 5.74 and the mode was 8.

### Second Year

Among the 41 students who participated in the study, 19 (46.3%) reported not having sexual medicine classes, 9 (22%) had such classes, and 13 (31.7%) did not know how to answer the question. The most cited disciplines that addressed sexual topics were physiology (21.95%), embryology (19.51%), medical psychology (14.63%), and anatomy (14.63%). Among the activities used, 21 students (51.2%) cited theory classes and 11 (26.8%) cited seminars. The main topics addressed were reproduction (75%) and organic diseases (59%) (Figure 2).

When asked about their satisfaction with the classes that addressed sexual medicine, the weighted mean was 2.82 and the mode was 1. In the evaluation of their expectations with regards to learning sexual health throughout the undergraduate program,

34 (82.9%) did not feel confident and 7 (17.1%) were unable to answer the question.

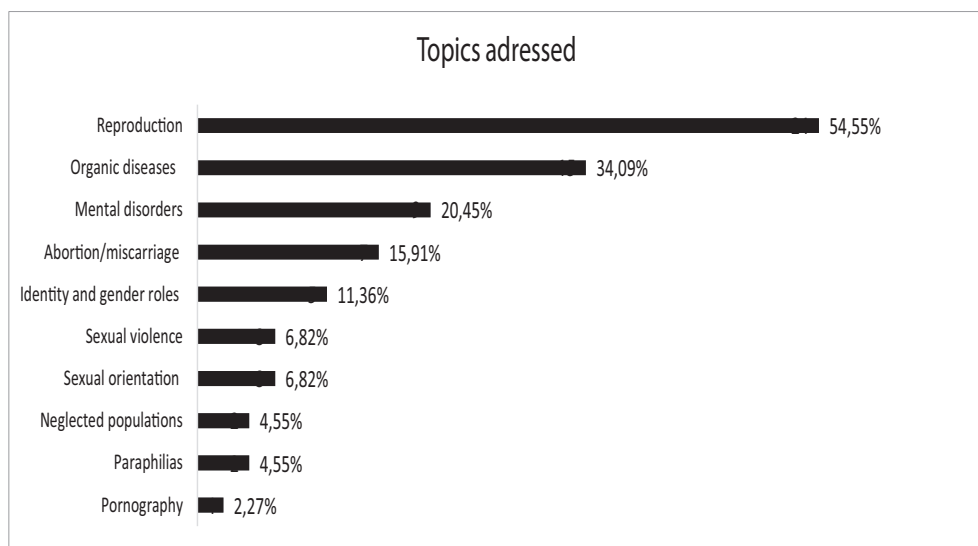
### Third Year

Among the 63 students, 23 (36.5%) reported not having classes on sexual medicine, 24 (38.1%) had such classes, and 16 (25.4%) did not answer the question. Regarding the disciplines that addressed sexual topics, the most cited were collective health (22.22%), infectology (14.28%), genetics (9.52%), physiology (9.52%), and pathology (7.93%). Among the activities developed, 35 students (55.5%) reported that the topics were addressed in theory classes, 13 (20.63%) reported that films were used and 9 (14.3%) cited seminars. The main topics were reproduction (76.2%) and organic diseases (73%) (Figure 3).

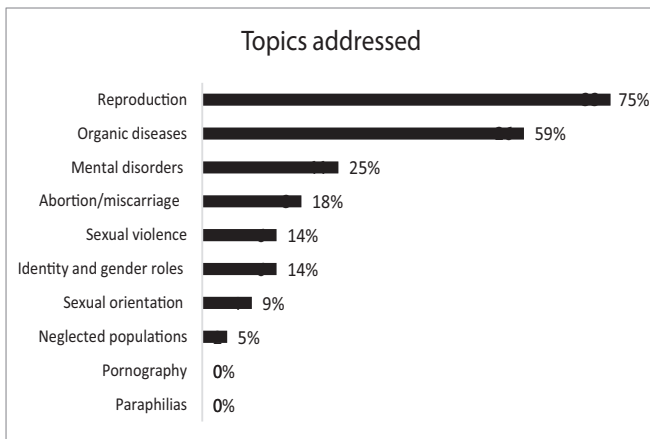
Regarding satisfaction with the classes that addressed sexual medicine so far, the weighted mean was 3.58 and the mode was 3. In the evaluation of their expectations with regards to learning sexual health throughout the undergraduate program, 49 (77.8%) reported feeling non-confident, 11 (17.5%) did not know how to answer the question, and 3 (4.8%) reported feeling confident.

