

ARTIGOS

THE PRIMING EFFECT ON ACCOUNTING FRAUD ASSESSMENT: AN EXPERIMENTAL APPROACH WITH ACCOUNTING SCIENCE STUDENTS**O EFEITO PRIMING NA AVALIAÇÃO DA FRAUDE CONTÁBIL: UMA ABORDAGEM EXPERIMENTAL COM ESTUDANTES DE CIÊNCIAS CONTÁBEIS****Esteniffer Freitas****estenifferfreitas@gmail.com**

Graduada em Ciências Contábeis pela Universidade Federal Rural do Semi-Árido (UFERSA). Especialista em Contabilidade, Perícia e Auditoria pela Faculdade Descomplica. Contadora da Universidade Federal Rural do Semi-Árido (UFERSA). Mossoró - RN - BR.

Caritsa Moreira**caritsascarlaty@ufersa.edu.br**

Doutoranda em Ciências Contábeis pela Universidade Federal da Paraíba (UFPB). João Pessoa - PB - BR.

Álvaro Macedo**alvarofabiano@ufersa.edu.br**

Professor Adjunto com Dedicção Exclusiva da Universidade Federal Rural do Semi-Árido (UFERSA). Doutor em Administração pela Pontifícia Universidade Católica do Paraná (PUC-PR) em regime de cotutela com a Universidade do Minho (Portugal). Mossoró - RN - BR.

Kallyse Oliveira**kallyse.oliveira@ufersa.edu.br**

Doutora em Ciências Contábeis pela Universidade Federal da Paraíba. Professora efetiva da Universidade Federal Rural do Semi-Árido (UFERSA). Mossoró - RN - BR.

Alexsandro Prado**alexsandro.prado@ufersa.edu.br**

Doutor em Economia pela Universidade Federal da Paraíba - UFPB (2021). Professor adjunto da Universidade Federal Rural do Semi-Árido. Mossoró - RN - BR.

ABSTRACT

The priming effect is characterized by the improvement of the ability to detect items after a recent experience with them, which can increase people's attention to moral standards when confronted with questionable behaviors. In this sense, this research aimed to analyze the influence of priming in the judgment of fraudulent situations. For that, an experiment composed of three parts was conducted: (i) identification of the participant's profile; (ii) presentation of a journalistic news item; (iii) evaluation of twelve scenarios of accounting fraud and unethical attitudes. In the evaluation of the cases, we used a Likert-type scale ranging from zero (0) to five (5) relative to the severity of the action and the punishment deserved. Descriptive statistics and the Tukey test – Honest Significant Difference (HSD) were used to analyze the collected data. The sample was composed of 43 students in the first and last period of the Accounting Sciences course at the Federal Rural University of the Semi-arid Region, located in the city of Mossoró-RN. Results demonstrate that there is no influence of priming on the ethical judgment of the students, considering previous knowledge about the subject and students' gender. On the other hand, it was observed that the magnitude of the consequences of fraudulent accounting acts has an impact on the intention to act honestly or not and that there is a proportional relationship between the severity attributed to the action and the punishment deserved by the offender.

Keywords: accounting fraud; human behavior; moral perception.**RESUMO**

O efeito de priming é caracterizado pela melhoria da capacidade de detectar itens após uma experiência recente com eles, o que

pode aumentar a atenção das pessoas aos padrões morais quando confrontadas com comportamentos questionáveis. Neste sentido, esta pesquisa teve como objetivo analisar a influência do “priming” no julgamento de situações fraudulentas. Para isso, foi realizada uma experiência composta de três partes: (i) identificação do perfil do participante; (ii) apresentação de uma notícia jornalística; (iii) avaliação de doze cenários de fraude contábil e atitudes antiéticas. Na avaliação dos casos, utilizamos uma escala do tipo Likert que variava de zero (0) a cinco (5) relativos à severidade da ação e à punição merecida. A estatística descritiva e o teste Tukey - Honest Significant Difference (HSD) foram usados para analisar os dados coletados. A amostra foi composta por 43 alunos do primeiro e último período do curso de Ciências Contábeis da Universidade Federal Rural do Semi-Árido, localizada na cidade de Mossoró-RN. Os resultados demonstram que não há influência do priming no julgamento ético dos alunos, considerando o conhecimento prévio sobre o assunto e o gênero dos alunos. Por outro lado, foi observado que a magnitude das consequências dos atos contábeis fraudulentos tem um impacto sobre a intenção de agir honestamente ou não e que existe uma relação proporcional entre a severidade atribuída à ação e a punição merecida pelo infrator.

Palavras-chave: fraude contábil; comportamento humano; percepção moral.

1 INTRODUCTION

In recent years, the growth of scandals involving accounting fraud in large corporations has been occupying space in media outlets around the world, such as the famous cases of American companies Tyco, Enron, Xerox, and World.Com; of the European companies Cirio and Parmalat; and in Brazil, the companies Sadia, Pan Americano and Santos Banks (PERERA; FREITAS; IMONIANA, 2014).

This type of behavior is responsible for huge losses, which have consequences,

not only in the economic context but also negative impacts on the whole society (OLIVEIRA; NAVES, 2010). According to data provided by the Association of Certified Fraud Examiners (ACFE, 2018), an estimated annual loss of around 5% of the company's revenues corresponds to approximately US\$4 trillion. The inappropriate and criminal use of accounting collaborated for this type of practice to occur (LIMA *et al.*, 2017).

As a result, ethical behavior ends up being the subject of discussion in several studies, with the purpose, for example, of verifying the tendency of accounting professionals to denounce questionable acts (LUCENA *et al.*, 2015), the perception of students about ethics in the accounting profession (VASCONCELOS *et al.*, 2018), accountants' perception of the professional code of ethics (MEDEIROS *et al.*, 2018), and even the ethical profile that the academy seeks to provide to undergraduate accounting sciences (ANDRADE; AVELINO; SANTOS, 2018).

However, this decision is not simply the result of moral cognition, being strongly influenced by other internal and external factors (HAIDT, 2001). According to Reynolds (2006), ethical decisions are made by two brain subsystems that act autonomously and cooperatively. Conscience, which uses moral precepts and intentional cognitive processes; and unconsciousness, which uses prototypes of ethical issues to make decisions on an intuitive level.

