Hazing and the Mental Health of Medical Students

O Trote e a Saúde Mental de Estudantes de Medicina

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KEY WORDS

- Medical Students.
- Hazing.
- Violence.
- Bullying.
- Mental Health.

ABSTRACT

Introduction: *The practice of hazing is a phenomenon that began in the Middle Ages and persists in many universities around the world. In Brazil, although the problem is widely recognized, it has been insufficiently studied.* ***Objective:*** *To estimate the prevalence and to identify factors associated with the occurrence of hazing in a public Medical School, located in the interior of the State of São Paulo, Brazil.* ***Method:*** *A cross-sectional study was conducted, including 477 medical students from the first to the sixth year of the course. The self-reporting questionnaire included questions and structured instruments to access: socio-demographic and academic life characteristics, social support, symptoms of depression, harmful alcohol use (using the Alcohol Use Disorder Identification Test – Audit), common mental disorder (using the Self-Reporting Questionnaire – SRQ) and if the participant had suffered any form of hazing that he/she considered abusive or if the participant had practiced hazing about which he/she felt guilty or regretful afterwards. Bivariate analyses and logistic regression were conducted to identify factors independently associated with each of the outcomes (having suffered abusive hazing or having participated in hazing and feeling regretful afterwards).* ***Results:*** *The response rate was 87.0%. Among the students, 39.8% (95% CI: 35.4% – 44.2%) reported having suffered abusive hazing, while 7.5% (95% CI: 5.2% – 9.9%) reported having practiced hazing of which they repented. Being subjected to abusive hazing was associated with: male gender, not being adapted to the city, presenting lower scores on the social support scale and psychiatric and/or psychological treatment after admission to university. Having practiced hazing, in turn, was associated with male gender, older age and higher score in the Audit.* ***Conclusion:*** *Hazing was associated with male gender, and with the pursuit of mental health treatment among those who received it and with harmful alcohol use among the perpetrators. It is essential that medical schools discuss and better understand the problem of hazing in order to adopt effective preventive measures.*

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PALAVRAS-CHAVE

– Estudantes de Medicina.
– Trote.
– Violência.
– *Bullying.*
– Saúde Mental.

RESUMO

Introdução: *A prática do trote é um fenômeno que teve início na Idade Média e ainda persiste em muitas universidades pelo mundo. No Brasil, embora seja um problema amplamente reconhecido, tem sido insuficientemente estudado.* ***Objetivo:*** *Estimar a prevalência e identificar fatores associados à ocorrência de trote numa faculdade de Medicina pública, localizada no interior do Estado de São Paulo.* ***Método:*** *Foi realizado um estudo transversal do qual participaram 477 estudantes de Medicina do primeiro ao sexto ano do curso. O questionário autopreenchido continha questões e instrumentos estruturados que permitiram avaliar: características sociodemográficas e da vida acadêmica, apoio social, sintomas depressivos, uso problemático de álcool (por meio do Alcohol Use Disorder Identification Test – Audit), transtorno mental comum (por meio do Self Reporting Questionnaire – SRQ) e se o participante sofreu trote que considerou abusivo ou se aplicou trote do qual se arrependeu posteriormente. Foi realizada análise bivariada e regressão logística para identificar fatores independentemente associados a cada um dos desfechos (ter sofrido trote que considerou abusivo ou ter aplicado trote do qual se arrependeu posteriormente).* ***Resultados:*** *A taxa de resposta foi de 87,0%. Relataram ter sofrido trote abusivo 39,8% (IC95% 35,4% – 44,2%) dos estudantes, enquanto afirmaram ter aplicado trote do qual se arrependeram 7,5% (IC95% 5,2% – 9,9%) deles. Ter sofrido trote abusivo associou-se a: sexo masculino, não estar adaptado à cidade, apresentar menor escore na escala de apoio social e ter feito ou estar fazendo tratamento psiquiátrico e/ou psicológico após o ingresso na universidade. Ter aplicado trote, por sua vez, também se associou a sexo masculino, assim como a maior idade e maior pontuação no Audit.* ***Conclusão:*** *Trote associou-se a sexo masculino e à procura por tratamento de saúde mental entre os que o receberam e a uso problemático de álcool entre os que o praticaram. É fundamental que as instituições debatam e compreendam melhor o problema do trote, a fim de adotar medidas efetivas para que este seja prevenido.*

