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Attitudes and perceptions of teachers and medical students regarding suicide

Atitudes e percepções de professores e estudantes de medicina em relação ao suicídio

Maria Gardenia Amorim[1] gardenia.ce@uol.com.br
Marcos Kubrusly[1] mmkubrusly@gmail.com
Sócrates Belém Gomes[1] socrates_belem@hotmail.com
Isabella Cabral Marinho Plens[2] isabellaplens@hotmail.com
Hermano Alexandre Lima Rocha[2,3] hermano@ufc.br
Anamaria Cavalcante e Silva[1] anamariacs2013@gmail.com

ABSTRACT

Introduction: The World Health Organization (WHO) estimates that there are around one million deaths by suicide a year worldwide, more than the total sum of deaths caused by wars and homicides, which results in one death every 40 seconds. Despite the existence of several scientific publications on suicide prevention, there have been studies showing that health professionals are not trained to adequately care for individuals at risk of suicide.

Objective: This study aimed to understand the attitudes and perceptions of medical school students and teachers regarding suicide.

Methods: This is a cross-sectional, descriptive study, with a quantitative and qualitative approach, approved by the Research Ethics Committee, which assessed a sample of 180 students attending the 8th and 11th semesters and 57 teachers from different semesters of the evaluated medical courses. The data were obtained by applying the Suicide Behavior Attitude Questionnaire (SBAQ), in addition to a sociodemographic questionnaire. The data were submitted to descriptive and analytical statistics.

Results: Regarding professional capacity, the scores were low for both students (median 5.5) and teachers (median 5.25). Students who had seen someone exhibiting suicidal behavior ($p = 0.002$) and those attending the more advanced semesters ($p = 0.04$) felt more confident when treating patients at risk of suicide. There was a significant difference regarding the Right to Suicide factor among students who said they were religious ($p = 0.001$), as also among the teachers who attended religious services with a higher frequency ($p = 0.02$).

Conclusions: We conclude that students and teachers have had little experience with suicide in the assessed medical courses, which contributes to low level of training and the feeling of insecurity, indicating the need to give more importance to the subject in the undergraduate medical school, aiming to allow the acquisition of knowledge and skills for a competent and preventive medical practice regarding suicide.

Keywords: Suicide; Medical Education; Teacher Training; Health Care.

RESUMO

Introdução: *A estimativa da Organização Mundial da Saúde (OMS) é que haja cerca de um milhão de mortes por suicídio por ano no mundo, mais do que a soma total de mortes em guerras e homicídios, que resulta em uma morte a cada 40 segundos. Apesar da existência de diversas publicações científicas sobre a prevenção do suicídio, existem estudos que mostram que os profissionais de saúde não são capacitados para cuidar adequadamente de pessoas em risco de suicídio.*

Objetivo: *Este estudo teve como objetivo compreender as atitudes e percepções de alunos e professores do curso de medicina em relação ao suicídio.*

Métodos: *Trata-se de um estudo transversal, descritivo, com abordagem quantitativa e qualitativa, aprovado pelo Comitê de Ética em Pesquisa, que avaliou uma amostra de 180 alunos do 8º e 11º semestres e 57 professores de diferentes semestres dos cursos médicos avaliados. Os dados foram obtidos por meio da aplicação do Suicide Behavior Attitude Questionnaire (SBAQ), além de um questionário sociodemográfico. Os dados foram submetidos à estatística descritiva e analítica.*

Resultados: *Em relação à capacidade profissional, as pontuações foram baixas tanto para alunos (mediana 5,5) quanto para professores (mediana 5,25). Alunos que viram alguém apresentando comportamento suicida ($p = 0,002$) e os que frequentavam o semestre mais avançado ($p = 0,04$) sentiram-se mais confiantes no atendimento de pacientes com risco de suicídio. Houve diferença significativa quanto ao fator Direito ao Suicídio entre os alunos que se disseram religiosos ($p = 0,001$), assim como entre os professores que frequentavam serviços religiosos com maior frequência ($p = 0,02$).*

Conclusões: *Concluímos que alunos e professores tiveram pouca experiência com suicídio nos cursos de medicina avaliados, o que contribui para o baixo nível de formação e o sentimento de insegurança, indicando a necessidade de dar mais importância ao assunto na graduação em medicina, visando permitir a aquisição de conhecimentos e habilidades para uma prática médica preventiva e competente em relação ao suicídio.*

Palavras-chave: *Suicídio; Educação Médica; Treinamento de Professor; Assistência Médica.*

[1] Centro Universitário Christus, Fortaleza, Ceará, Brazil.
[2] Universidade Federal do Ceará, Fortaleza, Ceará, Brazil.
[3] Harvard University, Boston, Massachusetts, United States.