Thus, based on prospect theory, which allows identifying behavioral differences resulting from biases to which individuals are exposed (KAHNEMAN; TVERSKY, 1979), there is the priming effect, represented by the improvement in the ability to assign terms or objects after a recent experience with them (SQUIRE; KANDEL, 2003). Bargh (2006) emphasizes that the effect generated by priming is related to the influence that previous exposure to certain stimuli causes the individual to respond to a subsequent stimulus without the individual being aware of its existence.

In both Brazilian and international literature, the priming effect is present in

different areas of knowledge, mainly involving human perceptions and behaviors. In accounting, priming can imply evaluations and judgments of unethical conduct (FARJADO; LEÃO, 2014); improvement of auditors' intrinsic motivations when processing and judging information considered complex (KADOUS; ZHOU, 2019); and the insertion of mechanisms that inhibit dishonest behavior (BONFIM; SILVA, 2019).

As a base reference, we have the research by Farjado and Leão (2014) that verified how the activation of priming modifies the moral standards of individuals when evaluating certain everyday situations, making them more strict in terms of severity and the punishment deserved by the offender. Thus, unlike the aforementioned study, this research seeks to analyze the effectiveness of the priming effect in the perception and judgment of fraudulent situations by Accounting Sciences students, relating the severity of the infraction and the degree of punishment deserved with other variables that can influence the perception of dishonest actions, such as gender and participants' knowledge of the theme.

In view of the aforementioned facts, the following research question arises: What is the influence of priming in the judgment of fraudulent situations? The present study has the general objective, therefore, to analyze the influence of priming in the judgment of fraudulent situations from the perspective of accounting science students. In order to meet the main objective, the following specific objectives are highlighted: (i) to identify how the priming effect influences the perception of accounting science students in situations involving misconduct, taking into account participants' gender and knowledge; (ii) investigate whether there are significant differences between the responses of students exposed and not exposed to textual stimuli; (iii) analyze the relationship between the severity attributed to the proposed situation and the judgment of the penalty deserved.

The study's relevance is related to the importance of promoting discussions in this area

of research still little explored and encouraging further studies regarding the intrinsic motivation in the ethical decision-making process and how this can help to improve professional judgment during fraud investigation, mainly in the area of accounting sciences, in view of the growth of corporate scandals involving accounting. Additionally, it should be noted that, although this type of professional specialization does not yet exist in Brazil, the accountant in the role of auditor or expert can also detect a fraud or trigger its origin (OLIVEIRA; NAVES, 2010).

For the literature, this study will provide relevant information by stimulating interest in these issues in the academic environment through new discoveries that can contribute to the training of future accounting professionals, given that studies in this area are still incipient in the country. In a practical context, for professionals and organizations, it is expected to encourage the development of procedures and methods capable of instigating the critical assessment of unethical situations, as well as helping in the identification of accounting fraud and in the management of human behavior.

2 THEORETICAL REFERENCE

2.1 ACCOUNTING FRAUD AND ETHICAL BEHAVIOR

Corporate frauds are frequent actions in the contemporary scenario of organizations and can be practiced both individually and in groups. Personally corrupt behavior usually occurs when individuals benefit at the expense of the organization, whereas at the organizational level, it can manifest when a significant number of members of a company act corruptly to achieve their own benefit or the entity's (PINTO; LEANA; PIL, 2008).

The Association of Certified Fraud Examiners [ACFE] (2018) has sorted the different types of this conduct into three segments: (i) corruption, which occurs when a person obtains some personal advantage as a result of their position or position within

the entity; (ii) misappropriation of assets, characterized as the theft or use of the organization's resources in its own favor; (iii) and fraudulent financial statements, understood as intentional misstatements, concealment of facts or disclosures of financial statements with the aim of deceiving their users (WELLS, 2008).

Of all crimes against property, accounting frauds are the ones that bring the greatest losses to companies since, according to ACFE's annual report (2018), fraud in financial statements, despite comprising only 10% of corporate fraud worldwide, were responsible for an average loss of US\$800.000, therefore, well above the average of cases related to corruption and misappropriation of assets, which ranges from US\$100 to US\$250.000, and represented, respectively, 38% and 89% of the cases.

It is worth noting that frauds have several impacts on companies, such as loss of resources, high costs of repairing damages, as well as compromising their image. According to Kamarudin, Ismail, and Mustapha (2012), in addition to the financial loss, corporate fraud can, in the long run, affect the reputation of an organization, hampering its relationship with suppliers, creditors, employees and even negatively interfering with the value of the brand.

In accounting, fraud is limited to the patrimonial field and applies to deliberate acts of omission or manipulation of transactions and operations and adulteration of documents, records, reports, and accounting transactions, Conselho Federal de Contabilidade [CFC]¹ (2003). According to Oliveira and Naves (2010), among the methods used are the manipulation of expenses through makeup in the accounting books; revenue inflation through expense management, and even the falsification of contracts, records, or other documents. Thus, the choice of means used in accounting fraud depends on which goals the fraudsters intend to achieve (GOUVÊA; AVANÇO, 2006).

Given the repercussion of this type of scandal, the accounting profession has become the target of charges by society, which expects

reliable information about the company's financial situation (OLIVEIRA; NAVES, 2010). Under this rationale, ethical commitment becomes essential because this financial information is used in the decision-making process, thus contributing to the maintenance of the organization's financial health and social welfare (CRISTINA; FLORINA, 2008).

According to Mazar, Amir, and Ariely (2008), the decision to act or not to act ethically is based on the internal value system. Such a system works as an internal reference against which an individual compares his behavior, exercising control over his way of behaving and influencing his ethical self-concept, *i.e.*, the way individuals see and perceive themselves. Thus, people have a self-image about their honesty and can commit dishonest attitudes without feeling like a criminal, as long as they do not exceed the threshold of this ethical self-concept.

