







# Death and the process of dying: perceptions of Medical and Psychology students

*A morte e o processo de morrer: percepção dos estudantes de Medicina e de Psicologia*

Claudia Bem Leite Nelson <sup>1,2</sup>		<a href="mailto:claudiabemleite@gmail.com">claudiabemleite@gmail.com</a>
Hanna Vitória Batista Leal <sup>1,2</sup>		<a href="mailto:hannaleal83@gmail.com">hannaleal83@gmail.com</a>
Natália Adriana Sousa e Silva <sup>1,2</sup>		<a href="mailto:natalia.28061998@gmail.com">natalia.28061998@gmail.com</a>
Maria Júlia Gonçalves de Mello <sup>3</sup>		<a href="mailto:mjuliagmello@gmail.com">mjuliagmello@gmail.com</a>
Ana Paula Amaral Pedrosa <sup>1</sup>		<a href="mailto:mepedrosa@gmail.com">mepedrosa@gmail.com</a>
Zilda do Rego Cavalcanti <sup>4</sup>		<a href="mailto:zrcavalcanti@gmail.com">zrcavalcanti@gmail.com</a>

## ABSTRACT

**Introduction:** Health students' education lacks debate on death and dying, which causes unpreparedness and emotional distress when facing these situations.

**Objective:** The objective of this study was to analyze the level of fear that medical and psychology students have when facing the process of death.

**Method:** This was a survey study using the Collet-Lester Fear of Death Scale involving students over 18 years old, attending different semesters of Medicine and Psychology undergraduate courses, with comparison between groups using appropriate statistical tests.

**Results:** Among the 333 students who answered the questionnaire, there was a greater fear of death of others for both courses. In medicine, the fear of own death was greater towards the end of the course ( $p=0.045$ ), whereas in psychology ( $p=0.039$ ), there was a significant reduction in the fear of death of others in the middle of the course.

**Conclusion:** Having a curriculum that addresses clinical and psychosocial issues regarding the finitude of life can help reduce students' insecurities and fears, aiming to provide comprehensive quality care to the patient.

**Keywords:** Fear; Death; Attitude to Death; Education, Medical; Psychology

## RESUMO

**Introdução:** Na formação dos estudantes de saúde, há uma escassez de debates sobre a morte e o morrer, provocando despreparo e sofrimento emocional no enfrentamento dessas situações.

**Objetivo:** Este estudo teve como objetivo avaliar o nível de medo que os estudantes de Medicina e de Psicologia apresentam diante do processo de enfrentamento da morte.

**Método:** Trata-se de um estudo do tipo survey que utiliza a Escala de Medo da Morte de Collet-Lester envolvendo estudantes maiores de 18 anos, em diferentes períodos da graduação de Medicina e de Psicologia, com comparação com os grupos por meio de testes estatísticos adequados.

**Resultado:** Entre os 333 estudantes que responderam ao questionário, evidenciou-se um maior medo da morte dos outros para ambos os cursos. Na Medicina, o medo da própria morte foi maior no final do curso ( $p = 0,045$ ), e, na Psicologia, houve uma redução significativa do medo da morte dos outros no meio do curso ( $p = 0,039$ ).

**Conclusão:** Ter uma grade curricular que trabalhe questões clínicas e psicossociais sobre a finitude da vida pode auxiliar na redução das inseguranças e dos medos dos estudantes visando fornecer um cuidado integral de qualidade ao paciente.

**Palavras-chave:** Medo; Morte; Atitude frente à Morte; Educação Médica; Curso de Psicologia.

<sup>1</sup> Faculdade Pernambucana de Saúde, Recife, Pernambuco, Brazil.

<sup>2</sup> Institutional Program for Scientific Initiation Scholarships of the National Council for Scientific and Technological Development (PIBIC CNPq IMIP).

<sup>3</sup> Postgraduate Program, Instituto de Medicina Integral Prof. Fernando Figueira, Recife, Pernambuco, Brazil.

<sup>4</sup> Health Secretariat of the state of Pernambuco, Recife, Pernambuco, Brazil.