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INTRODUCTION

Suicide is the intentional act of taking one's own life, even if the individual does it with ambivalence[1]. It is one of the five main causes of death[2], and a complex problem, a worldwide public health concern, which has been increasing in the last 45 years among the young population of low- and middle-income countries. The World Health Organization (WHO) estimates that around one million deaths occur by suicide a year worldwide, more than the total sum of deaths caused by wars and homicides, which results in one death every 40 seconds[3]. Regarding Brazil, this is the eighth country with the highest number of suicides in the world, with a self-extermination mortality rate of 5.8 / 100,000 inhabitants in 2012, according to the WHO estimate and showing an increasingly growing number of deaths in the young population and among the elderly and indigenous populations[4].

Despite the existence of several scientific publications on suicide prevention, there have been studies showing that health professionals are not trained to adequately care for individuals at risk of suicide, either due to the lack of knowledge, or due to moral issues or those associated with myths[5-7]. Based on this perspective, researchers found a lack of perception of psychological suffering by health professionals towards people with suicidal behavior treated in primary care, since 75% of those who attempted suicide had sought this basic health service in the previous year and 45% up to three months before the suicide attempt[8]. Investigators found that medical residents of Internal Medicine were sensitized when attending to those who attempted suicide, but were not familiar with the specialized bibliography, or with the care procedures standardized by the Ministry of Health and WHO on the subject[9]. The unpreparedness of medical professionals was observed according to the view of users who attempted suicide and were treated in the emergency room[5]. These users perceived the lack of humanized attitudes and a cold approach, among other issues related to the health service structure.

Therefore, a critical reflection is necessary to understand how students and teachers, during medical training, position themselves regarding the issue of suicide and how the teaching / learning process about self-extermination occurs in medical schools, considering that students will be the future professionals who will work in health services and the ones who will face suicidal behavior. This study aims to understand the attitudes (This work adopts the concept of attitude currently used in social psychology, as a "lasting organization of beliefs and cognitions in general, endowed with an affective charge for or against a defined social object, which predisposes to a coherent action with the cognitions and affections related to this object"[10].) and perceptions of medical teachers and students in the face of suicide, hoping to provide knowledge that favors the improvement of teaching and learning on this subject.

METHODS

Study and sample characterization

This is an observational, cross-sectional study of students and teachers from the medical course at a public and a private university. The present study was carried out in two phases, with different samples, from May 2016 to August 2017, at *Faculdades de Medicina do Centro Universitário Christus* (Unichristus) and *Universidade Estadual do Ceará* (UECE), in the city of Fortaleza, state of Ceará, Brazil. *Centro Universitário Christus* (Unichristus) is a private institution, which offers 14 undergraduate courses in several areas and *lato sensu* and *stricto sensu* postgraduate courses. The institution uses a hybrid teaching methodology, a traditional method and active methodologies. As for *Universidade Estadual do Ceará* (UECE), it offers 27 undergraduate courses, 59 *lato sensu* postgraduate courses and 44 *stricto sensu* postgraduate courses and the Medical School trains general practitioners, using predominantly the traditional teaching method.

The sample of medical students consisted of students attending the eighth and eleventh semesters of UECE and Unichristus. The sample calculation comprised 180 individuals, with 80% test power and 5% significance level. We considered an initial proportion of knowledge about suicide of 70%, with an accuracy of 15%. The choice of these semesters for the study was based on the fact that the students have already studied the disciplines of Internal Medicine and Psychiatry and have already obtained other types of knowledge and experience during the course. The inclusion criteria consisted of students from the eighth and eleventh semesters of the Medical Course, attending the selected institutions, who regularly exercised their activities and agreed to participate in the study. The exclusion criteria were students who, for some reason, did not attend the discipline of Psychiatry and / or did not fill out the Free and Informed Consent form.

The sample would be equally distributed, but it was observed that, in practice, the classes comprising the eighth and eleventh semesters of the Medical School of UECE had only 36 and 39 students, respectively, totaling 75 students. In order to prevent bias, the number of students at Centro Universitário Unichristus was increased to 105, with 54 from the eighth semester and 51 from the eleventh semester. Due to this inequality, data weighting was used to make the groups equivalent for result analysis. It is worth mentioning that all UECE students agreed to participate in the study.

