

The ethical conduct of nutrition undergraduates at a public university in Brazil

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Abstract

The practice of academic misconduct seems to be routine in undergraduate studies. Therefore, addressing ethical conduct in training is a starting point to promote debate on the construction of knowledge. This study aimed to analyze the academic misconduct of nutrition undergraduates. A cross-sectional study was performed with Nutrition students at a public university in Brazil. Participants included 105 students took part in the study: 42.9% were on the 1st to the 5th semesters and 57.1% on the 6th to the 9th semesters. Students on the final semesters had a higher prevalence of “letting the colleagues copy the answers” ($p=0.05$), “using ready-made work” ($p=0.04$), and “included their name on a paper without collaboration” ($p=0.01$). The main motivations for academic misconduct were: colleagues cheating (71.4%), believing that professors had committed misconduct (70.5%), difficult subjects (52.4%), and maintaining good grades (50.5%). Students on the last semesters reported lack of time ($p=0.05$) as a reason, and 10.5% mentioned having performed nutrition appointments without supervision. Given the high prevalence of academic misconduct in undergraduate courses, it is suggested that the discipline on ethics be taught in the initial semesters, in addition to offering courses and conversation circles on intellectual property, ethical conduct, time management, and teaching methodologies.

Keywords: Nutrition. Higher Education. Scientific Misconduct.

INTRODUCTION

Fraud, in the academic context, includes the practice of academic misconduct by students¹. Academic misconduct “is a term often used in reference to various types of student violations of academic integrity”². Some actions considered improper are frequently performed by students, including “cheating” during a test³, any act or action that inappropriately promotes benefits to one student over others⁴ or even using the scientific pro-

duction of others without reference⁵.

The practice of academic misconduct such as “cheating”, copying activities or adding information to a paper without mentioning the sources is a frequent behavior in the academic environment. Such actions occur systematically, which may indicate something conventional that is part of everyday life and does not generate losses⁶. However, the long-term consequences of sustaining such behavior for

students, professors, and educational institutions are serious⁵.

Research on undergraduate ethics and academic misconduct covers several areas in addition to the first publications on the topic, such as American studies in Administration and Economics. Those studies pointed to the growth of misconduct in an academic environment and the need for immediate intervention^{7,8}.

A study with Pedagogy, Law, Administration, and Engineering students found that “cheating” was not well regarded by students and professors, and that it could result in great damage both in academic training and professional life⁹. Another study found that 78% of the 179 business students had already been involved in some academic misconduct⁶ and about 94% of the 3000 students of four Colombian universities stated they were involved in more than one type academic misconduct (lending ready papers for

others to copy, having their name included on a paper without collaboration, letting the colleague “cheat”)¹. Academic misconduct in a professional environment may be a reflection of the behaviors in academic life⁵. However, no study was performed on academic misconduct among Nutrition students.

Articles on academic misconduct in undergraduate conduct in private and public higher education institutions in Brazil are extremely scarce, which highlights the importance of carrying out more research in this area. The lack of discussion on academic misconduct encourages such behavior and makes it difficult for students to reflect on the possible consequences for their professional trajectory, thus, the importance of a specific discipline on ethics and frequent debates stands out. Thus, the present study evaluated the prevalence of academic misconduct by Nutrition students at a public university in Brazil.

METHOD

A cross-sectional study was performed with Nutrition undergraduates of a public higher education institution in Brazil.

The Nutrition course was created on 1978 and was approved by the Brazilian Ministry of Education on 1983, being one of the most traditional in Brazil. It typically takes 4.5 years (9 semesters) to complete the course.

All Nutrition students at the university (N=286) were invited to participate in the survey. The inclusion criteria were: students aged 18 years old or more, enrolled in the Nutrition course. The exclusion criterion was: students enrolled in other courses. They were recruited through invitations made in classrooms and digital advertisements on social media such as *WhatsApp* and *Instagram*.

All participants were informed about the purpose of the research. The study was conducted according to the ethical standards set by the Declaration of Helsinki and approved by the Research Ethics Committee of the

University under protocol number CAAE: 18819119.2.0000.5150.