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## INTRODUCTION

The fear of death involves issues inherent to human life, based on individual and cultural values and beliefs. Although death is inevitable, in general, there is a reluctance in society to discuss the finitude of life. The death of the other, death itself and the consequent suffering represent feared and painful experiences, which can cause feelings of denial and escape from the subject<sup>1,2,3</sup>. In the training of health professionals, whether they are students or graduates, there is a scarcity of debates about death and dying, generating unpreparedness, insecurity and even emotional suffering when facing this process<sup>4</sup>.

In antiquity, death was seen as a natural event, surrounded by rituals, and the patient was allowed to express their last wishes and gather their relatives and friends to say goodbye<sup>5</sup>. From the 20<sup>th</sup> century onwards, with scientific and technological development, death was no longer seen as a natural phenomenon and, among health professionals, the inability to prevent it came to be understood as synonymous with failure<sup>6,7</sup>. Patients became passive in the face of medical decisions, and care became more focused on maintaining life at any cost, to the detriment of offering a good death to patients in the final stages of the disease<sup>8,9,10</sup>.

For a long time, the training of health professionals in Brazil did not aim to prepare its students to face death-related issues. Instead, it was common for medical schools to encourage their students to be impersonal in the doctor-patient relationship<sup>11,12</sup>. Regarding the academic training in Psychology, studies<sup>13,14</sup> have shown that a large part of the undergraduate students were dissatisfied with their curriculum, as they believed that the topic of death was insufficiently approached during the course.

Aiming to understand the feelings and perspectives about death and the dying process, some studies<sup>15,16</sup> were carried out with undergraduate students in the health area using the Collett-Lester Fear of Death Scale (CL-FODS). This scale was created in 1969 aiming at measuring the fear of death<sup>17</sup>, supported by its multidimensional concept, and has been validated<sup>18</sup> and adapted to Brazilian culture<sup>19,20</sup>.

The student's perspective in relation to death interferes in several aspects of professional behavior during patient care and involves their internal availability, values, concepts, and prejudices in relation to death and dying<sup>21</sup>. Health professionals who have not had access to adequate academic training on the subject may not have positive attitudes when faced with death<sup>22</sup>. This study aims to evaluate the perception that medicine and psychology students have when dealing with the process of coping with death, measuring and comparing the differences in the scores of fears of death and dying between the courses and

between students who are in the beginning, middle and end of their undergraduate studies.

## METHOD

The study was designed to be cross-sectional with an analytical component, such as a survey, using a questionnaire available online. The population consisted of medical and psychology students from the first to the last year, and those under 18 years of age were excluded. A sample size calculation was performed using the R software, version 4.0.0, considering a total of 1,245 medical students and 345 psychology students enrolled in the 1<sup>st</sup> semester of 2023. With an alpha error of 5% and a confidence level of 95%, the estimated sample would comprise 311 students, 248 of which were attending the Medicine and 63 the Psychology course. An estimate was also made according to the number of enrollments for each semester of the course. The participants answered two questionnaires developed using the REDCap® program. The first of them involved questions related to the sample sociodemographic characterization according to the course and undergraduate semester. The variables included were age, sex, marital status, ethnicity, family situation (living alone, with friends, with relatives, with a partner) and progeny. Two questions about the experience of death or death of a family member with a serious and incurable disease were also included. The second instrument was the CL-FODS with 28 items, distributed in four subscales, each with seven items with multidimensional information on the Fear of Own Death (FOD), the Fear of Own Process of Dying (FOPD), Fear of Death of Others (FDO) and Fear of the Process of Dying of Others (FPDO). The answer for each item follows a Likert-type scale with numerical values that represent the feelings of fear, sadness, discomfort and anxiety, being a lot (5), a little (4, 3 and 2) and not (1). Higher scores indicate greater fear of death or the process of dying<sup>19,20</sup>.

The instruments were initially made available electronically via WhatsApp, through the access link to the REDCap® platform and disseminated in the Institution's communication media. To increase student adherence, printed questionnaires identical to those available in the virtual environment were used. Participation, both electronically and in person, occurred only after the Free and Informed Consent Form (FICF) was signed.

In the analysis, both the Medicine and Psychology courses were grouped into three cycles: Medicine in the basic cycle (1<sup>st</sup> to 4<sup>th</sup> semesters), clinical cycle (5<sup>th</sup> to 8<sup>th</sup>) and internship (9<sup>th</sup> to 12<sup>th</sup>) and Psychology in cycle 1 (1<sup>st</sup> to 3<sup>rd</sup> semesters), cycle 2 (4<sup>th</sup> to 6<sup>th</sup>) and cycle 3 (7<sup>th</sup> and 8<sup>th</sup>).