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INTRODUCTION

Hazing in educational institutions, defined as "any activity in which the participant is subjected to degradation, humiliation, abuse or danger situations regardless of his/her willingness to participate"[1], is not a recent phenomenon. One of the oldest known records is from the year 1481 and presents, through dialogues between a veteran and a fictitious freshman, information about the student life in Heidelberg (Germany), which included provocations for which freshmen should be integrated into the academic community[2]. There are also in the fictional literature reports of hazings suffered by the characters in the educational institutions they attended. Raul Pompéia, in "*O Ateneu*", describes the reception of the character Sérgio in the boarding school:

> *A little beyond Silvino's chair, I was safe. From the safe retreat I saw, in the yard, fresh from the broad shadows of the hour, the movement of colleagues. At one point and in another, little trouble arose, irregularly condensing the dispersion of the pupils. It was the poor novices that the veterans beat on the head[3]. (p.15, free translation)*

The history of hazing seems to follow the history of the universities since its inception[4]:

> *This tradition, which perpetuates itself throughout the centuries, seems to have initiated in the eleventh century, during the Middle Ages. The candidates (a word derived from the Latin word candidus, that is, "white", "pure") for the courses of the first European universities could not attend the same rooms as the veterans and, therefore, they stayed in the antechambers, called vestibules, that contained the clothes of the oldest students of the institution. The clothes of the newcomers, the freshmen, were removed and burned. They had their hair shaved. But these activities were mainly justified by the need for prophylactic measures against the spread of diseases. (p.29, free translation)*

Hazing has been considered a ritual of initiation because it consists of a practice that marks the entry of students into the university[5]. In the history of mankind, violent rites often

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mark the passage, for example, from adolescence to adulthood in a given community[2]. Thus, in a tribe it is important to select young people based on their physical strength and ability to resist pain, insofar that in battles or as prisoners this will be important for the survival of the tribe. In the case of university hazing, it is argued that it would characterize a "backwards" ritual, since there would be no justification for the youngster being subjected to physical and psychological violence to become a better professional.

According to Cimino[6], the hazing presents four basic characteristics: it is temporary (extinguished at the end of the initiation period), it is unidirectional, coercive and may allow the formation of alliances of cooperation, the latter being one of the arguments presented by its defenders[6]. Akerman *et al.*[7] argue that in some Brazilian medical schools, hazing is never extinguished, persisting throughout the first year, and often throughout the undergraduate course; it is always possible for an older student to submit the younger one to situations that can be considered as hazing. It is also argued that the perpetuation of hazing would be related to the importance of hierarchy and power -in medical institutions[7,8].

Finkel[9] reviewed historical and legal aspects about hazing in the United States and identified different types of injuries suffered by freshmen. This long list includes: beatings, paddling and whipping, jerking, having a tattooed body, cigarette burns, confinement in restricted areas, ingestion of inedible substances, drowning, immersion in harmful substances, psychological abuse and sexual aggressions. In Brazil, in addition to tragic events resulting from some of the situations described above, is is also common to have the hair shaved, the face or ear canal painted, to receive eschatological or prejudiced nicknames, not to be allowed to wear makeup (for women), be forced to drink alcoholic beverages and to eat under the table, among others[2,10].

In the United States, a large survey was carried out[1], involving 11482 students from 53 American universities, as well as 300 individuals from the staff of 18 university institutions of different undergraduate courses. Among the students, 55.0% reported having undergone hazing, which extended beyond athletic activities and student organizations. In 95% of the cases where students recognized hazing situations, they did not report them to campus authorities. It is common for students to drop out of courses because they fear the hazing or because they have been harassed because of refusal to participate or denunciation of suffered hazing[10,11].

Hazing practices have been described in different courses in Brazil, including Pedagogy[12], Pharmacy[13], Agronomy[14], Nursing, Dentistry, Physical Education and Biology[15] and Medicine[10,16].