Anand, Ashforth, and Joshi (2004) point out that involvement in corrupt acts can be partially explained by mental rationalization strategies, which allow individuals to see their actions as justifiable. This process can be defined as a human ability that allows a person to benefit from cheating and still sees themselves as a good person (ARIELY, 2012). It is, therefore, easier to explain minor ethical deviations as opposed to serious violations.

The origin of unethical aspects in behaviors previously considered ethical must be attributed to a series of small infractions that gradually increased (WELSH *et al.*, 2015). In this way, committing slight indiscretions over time may gradually lead people to commit larger dishonest acts, which they would have previously considered impermissible. Gino and Bazerman (2009) emphasize that people tend to accept other people's fraudulent behavior when there is a progressive moral deterioration rather than a sudden change.

2.2 PRIMING EFFECT

Research on priming originated with Hebb's work (1949), in which the importance of

¹ Federal Accounting Council

internal mental representations for human learning was studied. Such representations can be activated by both internal and external sources of stimuli and remain electrically active in the neurons of exposed individuals. During the process, neuronal cells assume a certain composition in the function of a stimulus received, based on some information captured by the senses or simply by the activation of memory in the function of the occurrence of a thought.

According to Bargh (2006), for the effect generated by priming to occur, it is necessary to demand two requirements. Firstly, the existence of a mental representation triggered by some incentive, whatever it may be, and secondly, the fact that the individual is not aware of the influence that is being suffered in its subsequent processing.

Therefore, decision-making is performed by cognitive directions, characterized by a dual model of processing, intuitive and reflexive. This implies that, during the process, the individual is influenced by internal and external, conscious and unconscious stimuli. For this reason, mere exposure to a certain concept can affect the subsequent reactions of a person, according to how it is interpreted, creating a perspective on their behavior (BARGH, 2006).

As a way to expand attention to the moral standards of individuals, there is 'priming' that consists of the activation of knowledge after exposure to a stimulus (ALTHAUS; KIM, 2006). Priming is considered a type of implicit memory of antecedent events on subsequent performance, *i.e.*, an improvement in the ability to detect or identify items after a recent experience with them (DE SALLES; JOU; STEIN, 2007).

According to Borine (2007), priming refers to a way of preparing the subject through preliminary exposure to a certain stimulus, such as an image, sounds, symbols, and objects, before measuring their performance when operating a certain task. This incentive is a facilitator

or performance bias since it improves development for specific stimuli, either by increasing accuracy or reducing response time (EYSENCK; KEANE, 2007).

In this sense, textual preparation can be used as a tool for reducing dishonest conduct. According to Mazar and Ariely (2006), increasing the self-awareness of individuals about honesty, whether through commandments, which can help them remember or by the commitment made by signing a code of honor, can be a powerful and sufficient tool to reduce dishonesty in companies.

2.3 STUDIES RELATED TO THE TOPIC

In the Brazilian academic community, discussions on the influence of internal factors in the judgment of questionable acts regarding the accounting environment and the ethical decision-making process are still little explored, despite the accounting professional being one of the most exposed to scandals related to this subject. According to Shtudiner and Klein (2020), accountants have the responsibility of serving the interests of the company and shareholders and, at the same time, serving the public interest against fraud and other illegalities.

In this sense, Farjado and Leão (2014) developed two experiments proposing to explore the process by which priming could activate individuals' moral standards, modifying the way they would evaluate certain daily situations. The results revealed the effectiveness of the priming effect when evaluating dishonest attitudes as more serious and those who commit them as deserving of more severe punishments.

Silva, Freire, and Silva (2016) studied the ethical positioning of Accounting Science course students when faced with a fraudulent act. The results of the survey indicated that most students identified the moral issue involved in the scenarios presented and that their positioning is focused on teleological

ethics, in which they consider the consequence of such an act to subsequently agree or not with the behavior of agents.

Bonfim and Silva (2019) conducted an experiment with 204 participants to find out how the insertion of control mechanisms, such as auditing and professional technical standards, would influence individual and group dishonest behavior. Their findings revealed that auditing and reading the Accountant's Code of Professional Ethics made participants less dishonest than when they were not subject to any type of control mechanism.

In the international context, research is more developed. Welsh and Ordóñez (2014) explored the extent to which the subconscious mind could influence internal psychological processes by activating moral patterns. Results showed that the ethical subconscious process and unethical priming activate participants' moral patterns, thereby increasing ethical categorization and reducing unethical behaviors, even when participants were not being monitored or when given high-performance goals.

Kadous and Zhou (2019) experimentally tested whether priming would highlight auditors' intrinsic motivation, improving the processing of specific information and, consequently, the quality of judgments in complex audit tasks. Research findings demonstrated that auditors exposed to priming attend to a broader set of information, process information more thoroughly, and request additional evidence that is more relevant.

In his study, Oboh (2019) examined the influence of personal variables and moral intensity on specific processes, namely, ethical recognition, ethical judgment, and ethical intention, involved in the ethical decision-making of accounting professionals. Results suggested that age, economic status, education, moral idealism and relativism, the magnitude of consequence, and social consensus are significant determinants of the ethical decision-making process in accounting professionals.

In addition to cognitive drivers,

the relevance of individual factors in the decision-making process is observed. Silva, Freire, and Silva (2016) verified that the female gender tends to have a greater ethical inclination. Grosch and Rau (2017) observed that women exhibit higher social values and, therefore, their behavior is generally more honest than men. Feil, Diehl and Schuck (2017) found the existence of more ethical attitudes in female students and the fact that having taken the subject of Professional Ethics and Legislation had an impact on the ethical conduct of future professionals.

Given the research developed, there is a need to analyze the effectiveness of the priming effect in the evaluation and judgment of dishonest actions with students in the Accounting Science course. To this end, social factors are taken into consideration, given the importance of professional ethics and the fight against fraud, especially in the area of Accounting Sciences, due to the growing number of cases of fraud involving accounting. Furthermore, according to NBC PG 01², which deals with the Accountant's Professional Code of Ethics, the accountant must exercise the profession with zeal, diligence, honesty, and technical capacity.