The sample of teachers consisted of 57 subjects, estimated with the initial proportion of knowledge about

suicide at 75%, with an accuracy of 15% and a significance level of 5%. The sample was randomly distributed, with 29 teachers from Unichristus and 28 from UECE. The inclusion criteria were teachers linked to the selected institutions, who agreed to participate in the study and who were in full exercise of teaching. The exclusion criteria were refusal to participate in the study, failure to complete the informed consent form and incorrect completion of the questionnaire.

Measures

To evaluate the attitudes of teachers and students of the Medical Course regarding suicide, the Suicide Behavior Attitude Questionnaire (SBAQ)[11], validated in 2005 and the only one in Brazil validated for this purpose, was used. The SBAQ has already been applied to nursing professionals[11], medical students[12] and professionals from the municipal health network, including mental health, in Campinas, São Paulo[13].

The SBAQ is a scale comprising 21 visual analogue items that measure cognitive, affective and behavioral aspects of health professionals in the face of suicide. Each item comprises a 10 cm visual scale that varies from total disagreement to total agreement. Its internal consistency was assessed through factor analysis[11]. The questions were grouped by the author into three factors: "negative feelings towards the suicidal patient", with seven questions (Q2, Q5, Q9, Q13, Q15, Q17 and Q19), "perception of professional capacity", with four questions (Q1, Q7, Q10 and Q12) and "right to suicide", with five questions (Q3, Q4, Q6, Q16 and Q18). The total value of the question scores for each factor is: 70 points for negative feelings, the higher the score, the more negative the feelings; 40 points for professional capacity, the higher the score, the greater the professional capacity and 50 points for the right to suicide, the higher the score, the greater the condemnatory attitude.

For better understanding, a Sociodemographic Questionnaire was added with information on gender, religion, attendance at religious services, association between suicide and mental disorders, care of patients with suicidal behavior, as well as teaching and training time, in the case of teachers.

Data collection procedure

The questionnaire was applied by experienced researchers, in a quiet place, with the participants feeling relaxed. The questionnaire was applied to UECE students in the eighth semester at the campus itself, in the classroom, before classes started. As for the eleventh semester students, the questionnaire was applied in the accredited hospitals to which they were assigned, having been previously scheduled, as they were working as interns.

At Unichristus, the questionnaire was applied to 60 students from the eighth semester in the classroom, with the teacher's permission. As for the students from the eleventh semester, the questionnaire was applied to 60 students on the day of the internship evaluation at Unichristus, before they started this activity, with the permission of those in charge.

Regarding the collection of data from teachers, the SBAQ was applied to UECE teachers in the meeting room, after they provided their consent and through individual interviews at other times on campus.

At Unichristus, 34 questionnaires were applied in the teachers' meeting room and, through individual interviews, at other times.

Statistical analysis

In order to analyze the data, the scores for the three factors of the SBAQ and for each specific question were calculated. Independent analyses of students and teachers and comparisons between students were carried out. Due to the numerical difference in the sample between the two institutions, weighting of the data was used for descriptive analysis. Percentages and counts were used for the categorical quantitative data, whereas measures of central tendency and dispersion were used for the numerical data. The Kolmogorov-Smirnov normality test was performed for the numerical variables and the sample showed characteristics of an asymmetric distribution. As these were not serial measurements, chi-square tests were used for categorical variables. When comparing the SBAQ factors with the sociodemographic data, and comparing two numerical groups, the Mann-Whitney and Kruskal-Wallis non-parametric tests were used to compare three or more groups. A *p* value of up to 5% was considered significant in the analysis. The data were tabulated and analyzed using the software IBM SPSS Statistics for Windows, Version 23.0. Armonk, NY: IBM Corp. IBM Corp. Released 2015.

Ethical aspects

The study was submitted to and approved by the Ethics Committee of *Centro Universitário Unichristus*, under CEP number 56433716.80000.5049, with the consent of *Universidade Estadual do Ceará*. All ethical principles that guide research in human beings were followed. The collaborating subjects were informed about the overall objective of the study and the procedures for data collection, especially those regarding the use of the interviews. All subjects signed the Free and Informed Consent Form - FICF.