The answers obtained from the questionnaires were exported from REDCap® to an Excel spreadsheet and analyzed using the Stata software, version 13.0. According to the

characteristics of the variables, measures of central tendency and dispersion (mean, standard deviation, median, and interquartile range) were taken for continuous variables and relative frequencies for categorical variables. Appropriate tests involving Pearson's chi-square or Student's t-test were used for comparison between groups. A significance level of less than 5% ( $p < 0.050$ ) was adopted for the entire analysis.

The scores for each subscale of the CL-FODS were obtained by adding the answers given to each of the items, which ranged from 7 to 35 points for each participant. The arithmetic mean was obtained for each of the subscales and comparison between the different groups.

The construction of this research followed Resolution n. 466/12-CNS/CONEP and Official Memorandum. 2/2021 of CONEP/SECNS/MS, involving guidelines for procedures in research conducted in a virtual environment. The study was initiated after approval by the Research Ethics Committee - REC (CAAE: 61020222.1.0000.5569 and Opinion number: 5.590.244).

## RESULTS

A total of 395 Psychology and medical students accessed the questionnaire and signed the informed consent form, whereas 28 did not respond to any information and were excluded. Of the 367 who answered the sociodemographic questionnaire, 34 did not answer any CL-FODS question and were excluded. The sample consisted of 333 participants with fullfield questionnaires, 102 in Psychology and 231 in Medicine.

Characterizing the sociodemographic data of the 333 students (Table 1), most were female. In the Psychology and Medicine courses, 91 (89.2%) and 148 (64.1%) were women, respectively. Age ranged from 18 to 59 years for the entire sample, with a median of 23 and 21 for the Medicine and Psychology courses, respectively, with no difference between the mean ages. Most of the students were single, 79 (77.4%) of the Psychology students and 206 (89.2%) of the medical students, and 307 (92.2%) of the participants did not have children.

**Table 1.** Sociodemographic, course and semester characteristics, and personal history of family experience with severe disease or death according to the undergraduate status of the students who answered the survey questionnaire on death and dying from February to June 2023.

Characteristics	Total	Psychology	Medicine	p valor <sup>a</sup>
All participants N (%)	333	102 (30.6)	231 (69.4)	
<i>Gender n (%)</i>				<0.001
Male	91 (27.3)	11 (10.8)	80 (34.6)	
Female	239 (71.8)	91 (89.2)	148 (64.1)	
I prefer not to inform/others	3 (0.9)	0 (0)	3 (1.3)	
<i>Age in years (n=331)</i>				0.073
Range	18 to 59	18 to 59	18 to 43	
Mean $\pm$ SD	24.4 $\pm$ 6.6	25.4 $\pm$ 10.0	24.0 $\pm$ 4.3	
Median (IQR)	23 (21; 25)	21 (19; 27)	23 (22; 25)	
<i>Family situation</i>				0.001
Lives alone	46	5 (4.9)	41 (17.8)	
Lives with friends	10	0 (0.0)	10 (4.3)	
Lives with family members	246	85 (83.3)	161 (69.7)	
Lives with partner	31	12 (11.8)	19 (8.2)	
<i>Marital status</i>				0.014
Single	285	79 (77.4)	206 (89.2)	
Married/common-law marriage	42	21 (20.6)	21 (9.1)	
Separated/divorced	6	2 (2.0)	4 (1.7)	
<i>Progeny – children</i>				<0.001
Yes	26	17 (16.7)	9 (3.9)	
No	307	85 (83.3)	222 (96.1)	

Continue...