A structured questionnaire was prepared for data collection. The questionnaire contained questions about sociodemographic data (sex and course semester) and academic misconduct. The questions about academic misconduct and motivations were based on the questionnaires of the studies performed by Naghdipour and Emeagwali¹⁰ and Martinez and Ramírez¹. The questionnaire applied to students included 14 questions about academic conduct and 19 questions about reasons for the occurrence of academic misconduct. The questionnaire did not require identification to ensure privacy. Data collection was carried out using a free online survey tool - *Google Forms*.

Questions about academic misconduct and their reasons:

Types of academic misconduct

- 1) Cheating during exams/tests.
- 2) Knowing the penalties applied to cheating.
- 3) Using unauthorized materials during tests.
- 4) Letting the colleagues copy test answers.
- 5) Copying papers from other colleagues.
- 6) Allowing colleagues to copy my paper.
- 7) Presenting ready-made papers downloaded from the Internet.
- 8) Quoting or paraphrasing parts of someone else's paper without citing the reference.
- 9) Quoting or paraphrasing online texts without crediting the source.
- 10) Presenting a false medical certificate.
- 11) Signing the attendance list for an absent colleague.
- 12) Having a colleague's name included in a group paper without actual collaboration.
- 13) Having my name included in a paper without actual collaboration.
- 14) Performing nutritional appointments or guidance without the supervision of a licensed nutritionist.

Reasons for academic misconduct

- 1) I cheat because every student does so.
- 2) I cheat because I do not have time to study.
- 3) I cheat because I am afraid of getting bad grades.
- 4) I cheat because "cheating does not hurt anyone".
- 5) I cheat because my professors do not usually impose any punishment for it.
- 6) I cheat because I do not like my professor

- 7) I cheat because this university does not usually punish students severely.
- 8) I cheat because the subject is difficult.
- 9) I cheat because grades are more important than learning.
- 10) I cheat because the subject has no purpose.
- 11) I cheat because I want to keep my grades high.
- 12) I cheat because only I need the degree.
- 13) I believe everyone has cheated in tests or copied papers during their academic life.
- 14) I believe my professors have already cheated in tests or copied someone else's paper when they were students.
- 15) I feel good when I cheat in a test or copy another person's paper.
- 16) I feel bad when I am caught cheating or they find out I had copied someone else's paper.
- 17) I study, but I also cheat to improve my grade.
- 18) I would buy a certificate or a degree if I could.
- 19) I would let my students cheat in tests or copy papers from someone else if I were a professor.

Data were analyzed with software Stata/SE version 13.0 and the established statistical significance was 5%. Descriptive statistics were calculated (means, standard deviations, and percentages). Additionally, Chi-square test was applied.

RESULTS

105 out of the 286 Nutrition students enrolled in the institution participated in the survey (36.7%), which included students of all semesters. The majority were female (94.3%) and 42.9% of the 1st to 5th semesters and 57.1% of 6st to 9th semesters.

Figure 1 shows the frequency of the types of academic misconduct reported. 62.2% of

the students of the 1st to 5th semesters reported to having committed between 1 and 5 types of academic misconduct, while 4.4% reported not having committed any academic misconduct. All students of the final semesters (6th to 9th) revealed they had committed at least one type of academic misconduct, and 46.7% committed more than five.

