

A LOOK AT THE TRAITS OF *DARK TRIAD* AND THE CULTURAL VALUES OF ACCOUNTING STUDENTS

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Abstract: The relationship between the cultural value of students of Accounting Sciences and the non-pathological personality traits that make up the Dark Triad is analyzed. This is an empirical approach involving 1,404 Accounting students in 21 Brazilian public and private institutions. Data collection, through a questionnaire, revealed the preponderance of the characteristics which refer to Machiavellianism. In regard to cultural values, students were more inclined towards Individualism. The study also observed that the higher the levels of the personality traits of the Dark Triad, the greater the cultural values of Individualism, Masculinity, and the less the agreement to accept hierarchical inequalities that refer to the cultural value Distance to power. Finally, the study evidenced that the three traits corroborate the probability of students externalizing individualistic and masculine cultural values. These results instigate the reflection and the national debate on education policies in Accounting that can be created by Higher Education Institutions, with a view to interfering early in the academic environment, with dishonest attitudes motivated by the personality traits of the Dark Triad and with not always positive cultural values, which generate social, economic and financial consequences for the main users of accounting information.

Keywords: Dark Triad; Personality; Cultural Value; Accounting Education.

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▪ DOI: <http://dx.doi.org/10.14392/asaa.2019120110>

▪ Paper apresnetado no 2018 American Accounting Association Annual Meeting.

▪ Article submitted on: 10/15/2018. Submitted to new round on: 03/08/2019. Accepted: 05/26/2019.

UM OLHAR SOBRE OS TRAÇOS DO *DARK TRIAD* E OS VALORES CULTURAIS DOS ESTUDANTES DE CONTABILIDADE

Resumo: A relação entre os valores culturais dos estudantes de Ciências Contábeis e os traços de personalidade, não patológicos, que compõem o *Dark Triad* é analisada. Trata-se de abordagem empírica, envolvendo 1.404 estudantes de contabilidade em 21 instituições públicas e privadas brasileiras. A coleta de dados, por meio de um questionário, revelou a preponderância das características que remetem ao Maquiavelismo. Sobre os valores culturais, constatou-se maior inclinação dos estudantes para o Individualismo. Observou-se ainda que quanto mais altos os níveis dos traços de personalidade do *Dark Triad*, maiores os valores culturais do Individualismo, Masculinidade e menor a concordância para aceitação de desigualdades hierárquicas que remetem ao valor cultural Distância ao poder. Por fim, evidenciou-se que os três traços corroboram a probabilidade de os alunos exteriorizarem valores culturais individualistas e masculinos. Esses resultados instigam a reflexão e o debate nacional sobre políticas educacionais em contabilidade que podem ser criadas pelas Instituições de Ensino Superior, com o intuito de interferir ainda no ambiente acadêmico, atitudes desonestas motivadas pelos traços de personalidade do *Dark Triad* e valores culturais nem sempre positivos, que geram consequências sociais, econômicas e financeiras aos principais usuários da informação contábil.

Palavras-chave: *Dark Triad*, Personalidade, Valores Culturais, Educação contábil.

1. INTRODUCTION

The *International Education Standards* (IES) are the subject of scientific research in accounting. These standards recommend technical skills, a holistic view of the knowledge and abilities needed by accounting professionals (IES 2, 2015), in addition to intellectual, interpersonal, personal and organizational skills (IES 3, 2015), as well as skepticism, professional judgment, values, ethics and professional attitudes (IES 4, 2015).

Investigations in the field of accounting education which have focused on studying the norms of accounting education highlight the importance of considering personality (Wheeler, 2001; Mohamed & Lashine, 2003), self-esteem and self-confidence as integrating elements to professional accounting training (Mohamed & Lashine, 2003). Within this conception, this study analyzes the three personality traits that make up the Dark Triad, and the cultural values of accounting students, assuming that these variables together integrate the formation of these students, and are reflected in the attitudes and behaviors of future professionals.

The Dark Triad is considered a “constellation” or cluster that conceptually brings together non-pathological personality traits of Machiavellianism, Narcissism, and Psychopathy (Paulhus & Williams, 2002), as measured by the Short Dark Triad (SD3) instrument by Jones and Paulhus (2014) for social research, without the purpose of clinical diagnosis. Conceptually, the trait of Narcissism is characterized by grandeur, exhibitionism, self-admiration, vanity and attention seeking. Machiavellianism, in turn, is endowed with characteristics that refer to manipulation, cynicism, tactics and strategy. Psychopathy, on the other hand, is characterized by its charm and superficial charm, impulsiveness and lack of guilt or remorse. The three personality traits have in common insensitivity, dishonesty, lack of affability and manipulation (D’Souza, 2016).

The Dark Triad theme and each of its three personality traits, individually, have been the object of several studies in management and accounting related to various subjects, including: leadership style (Nair & Kamalanabhan, 2010), measurement of uncertainties, using accounting information (Majors, 2015), opportunistic decision making (D’Souza & Lima, 2015), counterproductive behavior in work environments (O’Boyle, Forsyth, Banks, & McDaniel, 2012).

In the educational field, the traits that make up the Dark Triad have been related to academic dishonesty (Baughman, Jonason, Lyons, & Vernon, 2014; Avelino & Lima, 2014; Brunell, Staats, Barden, & Hupp 2011), career choice in accounting (D’Souza and Lima, 2018), academic fraud (Bailey, 2015) and dysfunctional effects in organizational environments (Bogdanovic & Cingula, 2015).

Regarding investigations that discuss the relationship of these traits with cultural values, Jonason et al. (2017) realized that the Dark Triad facilitates opportunistic and strategic exploration in individuals, but also, in some geographically different situations or environments, it may result in desirable and beneficial attitudes to society.

Within this framework, studies discuss the relationship of these traits with values that refer to the cultural dimensions enunciated by Hofstede (2001, 2003), such as individualism (Yetiser, 2014) and distance to power (Robertson, Datu, Brawley, Pury, & Mateo, 2016). Individualism, which contrasts with collectivism, represents the degree to which individuals are integrated into social groups, and the distance to power presents the degree to which society or group is willing to accept social inequalities (Shome & Rao, 2009).