**Table 1.** Continuation.

Characteristics	Total	Psychology	Medicine	p valor <sup>a</sup>
<i>Ethnicity n (%)</i>				0.057
White	241	75(73.5)	166(71.9)	
Brown	77	20(19.6)	57(24.7)	
Black	12	4(3.9)	8(3.4)	
Yellow	3	3(3.0)	0(0.0)	
<i>Course semester (n=332)</i>				<0.001
1	38	13	25	
2	27	16	11	
3	24	18	6	
4	17	11	6	
5	41	18	23	
6	18	6	12	
7	43	14	29	
8	28	5	23	
9	27	-	27	
10	22	-	22	
11	27	-	27	
12	20	-	20	
<i>Has had or has any previous experience in the family with a severe and incurable disease</i>				0.048
Yes	226	77(75.5)	149(64.5)	
No	107	25(24.5)	82(35.5)	
<i>Had previous loss of a family member with a severe and incurable disease</i>				0.027
Yes	209	73(71.6)	136(58.9)	
No	124	29(28.4)	95(41.1)	

a - Pearson's chi-square

Source: Prepared by the authors.

Regarding the previous experience and/or loss of a family member with a severe and incurable disease, there were more than 65% of positive answers to the questions. A total of 77 (75.5%) of the Psychology students and 149 (64.5%) of the Medicine students had previous family experience of a severe and incurable disease.

When comparing the sociodemographic data between the courses, there was no significant difference for age and ethnicity.

### Comparison of CL-FODS results between courses:

In the general analysis (Table 2), a decreasing order of fear of death was observed in relation to the subscales, which in an orderly manner was as follows: FDO ( $26.5 \pm 6.1$ ), FPDO ( $25.2 \pm 6.6$ ), FOPD ( $23.3 \pm 7.0$ ), and FOD ( $20.2 \pm 7.6$ ). In the analysis of each course, this descending order was maintained, and the highest average was that of the FDO subscale, being  $27.2$  ( $SD \pm 6.3$ ) for Psychology and  $26.2$  ( $SD \pm 6.0$ ) for Medicine. There was no significant difference in the comparison of responses

to the subscales between the courses. Figure 1 depicts the median and interquartile range of the responses according to the undergraduate status.

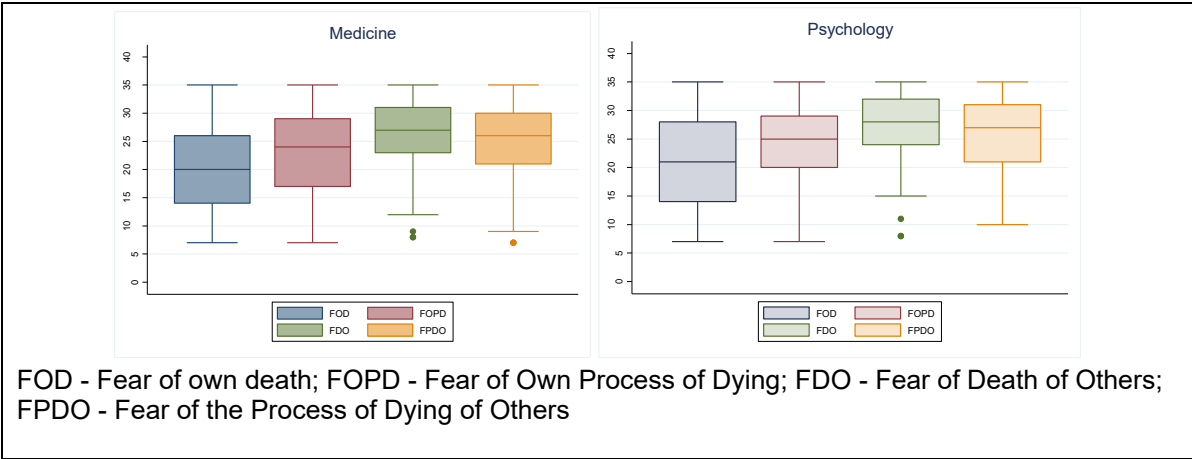
Of the 333 Psychology and Medical students who responded to the scale, the sub-item "Losing someone close to you" from the FDO subscale was the one with the highest score as "very afraid" [218/333 (65.5%) of the responses with a score of 5], followed by the sub-item "Seeing the person suffering with pain" from the FPDO subscale [211/333 (63.4%) of the responses with a score of 5]. The sub-item with the lowest score was "The disintegration of your body after death", from the FOD subscale [171/333(51.4%) of the answers with score 1], followed by "The physical decomposition involved" from the FOPD subscale [168/333(50.5%) with score 1]. When comparing the results of the CL-FODS with the experience or loss of a family member with a severe/incurable disease, no significant difference was observed regarding the feeling of fear in all subscales (the lowest p-value found was  $p = 0.23$ ). These findings are not described in the tables.