This study aims to estimate the prevalence of hazing practices in a public medical school in Brazil, identifying factors associated with this phenomenon. It seeks to investigate, in particular, if there is an association between suffered and/or applied hazing with the occurrence of common mental disorder, depressive symptoms, problematic use of alcohol and psychiatric or psychological treatment.

METHOD

This is a cross-sectional study, which is part of an extensive research on the life and health conditions of students of a Medical school in the interior of the State of São Paulo, Brazil. In this institution, several cross-sectional studies have been carried out to identify factors associated with various forms of emotional suffering and psychopathological symptoms among the students. The present study is part of this investigation, whose data were collected between May and August 2011.

Study site

A Brazilian public Medical School located about 200 kilometers from the city of São Paulo, on a university *campus* that offers other courses in biological sciences.

Participants

Students enrolled from the first to the sixth year of the medical course, who were present in the classroom or in didactic activity at the Teaching Hospital on the day the questionnaire was applied,and who agreed to participate in the study after being fully informed about its objectives.

Procedures

Didactic activities with lower percentages of absence were identified and the application was scheduled with the teachers responsible for those activities. In all applications, the researchers informed the students about the research objectives and made themselves available for any clarification, if necessary. Students who agreed to participate were instructed to complete and sign the 'Free and Informed Consent Form' (detached from the rest of the protocol to avoid identifying the respondent) and to respond directly to the questionnaire.

Assessment instruments

A self-reporting questionnaire was developed, investigating information on:

- **Sociodemographic characteristics and academic life:** a questionnaire previously used by other researchers[17] to investigate gender, age, income and other aspects, including living conditions andseveral aspects of academic life.

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- **Social support:** the Social Support Scale (SSS), originally developed for the *Medical Outcome Study*[18]. This instrument was adapted and validated for the Brazilian population[19,20,21] and tested among Brazilian university students, showing good accuracy[22]. It has 19 questions covering five dimensions of social support: **material** (provision of practical resources and material assistance); **affective** (physical demonstrations of love and affection); **emotional** (expressions of positive affect, understanding, and feelings of trust); **positive social interaction** (availability of people to have fun or relax) and **information** (availability of people to obtain advice or guidance) [21]. The questions investigate the social support perceived in each of these domains, producing a score that, the higher, indicates greater social support perceived by the participant. As this scale does not have established cut-off points, the total score was included in the multivariate analysis as a continuous variable.
- **Common mental disorder (CMD):** evaluated through the *Self Reporting Questionnaire* (SRQ-20), developed by the World Health Organization[23], translated into Portuguese and validated in Brazil[24]. SRQ-20 has been widely used in research with medical students in our country[17,25,26,27]. It has 20 questions with binary answers (yes/no) about depressive, anxious and somatic symptoms in the month prior to completion. The cut-off score used to discriminate "case" from "no case" was eight or more for women and six or more for men[24].
- **Problematic alcohol use:** identified through the *"lcohol Use Disorder Test"* (Audit), an instrument created by the World Health Organization to track drinkers at risk in general outpatient clinics[28]. It was validated in Brazil by Lima *et al.*[29], presenting sensitivity of 100% and specificity of 76%. It is the only specific international screening tool for alcohol use disorders, in accordance with ICD-10 definitions. In this study, its complete version was used, with ten questions about the consumption of alcoholic beverages in the previous 12 months (three on alcohol use, four on dependence and three on problems resulting from consumption). Each Audit question should be scored from 0 to 4, resulting in a maximum overall score of 40. A score of 8 or more is indicative of problematic alcohol use.
- **Depressive symptoms:** evaluated by the "Beck Depression Inventory"[30], which has been widely used to investigate depressive symptoms and depression among health students[31,32]. The inventory has 21 items, including symptoms and attitudes, whose intensity should be scored from zero to 3, with the following cutoff points indicating: < 10 = no depression or minimal depression; 10-18 = mild to moderate depression; 19-29 = moderate to severe depression and 30-63 = severe depression. For this study, the total score was used in the multivariate analysis, inserted as a continuous variable, since we considered that it would be more appropriate to analyze the intensity of depressive symptoms in a "non-clinical" sample. However, the occurrence of depression (BDI> 18) was also estimated in the descriptive and bivariate analyzes.
- **Hazing:** two questions about participatiion in hazing practices were used, with yes/no binary answers: "Have you ever been subjected to a hazing that you considered abusive?" and "Have you ever applied any hazing that made you feel sorry or guilty afterwards?", to assess suffered and practiced hazing, respectively. It was decided to investigate the subjective impression of the participant, considering that the experience of hazing can be lived in different ways by different individuals[15].