In this context, this study aims to elucidate the following research problem: What is the relationship between the cultural values of Accounting students and the three personality traits of the Dark Triad? A survey was conducted with 1,404 Accounting students in the Brazilian territory, through a self-report questionnaire. The results pointed to the preponderance of the characteristics that refer to Machiavellianism and to a greater inclination of students towards Individualism. The study also observed that the higher the levels of Dark Triad personality traits, the greater the cultural values of Individualism, Masculinity and the lower the level of agreeableness to accept hierarchical inequalities that refer to the cultural value Distance to Power. Finally, the study highlighted that the three traits corroborate the probability of students' externalizing individualistic and masculine cultural values.

Given the above, the study results contribute to the context of accounting research, as it offers theoretical and practical contributions. Theoretically, it presents a multidisciplinary research at the intersection of Accounting, Psychology and Anthropology, mainly, because most investigations that study cultural values focus on the analysis of perception and adherence of the skills and competences of the norms in accounting education or learning styles (Auyeung & Sands, 1997; Hamann, 2011; Sugahara & Boland, 2010; Teoh, Serang, & Lim, 1999). And those who investigate the influence of personality (Wheeler, 2001) and its correlation with cultural values (Briggs, Copeland, & Haynes, 2007; Kovar, Ott, & Fischer, 2003) have indicated personalities based on the psychological types enunciated by Carl Gustav Jung, such as extroversion, introversion, perception and judgment.

This study, therefore, differs from and broadens previous research by bringing to national debates the reflection on the theoretical and practical implications of students (future professionals) rich in characteristics which refer to the personality traits of the Dark Triad and to the cultural values that manifest themselves in unwanted attitudes and behaviors of aspiring accounting professionals. Although the study was not applied across countries, cultural values can be verified in an organization, profession, age group, gender or family, as stated by Hofstede (2003). The research by Hofstede, Hilal, Malvezzi, Tanure, & Vinken (2010), for example, showed different cultural values between regions of the Brazilian territory.

It is also important to discuss the interface between personality traits and individualistic, masculine and distance to power cultural values, since, according to Kroeber and Kluckhohn (1952), the discussion about the influence and interaction between these two themes allows for the understanding of human behavior, above all, because culture is manifested in and through personality.

It is noteworthy that the results of this study are not intended to modify the personality traits of students, but are based on the conception that the academic environment can influence, broaden or limit the personality of individuals. The American Psychological Association (APA) states that personality traits are relatively stable, consistent, permanent (Vandenbos, 2010), but are subject to influences from the environment in which the individual is inserted, such as social and cultural factors (Allport, 1937; 1961).

Thus, the findings allow for the reflection on educational accounting policies that can be created by Higher Education Institutions, in order to further interfere with the academic environment, with dishonest attitudes motivated by Dark Triad personality traits, and with not always positive cultural values, which generate social, economic and financial consequences for the main users of accounting information.

Finally, it points to the need for educational institutions and educators to emphasize and promote debates in academia about the consequences of unethical behavior for individuals, the profession and the public, arising from unethical values and professional attitudes. Although there is a concern in accounting research about the ethical dilemmas that students and future accounting professionals will face throughout their careers, studies on subjective factors, such as personality and cultural values that

are externalized in students' behavior, deserve to be highlighted, and therefore integrates the training of future accounting professionals.

2. THEORETICAL REFERENCES AND RESEARCH HYPOTHESES

This section discusses the conceptual aspects of Dark Triad's personality traits, the conceptual aspects and cultural dimensions, as well as the theorization of variables by reviewing the previous literature on the Dark Triad and cultural values.

2.1 Dark Triad Personality Traits

The personality traits of the Dark Triad (Narcissism, Machiavellism, and Psychopathy) exhibited overlapping paired characteristics and common characteristics evidenced by the moderate correlation between them, which was corroborated by further studies (Paulhus & Williams, 2002; Jones & Paulhus, 2014). The mentioned studies showed higher scores for the Machiavellian trait, followed by Narcissism and lastly Psychopathy.

When one studies the characteristics of the three traits individually, one notes that Narcissism was a trait initially considered as an attribute related to sexual pleasure through exaggerated self-admiration and the individual's instinctive libidinal selfishness (Freud, 1914). Subsequent studies reinforce that sub-clinical narcissistic individuals manifest authority, self-sufficiency, superiority, exhibitionism, exploitation, vanity, sense of entitlement (Raskin & Terry, 1988), self-centeredness, reinforcement of self-image, desire for exaltation, praise, admiration, applause and see others as inferior, for believing that they are different and special (Judge, Piccolo, & Kosalka, 2009).

Machiavellian trait studies consider the philosophical conceptions of Niccolò Machiavelli, an Italian political advisor who published *The Prince*, a notoriously popular book that preached that the politician's cunning is based on lies, cynicism, self-centeredness, interpersonal manipulation and persuasive power (Christie & Geis, 1970). One phrase that marked Machiavelli's conceptions was: "The ends justify the means." For him, cunning means that could lead to the achievement of political goals justified the attitudes of managers. They used strategy, calculation and rationality to make decisions (Jones & Paulhus, 2009; Judge, Piccolo, & Kosalka, 2009). Machiavellian-rich individuals exteriorize cheating behaviors for their own benefit (Jakobwitz & Egan, 2006), are cynical, cold, pragmatic, show immoral beliefs and insensitivity (Rauthmann & Will, 2011).

With regard to subclinical psychopathy, this trait shows high impulsivity, emotion seeking, low empathy, emotional detachment and anxiety (Paulhus & Williams, 2002). Superficial and deceptive charm, self-centeredness, lack of guilt or remorse, deception, manipulative spirit, irresponsible behavior, dishonesty, lack of principles and a tendency to violate explicit social norms are striking attributes of everyday psychopaths (Garcia, Adrianson, Archer, & Rosenberg, 2015; Vandenbos, 2010).

The Dark Triad theme inspires business and educational research. In the business area, D'Souza (2016) developed a study with Brazilian managers and observed the tendency to manipulate results when motivated by an award. In the sequence, D'Souza, Lima, Jones, and Carré (2019) discussed less dark or brilliant behavior when analyzing the moderate traits of the Dark Triad, even when managers are motivated to manipulate results to maximize personal and business gains. The discussion argues that the vision and charisma of narcissistic individuals, the strategy and tactics of Machiavellian individuals,

and the creativity and good strategic thinking of psychopathic individuals are differentiating features that enhance successful and integrative leadership.