**Table 2.** Measures of central tendency and dispersion of the scores of the responses to the sub-items of the Collett-Lester Fear of Death scale according to the undergraduate status of the students who answered the questionnaire of the survey on death and dying from February to June 2023.

	Total	Psychology	Medicine	p-value <sup>a</sup>
Answered the CL-FODS n, (%)	333 (90.7%)	102 (88.7%)	231 (91.7%)	
<i>Subscales</i>				
FOD - Fear of Own Death				
Extreme	7 - 35	7 - 35	7 - 35	
Mean ± SD	20.2 ± 7.6	21.0 ± 7.9	19.9 ± 7.5	0.264
Median (IQR)	20 (14-26)	21 (14-28)	20(14-26)	
FOPD - Fear of Own Process of Dying				
Extreme	7-35	7-35	7-35	
Mean ± SD	23.3 ± 7.0	24.2 ±6.9	23.0 ±7.0	0.140
Median (IQR)	24 (18-29)	25 (20- 29)	24 (17-29)	
FDO - Fear of Death of Others				
Extreme	8 – 35	8 – 35	8 – 35	
Mean ± SD	26.5 ±6.1	27.2 ±6.3	26.2 ±6.0	0.171
Median (IQR)	27 (23-31)	28 (24 – 32)	27 (23-31)	
FPDO - Fear of the Process of Dying of Others				
Extreme	7 - 35	10 – 35	7 – 35	
Mean ± SD	25. 2 ±6.6	26.1±6.7	24.9±6.5	0.118
Median (IQR)	26 (21 – 30)	27 (21-31)	26(21-30)	

<sup>a</sup> Student's t-test  
Source: Prepared by the authors.

**Figure 1.** Median and interquartile range of the scores of the responses to the sub-items of the Collett-Lester Fear of Death scale according to the undergraduate status of the students who answered the questionnaire of the survey on death and dying from February to June 2023.



Source: Prepared by the authors.

**Comparison of CL-FODS results among medical students according to the cycle:**

Of the 231 medical students who answered the scale, 48 (20.8%) were attending the basic cycle, 87 (37.7%) the clinical cycle and 96 (41.6%) the internship. The decreasing

order of fear of death in relation to the subscales (Table 3) was the same in all cycles, with the FDO showing the highest mean, followed by the FPDO, FOPD and FOD subscales. When comparing the means of the FOD and FOPD subscales according to the cycles, it was observed that there was an

increase between the clinical cycle and the internship ( $p = 0.045$  and  $0.079$ , respectively).

Among medical students, the sub-item "Losing someone close to you" from the FDO subscale was the most scored as "very afraid" [154/231 (66.7%) of the responses were score 5] followed by "Seeing the person suffering from pain" from the FPDO subscale [151/231 (65.4%)] of the responses with score 5). The lowest scoring sub-item was "The disintegration of your body after death" from the FOD subscale [127/231 (55%) of the responses were score 1], followed by "The physical decomposition involved" from the FOPD subscale [126/231 (54.6%) of the responses were score 1]. These data are not depicted in the tables.

### Comparison of the results of the CL-FODS among the Psychology students according to the cycle:

Of the 102 Psychology students who answered the scale, 1 participant was excluded who did not answer which semester

of the course they were attending. Of the 101 students included in this analysis (Table 4), 47 (46.6%) were attending cycle 1, 35 (34.7%) were attending cycle 2 and 19 (18.9%) were attending cycle 3. It was observed that the FDO subscale obtained the highest score in all cycles with a reduction in the comparison between cycles 1 and 2 ( $p = 0.039$ ).

The sub-item "Losing someone close to you" from the FDO subscale was the most scored as "very afraid" [64/101 (63.4%) of the responses were score 5], followed by "Never being able to communicate with the person again" of the same subscale [63/101 (62.4%) responses were score 5] and "Seeing the person suffering from pain" from the FPDO subscale [60/101 (59.4%) of the responses were grade 5]. The lowest scoring sub-item was "The disintegration of one's body after death" from the FOD subscale [45/101 (44.5%) of the responses were score 1], followed by "The physical decomposition involved" from the FOPD subscale [43/101 (42.6%) of the responses were score 1]. The data are not shown in the tables.