RESULTS

A total of 237 subjects participated in this study, distributed as 57 teachers from different semesters and 180

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students, divided as 90 from the 8th and 90 from the 11th semesters. There was a predominance of female subjects, 51.9% (93), and the median age was 24 years. Regarding religiosity, 65.2% (117) declared to be religious. The most frequent religion was Catholicism (64.3%), and 54.4% (98) attended religious services from once a week to once or twice a month. The majority of students, 70% (126), reported having treated someone with suicidal behavior (Table 1).

Most teachers were males, 52.6% (30), with a median age of 37 years, median teaching time of 6 years and median training time of 14 years. Approximately two thirds, 66.7% (38), had treated patients with suicidal behavior and a median of 66 teachers associated suicide with mental illness. Most of them (84.2%/ 48) considered themselves to be religious, with a predominance of the Catholic religion: 77.2% (44). Regarding the frequency of religious services, 64.9% (37) reported attending religious services from once a week to once or twice a month (Table 2).

The students did not feel well prepared to care for patients at risk of suicide, as seen in questions Q10 and Q12. The sum of the questions on the professional capacity factor reached just over 50% of the total score: 22 (40) points, with a total median of 5.5. The condemnatory attitude of students

Table 1. Descriptive characteristics of the student sample of the Medical Course at Unichristus and UECE (n=180), Ceará, 2018.

Variables	N	%
Gender		
Male	87	48.1
Female	93	51.9
Semester		
8th semester	90	50.0
11th semester	90	50.0
Institution attended		
Unichristus	90	50.0
UECE	90	50.0
Religious person		
Yes	117	65.2
No	63	34.8
Religion		
Catholic	116	64.3
Protestant	15	8.6
Spiritualist	13	7.2
Agnostic	8	4.4
Atheist	2	1.0
Christian	22	12.5
Others	4	2.0
Frequency attending religious services		
1x a week	62	34.2
2x a month	36	20.2
1x a month	22	12.2
2 to 3x a year	40	22.3
1x a year	19	10.6
Almost never	1	0.5
Has ever treated someone with suicidal behavior		
Yes	126	70.0
No	54	30.0
Median age (Interquartile range)	24	(23 to 26)

Table 2. Sociodemographic characteristics of teachers of the Medical course at Unichristus and UECE (n-57).

Variables	N	%
Gender		
Male	30	52.6
Female	27	47.4
Are you a religious person		
Yes	48	84.2
No	9	15.8
Religion		
Catholic	44	77.2
Protestant	7	12.3
Spiritualist	2	3.5
Agnostic	3	5.2
Others	1	1.8
Frequency attending religious services		
1x a week	27	47.4
2x a month	10	17.5
1x a month	6	10.5
2 to 3x a year	3	5.3
1x a year	10	17.5
Almost never	1	1.8
Treated patient with suicidal behavior		
Yes	38	66.7
No	19	33.3
Institution where you teach		
Unichristus	29	50.9
UECE	28	49.1
Median age	37.0	(24-65)
Median time since graduation	14.0	(1.0-45)

regarding the right to suicide factor is emphasized, as seen in question Q3, which has an inverted value, and in Q4 and Q18. The total score was 23 (50), with a total median of 5.4. A low score was seen regarding the negative feelings factor, with a total score of 21 (70) and a median of 3.0 (Table 3).

The students from the 11th semester had a higher score than those from the 8th semester, with a median of 5.5 and 5.25, respectively. There was a significant difference regarding the professional capacity factor, with p = 0.04. The score for the negative feelings factor was uniform and low in both

Table 3. Comparison of the factors of the Suicide Behavior Attitude Questionnaire among students from the 8th and 11th semesters at Unichristus and UECE.