Statistical analysis

The data were entered in a spreadsheet in the Excel program and later analyzed in the Stata 12.0[33] program. Initially, a descriptive analysis was made, obtaining measures of central tendency and variability, besides simple frequencies and percentages of the different explanatory variables. The prevalence of the outcomes (having suffered and practiced hazing) was calculated, along with the respective confidence intervals. No question was asked about practicing hazing to first year students. A bivariate analysis was performed for the aforementioned outcomes, considering sociodemographic and academic life variables, alcohol use, social support, depressive symptoms, CMD and mental health treatment as explanatory variables. For the multivariate analysis two models of *Stepwise* Logistic Regression, backward type, were constructed (one for each outcome). For being an exploratory study, all variables with $p < 0.25$ in the bivariate analysis were initially included in the Regression models, eliminating one by one (from the highest p value), until all variables remained statistically significant ($p < 0.05$).

RESULTS

The students had a mean age of 22.5 years (± 2.6), they were predominantly women (58.7%) and singles (99.2%). Most of the students lived with colleagues (55.9%), and only a small percentage had worked in the six months prior to the application of the questionnaire (4.4%). Of the total, 44.1% received some scholarship, 2.3% through the student support program (social demand) and the others through activities of scientific initiation projects, Education for Work Program (PET) or aca-

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demic monitoring. As most of the students came from other cities, the frequency of family visits was investigated, and 51.8% reported weekly or biweekly visits. Ninety-three percent of the students received a monthly allowance, and only 6.5% considered it insufficient. The students reported monthly expences of 0.5 to 14 minimum wages, with a median of 2.5 minimum wages (data not shown in the tables).

Regarding hazing, 39.8% (95% CI: 35.4% to 44.2%) reported having suffered some hazing that they considered abusive and 7.5% (95% CI: 5.2% to 9.9%) reported having already practiced some hazing of which they have regretted or felt guilty afterwards. In the bivariate analysis, the following variables were associated with being hazed (Table 1): male gender, year of the course, difficulty making friends in the previous year, moderate or severe depressive symptoms (BDI> 18), psychological or psychiatric treatment before and after entering college, use of psychotropic drugs, CMD, not feeling fully adapted to the city and having already had thoughts about dropping the course. These variables were not associated with being abusively hazed (data not shown in the table): living alone (p = 0.99), religion practice (p = 0.33), problematic alcohol use (p = 0.91), and monthly expenses (p = 0.85).

Considering hazing practices that generated regret or guilt, they were associated in the bivariate analysis with (Table 2): male gender, being younger and having higher scores in the Audit. They were not associated with (data not shown

Table 1
Characteristics of Medical students, according to whether or not having suffered hazing that they considered abusive[1], 2011 (n = 477)