**Table 3.** Measures of central tendency and dispersion of the scores of the responses to the sub-items of the Collett-Lester Fear of Death Scale according to the cycles of the undergraduate medical course who answered the survey questionnaire on death and dying from February to June 2023.

	MEDICINE			p-value <sup>a</sup>		
	Basic cycle (1 <sup>st</sup> - 4 <sup>th</sup> semesters)	Clinical cycle (5 <sup>th</sup> - 8 <sup>th</sup> semesters)	Internship (9 <sup>th</sup> - 12 <sup>th</sup> semester)	Basic X Clinical	Basic X Internship	Clinical X Internship
All N=231 (%)	48 (20.8)	87(37.7)	96(41.6)			
<i>FOD - Fear of Own Death</i>						
Extreme	7-33	7-35	7-35			
Mean $\pm$ SD	19.5 $\pm$ 7.0	18.9 $\pm$ 7.3	21.1 $\pm$ 7.9	0.652	0.209	0.045
Median(IQR)	20.5(14-25)	18 (13-24)	21.5(15-26.5)			
<i>FOPD - Fear of Own Process of Dying</i>						
Extreme	9-35	7-35	7-35			
Mean $\pm$ SD	22.9 $\pm$ 7.2	22.0 $\pm$ 6.9	23.8 $\pm$ 7.0	0.502	0.438	0.079
Median (IQR)	22.5(17-29.5)	23 (17-28)	24 (18-30)			
<i>FDO - Fear of Death of Others</i>						
Extreme	15-35	8-35	9-35			
Mean $\pm$ SD	27.2 $\pm$ 5.5	25.7 $\pm$ 6.0	26.2 $\pm$ 6.3	0.172	0.349	0.628
Median (IQR)	28 (23 - 31)	27 (22-30)	27(23-31)			
<i>FPDO - Fear of the Process of Dying of Others</i>						
Extreme	7-35	7-35	7-35			
Mean $\pm$ SD	24.4 $\pm$ 7.5	25.4 $\pm$ 6.3	24.7 $\pm$ 6.2	0.408	0.771	0.477
Median (IQR)	26(18.5-30)	26(22- 31)	26(20-29)			

<sup>a</sup> Student's t-test

Source: Prepared by the authors.



**Table 4.** Measures of central tendency and dispersion of the scores of the responses to the sub-items of the Collett-Lester Fear of Death Scale according to the cycles of the undergraduate course in Psychology who answered the research questionnaire on death and dying from February to June 2023.

	PSYCHOLOGY			p-value <sup>a</sup>		
	Cycle 1 (1 <sup>st</sup> - 3 <sup>rd</sup> semesters)	Cycle 2 (4 <sup>th</sup> - 6 <sup>th</sup> semesters)	Cycle 3 (6 <sup>th</sup> - 8 <sup>th</sup> semesters)	Cycles 1 X 2	Cycles 1 X 3	Cycles 2 X 3
All N=101 (%)	47 (46.5%)	35 (34.7%)	19 (18.8%)			
<i>FOD - Fear of Own Death</i>						
Extreme	8-33	7-35	8-32			
Mean ± SD	20.9±6.8	20.7±9.2	20.8±7.5	0.923	0.948	0.985
Median(IQR)	22 (14-27)	19(14-30)	21(16-26)			
<i>FOPD - Fear of Own Process of Dying</i>						
Extreme	8-35	7-35	14-34			
Mean ± SD	24.5±6.4	23.3±8.1	24.9±5.8	0.462	0.801	0.450
Median (IQR)	25(21-29)	25(16-30)	25(20-31)			
<i>FDO - Fear of Death of Others</i>						
Extreme	8-35	11-35	8-35			
Average ± SD	28.5±5.5	25.7±6.6	26.6±7.5	0.039	0.262	0.644
Median (IQR)	29(25-33)	27(19-31)	28(21-33)			
<i>FPDO - Fear of the Process of Dying of Others</i>						
Extreme	10-35	11-35	10-35			
Mean ± SD	27±5.6	25.4±7.3	24.7±8.0	0.264	0.197	0.760
Median (IQR)	28(24-31)	27(19-31)	26(17-32)			

<sup>a</sup> Student's t-test

Source: Prepared by the authors.