	Professional Capacity	8th semester		11th semester	
		Median	Percentile (max – min)	Median	Percentile (max – min)
Q1	I feel capable of helping a person who tried to kill themselves	6.0	(5.0-7.0)	6.0	(4.0-8.0)
Q7	I feel capable of perceiving when a patient is at risk of killing themselves	6.0	(4.0-7.0)	6.0	(5.0-7.0)
Q10	I think I have professional training to deal with patients at risk of suicide	4.0	(2.0-6.0)	5.0	(2.0-7.0)
Q12	I feel insecure to care for patients at risk of suicide	6.0	(4.0-8.0)	6.0	(4.0-8.0)
	Total result	5,25	(5.5-6.0)	5.5	(5.0-6.25)
	p= 0.04				
	Negative Feelings	**Median**	**Percentile (max – min)**	**Median**	**Percentile (max – min)**
Q2	Those who threaten to kill themselves generally do not do it.	1.0	(0.0-4.0)	1.0	(0.0-5.0)
Q5	Deep down, I prefer not to get too involved with patients who have attempted suicide.	3.0	(1.0-5.0)	3.0	(1.0-5.0)
Q9	I'm afraid to ask about suicidal thoughts and end up inducing the patient to do it.	2.5	(0.0-7.0)	3.0	(0.0-6.0)
Q13	Sometimes it even makes you angry, because so many people want to live ... and that patient wants to die.	0.0	(0.0-2.0)	1.0	(0.0-3.0)
Q15	We feel powerless in the face of a person who wants to kill themselves.	6.0	(3.0-7.0)	6.0	(3.0-8.0)
Q17	In the case of patients who are suffering a lot due to a physical illness, I find the idea of suicide more acceptable.	3.0	(0.0-7.0)	2.0	(0.0-6.0)
Q19	Those who want to kill themselves do not "keep trying" to kill themselves.	1.0	(0.0-3.0)	0.0	(0.0-3.0)
	Total result	2,89)	(1.86-4.14)	3.0	(1.86-4.0)
	p=0.84				
	Right to suicide	**Median**	**Percentile (max – min)**	**Median**	**Percentile (max – min)**
Q3	Despite everything, I think that if a person wants to kill themselves, they have the right to do it.	2.0	(0.0-5.0)	2.0	(0.0-6.0)
Q4	In the face of suicide, I think: if someone had talked to them, perhaps they would have acted differently.	8.0	(7.0-9.0)	8.0	(7.0-9.0)
Q6	Life is a gift from God and only He can take it away.	7.0	(2.0-10.0)	5.0	(3.0-9.0)
Q16	Whoever has God in their hearts will not try to kill themselves.	1.0	(0.0-5.0)	2.0	(0.0-4.0)
Q18	When a person talks about ending their life, I try to get this idea out of their head.	8.0	(5.0-10.0)	8.0	(7.0-9.0)
	Total result	5,4	(4.0-6.40)	5.4	(4.4-6.20)
	p=0.80				

*p – Mann-Whitney-U test.

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semesters, with a median of 2.89 for the 8th semester and 3.0 for the 11th semester, with p = 0.84. The students also disagreed that suicide is a personal right, with a median of 5.4 in the 8th and 11th semesters. Q6, which says "Life is a gift from God and only He can take it away", showed greater agreement among students from the 8th semester (median 7.0) when compared to those from the 11th semester (median 5.0) (Table 3).

Regarding the professional capacity factor, greater confidence when dealing with suicide is demonstrated by the students from the most advanced semester (median 5.5) compared to those from the 8th semester (median 5.25), with p = 0.04. Also, students who had already treated someone with suicidal behavior (median 5.5) were more prepared to deal with suicide when compared to those who had not (median 5.00), with p = 0.002. The difference between the study semesters in relation to religion, with p = 0.00, considering oneself religious with p = 0.00 and frequently attending religious services with p = 0.00, showed the most significance regarding the right to suicide. The difference in attitudes between those who are religious (median 5.50) and non-religious individuals (median 4.00) is significant for the factor personal right to suicide, with p = 0.000 (Table 4).

As for the teachers' evaluation, the low score 17 (70) in the negative feelings factor stands out, demonstrating few negative feelings towards the patient with suicidal behavior. The teachers reached 50% of the total score for the factor person's right to suicide with a score of 25 (50) and a median of 5.0, which, according to the interpretation of the scale, means "I don't know". The professional capacity factor was the only one that reached more than 50% of the total score, 22 (40), but the median (5.25) was lower than the students' median score (5.50). Attention is drawn to the significant difference in being religious regarding the negative feelings factor, with p = 0.041. More negative feelings are observed in relation to suicide in those who consider themselves religious, with a median of 3.43 in relation to non-religious, with a median of 2.00. Having treated a patient with suicidal behavior was significant regarding the negative feelings (p = 0.003) and right to suicide (p = 0.023) factors. The teachers who did not treat suicide risk cases (median 4.00) had more negative feelings about suicide than those who did it (median 2.43). Moreover, teachers who had not treated patients with suicidal behavior had more condemnatory attitudes (median 5.80) than those who had done it before (median 4.80). (Table 5)

Table 4. Comparison of the three factors of the Suicide Behavior Attitude Questionnaire with the students' sociodemographic variables (N=180).