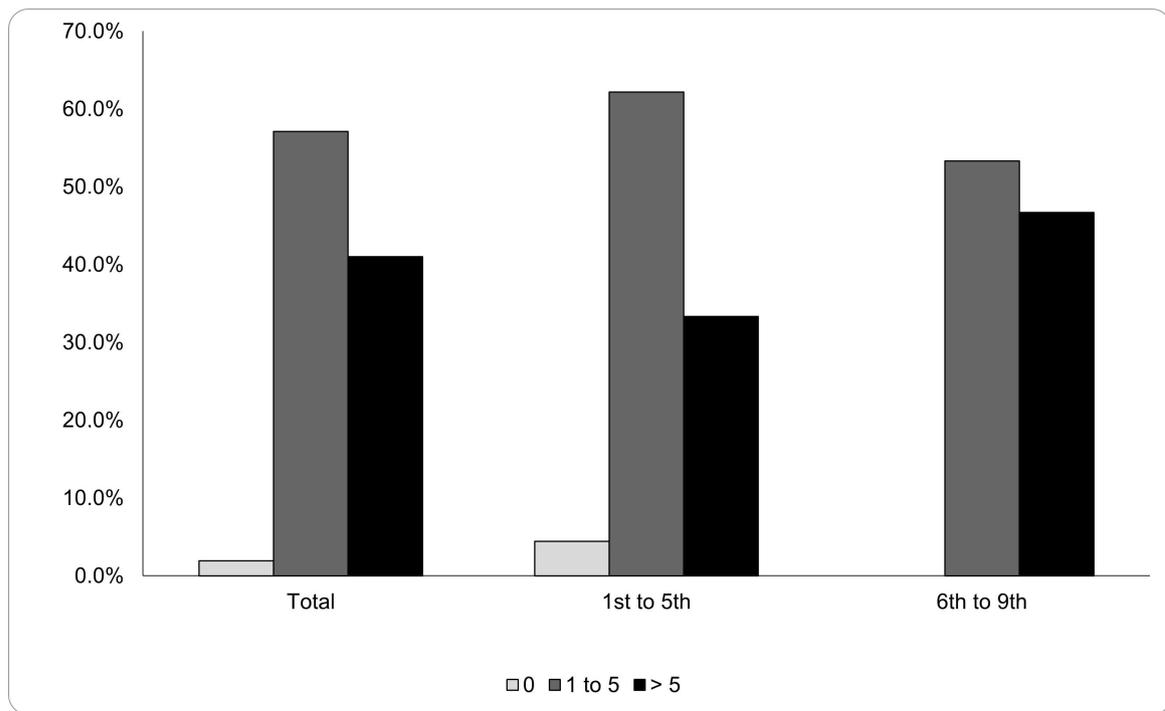


Figure 1 - Frequency of academic misconduct on nutrition undergraduate of the 1st to 5th and 6th to 9th semester, 2019.

Among the types of academic misconduct reported (Table 1), the most frequent practices were “including the colleague’s name without their collaboration”, “letting colleagues copy test answers, and “lending papers to be copied”. In addition, 80.0% of the undergraduates said they know the penalties applied for cheating on tests and 10.5% reported having performed nutrition appointments wi-

thout supervision.

The students of the final semesters (from 6th to 9th) reported more prevalent behaviors such as “letting colleagues copy test answers” (p=0.05), “using ready-made papers” (p=0.04), and “having their name included in a group paper without actual collaboration” (p=0.01) when compared with students of the initial semesters (1st to 5th) - Table 1.

Table 1 - Association of undergraduates’ academic misconduct and semester of the Nutrition course, Brazil, 2019.

Types of misconduct	Total		1 st to 5 th		6 th to 9 th		P-value*
	n	%	n	%	n	%	
Included a colleague’s name in a group paper without his/her collaboration	95	90.5	38	84.4	57	95.0	0.07
Knew the penalties applied to cheating	84	80.0	39	86.7	45	75.0	0.14

to be continued...

...continuation Table 1

Types of misconduct	Total		1 st to 5 th		6 th to 9 th		P-value*
	n	%	n	%	n	%	
Let colleague copy the test answer	80	76.2	30	66.7	50	83.3	0.05
Allowed colleague to copy my paper	79	75.2	30	66.7	49	81.7	0.08
Used unauthorized material during tests	79	75.2	30	66.7	49	81.7	0.08
Signed attendance list for an absent colleague	71	67.6	27	60.0	44	73.3	0.15
My name was included in a paper without actual collaboration	52	49.5	16	35.6	46	60.0	0.01
Copied or paraphrased internet texts without crediting the source	47	44.8	22	48.9	25	41.7	0.46
Used colleague's ready paper	42	40.0	13	28.9	29	48.3	0.04
Copied or paraphrased parts of someone else's paper without citing reference	38	36.2	20	44.4	18	30.0	0.13
Performed nutrition appointment without supervision	11	10.5	3	6.7	8	13.3	0.27
Presented ready-made paper downloaded from the internet	4	3.8	2	4.4	2	3.3	0.77
Cheated during exams/tests	3	2.9	1	2.2	2	3.3	0.74
Presented false medical certificate	3	2.9	0	0.0	3	5.0	0.13

*Chi-square test.

Among the motivations for academic misconduct, 50.5% of the students indicated the maintenance of good grades, 52.4% found the subject difficult, 71.4% mentioned that colleagues have already committed academic dishonesty and 70.5% said they believe that professors have already done it. On the other hand, 74.3% of the students reported feeling bad when they copy someone else's paper or cheat in exams.