In the educational area, the findings of Avelino and Lima (2014) contrast with the dark nature of narcissistic traits, by verifying that students of Accounting Science courses, with evidence of these traits, externalized a low propensity for academic dishonesty. Brunell et al. (2011) found that students who manifested narcissistic exhibitionism were more likely to commit fraud to impress other peers and achieve academic success.

Lima, Souza, and D'Souza (2016) investigated Narcissism and the profile of participants of a Brazilian congress of accounting students, and realized that those rich of this trait presented remarkable characteristics of authority and exhibitionism. Males and students from private institutions turned out to be more narcissistic. Bailey (2015) also noted among junior, senior, and graduate students from various universities that those rich in psychopathy are willing to accept a variety of unethical or fraudulent practices.

D'Souza and Lima (2015) evidenced with Brazilian postgraduate students in the business area, the willingness for opportunistic decision making, when they studied the influence of the three traits that make up the Dark Triad. Bogdanovic and Cingula (2015) studied the traits within Croatian and Canadian business students, and found that Croatians had more characteristics that refer to the traits, which, according to the authors, is justified by the social determinants of the examined Croatian population.

The three traits of Dark triad were also the object of study by D'Souza and Lima (2018) who investigated within Brazilian students the reasons for choosing a career, and showed that the auditing and accounting careers in private organizations are the most desired, motivated by job satisfaction and good pay. The traits boosted interests associated with Manipulation, Superiority, Exhibitionism, and Power.

It is worth highlighting here the difference in attitudes and behaviors when discussing personality traits. Although attitudes may lead to the intention to behave in a certain way, attitudes may not be consummated depending on the situation or circumstances (Bowditch & Buono, 1992). Behavior, on the other hand, "[...] are specific actions directed at a target object, always occurring in a situational context or environment and at a particular moment" (Peter & Olson, 2009, p. 149). The present study intends to highlight the students' attitudes, employing as the data collection instrument a questionnaire that uses the Likert agreement scale.

As cultural values can influence personality, according to the studies by Allport (1937; 1961), who consider that traits are differentiating characteristics that govern behavior and are subject to social, environmental and cultural influences, they vary according to the situation, and present interrelationships and overlaps (Allport, 1937; 1961). Therefore, it is important in this study to discuss the conceptual aspects and investigations that have focused on the cultural approach.

2.2 Culture: conceptual aspects and dimensions

Hofstede and McCrae (2004) define culture as "The collective programming of the mind that distinguishes members of one group or society from others" (p. 58). Thus the mind stands for thought, feeling, and action and, as a consequence, for beliefs, attitudes, and abilities. Therefore, culture is: (a) collective, not an individual attribute; (b) not directly visible, but manifested in behaviors; and (c) common to some but not all people.

From this perspective, Hofstede (1984) developed a study of 71 countries, of which 40 countries in the sample presented reliable results from 1967 to 1973. The questionnaire was translated into 20 languages and applied to IBM employees and subsidiaries. The findings allowed the authors to categorize

culture in five dimensions: Distance to Power, Individualism vs. Collectivism, Masculinity vs. Femininity, Uncertainty Aversion, and Short Term Guidance vs. Long term, according to table 1:

Table 1: Characteristics of cultural dimensions proposed by Hofstede (2003)

Dimensions	Characteristics
Distance to power or Hierarchical Distance	Hofstede (2003) observed how the least influential members of organizations and institutions accept and expect power to be distributed. Countries where few people hold power, such as Japan, have shown a high rate of distance from power, as individuals accept and expect hierarchical inequality. Nevertheless, in countries where power is widely distributed, such as the US, where diverse people have influence in various spheres, especially because they have greater opportunities for education, employment and income and have the ability to achieve leader status, the distance index. power was low (Brislin & Lo, 2006; Hofstede & McCrae, 2004).
Individualism vs. Collectivism	In this dimension, the level of integration of individuals within the groups was observed. In societies with a high individualistic index, such as the US and Eastern Europe, ties between individuals are loose. People take care of themselves and their immediate family. Self-interest, self-realization, and self-esteem prevail in individualistic societies. The relationship between employee and employer is a calculative, business relationship based on the assumption of mutual advantage. In societies with low individualism, considered by the authors to be collectivists such as Asia, South America and Africa, people are strongly integrated from birth and cohesive in groups (Hofstede, 2003; Hofstede & McCrae, 2004).
Masculinity vs. Femininity	In this dimension the findings showed how the division of emotional roles between men and women occurs. One company or group was considered Male (Austria, Italy, USA) when the rates of assertiveness, endurance, competitiveness, ambition and focus on material success were high. Regarding the Feminine, the predominant indices of delicacy, generosity, modesty and focus on quality of life were observed (Hofstede, 2001; 2003). In this regard, it is important to consider that Hofstede (2001) employs the adjectives masculine and feminine, relatively, because he understands that a man can behave in a feminine way and a woman can behave in a masculine way. Hofstede (2003) observed the level of stress in society in the face of ignorance of the future - the degree of discomfort associated with new, ambiguous and unstructured situations. On the other hand, in the Short term vs. Longer term dimension, the study evaluated the choice of focus for the efforts and perspective of future or present-oriented people (Hofstede, 2001; 2003).
Aversion to uncertainty (fear of change)	It refers to the choice of focus for people's efforts: the future or the present (Hofstede, 2001; 2003). This dimension was added in 1980, based on studies with students from 23 countries around the world through a questionnaire prepared by Chinese researchers. Values associated with long-term orientation are saving and perseverance; while the values associated with short-term orientation are respect for tradition and fulfillment of social obligations (Hofstede & McCrae, 2004).
Short versus long term orientation	It refers to the choice of focus for people's efforts: the future or the present (Hofstede, 2001; 2003). This dimension was added in 1980, based on studies with students from 23 countries around the world through a questionnaire prepared by Chinese researchers. Values associated with long-term orientation are saving and perseverance; while the values associated with short-term orientation are respect for tradition and fulfillment of social obligations (Hofstede & McCrae, 2004).

Source: Prepared by the authors

Regarding research in Brazil on the Brazilian cultural profile, Hofstede's¹ studies revealed that Brazilians behave in a collectivist, masculinized manner, accepting social inequalities, with aversion to uncertainty and indulgence. These dimensions of culture postulated by Hofstede (2001; 2003) contributed to research in business and accounting. The author understands accounting and its control systems as manifestations of culture, which differ from country to country. He says that behind the technical rituals of accounting are values that stem from cultural variation among peoples.