## DISCUSSION

In this study, higher levels of fear were evidenced in the sub-items of "death of the other" than in those of "one's own death", both for the Medicine and Psychology courses. Among medical students, the fear of their own death was significantly higher during the internship compared to the clinical cycle. Among psychology students, there was a significant reduction regarding the fear of the death of others in cycle 2 compared to cycle 1. Among the FDO items, in both courses, "Losing someone close to you" and "Seeing the person suffering from pain" obtained the highest score and "Never being able to communicate with the person again" was one of the items most often scored by Psychology students.

It is undeniable that death generates a philosophical debate in society due to its multiple ways of dealing with the process of finitude of life, depending on cultural and personal influence<sup>21</sup>. This debate should be frequently addressed in health educational institutions; however, it is not what currently happens and this is reflected in the students' perception of death and dying, as observed in this study.

In the present study, a greater fear of death and the dying process of the other was observed, represented by the higher

scores of the sub-scales FDO and FPDO, with no significant difference between the courses. A similar result was observed in a 2021 study conducted with students from different courses in the health area<sup>15</sup>. These data show that the difficulty of dealing with the finitude of the other and all its nuances is something present in the daily lives of students from the health area.

It is observed that in the FPDO sub-scale, the sub-item most often scored as "much fear", between the two analyzed courses, was "seeing the person suffering from pain". This high score may be related to the students' lack of competency and skills to heal the pain of their patients in their different psychological and physical dimensions during the dying process. A study conducted in 2011 highlighted medical students' testimonies, who claimed that death was a topic that was not included in their academic training and that they were not prepared for the moment of their patient's death and providing support to their family members<sup>11</sup>. Similarly, it was observed by Tibaldi<sup>16</sup> that most Psychology students stated that there was little encouragement during their undergraduate studies to participate in discussions about death and dying and that they felt poorly prepared to deal with situations of finitude of life.

Regarding previous family experience with death and/or loss of a family member due to severe and incurable disease, there were more than 65% of positive answers to the questions. However, there was no statistical significance when comparing this information with the responses to the CL-FODS subscales. The concept of the multidimensionality of death is very personal. It correlates not only with the different experiences previously lived by the individual, but also their culture, religiosity and conceptions influence the understanding of the dying process and attitude towards dying, as demonstrated by Costa Ramos et al.<sup>14</sup>

Among the medical students, it was observed that the level of fear of death of others and of the dying process of others remained high throughout all analyzed periods, with no significant differences between the cycles. A similar result was observed in the study conducted by Malta et al.<sup>21</sup>, where, even after being exposed to practical learning, the internship students showed results close to those of the group at the beginning of the course. This persistence of fear and insecurities in relation to the finitude of life during the undergraduate course may be a reflection of the culture of teaching curative medicine, in which death must be avoided at all costs, as well as the increase in the student's responsibility with their patient during the undergraduate course and the lower professional experience. Moreover, in the Medicine course, the training is still inefficient for the professional to deal with the death of others.

This institution's curriculum structure includes the introduction of the communication of bad news at the beginning of the course, through the communication laboratory, which is related to the doctor-patient interaction on the process of illness and possible death of patients. However, it is only at the 8<sup>th</sup> semester that students have some theoretical knowledge about thanatology, in one of the tutorial cases of the module "Health of the elderly and terminal life age", which is still insufficient to consolidate learning and prepare trained professionals<sup>23</sup>. Higher levels of fear of own death were observed at the end of the medical course, with a significant difference between the clinical cycle and the internship. Living intimately with pathologies and the finitude of others can generate fear of own illness and that of one's family members, causing anxiety and distress<sup>24</sup>, which could justify the increase in the fear of own death during the internship.

When analyzing the Psychology students' answers to the CL-FODS, more than 60% of the participants scored as very afraid when faced with the sub-item "Never being able to communicate with the person again". This result is interesting, considering that the psychologist's work tool is listening, and both verbal and non-verbal communication, aiming to create a safe and reliable interpersonal relationship, so that, when

facing the death of a patient and/or their dying process, there is an urgent need for good communication and connection with the patient and their family. This fact may have had an emotional impact for the students, culminating in a greater fear of not communicating.