Variables	Professional capacity				Negative feelings				Right to suicide			
	Median	P25	P75	p	Median	P25	P75	p	Median	P25	P75	p
Semester												
8th semester	5.25	5.50	6.00		2.56	1.86	4.14		5.40	4.00	6.40	
11th semester	5.50	5.00	6.26		3.00	1.86	4.00		5.40	4.40	6.20	
				0.04*				0.840*				0.801*
Gender												
Male	5.50	4.75	6.25		2.85	1.86	3.86		5.00	3.50	5.80	
Female	5.50	4.50	6.00		3.14	2.00	4.14		5.60	4.60	6.40	
				0.311*				0.338*				0.11*
Institution												
Unichristus	5.50	5.00	6.25		3.00	1.86	4.14		5.60	4.80	6.60	
UECE	5.25	4.50	6.00		2.71	1.86	3.56		5.00	3.80	5.80	
				0.164*				0.300*				0.001*
Religious person												
Yes	5.50	4.75	6.25		3.14	1.86	4.14		5.50	5.00	6.60	
No	5.25	4.75	6.00		2.86	1.86	3.71		4.00	3.80	5.40	
				0.946*				0.149*				0.00*

Continue...

Table 4. (Continuation) Comparison of the three factors of the Suicide Behavior Attitude Questionnaire with the students' sociodemographic variables (N=180).

Variables	Professional capacity				Negative feelings				Right to suicide			
	Median	P25	P75	p	Median	P25	P75	p	Median	P25	P75	p
Religion												
Catholic	5.50	4.75	6.25		3.14	1.86	4.14		5.80	5.00	6.60	
Protestant	5.75	5.50	6.50		3.14	2.71	4.57		6.40	5.40	6.80	
Spiritualist	6.25	5.00	6.75		3.00	1.57	3.71		5.20	4.60	5.60	
Agnostic	5.25	3.50	5.75		3.00	1.14	4.86		4.00	2.20	4.60	
Christian	5.25	4.00	6.22		2.75	1.45	3.45		4.00	3.40	5.30	
Others	5.50	3.50	5.88		2.14	1.71	4.71		6.00	3.60	6.90	
				0.348**				0.215**				**0.00****
Religious service frequency	**Median**	**P25**	**P75**	**p**	**Median**	**P25**	**P75**	**p**	**Median**	**P25**	**P75**	**P**
1x a week	5.50	4.75	6.75		3.14	2.00	4.14		6.00	5.20	6.80	
2x a month	5.63	5.00	6.25		3.00	1.86	4.21		5.20	3.80	6.50	
1x a month	5.00	4.75	6.25		3.14	2.00	4.14		6.00	5.20	6.80	
2 to 3x a year	5.75	3.00	6.75		3.25	2.57	3.71		4.60	3.40	5.50	
1x a year	5.25	4.75	6.00		2.57	1.43	3.71		4.40	3.70	5.40	
Almost never	5.75	5.75	5.75		1.57	1.57	1.57		6.00	6.00	6.00	
				0.384**				0.556**				0.00**
Treated patient with suicidal behavior												
Yes	5.50	5.00	6.25		2.86	1.86	3.86		5.20	4.40	6.20	
No	5.00	4.00	5.75		3.25	1.86	4.43		5.40	4.00	6.40	
				0.002*				0.066*				0.00*

p* Mann Whitney and p** Kruskal-Wallis.

Table 5. Comparison of the three factors of the Suicide Behavior Attitude Questionnaire (SBAQ) and the teachers' sociodemographic variables at Unichristus and UECE, N = 57, Ceará, 2018.

Variables	Professional Capacity				Negative feelings				Right to suicide			
	Median	P25	P75	p	Median	P25	P75	p	Median	P25	P75	p
Gender												
Male	5.50	5.00	6.25		3.12	1.57	4.25		5.10	4.20	6.20	
Female	5.25	4.50	5.50		3.15	1.71	4.43		5.00	4.40	5.00	
				0.911*				0.719*				0.854*
Religious person												
Yes	5.25	4.50	6.50		3.43	2.00	4.43		5.30	4.40	6.20	
No	6.00	5.00	6.25		2.00	1.25	2.57		4.80	4.20	5.00	
				0.531*				0.041*				0.125*
Religion												
Catholic	5.25	4.50	6.38		3.36	1.75	4.21		5.30	4.40	6.10	
Protestant	6.50	6.25	7.00		1.43	1.00	?		5.00	4.00	7.20	
Spiritualist	4.13	3.75	4.50		3.50	2.43	4.57		5.00	4.80	5.20	
Agnostic	6.00	4.25	6.50		2.86	2.71	3.14		4.20	2.40	4.40	
Others	5.00	5.00	5.00		5.86	5.86	5.86		5.00	5.60	5.60	
				0.046**				2.85**				0.367**

Continue...