In the same vein, foreign and national researchers proposed to discuss the cultural influence on accounting systems (Harrison & Mckinnon, 1999; Gray, 1988), the influence of culture on the process of harmonization of international standards in Brazil (Weffort, 2005) and the organizational culture (Alves Filho, 2016; Casagrande, 2009).

Moreover, this motivated a comparative research (Hofstede et al., 2010) between Brazilian regions, using the Hofstede's Values Survey Module (VSM) instrument. The survey, in the five Brazilian regions, applied to managers, senior executives and employees of industrial, commercial and banking companies, did not have significant results for all dimensions, but it clearly highlighted the Individualism versus Collectivism factor. The main cultural findings of the study by Hofstede et al. (2010) are listed in table 2:

¹ Hofstede Model. Available at: <https://www.hofstede-insights.com/country/brazil/>. Access 2019.

Table 2: Cultural values in Brazilian regions

Brazilian regions	Features
South region	More hierarchical, less formal, more individualistic, and more masculine (achievement-oriented) region.
Southeast region including Brasilia city	Less masculine and more short-term region.

Midwest region	Less formal area.
Northeast region	Less hierarchical, more formal and less masculine area.
North region	Markedly informal, collectivist and very masculine (high level of assertiveness).

Source: Adapted from Hofstede et al. (2010)

It is also worth mentioning the studies that discuss cultural dimensions in the area of accounting education. Auyeung and Sands (1997) realized that students of Chinese society have a predisposition for collectivist activities. Australian students, in turn, highly value self-reliance and individual achievement. In the same vein, Sugahara and Baland (2010) findings suggested that the Japanese enjoy learning by observing, due to the relatively collective nature of learning. In contrast, Australian students, who tended more toward individualism in their learning, were more willing to learn from practice.

Teoh et al. (1999) noted that there are differences in cultural perception, revealing Indonesians as collectivists and Australians as individualists. Hamann (2011) investigated the relationship between cultural dimensions and learning style of 311 Accounting students in the Federal District. The results suggested a predominance of cultural values of masculinity, due to the greater evidence of affirmation, competitiveness and higher ambitions, associated with a learning style that privileges theory over practice.

The next section brings the literature review on the theorization of variables: Dark Triad personality traits and cultural values.

2.3 Dark Triad and cultural values: previous studies

Robertson et al. (2016) analyzed students from the US and the Philippines to understand the influence of Dark Triad traits with counterproductive behavior in the workplace, using the cultural distance to power dimension as one of the control variables. The narcissistic trait was positively related to the distance to power dimension in the sample of Filipino students, while US students who demonstrated traits of psychopathy also positively related to distance to power.

Yetiser (2014) observed that individuals from countries of individualistic cultures showed greater propensity for Machiavellian traits when compared to countries of collectivist culture. Since Machiavellians project individual gains over collective gains, individuals in individualistic societies tend to manipulate others to achieve their own goal. On the other hand, individuals from societies with collectivist cultures project community gain higher than their own; therefore, they show less Machiavellianism.

Jonason et al. (2017) verified, in six countries, the relationships between individual differences of independent (ambition, competition, masculine) and interdependent (communion, generosity, feminine) self-construction and the traits of the Dark Triad. Machiavellianism and narcissism were most strongly associated with independence. Men scored higher than women in the Dark Triad traits across all surveyed countries.

The presented studies motivate the continuation of investigations that explore the effect of Dark Triad's personality traits and cultural values, in particular the values related to cultural values that refer to the dimensions Masculinity versus Femininity, Individualism versus Collectivism, and Distance to power, mainly because the characteristics of these values are more closely related to the characteristics of the personality traits under study, such as ambition, competitiveness, self-esteem, self-interest and non-hierarchical acceptance.

That said, the research hypotheses are as follows:

- H1: There is a significant correlation between the traits that make up the Dark Triad and the cultural values of Masculinity, Individualism, and Distance to Power.

• H2: Accounting students with high personality traits that make up the Dark Triad are more prone to male values.

• H3: Accounting students with high personality traits that make up the Dark Triad are more prone to individualistic values.

• H4: Accounting students with high personality traits that make up the Dark Triad are less likely to accept cultural values from Distance to Power.

On the levels of traits, the study proposes the observation of the behavior of individuals in low, moderate and high degree. According to D’Souza, Lima, Jones, & Carré (2018) the moderate level may reveal desirable attitudes from those who exhibit Dark Triad traits.

3. METHODOLOGY

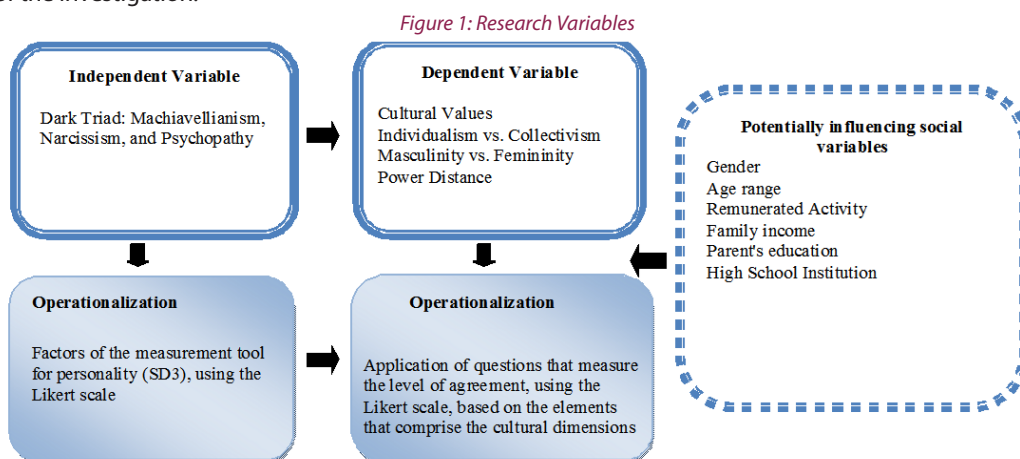
3.1 Approach, strategy and research sample

The survey was elected as a data collection strategy, based on the application of a self-report questionnaire, answered in person and online, from November to December 2016, comprising the Free and Informed Consent Form (ICF), and the survey of the demographic, social, cultural and personality profile of Accounting students. SD3 (Jones & Paulhus, 2014) was applied to measure Dark Triad’s personality traits. Cultural profiles Individualism vs. Collectivism, Masculinity vs. Femininity and Distance to power were verified through assertions that contain components of the conceptual elements of these cultural dimensions (Hofstede, 2001).