3 METHODOLOGICAL PROCEDURES

In analyzing the influence of the priming effect in the judgment of fraudulent situations from the standpoint of Accounting Science students, this research can be considered an exploratory study since it seeks the deepening of a theme still little discussed in Brazilian academia, which is accounting fraud. As much as the problem's approach is concerned, its quantitative nature stands out given the fact

² Brazilian Accounting Standard

that statistical instruments such as the average, standard deviation, and level of significance were employed to translate the information obtained into numbers.

As for the procedures adopted, it consists of an experimental study based on the work of Farjado and Leão (2014), in which a part of the sample, chosen at random, was subjected to priming through textual pre-activation (Test Group - TG), while the other part of the sample did not receive any type of stimulus (Control Group - CG).

The experiment was carried out in January 2020 at the Federal Rural University of the Semi-Arid Region (UFERSA), located in the municipality of Mossoró – RN. The sample consisted of 45 students from the Accounting Sciences course who were attending the first and last periods of the undergraduate course. Of this total, two had their answers discarded because they were incomplete and/or incorrectly filled out. The intention of the sample selection is based on the fact that part of the individuals will have attended the disciplines of ethics of the accounting professional, audit, and accounting expertise. Thus, it will be possible to compare how the priming effect acts in individuals with different levels of knowledge.

For data collection, a questionnaire was applied, whose questions related to fraud were addressed in the format of multiple cases. This questionnaire was divided into three blocks, first addressing questions inherent to the respondent's profile regarding gender, age, period of the course, knowledge about accounting fraud, and in which disciplines, as well as the field of professional activity.

In the second block, the test group was offered recent news about the involvement of the company General Electric (GE) in accounting fraud scandals, containing expressions that refer to “losses”, “accounting fraud”, “insolvency” and “financial pyramid”. For the control group, the news was offered about the failure rate in the sufficiency exam of the Federal Accounting Council, that is, a neutral text, without any involvement with the

theme addressed in this research.

Subsequently, participants were asked to judge some simple statements related to the base text but required a certain degree of reflection by the respondent. The objective of this procedure was to verify the level of comprehension of the participants and at the same time to reinforce the effect generated by priming in the test group through a more attentive reading. Finally, twelve scenarios were proposed containing accounting fraud and ethical deviations of the accounting professional, based on famous cases reported by the media. For the evaluation, a Likert-type scale was used, and each case was assigned a numerical value from zero (0) to five (5) corresponding to the severity of the action, in which (0) was irrelevant and (5) very severe; and the type of punishment that such an attitude deserved, being (0) mild and (5) very severe.

Thus, the activation of the effect generated by priming occurs through the mental representation of expressions that refer to situations of fraud and dishonest conduct contained in the text. Therefore, participants of the experiment exposed to textual encouragement (TG) are expected to be influenced in their cognitive processing, making them more rigorous in their evaluation than the group of students who did not receive any kind of previous stimulus.

For the analysis of the collected data, descriptive statistics and the Tukey test – Honest Significant Difference (HSD) of multiple comparisons of means were used in order to achieve the objective of this work it was necessary to compare the responses of the different participating groups (Test and Control) and to identify those who presented significant differences in mean responses.

4 RESULTS ANALYSIS

4.1 RESPONDENTS PROFILE

From the sample selection, it is possible to observe that 26 students are male, corresponding to a percentage of 60.4%, of

these 11 belong to the Test Group and the remaining 15 belong to the Control Group. The female sex is represented by 17 responses, totaling a percentage of 39.6%, with 11 belonging to the Test Group and the remaining 6 belonging to the Control Group.

As for the period of the course, 27 responses were obtained from the students attending the first period, representing 62.8% of the total, 14 of which were related to the Test Group and the other 13 to the Control Group. Due to the low number of students in the last period of the course, only 16 responses were obtained from the ninth period, totaling a percentage of 37.2%, of which half belong to the Test Group and another half to the Control Group.

Regarding the students' age group, it was observed that the predominance of students was between 20 and 24 years, thus corresponding to 46.5% of the respondents. On the other hand, students aged up to 19 years are the minority, that is, only 11.7%, followed by those aged over 30 years, with 13.9%. A fact that can be explained as a result of most of the sample selection is concentrated in the first period of the course, where the majority of students are younger, as summarized in Table 1.

Table 1 - Participants profile

Characteristic	Test Group	%	Group Control	%	TOTAL	%
Gender	22	51.2%	21	48.8%	43	100%
Male	11	25.6%	15	34.8%	26	60.4%
Female	11	25.6%	6	14.0%	17	39.6%
Period	22	51.2%	21	48.8%	43	100%
1°	14	32.6%	13	30.2%	27	62.8%
9°	8	18.6%	8	18.6%	16	37.2%
Age group	22	51.2%	21	48.8%	43	100%
up to 19	3	7.0%	2	4.7%	5	11.7%
20 to 24	9	20.9%	11	25.6%	20	46.5%
25 to 29	5	11.6%	7	16.3%	12	27.9%
above 30	5	11.6%	1	2.3%	6	13.9%

Source: survey data.

Unlike the baseline reference, it also sought to identify whether students had already acquired any knowledge about the theme "fraud" in the classroom and in which discipline this content was approached. Table 2 summarizes this information, detailing its representativeness in the sample.

Table 2 - Knowledge about fraud

During the accounting course did you acquire knowledge about fraud?	Subjects							
	Audit I and II.	%	Audit I and II, Expertise and Ethics.	%	Others	%	Total	%
Yes	7	16.3%	9	20.9%	2	4.7%	18	41.9%
No	-	-	-	-	-	-	25	58.1%
Total							43	100%

Source: survey data.

The findings show that 58.1% of the students did not acquire any knowledge about the subject, being these students beginners in the course. On the other hand, 41.9% said they had already discussed the subject during the undergraduate course, especially students from the last period who had already attended the courses Audit I and II, Accounting Expertise and Ethics of the Accounting Professional (20.9%), and only two students from the first period of the course said they had discussed these subjects in the subjects of Introductory Accounting and Tax Accounting.

It can be observed that, as students advance in the Accounting Sciences course, the theme 'fraud' is gradually discussed in the classroom, gaining greater emphasis in the last periods of the undergraduate course, when it is assumed that students can attend the disciplines of audit and accounting expertise. On the other hand, results indicate the need for a subject as recurrent in organizations as accounting fraud to be further explored during undergraduate education since such a subject is addressed only in specific disciplines.