		Suffered abusive hazing				
		No		Yes		
Variable		n	%	n	%	p[2]
Sex	Female	203	72.5	77	27.5	< 0.001
	Male	84	42.6	113	57.4	
Year of the course	1º	49	58.3	35	41.7	0.02
	2º	41	58.6	29	41.4	
	3º	61	70.9	25	29.1	
	4º	35	46.7	40	53.3	
	5º	40	54.8	33	45.2	
	6º	61	68.5	28	31.5	
Difficulty making friends (last year)	No	222	63.8	126	36.2	0.006
	Yes	64	50.0	64	50.0	
Feels fully adapted to the city[3]	Yes	95	33.0	193	67.0	0.001
	No	94	50.0	94	50.0	
Thought about dropping the course	Never though	102	35.3	187	64.7	0.03
	Thought but think no more	70	45.5	84	54.5	
	Still think about	18	52.9	16	47.1	
Common Mental Disorder	No	88	35.5	160	64.5	0.04
	Yes	102	44.5	127	55.5	
Presence of depressive symptoms (BDI >18)	No	271	62.2	165	37.8	0.004
	Yes	16	39.0	25	61.0	
Received psychological or psychiatric treatment before entering college	No	174	65.4	92	34.6	0.009
	Yes	113	53.5	98	46.5	
Received psychological or psychiatric treatment after entering college	No	132	70.2	56	29.8	< 0.001
	Yes	155	53.6	134	46.4	
Use of psychoactive drugs (previous or current)[4]	No	239	62.9	141	37.1	0.02
	Yes	45	50.0	45	50.0	
		Average	95% CI	Average	95% CI	
BDI (score)		8.3	7.6-9.0	10.3	9.2-11.4	0.004

[1] Considered abusive by the subject who suffered hazing.
[2] Chi-square test.
[3] No information about 1 subject.
[4] No information about 7 subjects.

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in the table): housing arrangement (p = 0.23), self-evaluation of academic performance (p = 0.53), social support score (p = 0.92), support interaction (p = 0.68), presence of CMD (p = 0.33) and religion (p = 0.51).

Table 2
Characteristics of the Medical students according to having practiced hazing that made him/her feel sorry or guilty, 2001 (n = 478)

		Practiced hazing				
		No		Yes		
Variable		n	%	n	%	p[1]
Sex	Female	269	96.1	11	3.9	< 0.001
	Male	173	87.4	25	12.6	
Year of the course[2]	1º	–	–	–	–	
	2º	65	92.9	5	7.1	0.07
	3º	83	96.5	3	3.5	
	4º	69	92.0	6	8.0	
	5º	65	89.0	8	11.0	
	6º	76	84.4	14	15.6	
		Average	95% IC	Average	95% IC	
Audit		6.6	6.1-7.1	10.2	8.1-12.3	0.002

[1] *In the opinion of the subject who practiced hazing.*
[2] *Chi-square test.*
[3] *Not included first year students, which is why the total is 394 students.*
[4] *No information about 1 subject.*

Table 3
Final Logistic Regression Model for "Having suffered abusive hazing"[1] among Medical students, 2011 (n = 479)

Variables	Suffered abusive hazing					
	Total	n	%	OR[2] adjusted	$CI_{95\%}$	p
Male gender	197	113	59.5	4.57	2.94-7.09	< 0.001
Being unadapted to the city	189	95	50.0	1.93	1.25-2.97	0.003
Social support score (continuous)	–	–	–	0.98	0.97-0.99	0.03
Received mental health treatment after admission	289	134	46.4	2.31	1.33-3.43	0.002

[1] *Considered abusive by the subject who suffered hazing.*
[2] *Odds Ratio adjusted for other variables in the model.*

In the multivariate analysis, all the exploratory variables with p < 0.25 were initially included, remaining in the final models only those that presented p ≤ 0.05. In the final model, for the outcome "having suffered abusive hazing", the following variables remained associated: male gender, being unadapted to the city, having undergone psychological or psychiatric treatment after entering university,and social support score (only this last variable as a protective factor). It is important to emphasize that psychological or psychiatric treatment before the course was also included in the model, for adjustment. The outcome "having practiced some hazing that generated regret or guilt afterwards" was independently associated with: male gender, older age, and higher Audit score.

Table 4
Final Model of Logistic Regression for "Having practiced some hazing that generated regret or guilt afterwards" [1] among Medical students, 2011 (n = 479)

Variables	Practiced abusive hazing					
	Total	n	%	OR[2] adjusted	$CI_{95\%}$	p
Male gender	197	25	12.6	3.49	1.58-7.67	0.02
Age (continuous)	–	–	–	1.19	1.05-1.35	0.006
Audit score (continuous)	–	–	–	1.10	1.04-1.17	0.002

[1] *In the opinion of the subject who practiced hazing.*
[2] *Odds Ratio adjusted for other model variables.*

DISCUSSION

The present study fills a gap in the scientific literature on hazing in medical schools. Research conducted in national and international universities with which it is possible to somehow compare the prevalence of hazing practices observed in the present study is rare. According to Almeida Junior[34], the lack of research on the subject seems to reflect the negligence with which institutions, historically, have dealt with the issue of hazing.