The sample was selected non-probabilistically and includes students enrolled in undergraduate courses in Accounting from 21 Brazilian Higher Education Institutions (IES), 12 public and 9 private. Although we are aware of the results of the study by Hofstede (2001) and Hofstede et al. (2010) in the Brazilian territory, with market professionals and graduate students, this research was applied to undergraduate students (future professionals) and brings up the discussion and interface with the theme of Dark Triad, which is an issue still little explored in the area of accounting education.

3.2 Search Variables

Figure 1 illustrates the research design, detailing the variables and respective operationalizations of the investigation.



Fonte: Elaborado pelos autores

The Dark Triad is the independent variable, by explaining the cultural values of Individualism vs. Collectivity, Masculinity vs. Femininity and Distance to power. The studies by Hofstede and McCrae (2004), applied in 33 countries, support this conception that personality traits correlate with the cultural dimensions proposed by Hofstede (2003).

Demographic (Gender and Age range) and social (Remunerated Activity, Family Income, Parental Education and High School Institution) variables are also considered as potentially influential in the model presented, because, according to Hambrick (2007), characteristics such as age, occupation in the company, functional experience, education, socioeconomic roots and financial position influence the personality of individuals, and enable a psychological view of human behavior.

3.3 Data Collection Instrument and Statistical Procedures

3.3.1 Personality Profile: SD3

To measure personality traits, SD3 (Jones & Paulhus, 2014) was used, consisting of 27 assertions, in Likert format (1 to 7 points), translated into Portuguese by D’Souza (2016), according to table 3.

Table 3: Assertions of the SD3 instrument (Jones and Paulhus, 2014) Assertions

Machiavellianism
It's not wise to tell your secrets.
I like to use clever manipulation to get my way.
Whatever it takes, you must get the important people on your side.
Avoid direct conflict with others because they may be useful in the future.
It's wise to keep track of information that you can use against people later.
You should wait for the right time to get back at people.
There are things you should hide from other people to preserve your reputation.
Make sure your plans benefit yourself, not others.
Most people can be manipulated
Narcissism
People see me as a natural leader.
I hate being the center of attention. (R)
Many group activities tend to be dull without me.
I know that I am special because everyone keeps telling me so.
I like to get acquainted with important people.
I feel embarrassed if someone compliments me. (R)
I have been compared to famous people.
I am an average person. (R)
I insist on getting the respect I deserve.
Psychopathy
I like to get revenge on authorities.
I avoid dangerous situations. (R)
Payback needs to be quick and nasty.
People often say I'm out of control.
It's true that I can be mean to others.
People who mess with me always regret it.
I have never gotten into trouble with the law. (R)
I like provoking unsuccessful people
I'll say anything to get what I want.

Note1: Original Version

Note2: In accordance with the research instrument, responses to assertions with R were reversed: response 1 to 5; response 2 to 4 and response 3, remained unreversed.

In order to learn the levels of personality traits, the following criterion was adopted: initially the average of each individual and group (quantitative variable) was measured, and then the tertile was used to divide the group into three ranges: low, moderate and high traits (qualitative variable). This calculation methodology is consistent with current practice in psychology and accounting (Johnson, Kuhn, Apostolou, & Hassel, 2012; Majors, 2015).

It is important to consider that, although the three traits have common characteristics and are moderately positively correlated, they are conceptually distinct constructs (Paulhus & Williams, 2002; Jones & Paulhus, 2014), which justifies the theoretical and empirical separation for studies that address this issue (O’Boyle et al., 2012). In this view, this research works with the individual analysis and the combined effect of the three traits.

3.2.2 Cultural Values

The cultural assertions were elaborated through the adaptation of the research instrument idealized by Hofstede (2003) and Casagrande (2009), based on the theory and elements that characterize the cultural dimensions. For Individualism, the study considered assertions that refer to self-esteem, self-interest, self-realization, advantageous exchange relationships and interest in the immediate family. As for masculinity, the study considered assertiveness, endurance, material success and competitiveness. And, as for the Distance to power, social inequality, dependence and status of the dimension were estimated, as shown in table 4. The degree of attitudinal agreeableness of the students was measured using the Likert scale (1 to 7 points).

Table 4: Assertions of the cultural value measuring instrument

Masculinity	Characteristics
Assertive	
Material success is more important than personal.	Focus on material success
I like to compete with my university and / or work colleagues	Competitiveness
Persistence is the best way to achieve better results.	Resistance
I defend my opinions safely.	Assertiveness
Taking on the best roles in the company is a goal to be achieved.	Ambition
Individualism	Characteristics
Assertive	
Obtaining degrees and diplomas increases economic value and self-love.	Self Interest and Self Esteem
I don't like bonding with strangers. Each one should take care of himself and his nearest family.	Loops
It's important to maximize my earnings	Self interest
In my decisions I seek first my own benefits, then the collective.	Self interest
Self-realization is the foundation for success	Self Realization
Self-esteem is essential for my motivation at university and / or at work.	Self esteem
The employment relationship is a business and unfamiliar transaction.	Calculating Ratio
Distance to power	Characteristics
Assertive	
Inequalities between people must exist and are desirable	Hierarchical Distance
Those who have less power should depend on those who have more	Hierarchical Distance
Privileges and status symbols must exist and are well regarded.	Hierarchical Distance
I am afraid to express disagreement with my superiors' decisions	Hierarchical Distance
Those who have less power should depend on those who have more	Hierarchical Distance

Source: Adapted from Hofstede (2003) and Casagrande (2009)

It is worth mentioning here the satisfactory reliability level of the questionnaire applied in the study. For personality trait variables, Cronbach's alpha indicated a level of 0.792; For the cultural values variables, the level was 0.767 and when all the research variables were included, the level was 0.836.