When asked whether they perform any paid or unpaid activity, 51.16% of the students answered no. Of the 48.84% of students who confirmed exercising some activity, only 13.95% said they worked in the accounting area, and the activities developed by them were focused on the personal, tax, accounting, and research sectors.

It is verified, therefore, that students' knowledge about accounting fraud is provided by the university since most participants of the experiment do not have practical experiences related to the accounting area, especially concerning the activities of Audit and Accounting Expertise. Thus, educational entities must bring real cases to be discussed in the academic context to reduce the distance between teaching and practice.

4.2 THE PRIMING EFFECT ON THE JUDGMENT OF FRAUDULENT SITUATIONS

4.2.1 Priming in relation to respondents' knowledge

In order to identify the priming effect in the judgment of questionable attitudes taking into account participants' prior knowledge about the treated theme, the groups were segregated according to the period of the course (first period or ninth period) and in relation to the type of questionnaire received, with textual incentive (TG) or without a textual incentive (CG), as shown in Table 3.

Table 3 - Averages of the responses of the groups in relation to knowledge on the subject

Scenarios	Severity						Punishment					
	1st period			9th period			1st period			9th period		
	Average		Sig	Average		Sig	Average		Sig	Average		Sig
	CG	TG		CG	TG		CG	TG		CG	TG	
I. Use variable costing method in the calculation of the costs of the products, knowing that this is not accepted in Brazil.	4.3	3.7	0.4	3.3	3.5	0.9	3.6	3.3	0.9	2.5	3	0.8
II Recognize revenues from contracts not yet executed, aiming to inflate profit.	4.3	4.1	0.8	4.5	4.6	0.9	4.2	3.8	0.7	4.3	4.7	0.9
III. Evidence of non-existent assets, such as alleged deposits in international banks.	3.8	4	0.9	5	4.6	0.9	3.9	3.8	0.9	5	4.6	0.3

IV. Frequently change the format of financial reports, aiming to hide irregularities and make comparability difficult	4.3	4.5	0.8	4.2	4.8	0.5	4.2	4.5	0.9	4.2	4.8	0.9
V. Recognize expenses without the necessary supporting documents.	3.5	3.8	0.9	3.8	4.2	0.9	3.3	3.6	0.9	3.8	4	0.6
VI. Practice aggressive pricing in order to inflate revenue.	3.2	3.7	0.7	2.3	3.6	0.7	3	3.7	0.6	2.5	3.6	0.8
VII. Pretend not to see minor fraud in a financial report in order to avoid further work.	4	4.2	0.9	4.5	5	0.8	4.4	4.3	0.9	4.5	4.7	0.9
VII. Issue an accounting report with relevant distortions about the company's financial position in order to assist it in raising loans.	4	4.2	0.9	4.6	4.5	0.9	3.2	4.2	0.1	4.3	4.5	0.9
IX. Failure to correct an error in the launch of an event that causes only qualitative distortions.	2.7	2.6	0.9	3.1	3.5	0.9	2.5	2.5	1	3.2	3.2	0.7
X. Take advantage of one's position to subtract cash from the company.	3.8	4	0.9	4.5	4.6	0.9	3.5	4.2	0.5	4.5	4.6	0.6
XI. Make an investment that favors someone personally	4	4	1	4.3	4.6	0.9	3.9	4.0	0.9	4.5	4.6	0.9
XII. Receive bribes to certify that fraudulent accounting reports are free from material misstatement.	4	4.7	0.1	5	4.7	0.9	4.6	4.9	0.4	5	4.8	0.6

Source: survey data.

Analyzing the responses for each of the proposed scenarios, it is noteworthy that in relation to the severity of the situation, the TG of the first semester and the ninth semester of the course had higher mean responses compared to their peers in the CG in eight (III, IV, V, VI, VII, VIII, X, and XII) and nine (I, II, IV, V, VI, VII, IX, X, and XI) proposed scenarios, respectively. As for the punishment deserved for the one who commits such an attitude, again, the highest means are manifested by the TG of the first semester in seven scenarios and the TG of the ninth semester in ten of the twelve situations presented. It means the students who received the priming were more severe in their assessments.

In this sense, intrinsic motivation seems to contribute to improving the processing of specific information, consequently resulting in the quality of judgments (KADOUS; ZHOU, 2019). Similar to the findings of previous works (BONFIM; SILVA, 2019; FARJADO; LEÃO, 2014; WELSH; ORDÓÑEZ, 2014), where the results reveal that moral reminders tend to reduce the dishonesty of individuals, influencing their judgment, since the individuals who received the textual incentive judged as more serious the questionable and punishable acts.

Analyzing Graph 1, it is possible to see that in six scenarios (IV, V, VI, VIII, X, and XII), the TG of the first semester assigned higher scores for both severity and punishment since the most stringent punishments were attributed to the most severe faults. In a similar experiment, Farjado and Leão (2014) verified the existence of a positive correlation between the severity of the situation and the punishment given to the one who commits them.

Graph 1 – Mean severity x punishment of the first semester



CG1 – First Semester Control Group

TG1 – First Semester Test Group

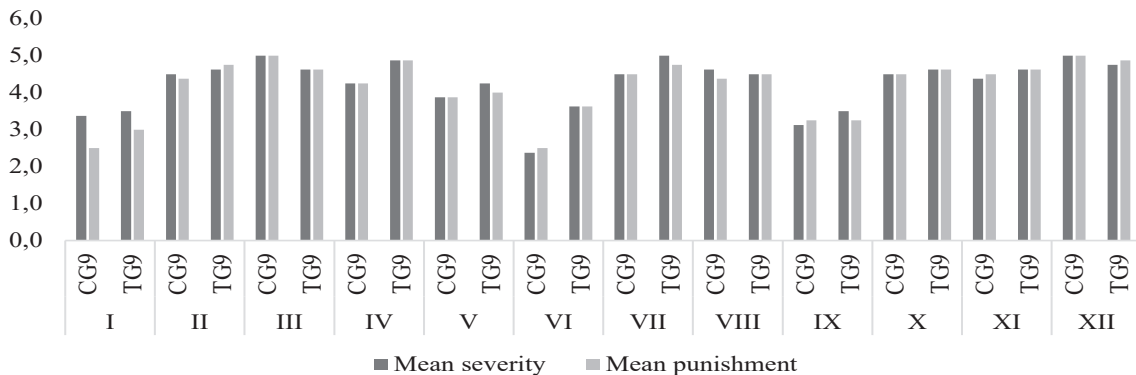
Source: prepared by the authors. Research data.