Comparison with the few existing researches is also difficult because of the different hazing definitions. In the study by Allan and Madden[1], for example, 55% of North American college students reported having suffered hazing, but there is no report of how the students felt the experience or whether they considered it abusive or not. It is also difficult to investigate the occurrence of hazing, as can be observed in the study by Campo *et al.*[35], conducted in the United States with students of several courses. When the question was explicitly about hazing, 12.4% said they had been subjected to it; however, when questioned about specific activities that occur in the hazing context, 36.0% reported having participated in these. This apparent inconsistency in responses suggest that subjects differ in what they consider as hazing or not. It is important to emphasize that in the present study, it was investigated whether the subjects suffered hazing that they considered abusive and not simply if they were hazed. In other words, almost 40% of the students reported having undergone some hazing that they experienced subjectively as an abusive practice, despite

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the legislation that prohibits hazing throughout the State of São Paulo, providing punishment even when it occurs outside the university *campus*[36].

The practice of hazing was investigated by asking whether the respondent applied any hazing that made him/her feel sorry or guilty afterwards. The format of this question does not allow for identifying subjects who have practiced hazing and have not felt sorry or guilty subsequently. In summary, the question does not identify the total percentage of students who practiced hazing, but only those who felt wrong *afterwards* with the practice. In the study by Campo *et al.*[35] 6,7% of the participants said that they practiced hazing – a percentage very close to that found in the present study, regardless of the differences in the definition of the outcomes. It is important to note that, besides male gender and older age, greater severity of harmful alcohol use was independently associated with this outcome. That is, those who use alcohol abusively are more likely to engage in violent hazing practices, which they may regret or feel guilty about later. Although no previous Brazilian study has reported such an association, it is important to consider the role of psychoactive substances use by college students at parties and sports competitions, since studies show that this use is quite prevalent[37]. The institutional confrontation of the problem of hazing should, therefore, include the question of alcohol use, but not only in this aspect.

A Brazilian study conducted by Costa *et al*.[15] investigated students from different health courses who practiced hazing. In this survey, held in a university in Minas Gerais, 12.7% answered affirmatively to the question "Did you place the participants in a situation of embarrassment?", related to the context of hazing. In this research, attention was drawn to the perception of the students on whether or not hazing was a violence: while only 22.5% considered hazing a violence, 30.3% said that it was an embarrassing experience. This discrepancy suggests that a considerable number of university students do not consider that "creating a constraint" is also a form of violence. This issue points to the question of how students perceive hazing.

In the process of experiencing hazing, which is repeated year after year in universities, there seems to be a naturalization of the violence suffered, which is not seen as something violent by the academic community, including some teachers. This is observed, for example, in the qualitative study conducted by Villaça and Palácios[38] in a medical school in Rio de Janeiro. The authors sought to analyze how the theme of hazing appeared in the speech of students and teachers when stimulated to report situations of violence. They identified, based on these discourses, a set of violent situations experienced at the time of hazing, but were referred to by the interviewees as current, circumstantial and, to some extent, expected. Still according to these authors, due to the naturalization of hazing and the fear of retaliation by colleagues, there would be no possibility of rebelling[38]. As for teachers, the authors stated that: "[...] many times teachers who agree with the hazing rites of passage often act as if it was natural to experience or witness violence"[38] (p. 510).