3.3.3 Statistical Procedures

The following statistical techniques were applied: descriptive, correlation, hypothesis testing and logistic regression to validate the hypotheses. The descriptive technique allowed the calculation of means, frequencies and standard deviations.

The one-way Anova mean difference hypothesis test and the Mann-Whitney and Kruskal-Wallis tests were used to verify whether there were differences between Dark Triad personality trait levels and cultural values and demographic and social variables.

Logistic regression was applied to give robustness to the results and due to the binary nature of the variables dependent on cultural values, allowing for the verification of the effects of each of the variables inserted in the model. Thus, it was possible to verify the probability of occurrence of a certain event and the individual contribution of each of the predictors and to give more robustness to the study results.

4. RESULTS AND DISCUSSION

The results are presented according to the following division: Profile of participants and the Dark Triad, cultural values and the influence of demographic and social variables.

4.1 Participant Profile

The survey was conducted in the Brazilian territory and obtained 1,404 answers from Accounting students. Regarding the demographic profile, 58.8% are female, with a higher prevalence of the age group between 17 and 25 years old (61.5%), single (79.7%) and with high school attended in public school (63,5%). The sample reveals that 57.4% of the students attend a Bachelor's degree in public schools, with a higher incidence of semesters 2 (12%), 7 (12.2%) and 8 (17.3%). Parents have completed high school (33.5%) – this is the highest level of education. Regarding the source of income, most have worked or are in paid work (85.5%), earning a family income between two and four minimum wages (52.6%). During the survey period the minimum monthly salary was R\$ 937.00.

4.2 Dark Triad, Cultural Values and the Influence of Demographic and Social Variables

Of the three personality traits of the Dark Triad, Machiavellism had the highest average (3,556) (Table 5), meaning students were more likely to use strategies. This result is corroborated by the studies of Jones and Paulhus (2014), Paulhus and Williams (2002), D'Souza (2016), D'Souza and Lima (2015), Bogdanovic and Cingula (2015).

Concerning the cultural dimensions, the students showed greater inclination towards individualistic cultural values, presenting the highest score ($\mu = 4,530$), followed by the values of Masculinity ($\mu = 4,471$), with the Distance to power dimension being the lowest average ($\mu = 2,201$) (in this dimension the low level meant lower levels of agreeableness with the statements: "inequalities between people must exist and are desirable", "those who have less power must depend on those who have more" and "privileges and status symbols must exist and are well regarded ") (Table 5).

Here is the comparison with the results of Hofstede’s study 1 for the Brazilian society. According to the author, Brazil is collectivist, masculine and has high rates of acceptance of social inequalities. The results of the present research revealed that students have more individualistic cultural values such as self-interest, self-esteem and self-realization, values that can minimize the common and collective good in the academic and professional environment.

Moreover, students show that they are not afraid to disagree with their leaders and to not accept social inequalities; these results differ from the study by Hofstede1 in Brazil, which, according to the author, society believes that hierarchy must be respected and inequalities between people are acceptable. In companies, there is a boss who takes full responsibility. Thus, there is a change of conception in the sample analyzed, which may be a consequence of the training in the business area, which drives students to seek better positions in the job market. Respect is important, but maintaining a subordinate stance is not always the best way as it can prevent you from struggling for a successful career within companies.

Regarding studies with students, the results of this study are corroborated by the findings of Auyeung and Sands (1997), Sugahara and Boland (2010) and Teoh, Serang, and Lim (1999), with Australian students, who favor self-sufficiency and personal fulfillment. Regarding the sample of Brazilian accounting students, Hamann (2011) verified the predominance of students for male characteristics.

Table 5: Descriptive statistic for the Dark Triad traits and the cultural dimensions

Variables	N. of students	Minimum	Maximum	Average	Standard Deviation
Machiavellianism	1,404	1.0	7.0	3.556	1.0794
Narcissism	1,404	1.0	6.9	3.493	0.8938
Psychopathy	1,404	1.0	6.7	2.145	0.8408
Masculinity	1,404	1.0	7.0	4.471	0.9552
Individualism	1,404	1.0	7.0	4.530	0.9946
Power Distance	1,404	1.0	7.0	2.201	1.3557
Valid no. (from list)	1,404				

Source: Research Data (2017).

When analyzing the frequency of traits by level, based on tertile, it is observed that although there is a predominance of low willingness of students for Machiavellism 35.6%, Narcissism 37.6% and Psychopathy 35.8%, notes There was a significant and balanced frequency of students with high levels of Machiavellianism (31.6%), Narcissism (31.1%) and Psychopathy (29.3%). (Table 6).

The results also show the preponderance of the Machiavellism trait, corroborating the investigation by D’Souza (2016), who also found significant percentages of Machiavellism (38%) and Psychopathy (41.1%), when researching Brazilian managers. This procedure makes it possible to perceive the strength of the traits to differentiate the individual’s greater or lesser willingness to imprint dark behaviors in the educational environment and, later on, in professionals. As psychopathy had the lowest average in relation to the other two traits, the tertile also reflects lower value between the high, moderate and low ranges.

Table 6: Traits’s frequency per level

		Machiavellianism		Ranges	Narcissism		Ranges	Psychopathy		Ranges
Level of traits		N	P (%)	Tertile	N	P (%)	Tertile	N	P (%)	Tertile
Valid	Low	500	35,6	< 3,00	528	37,6	< 3,1	503	35,8	< 1,7
	Moderate	461	32,8	3 ≥ 4	439	31,3	3,1 ≥ 3,9	490	34,9	1,7 ≥ 2,3
	High	443	31,6	> 4	437	31,1	> 3,9	411	29,3	> 2,3
	Total	1.404	100,0		1404	100,0		1.404	100,0	

Source: Research Data (2017)

When analyzing the correlation between personality traits and cultural dimensions, the results allow us to verify (Table 7) a positive and significant correlation between Dark Triad personality traits and culture dimensions. Hofstede and McCrae (2004) have already pointed out this positive correlation between personality traits and cultural dimensions. Along the same lines, Robertson et al. (2016) noticed in US students who exhibited traits of psychopathy the positive relationship to cultural values about distance to power, and in Filipino students the positive relationship between the narcissistic trait and the Distance to power dimension. Jonason et al. (2017) noticed that Machiavellians and narcissists had a stronger association with the values of ambition, competition that refer to male characteristics.