Table 5. (Continuation) Comparison of the three factors of the Suicide Behavior Attitude Questionnaire (SBAQ) and the teachers' sociodemographic variables at Unichristus and UECE, N = 57, Ceará, 2018.

Variables	Professional Capacity				Negative feelings				Right to suicide			
	Median	P25	P75	p	Median	P25	P75	p	Median	P25	P75	p
Religious service frequency												
1x a week	5.50	4.50	6.50		3.71	1.71	4.43		5.50	4.50	7.00	
2x a month	5.13	4.50	6.50		2.00	1.27	3.43		4.60	3.80	5.00	
1x a month	5.63	5.00	6.25		3.75	2.43	4.43		4.50	4.40	5.40	
2 to 3x a year	4.75	4.00	6.00		2.00	1.25	3.14		4.20	4.00	4.20	
1x a year	6.38	5.25	7.00		2.93	1.71	4.86		5.00	4.20	5.60	
Almost never	4.25	4.25	4.25		4.225	2.86	2.86		4.40	4.40	4.40	
				0.352**				0.330**				0.027**
Treated patient with suicidal behavior												
Yes	6.00	5.00	6.50		2.43	1.57	3.71		4.50	4.20	5.60	
No	5.25	4.25	6.50		6.00	3.14	4.86		5.80	5.00	6.60	
				0.122*				0.003*				**0.023***
Institution where the teacher works												
Unichristus	5.00	4.25	6.50		3.43	2.29	4.57		5.20	4.40	6.20	
UECE	5.88	5.25	6.50		2.75	1.57	4.21		5.00	4.20	5.30	
				0.104*				0.165*				0.517*

p* Mann Whitney and p** Kruskal-Wallis.

DISCUSSION

The results of this study are related to the attitudes of teachers and students of the medical course towards suicide, considering the aspects of professional capacity, negative feelings and the right to suicide and the association with sociodemographic variables. Among the study findings, we observed greater professional capacity of students and teachers who had previously treated a patient with suicidal behavior and of students attending the more advanced semester, as expected, due to greater acquisition of knowledge, greater experience with death and greater professional skills.

Dealing with death and suicide has always been difficult for health professionals, especially for doctors and medical students. Researchers, when studying medical students' attitudes towards relevant aspects of clinical practice, observed their negative or indefinite attitudes towards aspects related to death and mental illness[14]. A similar finding was identified in the association between students and their difficulty in dealing with death[15], which also researched the medical students' attitudes in relation to relevant aspects of clinical practice. When the students from the two assessed medical schools are compared, slightly higher scores are observed regarding the median of the professional capacity factor at Unichristus, which is probably due to the teaching method, bringing theory and practice closer together and resulting in a greater possibility of treating patients with suicidal behavior.

Several studies have found a reduction in negative attitudes and improved knowledge after students received training on how to deal with suicidal behavior. Analyzers, when they reassessed the nurses at the *Hospital das Clínicas de Campinas*, six months after the training on suicide, observed that the knowledge gains remained[11]. Investigators assessed the attitudes towards suicide among the health teams from the public health care area in Campinas (SP) using the same instrument as this study and provided skill training and teaching on suicide[13]. The author noticed a reduction in negative attitudes towards suicide. Specialists trained health teams and individuals related to the administration and security on suicide in a hospital environment and also found a change in negative attitudes[16]. In this context, the acquisition of knowledge and training of skills on how to deal with suicide seems to result in more confident professionals, with a reduction in negative attitudes and moralistic attitudes, capable of a more competent and humanized approach in relation to self-extermination.

The results with the most significant differences were observed regarding the right to suicide factor among individuals who considered themselves religious, among those who attended religious services in all groups and among Protestant students and Catholic teachers, showing more

condemnatory attitudes towards suicide. This type of attitude damages the doctor/patient relationship, prevents an empathic relationship with the individual with suicidal behavior and undermines a competent and humanized clinical practice. In the literature, the study that is closest to this aspect is the one[12], which also used the Suicide Behavior Attitude Questionnaire in the population of medical students at *Faculdade de Barbacena* (MG), comparing students from the pre-clinical period (1st to 7th semesters) to those in the post-clinical period (8th to 12th semesters) and found a significant difference in relation to the Catholic religion regarding the right to suicide factor. Another study that evaluated and compared the attitudes towards suicide of Japanese and North-American medical students, using another instrument, found a difference in relation to religiosity and gender[17].