In the present study, being a man was associated with both having suffered abusive hazing and having practiced hazing of which he/she have regretted or felt guilty. Other studies also indicate a higher prevalence of hazing among men, when compared to women[10,16]. In the study by Marin *et al*.[16] the students reported that men applied the worst hazing practices, and about 10% of the students (more frequently women) considered hazing "heavy".. For the authors, this finding is related to cultural values that differ between male and female genders[16]. Thus, as men are expected to be strong, virile, and to suppress or not express their needs, they would tend to rate hazing as less heavy than women. Boys were also more likely to consider hazing as an action that aimed at integration and which would, in fact, be just a joke.

Siqueira *et al*.[13] observed, among Pharmacy students, that sexuality was a recurrent subject in the hazing practicesand appeared "imbricated with issues of gender and consumption: bodies are exposed and subjugated in processes that exclude what escapes from the norm and reinforce hegemonic identities" (p. 145). It draws attention to the fact that the veteran/freshman power relationship widens, influencing and being influenced by other power relations existing in society, such as the male/female or heterosexual/homosexual relationships. Almeida Jr. and Queda[14] enumerate several hazing practices with clearly sexual content and, in particular, parody homosexuals or place women in a situation of exposure and apparent sexual availability.

No studies were found investigating racial and economic issues in the university and its relation to hazing. It is possible that affirmative actions implemented in several Brazilian universities in the last years, with the entry of students by racial quotas or by having attended public schools, will modify this scenario. The only study in our country that examined socioeconomic aspects was the one conducted by Marin *et al*.[16], which identified a greater participation of men in hazing, but did not reveal differences related to the income ranges evaluated.

Investigations about the association of hazing with emotional suffering are even rarer. Castaldelli-Maia *et al*.[39] investigated the role of hazing in depression among students at a Brazilian Medical school. Although qualitative data pointed

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to this relationship, the number of subjects who participated in the study was not sufficient to confirm the association, and there was only a trend for a higher prevalence of depressive symptoms among preclinical students. Likewise, in the present study, depressive symptoms and CMD did not remain associated with hazing in the logistic regression analysis. However, having suffered hazing that he/she considered abusive was associated with having sought psychological and psychiatric treatment after entering the course. This aspect, controlled for having received mental health treatment before the course, is a strong indicative of the association of some form of psychological suffering to hazing.

Other factors associated with being abusively hazed were: being unadapted to the city and having less social support. As this is a cross-sectional study, it was not possible to identify the direction of causality between these aspects and hazing. Despite this, the association between being unadapted and having been hazed may be related to the reports of subjects who dropped their courses due to the hazing suffered[10]. It would be interesting to investigate, longitudinally, the association between having been hazed and thinking about leaving the course. Regarding greater social support as a protective factor to suffering hazing, it is possible that the freshman offers greater resistance to it, sustained by a group that would support him/her in this decision. However, there are no elements in this study to explore this association, but it is fundamental to understand the role of social support in hazing in other investigations.

In the reports of some students, it can be seen that they experienced different forms of embarrassment during hazing[10,14,38]. However, hazing continues unabated in educational institutions, despite its association with different forms of violence and even with fatal outcomes[5]. This issue is particularly intriguing in health-related courses, such as Medical schools, in which a humanistic, critical, reflexive and ethical formation is advocated[40]. It is possible that some answers can be found in the professional training process. About the identity of the physician, he/she is expected to be strong and powerful, contrasting with the role of the patient, fragile and submissive[41]. In this way, to be a good doctor, it would be necessary to show strength and resistance since the beginning of the course, including in the experience of hazing. Akerman *et al*.[7] identified some of these ideas in hazing narratives of the students: "Going through some ordeals, such as doing numerous pushups led by veterans, is justified as necessary, as the physician must have 'tough skin'(p. 627).

In addition to the claim that hazing would serve as a marker of strength and supposed power to deal with the vicissitudes of medical career, another frequent argument of its advocates is that it would increase group cohesion, by creating friendships[14,42]. Lodewijkx *et al*.[42] carried out an interesting study with Dutch university students, from different courses, who were entering two university communities. These communities differed, basically, as to the hazing to which the participants were submitted, being more moderate in one of them and more intense in the other. In the longitudinal evaluation performed by the authors, having undergone more intense hazing was not associated with greater cohesion in the affiliation to these communities.