The data suggest that the calculating and strategic characteristic of the Machiavellian individual drives the pursuit of material success through advantageous exchanges for self-realization and self-esteem. Social difference is not acceptable, as Machiavellian individuals seek reputation and status. In this respect, the Machiavellian trait promotes the struggle for better job opportunities, power and income.

For the narcissistic trait, this result fits the characteristics of self-esteem, self-interest and self-realization externalized by individualistic people and the competitiveness exhibited by people with male values. The narcissist seeks power because of the difficulty of being subordinate or having any level of dependence on others, especially due to their behavior outlined in vanity, authority, arrogance and delusions of grandeur. Regarding the trait of Psychopathy, we note the association between characteristics such as self-promotion, search for emotions and lack of guilt or remorse of psychopaths and characteristics that refer to the three cultural dimensions. These findings confirm hypothesis H1.

Table 7: Pearson Correlation (Averages)

Pearson	Machiavellianism	Narcissism	Psychopathy	Masculinity	Individualism	Power Distance
Machiavellianism	1					
Narcissism	0.369(**)	1				
Psychopathy	0.460(**)	0.367(**)	1			
Masculinity	0.346(**)	0.331(**)	0.201(**)	1		
Individualism	0.431(**)	0.301(**)	0.242(**)	0.523(**)	1	
Power Distance	0.426(**)	0.298(**)	0.389(**)	0.280(**)	0.297(**)	1

(**) $p < 0.01$, two-tailed.

Source: Research Data (2017)

In order to highlight a significant difference between personality traits of the Dark Triad and cultural dimensions, the Anova test was applied. In the analysis of the Masculinity dimension, through the F test, we found (F (2, 1401) = 77.957, $p = 0.000$) for Machiavellism, (F (2, 1401) = 73.286 $p = 0.000$) for Narcissism and (F (2,101) = 21.628, $p = 0.000$) for Psychopathy. These results indicate that there is a difference in the masculinity cultural dimension between individuals for the low, moderate and high levels of Machiavellianism, Narcissism and Psychopathy, which confirms hypothesis H2: The stronger the Dark Triad traits, the higher the values of Masculinity of accounting students.

This result allows us to infer that the narcissistic individual's sense of grandeur, the Machiavellian's strategy, and the psychopath's impulsiveness influence values that lead to the pursuit of material success and competitiveness in this sample.

Table 8: Anova – Levels of the personality traits of the Dark Triad and Masculinity (average)

	Machiavellianism			Narcissism			Psychopathy		
	DF	F	Sig.	DF	F	Sig.	DF	F	Sig.
Between groups	2			2			2		
Within groups	1,401	77,957	,000(*)	1,401	73,286	,000(*)	1,401	21,628	,000(*)

Total	1,403			1,403			1,403		
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(*) $p < 0.05$.

Source: Research Data (2017)

Similarly, the F test was applied to verify the difference between the three personality traits of Dark Triad and Individualism. The results showed (F (2, 1401) = 115.001, $p = 0.000$) for Machiavellianism, (F (2,1401) = 64.192, $p = 0.000$) for Narcissism and (F (2,1401) = 34.466, $p = 0.000$) for Psychopathy and confirm hypothesis H3 - the higher the Dark Triad’s traits, the higher the students’ cultural values of Individualism.

This result suggests that the selfishness, self-promotion and self-esteem common to narcissistic and psychopathic individuals, and the strategic calculation of Machiavellian individuals influence values that refer to the self-interest, self-realization, and advantageous exchange ratio of the Accounting students in the sample under analysis.

Table 9: Anova – Levels of Dark Triad traits and Individualism (average)

	Machiavellianism			Narcissism			Psychopathy		
	DF	F	Sig.	DF	F	Sig.	DF	F	Sig.
Between groups	2			2			2		
Within groups	1.401	115,001	,000	1.401	64,192	,000	1.401	34,466	,000
Total	1.403			1.403			1.403		

(*) $p < ,05$.

Source: Research Data (2017)

The F test also showed significant differences between the Dark Triad’s three personality traits and the Power Distance dimension by analyzing the values (F (2, 1401) = 127.166, $p = 0.000$) for Machiavellianism, (F (2, 1401) = 67.126, $p = 0.000$) for Narcissism and (F (2,1401) = 77.161, $p = 0.000$) for Psychopathy. The findings confirm hypothesis H4 and allow us to infer that the higher the traits of the Dark Triad, the lower the propensity for cultural acceptance of distance to power among Accounting students. These showed a non-acceptance for hierarchical inequality in society, not matching the findings of the study by Hofstede et al. (2010). This demonstrates that students expect greater equality and opportunities for education, employment and income.

Table 10: Anova – Levels of Dark Triad traits and Power Distance (average)

	Machiavellianism			Narcissism			Psychopathy		
	DF	F	Sig.	DF	F	Sig.	DF	F	Sig.
Between groups	2			2			2		
Within groups	1.401	127,166	,000	1.401	67,126	,000	1.401	77,161	,000
Total	1.403			1.403			1.403		

(*) $p < 0.05$.

Source: Research Data (2017)

Bonferroni’s tests also confirm that students with low and moderate levels of Dark Triad personality traits exhibit significant differences in agreement in relation to the cultural values of Masculinity, Individualism, and Distance from Power compared to students with high levels. Tukey’s test corroborates these results by displaying the formation of three different subsets for each level of the Dark Triad’s personality traits.

This result allows us to infer that students with moderate traits of Dark Triad behave differently than those who exhibit low and high traits, denoting that they have more peculiar characteristics that can result in desirable and healthy attitudes from individuals who externalize these traits, as discussed by D’Souza et al. (2019), Jonason, Webster, Schmitt, Li, and Crysel (2012) and Jones and Paulhus (2014). For example, in the sample under study, students with moderate levels of Machiavellism were more inclined to male

values (50.1%) and acceptance of hierarchical inequality (54.2%). Moderate narcissists also expressed greater acceptance of the hierarchy (51%), while students with moderate levels of psychopathy had low inclinations to the values of the three cultural dimensions.

In order to highlight the influence of demographic and social variables on personality traits, the test of difference between means was applied. It is possible to notice that gender, paid activity, income, parental education, and the type of institution in which high school was studied, differ when the Machiavellian traits are analyzed.