One limitation of this study is the possibility of the occurrence of reverse causality, as it is a cross-sectional study. Another limitation is the use of an instrument validated with nursing professionals, due to the lack of a specific instrument for medical professionals and medical students in Brazil.

CONCLUSION

We concluded that it is necessary to discuss, reflect and build knowledge on self-extermination, especially regarding the deconstruction of negative beliefs and teachings about the approach, diagnosis and treatment management through active methodologies (PBL, TBL and OSCE), in different semesters of undergraduate school. This can be achieved through discussion of cases with an interdisciplinary team in the services, discussions in the Psychiatric League, through role playing and by encouraging community and school projects on suicide prevention. The construction of knowledge about self-extermination must be initiated by teachers through study groups, discussions and permanent education, to ensure the improvement of the teaching / learning process along the lines recommended by the National Curricular Guidelines.

AUTHORS' CONTRIBUTION

All authors have made substantial contributions to the study conception and design, revising the manuscript critically for relevant intellectual content, drafting the article and revising it critically for important intellectual content.

CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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REFERENCES

1. WHO. Prevenção do suicídio: um manual para profissionais da saúde em atenção primária. 2000.
2. WHO. Preventing suicide: A global imperative. 2014.
3. WHO. Preventing suicide: how to start a survivors' group. 2008.
4. WHO. Public health action for the prevention of suicide: a framework. 2012. See flyer SUPRE (Suicide Prevention). 2014:2.
5. Vidal CEL, Gontijo ED. Tentativas de suicídio e o acolhimento nos serviços de urgência: a percepção de quem tenta. Cadernos Saúde Coletiva. 2013;21(2):108-14.
6. BAP. Suicídio: informando para prevenir. Brasília: CFM/ABP. 2014.
7. Botega NJ. Crise suicida: avaliação e manejo. Porto Alegre: Artmed; 2015.
8. Luoma JB, Martin CE, Pearson JL. Contact with mental health and primary care providers before suicide: a review of the evidence. American Journal of Psychiatry. 2002;159(6):909-16.
9. Ramos INB, Falcão EBM. Suicídio: um tema pouco conhecido na formação médica. Revista Brasileira de Educação Médica. 2011;35(4):507-16.
10. Rodrigues A, Assmar E, Jablonski B. Psicologia Social. 16ª Edição. Vozes. 1996.
11. Botega NJ, Reginato DG, da Silva SV, Cais CFS, Rapeli CB, Mauro MLF, et al. Nursing personnel attitudes towards suicide: the development of a measure scale. Braz J Psychiatry. 2005;27(4):315-8.
12. Magalhães CA, Neves DMM, Brito LMDM, Leite BBC, Pimenta MMF, Vidal CEL. Atitudes de estudantes de medicina em relação ao suicídio. Revista Brasileira de Educação Médica. 2014;38(4):470-6.
13. Cais CFS, da Silveira IU, Stefanello S, Botega NJ. Suicide prevention training for professionals in the public health network in a large Brazilian city. Archives of Suicide Research. 2011;15(4):384-9.
14. Troncon LEA, Colares MFA, Figueiredo JFC, Cianflone ARL, Rodrigues MLV, Piccinato CE, et al. Atitudes de graduandos em medicina em relação a aspectos relevantes da prática médica. Rev Bras Educ Med. 2003;27(1):20-7.
15. Mascia AR, Silva FB, Lucchese AC, De Marco MA, Martins MCFN, Martins LAN. Atitudes frente a aspectos relevantes da prática médica: estudo transversal randomizado com alunos de segundo e sexto anos. Revista Brasileira de Educação Médica. 2009;33(1):40-8.
16. Berlim MT, Perizzolo J, Lejderman F, Fleck MP, Joiner TE. Does a brief training on suicide prevention among general hospital personnel impact their baseline attitudes towards suicidal behavior? Journal of Affective Disorders. 2007;100(1-3):233-9.
17. Domino G, Takahashi Y. Attitudes toward suicide in Japanese and American medical students. Suicide and Life-Threatening Behavior. 1991;21(4):345-59.