Also, when analyzing Graph 1, it should be noted that the participants attributed higher scores, both with regard to the severity of the act and the punishment deserved, to case XII, which addresses the receipt of bribes to confirm that fraudulent accounting reports are free from relevant distortions. The lowest score was assigned to case IX, revealing that students are more lenient when it comes only to distortions in the qualitative aspect of accounting information. Therefore, the data suggest that the magnitude of the consequences of dishonest accounting acts affects the dimensions of students’ moral intensity (OBOH, 2019).

These results indicate that unethical behavior is judged with greater severity when it exposes an illegal act than a violation of professional standards (SHTUDINER; KLEIN, 2020). According to Mazar, Amir, and Ariely (2008), individuals are more often willing to commit mild indiscretions that can be easily justified than more severe ethical violations that may harm their moral self-concept.

Graph 2 shows that in eight scenarios (I, II, IV, V, VI, VII, IX, and XI), the TG of the ninth semester attributed both the highest severity and the punishment to the offenders. Compared with the first semester, it is noticed that at the end of the course, these two variables (severity and understanding) are more restricted as the number of controlled scenarios is greater.

Graph 2 – Mean severity x punishment of the ninth semester



CG9 – First Semester Control Group

TG9 – First Semester Test Group

Source: prepared by the authors. Research data.

Both Table 3 and Graph 2 show that of the participants exposed to priming, the graduating students, who claimed to have discussed the topic in the classroom, obtained higher scores than the beginning students in the course in nine of the twelve scenarios, thus demonstrating alignment with Feil, Diehl and Schuck (2017) when they observed that the technical knowledge related to the theme has an impact on the ethical behavior of individuals.

To Oboh (2019), an individual's moral intensity can vary substantially, with some issues reaching high levels and others reaching low levels. These findings confirm the significant and positive relationship between consequence severity and recognition, judgment, and ethical intention. Similarly, the results of Silva, Freire and Silva (2016), suggested a behavior more geared toward teleological ethics, where the intention to act is influenced by the consequence of the act. According to the authors, there is an inverse relationship between the severity of the act and unethical intention, that is, the greater the severity of the act, the lower the intention to act dishonestly.

However, contrary to the initial proposition, none of the scenarios presented statistical significance regarding differences in the averages of responses between the participant groups. A possible explanation for the common judgment of the individuals surveyed is that the corruption that leads to the practice of fraudulent acts may be derived both from individuals themselves and from organizations, and because they are inserted in the same social context, they may have the same perception about what illegal manipulative acts are (PINTO; LEANA; PIL, 2008).

Hence, it is worth mentioning that as they are in the same social context as the university, these students have a similar view about dishonesty in the accounting aspect. As they do not have practical experience since most do not exercise paid activity in the area, they may not have practiced or had the opportunity to practice such an act, maintaining their moral self-concept to the same degree.

Moreover, fraudulent behavior can be rationalized when committed (ANAND; ASHFORTH; JOSHI, 2004) and influenced by the self-concept that people have about their honesty, which serves as a limit for individuals to be able to commit dishonest acts without feeling like a criminal (ARIELY, 2012; MAZAR; AMIR; ARIELY, 2008; MAZAR; ARIELY, 2006). Thus, even if the dishonest act offers high benefits to the individual, low risk of being discovered, and relatively weak punishments, the individual may still choose not to adopt a totally unethical stance, just so as not to negatively update their moral self-concept. Thus, it is believed that they have not committed or had the opportunity to commit such an action, holding themselves to the same moral standard.

4.2.2 Priming in relation to the respondents' gender

For the purpose of identifying the influence of priming on the judgment of questionable attitudes taking into account the gender of the participants, the groups were segregated according to their gender, male or female, and the type of questionnaire received, with the textual incentive (TG) or without the textual incentive (CG), as shown in Table 4.

Table 4 - Averages of the group responses in relation to the gender of the respondent

Scenarios	Gravity						Punishment					
	Male			Female			Male			Female		
	Averages		Sig	Averages		Sig	Averages		Sig	Averages		Sig
	CG	TG		CG	TG		CG	TG		CG	TG	
I. Using the variable costing method in determining product costs, knowing that this is not accepted in Brazil.	4.1	3.5	0.4	3.5	3.7	0.5	3.4	2.9	0.4	2.5	3.5	0.6
II. Recognizing revenues from contracts not yet executed, aiming to inflate profit.	4.6	4	0.2	4	4.6	0.3	4.4	3.5	0.3	3.8	4.8	0.4
III. Evidencing of non-existent assets, such as alleged deposits in international banks.	4.2	3.8	0.4	4.3	4.7	0.5	4.2	3.3	0.4	4.5	4.9	0.5
IV. Frequently changing the format of financial reports, aiming at hiding irregularities and making comparability difficult.	4.5	4.5	0.3	3.6	4.8	0.4	4.5	4.5	0.3	3.5	4.7	0.4
V. Acknowledging expenses without the proper supporting documents.	3.6	3.3	0.4	3.8	4.6	0.5	3.6	3	0.51	3.5	4.5	0.6
VI. Aggressive pricing with the goal of inflating revenue.	2.7	3.0	0.4	3.3	4.2	0.6	2.7	3.0	0.5	3	4.2	0.7
VII. Pretending not to see small frauds in a financial report in order to avoid more work.	4.6	4.1	0.4	3.3	4.8	0.5	4.6	4.0	0.3	4	4.9	0.4
VIII. Issuing an accounting report with relevant distortions about the company's equity situation in order to assist the company in raising loans.	4,4	4,3	0,3	3,8	4,2	0,4	4	4,3	0,4	2,8	4,2	0,5
IX. Not correcting an error in an event posting that causes only qualitative distortions.	3,4	2,4	0,5	1,5	3,4	0,6	3,0	2,5	0,6	2,1	3,0	0,7
X. Taking advantage of one's position to subtract money from the company.	4,4	4	0,4	3,3	4,4	0,5	4,3	4,1	0,4	2,8	4,5	0,6
XI. Making an investment that favors you personally.	4,4	4	0,4	3,5	4,5	0,5	4,3	4,0	0,4	3,6	4,4	0,5
XII. Receiving a bribe to attest that fraudulent accounting reports are free of material misstatements.	4,5	4,6	0,3	4,1	4,9	0,4	4,7	4,9	0,1	5	4,9	0,2

Source: research data.