Almeida Jr.[34] discussed some hypotheses to explain/justify the permanence of hazing, which are not mutually exclusive. The first of these is the hazing considered as a rite of passage or initiation. Such an idea has been rejected on the basis that tribal rites of passage, for example, would seek inclusion, while hazing would seek exclusion. However, it is possible that hazing represents a rite of initiation in which are included only those who agree with its practice, who uncritically accept various forms of hierarchy and violence and the silence pact on hazing. This rite would exclude women, "weak" men, and those who criticize the *status quo* of the university. Sexist hazing and the ones parodying homosexuals[14] may be indicative of the exclusion of those who somehow do not fulfill the stereotype of strength.

In the second hypothesis mentioned, the violence of hazing would serve to maintain the relations of power within the institutions. The work of Rios and Schraiber[43], about the humanized and humanistic formation in medical schools, highlights how the teacher-student and the student-student relationships are still mediated by hierarchy. The authors discuss the lack of appropriate preparation of teachers and the fact that learning from pain and fear is still considered a valid form of learning. These aspects reinforce the idea that hazing can be an element in line with the institutional hierarchy, although it can have deleterious consequences for the medical formation.

Almost twenty years ago, Kassebaum and Cutler[44] argued that student abuse in medical schools would be strongly associated with the formation of physicians with low empathy and tendency to reproduce with patients the abuses suffered throughout their training process. A final point highlighted by Almeida Jr. [34] is that there may be, in the set of institutions, sadistic and masochistic personalities who find, in the previously described context, the perfect environment for their expression, establishing a vicious circle of reproduction of hazing and other forms of violence.

Discussing unethical behaviors observed in medical schools, Vidal *et al.* [45] question the reasons why these institutions tolerate such behaviors. One hypothesis raised by the authors

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is that the way these institutions deal with violence, whether or not in the context of the hazing, is an aspect that should be considered in the evaluation/accreditation processes of these institutions. It is possible that considering it in such evaluative processes will be a further incentive for the institutions to deepen the discussion on the subject. However, superficial measures, however correct, such as mere prohibition, cannot solve such a complex phenomenon,[5,46] which has its roots in the social trivialization of violence and goes beyond the walls of faculties[47].

Therefore, the elimination of hazing in medical schools must necessarily lead to a deeper cultural and social change in interpersonal relationships in all spheres (in teacher-student, teacher-resident, resident-student, doctor–health professionals, doctor-patient, student-patient, student-student). For this, it is important to move towards building an institutional environment that is more respectful to the other and more accepting of differences, with more horizontal and less hierarchical relations, which are more collaborative and less competitive, and of projects and practices built more collectively and less individually.

FINAL CONSIDERATIONS

Hazing appeared as a prevalent phenomenon among Medical students, particularly males, and was associated, among other aspects, with the search for mental health services after admission to college. This finding, indicative of psychological distress associated with the hazing situation, should be enough to be hard-fought. Special support should be given to students who are poorly adapted to the city and with less social support, who seem to be more vulnerable to abusive hazing practices. Harmful use of alcohol is also a relevant problem to be addressed in order to prevent violent practices.

Empirical studies, both qualitative and quantitative (ideally longitudinal), on this subject are still very much needed, in order to broaden the understanding of the nature and consequences of this phenomenon, which is as old as undesirable.

The National Curricular Guidelines for the Medicine Course, promulgated in 2014, propose, among other aspects, to train a professional with social responsibility and commitment to the defense of citizenship and human dignity. The coexistence with violence is incompatible with this profile and probably deleterious for the development of empathy of the future professional. The presence of any form of violence cannot be tolerated by educational institutions. It is essential that medical schools deepen the discussion about the violence that exists in hazing practices and institutional relations, identifying not only the actors involved, but also the factors that allow their existence and permanence.

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CONTRIBUTION OF AUTHORS

MCPL, ATARC and ART participated in the conception and design of this study, analysis and interpretation of the data. CLD, JRL and LECR participated in the analysis and interpretation of the data. All authors reviewed the final version of this article, approving it for publication.

CONFLICT OF INTERESTS

Nonexistent.

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