### Fourth Year

Among the 68 students, 37 (54.40%) reported having classes on sexual medicine, 13 (19.1%) did not have such classes, and 18 (26.5%) did not answer the question. The most cited



**Figure 1.** Topics addressed in first year of undergraduate course in medicine.



**Figure 2.** Topics addressed in second year of undergraduate course in medicine.

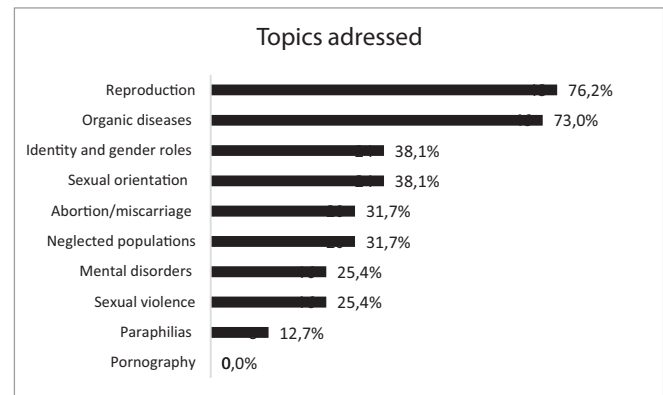
disciplines that addressed sexual topics were gynecology/obstetrics (55.88%), urology (41.17%), bioethics (11.76%), collective health (5.88%), and infectology (5.88%). Regarding the main activities developed, 53 (77.9%) reported that the topics were addressed in theory classes, 10 (14.7%) cited clinics, 3 (4.4%) cited the infirmary, 11 (16.2%) cited seminars, and 3 (4.4%) reported that films were used. The main topics were abortion/miscarriage (83.8%), reproduction (80.9%), and organic diseases (80.9%) (Figure 4).

Regarding satisfaction with the classes that addressed sexual medicine, the weighted mean was 4.55 and the modes were 5 and 6. In the evaluation of their expectations with regards to learning sexual health throughout the undergraduate program, 46 (67.6%) reported feeling non-confident, 18 (26.5%) did not answer the question, and 4 (5.9%) reported feeling confident.

## DISCUSSION

As the variables did not remain equal for all years, the present data enable an evaluation of the progression of the teaching of sexual health and the degree of student satisfaction with regards to this teaching. The mean satisfaction scores were 2.6 for the first year (mode: 1), 2.82 for the second year (mode: 1), 3.58 for the third year (mode: 3), and 4.55 for the fourth year (mode: 5 and 6).

The data reveal dissatisfaction on the part of the students and deficient teaching. This finding suggests the need of integration among all disciplines related to sexual medicine. A similar study was performed with students of a medical course in the state of Piauí, Brazil, the results of which showed that the subject was mainly centered on biological and pathologic aspects.<sup>10</sup> Moreover, the organic and reductionist view of sexuality, with little use of interdisciplinarity, were negative aspects of the teaching of medicine in the study, which is in agreement with the data found in the present investigation.