By analyzing the mean scores attributed to the severity of the action, it is observed that the male CG obtained higher means in nine scenarios (I, II, III, V, VII, VIII, IX, X, and XI) against only three of their respective TG. When female students' responses were verified, the TG attributed the highest means in all scenarios. As for the punishment, the CG of male students assigned higher means in eight scenarios (I, II, III, V, VII, IX, X, and XI) against only four of their TG. In the female participants, the TG presented the highest means in eleven (except for the XII) of the twelve proposed scenarios.

Analyzing the difference between genders the experiment showed statistical significance in terms of severity in only two scenarios. Case VII refers to pretending not to see small frauds in a financial report in order to avoid further work (0.552), and case IX, deals with failing to correct errors in the launch of an event that causes only qualitative distortions (0.693). Concerning the punishment, it also showed statistical significance in only two scenarios, case VIII, related to issuing an accounting report with relevant distortions about the company's financial situation in order to assist it in raising money through loans (0.536) and case X, that talks about taking advantage of one's position to subtract cash from the company (0.611).

It can be observed that, regarding severity, statistical difference was presented in the scenarios where individuals demonstrated low relevance. As for punishment, statistical difference was observed in the scenarios where the action would harm others. For Grosch and Rau (2017), the effect of gender on fraudulent behavior is mediated by that of the individual's social value, as people who are more pro-social face higher psychological costs when their immoral act has negative consequences for others. Their study shows that, on average, women exhibit high social value, which translates into more ethical behavior than men's behavior.

In the other cases, no statistical significance was demonstrated in the difference

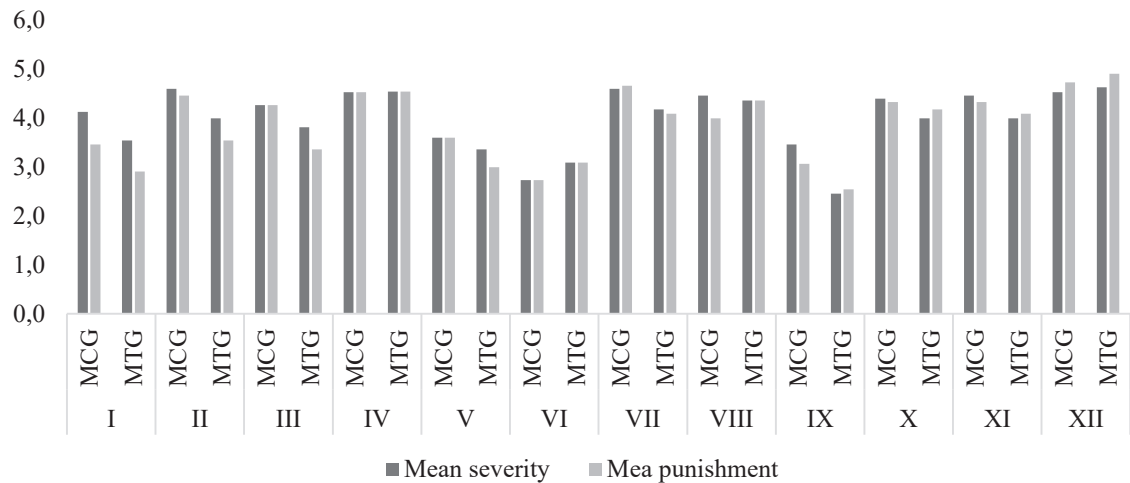
of the means of the answers between the analyzed groups. At this point, the findings corroborate Oboh (2019) in concluding that gender has no influence in ethical decision-making and opposes the results of Silva, Freire, and Silva (2016) in stating that the female gender tends to be more ethically inclined and the results of Feil, Diehl, and Schuck (2017) who observed the existence of more ethical attitudes by female students.

A possible justification for this relationship is that people are more accepting of unethical conduct when it develops gradually over time and not abruptly (GINO; BAZERMAN, 2009). Thus, the way the scenarios were presented in the experiment may have impacted the student's decision not to agree with the fraud situations presented.

Another possible explanation for these results is the use of different texts in the experiment, which may have created the demand effect. Thus, because the base text visibly refers to a situation of accounting fraud, the textual incentive may have been too evident and provoked the activation of the conscious process of choosing answers with high ethical standards, making the participants feel the need to consciously evaluate the scenarios more strictly (FARJADO; LEÃO, 2014).

Despite the absence of statistical significance, Graph 3 shows that male individuals aligned punishment with severity in the CG as, of the nine scenarios in which they attributed greater severity than the TG, eight of them (I, II, III, V, VII, IX, X, and XI) were also the ones who received the severest punishments for offenders.