Among the Psychology students, there was a significant reduction in the fear of death of others in cycle 2 when compared to cycle 1. This fact may be related to the greater theoretical contact with the dying process from the 5<sup>th</sup> period onwards, which includes the Thanatology module that addresses death during the cycles of life<sup>25</sup>. However, it was observed that in cycle 3 of the Psychology course, there was a slight increase in the fear of death of others in relation to cycle 2, although there is a tutorial module in the 8<sup>th</sup> period of Psychology that addresses the process of dying: "Death and its representations". This result may have been due to the beginning of the hospital internship from the 7<sup>th</sup> period onwards, in which students experience in practice the illness and the finitude of patients' lives and begin to learn how to react and deal with the dying process of others, which can cause negative feelings. This reflection was also observed by Casarin et al.<sup>13</sup> and Costa Ramos et al.<sup>14</sup>, which demonstrate that Psychology students, when attending the clinical stage, showed anxieties about their own life, as they had to face death in person.

The emotional perceptions of health students about death and dying during their undergraduate studies highlight their difficulties in dealing with this topic, which can impact their ability to welcome and care for their patients during the finitude of life in their professional life. If, from the beginning of the course, there were greater opportunities for debates and discussions about death and its multidimensionality within educational institutions, in an integrated way with practice, there would be a possible development of technical, communication and social skills, so that these future professionals could better face the anxieties, fears and distress of their patients and/or their own when faced with situations related to the process of illness and death.

Although there have been different attempts to increase the sample of the initial periods of the medical course, with the application of online and in-person questionnaires, there was some difficulty in having access to the answers of this group, and the number of the initial sample calculation was not reached. This limited the comparative analysis of the present study between the basic and internship cycles. This low adherence to the questionnaire also reflects the difficulty of students to stop their activities to answer about the subject, which may indicate that reflection on death and dying remains a taboo in society.



## FINAL CONSIDERATIONS

The objective of this research was to bring reflections on the emotional perception of students of Medicine and Psychology in the face of the issues of death and dying, in an attempt to identify the presence of negative feelings, such as fear, anguish and insecurity related to this topic.

It is emphasized that an effective academic approach, based on theoretical and practical learning, allows students to acquire skills and competencies, and to be able to face the demands that require the ability to see, hear and feel the other in their fears and anxieties when facing situations of finitude of life and family support, seeing the patient in a comprehensive manner, and not only as an experimental object.

Additionally, building knowledge and means of dealing with the dying process can act to reduce these negative feelings generated within the undergraduate health area and observed in this study, helping to prevent mental illness in these students.

It was expected that the fear of death of others would decrease over the course of the teaching cycles, in opposition to the observed result. Perhaps the difficulty in collecting answers to the questionnaire influenced this finding, such as giving up when faced with the instrument's assertions, which could induce emotional discomfort and triggers. Therefore, one can ask: if the N of the sample were higher, would there be more significant differences between the analyzed cycles? How would other courses in the health area react to the issues of their own death and the death of others?

The results found in this study reinforce the need to include the topic of death and dying during the undergraduate course of students in the health area since the beginning of the course. It is important and necessary that these students have more space in their curriculum to work on both personal and professional issues related to the finitude of life, aiming to reduce their own insecurities. This would allow these professionals to be trained to provide comprehensive care to the patient, aiming above all at providing quality care to the detriment of healing at any cost.

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## AUTHORS' CONTRIBUTIONS

Claudia Bem Leite Nelson and Hanna Vitória Batista Leal contributed to the Acquisition and Quality Control of data and algorithms; Analysis and interpretation of data; Statistical analysis; Writing, Editing and Review of the manuscript. Natália Adriana Sousa e Silva: Acquisition and Quality Control of Data and Algorithms; Statistical analysis; Writing and Review of the manuscript. Maria Júlia Gonçalves de Mello: Study design; Data quality control and algorithms; Analysis and interpretation of data; Statistical analysis; Writing, Editing and Review of the manuscript. Ana Paula Amaral Pedrosa and Zilda do Rego Cavalcanti: Study Conception and Design; Analysis and interpretation of data; Editing and review of the manuscript.

## CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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