In addition, 74.3% of the students disagreed that grades are more important than learning, while half of them said they committed academic misconduct motivated by maintain-

ing good grades. One of the motivations for copying works comes from the belief that colleagues (71.4%) and professors (70.5%) have already done the same, 80.9% of the students disagreed that seeing others cheating would be a motivation to commit such conduct. Most students disagreed that academic misconduct is not punished by their institution and professors (Table 2).

Despite the academic misconduct reported, it is interesting to note that the most undergraduate students would not buy the degree (97.1%) and disagreed that the purpose of undergraduate education would be only to

obtain a degree (91.4%). Among all the reasons reported, there was a significant difference between the semesters only regarding “lack of time” ($p=0.046$).

Table 2 - Reasons related to academic misconduct of students in the Nutrition course, Brazil, 2019.

I cheat because...	Disagree		Indifferent		Agree	
	n	%	n	%	n	%
I would buy the degree	102	97.1	3	2.9	0	0.0
I just need the degree	96	91.4	6	5.7	3	2.9
I feel good when I cheat	91	86.7	14	13.3	0	0.0
I do not like the professor	87	82.9	16	15.2	2	1.9
It does not cause harm to anyone	86	81.9	14	13.3	5	4.8
Every student cheats	85	80.9	17	16.2	3	2.9
The Institution does not usually punish students severely	84	80.0	19	18.1	2	1.9
My professors do not usually impose any punishment	83	79.1	18	17.1	4	3.8
If I were a professor, I would let students cheat	82	78.1	17	16.2	6	5.7
Good grades are more important than learning	78	74.3	9	8.6	18	17.1
Subject has no purpose for my professional life	76	72.4	14	13.3	15	14.3
I don't have time to study	75	71.4	16	15.2	14	13.3
Despite studying, I want to increase my grade	63	60.0	16	15.2	26	24.7
I am afraid of getting bad grades	58	55.2	12	11.4	35	33.3
I want to keep my high (good) grades	39	37.1	13	12.4	53	50.5
Subject is difficult	34	32.4	16	15.2	55	52.4
I believe everyone has cheated in exams or copied papers during academic life	16	15.2	14	13.3	75	71.4

to be continued...

...continuation Table 2

I cheat because...	Disagree		Indifferent		Agree	
	n	%	n	%	n	%
I believe professors have cheated in exams or copied papers when they were students	6	5.7	25	23.8	74	70.5
I feel bad when I cheat	6	5.7	21	20.0	78	74.3

DISCUSSION

Nutrition undergraduates in the final semesters (6th to 9th) reported higher percentage of academic misconduct in comparison with students in the initial semesters (1st to 5th). There were three main cheating behaviors: exam cheating, using ready-made work, and including names in group papers without collaboration. Lack of time, difficulty in following the subject content and trivialization of cheating were reported by students as the main reasons for academic misconduct.

The frequency and types of academic misconduct identified were like those found by Martinez and Ramírez¹. These authors showed that 94% of students of four Colombian universities admitted having committed academic misconduct during their undergraduate courses. The most reported types of academic misconduct were also similar: “letting your colleague copy the test answer” and “having your name included in a group paper”¹.

A type of academic misconduct also mentioned by the students was “using ready-made work”. The studies performed by Krokosczyk¹¹ and Veludo-de-Oliveira⁶ showed that plagiarism is a present practice and is well incorporated in the teaching culture of universities. This practice can have consequences not only in the fields of ethics and morals, but also in the legal sphere⁶.

It is important to highlight the self-reported

conduction of nutrition appointments without supervision by students in 6th and 9th course semesters, which presented the highest percentage of academic misconduct. This consists in the improper exercise of the profession since Nutrition students are not yet able to perform nutrition appointments, only qualified nutritionists can perform professional practices in Nutrition¹². Studies suggest that students that commit acts of academic misconduct are more inclined to do the same in their professional lives^{5-8,13}.

The higher frequency of academic misconduct in this group (6th and 9th) can be related to practical aspects of the subjects in the final semesters in which the student experiences a nutritionist’s routine. This may create a false impression and confidence that the students are ready to exercise the profession. The practical classes are essential to develop skills and experiences for the profession. The development of nutritionist duties during graduation can only occur under the direct supervision and responsibility of a professional, or if it involves a nutritionist preceptor^{12,14}.