Graph 3 – Mean severity x punishment of the male gender



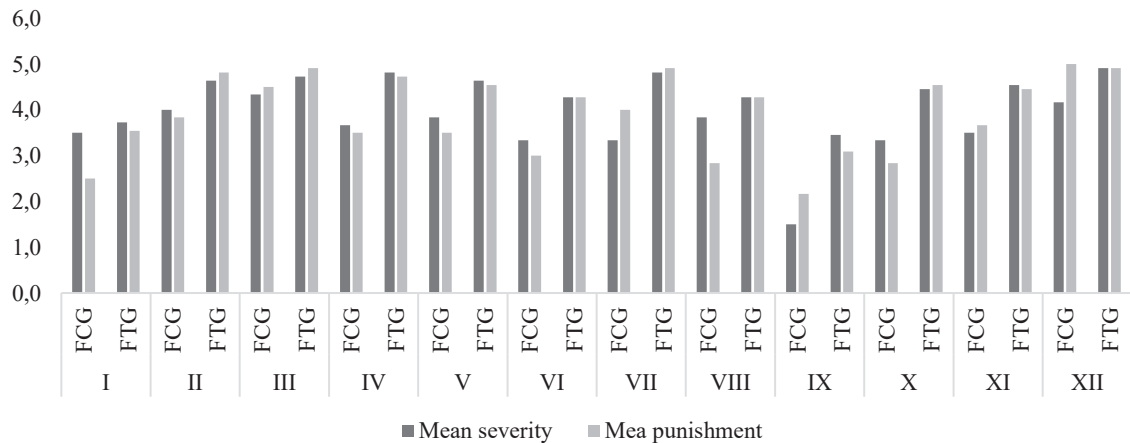
MCG – Male Control Group

MTG – Male Test Group

Source: prepared by the authors. Research data.

Graph 4 shows that female individuals also aligned punishment with severity. However, unlike males, the TG presented this greater alignment when compared to the CG. Eleven of all the scenarios showed consistency between the two variables (except XII).

Graph 4 – Mean severity x punishment of the female gender



FCG – Female Control Group

FTG - Female Test Group

Source: prepared by the authors. Research data

Analyzing the severity and punishment of the two genders, one realizes that the assignments of scores between the two variables were aligned, differing only in relation to the predominance of CG and TG for males and females, respectively.

It is noticeable that without the textual incentive, males tend to be more rigorous in their

judgment since when comparing the answers from the CG alone, it can be seen that, both in relation to severity and punishment, males attributed higher averages. On the other hand, it is noteworthy that when exposed to priming, that is, in the TG, females stand out with the highest averages in all twelve situations presented.

Thus, although no statistical significance was found in general, the findings suggest that female individuals have greater sensitivity to the effect caused by priming since, when exposed to a textual preparation, they tend to consider with greater severity questionable behaviors and are susceptible to more stringent punishments compared to the assessment of the opposite sex.

Given all the findings, it is statistically verified that priming does not influence the ethical decision of individuals in order to assess fraudulent situations more severely and, consequently, be susceptible to greater punishments. Although the TG of the ninth semester and the females expressed higher means, the experiment showed no statistical difference in the responses of the groups to the proposed scenarios, demonstrating no influence of priming in relation to previous knowledge about the topic and the student's gender. On the other hand, it was observed that the magnitude of the consequences of fraudulent accounting acts affects the intention to act honestly or not and that there is a relationship of proportionality between the severity attributed to the action and the punishment deserved by the offender since the greater punishments were attributed to the acts considered more severe.

5 FINAL CONSIDERATIONS

The present research aimed to analyze the influence of the priming effect on the judgment of fraudulent situations from the perspective of Accounting Science students, taking into account the prior knowledge of the subject addressed and the gender of the student. To this end, an experimental study was carried out with 45 students from the first and last

periods of the Accounting Science course at the Federal Rural University of Semi-Arid Region, located in the city of Mossoró-RN, obtaining 43 valid answers.

In general, it can be stated that the participants of this research are sensitive to situations of accounting fraud and ethical-professional deviations since they attributed above-average scores to the seriousness of the situation and considered as very serious the punishments deserved by the offenders. Thus, reinforcing the idea that most students identify the moral issue involved in the scenarios and accept universal moral rules (SILVA; FREIRE; SILVA, 2016).

Taking the work done by Farjado and Leão (2014) as a reference, it was possible to form a new structure with the evaluation of scenarios more focused on the accounting area, containing twelve cases of situations involving accounting fraud and unethical conduct of the professional accountant, extracted from real cases that were disclosed in the national and international media.

However, the results of the research suggest that there is no difference in perception between the groups analyzed in relation to the knowledge of the participants, that is, priming seems to have no influence in the evaluation of fraudulent situations, although the individuals who received textual encouragement in the ninth period judged dishonest conducts as more serious and susceptible to more severe penalties. What can be drawn from these findings is that academia has provided a leveling in the ethical behavior of students.

It was also observed a proportionality relationship between the scores assigned to the seriousness of the situations and the punishment deserved by the offender who commits them since, as a rule, the stricter punishments were assigned to actions considered more serious. Therefore, it can be seen that light penalties or even impunity can lead people to commit certain dishonest attitudes, which implies the need for the application of sanctions as a strategy to inhibit this type of practice from occurring.

Despite the absence of statistical

significance in the difference in perception between the genders of the participants, regardless of whether male or female, they chose not to agree with the reported fraud situations. More specifically, women are more sensitive to exposure to priming, which could be explored in the organizational environment.

In comparison with the reference text, this paper brings advances with the inclusion of personal variables, such as the level of knowledge and gender of the respondents, in the analysis of the priming effect in the judgment of fraudulent situations since such aspects have so far only been evaluated separately.

Thus, the results obtained with the research aim to contribute to the process of combating accounting fraud since it was identified how this type of attitude unfolds over time. They also seek to contribute to the improvement of professional education as to the identification of fraudulent attitudes and the importance that, during the entire academic education, subjects related to this theme are approached in the classroom, with the purpose of keeping the moral self-concept of the students of the Accounting Science course at a high level.

Furthermore, the findings contribute by demonstrating that the moral self-awareness of accounting professionals can be constantly reviewed through continuing education, with the promotion of courses that address this subject. It also reinforces the need for professional education and regulation of professionals specialized in fraud detection in view of the enormous financial losses that such attitudes have caused in organizations.

As limitations of the research, we highlight the restriction of the sample analyzed and the difficulty in controlling the exposure time of the priming. Therefore, it is recommended for future research the opportunity to include a larger number of individuals, extending to accountants to identify the priming effect in relation to professional experience. In addition, other ways in which priming would influence people's judgment can be explored, through

manipulations such as intensity, duration of exposure to the textual incentive, and other forms of priming, such as images and sounds.

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