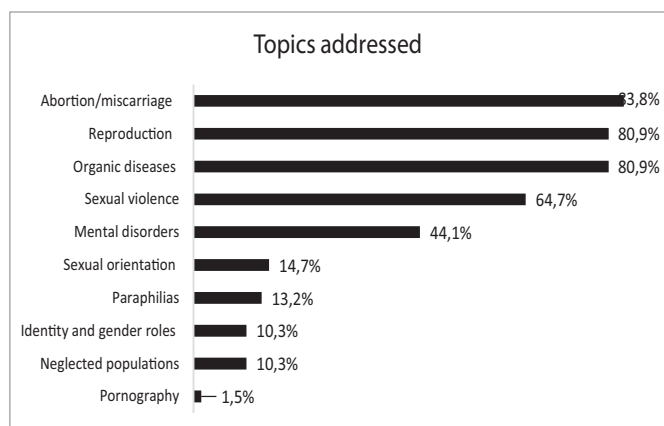
**Figure 3.** Topics addressed in third year of undergraduate course in medicine.

Another study involving 207 professors from 110 Brazilian medical schools found that 96.9% addressed topics of sexuality mainly in the third and fourth years as disciplines of the field of clinical medicine. The main disciplines were gynecology (51.5%) and urology (18%), and the most related topics were reproductive anatomy and physiology (55.4%).<sup>11</sup> Similar results were found in the present investigation, as the main disciplines cited in the basic cycle were anatomy and physiology.

Therefore, investigations of this issue are needed to improve the teaching of sexual health in the undergraduate course in medicine, with possible improvements in the curriculum, training during the education process, and the holistic treatment of patients.<sup>12</sup> In a survey of 125 medical students in the internship phase, Olímpio et al demonstrated that their knowledge of sexual health was insufficient, mainly owing to deficient teaching of the subject and difficulties addressing the issue with patients.<sup>13</sup> As per the national curricular guidelines for undergraduate courses in medicine, students need to have knowledge on theory as well as understand the social determinants of the health-disease process.<sup>14</sup> Considering the broad spectrum of sexuality, it is extremely important for students to have contact with this subject in the basic cycle of the course of medicine so that this issue can be addressed in a holistic manner.

In the present study, although the students in the basic cycle had contact with sexual medicine in disciplines such as anatomy, embryology, physiology, and medical psychology, they had difficulty perceiving this as initial contact with the subject. With the exception of medical psychology, the disciplines focused more on reproduction and organic diseases. Sexual health is the physical, emotional, mental, and social well-being related to sexuality,<sup>3</sup> which may explain why most students do not recognize classes on sexual medicine during their undergraduate studies because the disciplines focus on only 1 aspect rather than the totality of the subject.

In the clinical cycle, the main disciplines cited were infectology, gynecology/obstetrics, urology, genetics, physiology, and collective health. Collective health is an undergraduate discipline



**Figure 4.** Topics addressed in fourth year of undergraduate course in medicine.

that addresses knowledge of diseases and their complications as well as the social aspects of the health-disease process, offering a critical, reflexive education of the entire illness process.<sup>15</sup>

In summary, the present study showed that sexual health teaching of basic science courses among medical students sexual health continues to have a fragmented, biology-based focus. The main disciplines cited by the participants were those that address the biological mechanisms of health and disease in the organism. Although the disciplines of collective health, bioethics, and physical psychology were also cited, the results show that the students in all years considered the classes to be insufficient. Thus, students learn theory but feel insecure and unprepared with regards to sexual health, which can have repercussions in their future years in internship.<sup>16</sup>

## CONCLUSION

The present results reveal progression in the teaching of sexual health throughout the 4-year undergraduate course in medicine at a single institution. However, the weighted means of degree of satisfaction were low. Thus, the content of the classes is fragmented and superficial, and the students report not feeling confident or prepared enough to address sexuality in the development of the physician-patient relationship.

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## STATEMENT OF AUTHORSHIP

André Urdhamuck Teixeira Santos: Original Draft, Conceptualization, Writing - Review & Editing, Final Approval. Luis César Fava Spessoto: Original Draft, Conceptualization, Writing - Review & Editing, Final Approval. Fernando Nestor Fácio Jr: Conceptualization, Writing - Review & Editing, Final Approval.

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## SUPPLEMENTARY DATA

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.esxm.2020.100309>.