The exercise of professional practices such as nutrition prescription, anthropometrical assessments, and nutrition appointments before concluding the undergraduate course may cause damage to the student and to the patient’s health. Therefore, it is suggested to provide guidance on professional responsibi-

lity and academic conduct since the beginning of the course, including the professional practices of a qualified nutritionist, to ensure the ethical training at the university level and legal exercise of Nutrition professionals^{12,15}.

The knowledge on the penalties for exam cheating does not seem to inhibit academic misconduct regardless of the course semesters. However, the academic conduct code of the school does not clearly define “action that provides an unfair academic advantage” nor establish penalties for academic misconduct such as cheating.

Although students understand that violations of ethical standards are not socially accepted and can result in serious damage, the cost-benefit ratio seems to outweigh the risks¹⁶ since only a small minority are caught cheating, thus being one of the reasons for academic misconduct¹. A survey conducted with 1276 economics and business students in Portugal showed that the increase of misconduct was associated with the increasing perception of academic misconduct by colleagues¹⁷.

The reasons for academic misconduct by students may be related to insecurity about their knowledge, low self-esteem, and high levels of perfectionism regarding academic performance¹⁸. Insecurity leads students to believe that the colleague’s paper is better than theirs, so they think to be more advantageous by “copying papers or exam answers from colleagues”^{1,6,7,11}. Students who cheat believe that the benefits outweigh the risks and those who let their colleagues copy their papers think they are helping and there is no damage^{6,11}. Lack of time is considered a chief reason for academic misconduct¹⁹⁻²¹. Studies show that students attribute academic misconduct to “lack of time”, the large number of subject contents and works given by teachers, and the high load of the course^{1,6}.

Academic misconduct appears to be associated with grades and lack of identification with the course, and students who have bad grades may be more prone to commit academic misconduct¹⁷. A study performed with

56 engineering students at two universities in São Paulo (Brazil) revealed that individuals shared their test answers with closest friends and this type of academic misconduct was more common in institutions where the choice of the undergraduate course was defined by grades obtained in the two first years at the university²¹.

This study had limitations. Academic misconduct was assessed through questionnaires, which may have led to constraints related to the theme and fear of identification, resulting in an under-report of academic misconduct and its motivations. Participants were not asked for personal information to avoid any embarrassment. The adherence of students in the initial semesters was reduced compared to those in the final semesters. This fact may be related to little contact of the beginners with ethical issues, subjects of the Nutrition area, and no knowledge of the importance of taking part in research.

The main strengths are the novelty of the theme and the use of instruments already applied to other studies. Yet, studies on academic misconduct are scarce and no study conducted with Nutrition students was found, which has limited the comparison of the results. However, these findings could be reasonably extrapolated to other courses and countries since university higher education has a similar format, and academic misconduct, as mentioned in this work, is present in several educational contexts worldwide.

It is necessary to look for ways to improve students' awareness of the importance of ethical conduct in their education. It suggests promoting courses about the importance of intellectual property and how to write academic papers without plagiarism²², and extracurricular reinforcement of the most difficult subjects, in addition to encouraging them to do extracurricular internships. It is also important to offer proper assistance to students with low self-esteem, anxiety, and/or depression; and to promote meetings to discuss ethical issues and academic misconduct in education and

professional life. Moreover, it is necessary to promote activities in which students and professors together can develop tools to improve

time management, as well as reassess existing teaching and evaluation methods, with the mediation of psychologists and educators.

CONCLUSION

There are still few studies on academic misconduct in Nutrition courses at public and private universities and this study aims to contribute to research on this topic. Nutrition students reported a high frequency of academic misconduct, the most cited being “using ready-made work”, “letting the colleague copy the test answer” and “having the name included in a group paper”. The reasons for academic misconduct were related to lack of time, maintenance of grades, and

the trivialization of academic cheating. These findings will contribute to the debate on ethical conduct in academia and the efforts to prevent academic misconduct.

The present study provides information to professors and educational institutions to develop actions to prevent academic misconduct from becoming trivial such as the discipline on ethics being taught in the initial semesters, courses on intellectual property, ethical conduct, and time management.

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