The narcissistic trait showed a difference in the presence of gender, age group, income, parental education and type of institution where high school was attended. Psychopathy levels also showed a difference in the presence of gender, age group, income, parental education, type of institution where high school was studied and region. This result allows the inference that social factors are potentially influential in the personality traits of the Dark Triad, as Hambrick (2007), Allport (1937; 1961) assert.

The three traits of the Dark Triad showed differences in the presence of gender, parental education, and type of institution where high school was attended. This denotes that male Accounting students are more inclined than females to manifest Dark Triad traits, possibly because they exhibit greater characteristics of insensitivity, impulsiveness, self-sufficiency, self-centeredness, emotional coldness, and strategic calculations.

In this regard, these findings are corroborated by the research by Jones and Paulhus (2014) in showing that men had higher scores for the three traits of the Dark Triad. Bogdanovic and Cingula (2015) found higher scores of Machiavellianism and Psychopathy for males. Lima, Souza, and D’Souza (2016) also proved that male students are more narcissistic. Jonason et al. (2017) found that men scored higher on the three traits that make up the Dark Triad in six countries with different cultures.

Regarding parents’ education, the study observed that students whose parents have a Specialization, a Master’s or a Doctorate degree reveal higher frequency for the high Machiavellian (42.17%) and narcissistic (36.73%) personality traits. This result suggests that more educated parents can influence their children to pursue professional success through more innovative study strategies. The high traits of Psychopathy (42.85%) were more evident for students to parents with incomplete high school education.

The students who presented higher frequencies for the highest traits of Machiavellism (39.08%), Narcissism (31.57%) and Psychopathy (31.21%) came from private high schools. This result allows the inference that the school background motivates the conception of students feeling better prepared, confident and more competitive than those coming from public schools, especially due to the difficulties faced by the Brazilian public education.

Table 11: Nonparametric Tests: Dark Triad and Demographic and Social Factors

Dependent variable	Test	Machiavellianism	Narcissism	Psychopathy
		Sig	Sig	Sig
Gender	Mann-Whiney	0.000(**)	0.001(**)	0.000(**)
Age Group	Kruskal-Wallis	0.062	0.010(**)	0.000(**)
Employment	Mann-Whiney	0.000(**)	0.647	0.143
Income	Mann-Whiney	0.002(**)	0.000(**)	0.340
ParEd	Kruskal-Wallis	0.000(**)	0.003(**)	0.001(**)
HighSch	Kruskal-Wallis	0.000(**)	0.033(**)	0.000(**)

*Note: ParEd: parent educational attainment; HighSch: Type of high school attended. (**) p 0.05.*

Source: Research Data (2017)

These results allow for the inference that the demographic and social characteristics of Accounting students accentuate or inhibit the externalization of the personality traits of Dark Traid and, consequently, reflect on the behavior of those in academia.

Thus, in order to confirm the previous results, logistic regression was applied due to the dichotomous nature of the dependent variable in relation to the metric independent variable and the potentially influential variables.

Table 12: Logistic Regression: Cultural Values, Dark Triad Personality Traits, and Demographic and Social Variables

	Expected sign	Sign found	Coefficient B	Coefficient Exp(β)	Coefficiente Exp(β)
Masculinity					1.495(***)
	Narcissism	+	+	0.538	1.713(***)
	Psychopathy	+	-	0.065	0.937
	Gender				-
	Age group				-
	Employment				-
	Income				-
	Parent education				-
	High school				Yes
	Constant	+	-	3.479	.031(***)
Individualism	Narcissism	+	+	0.376	1.456(***)
	Psychopathy	+	-	0.035	0.966
	Gender				-
	Age group				-
	Employment				Yes
	Income				-
	Parent education				-
	High school				-
	Constant	+	-	4.398	0.012(***)
	Machiavellianism	+	+	0.600	1.823(***)
Power distance	Narcissism	+	+	0.338	1.402(***)
	Psychopathy	+	+	0.311	1.365(***)
	Gender				Yes
	Age group				-
	Employment				-
	Income				Yes
	Parent education				-
	High school				-
	Constant	+	-	5.218	135.919(***)
	Constante	+	-	5,218	135,919(***)

Key: Parent education: Parent educational attainment; High school: Type of high school attended.

Note 1: Masculinity: Obs.: 1404; Sig: 0.000; Chi-squared: 160.655; PseudoR²: 0.144.

Note 2: Individualism: Obs.: 1404; Sig: 0.000; Chi-squared: 229.489; PseudoR²: 0.201.

Note 3: Power Distance: Obs.: 1404; Sig: 0.000; Chi-squared: 301.018; PseudoR²: 0.257.

(***) p < 0.01

Source: Research Data (2017)

Table 12 shows that the Machiavellism and Narcissism variables are significant and have a positive sign, showing that the positive variation of these variables contributes to the increased likelihood of students agreeing with male attitudes when the other variables remain constant. A similar result is observed for Individualism.

Psychopathy, which had not been a predictor for the attitudes of Masculinity and Individualism, was positive and significant, as well as Machiavellism and Narcissism, to estimate the likelihood of students' agreement with the attitudes of distance from power. The variables gender and income were also positive for the model.

Briefly, the study results confirm the hypotheses H1, H2, H3, H4, as shown in table 13.

Table 13: Summary of Search Hypothesis Results

Hypotheses	Decision
H1: There is a significant correlation between the traits that make up the Dark Triad and the cultural values of Masculinity, Individualism, and Distance to Power.	Reject H0
H2: Accounting students with high personality traits that make up the Dark Triad are more prone to male values.	Reject H0
H3: Accounting students with high personality traits that make up the Dark Triad are more prone to individualistic values.	Reject H0
H4: Accounting students with high personality traits that make up the Dark Triad are less likely to accept cultural values from Distance to Power.	Reject H0

Source: elaborated by the authors

The results presented allow us to draw a profile of personality and cultural, demographic and social values of the study sample and draw attention to the fruitful debate on the subject.

5. CONCLUSION

The findings of this study draw attention and corroborate the concern that personality influences the attitudes of aspirants to the accounting profession, especially because individuals rich in narcissistic traits, for example, out of need for public admiration, feel that they have the authority to remove from the environment anyone who might threaten them; Machiavellians use the strategy to gain advantages, regardless of harming his partners; and the psychopath impulsively grab whatever they want without worrying about whether it will hurt anyone.

The trait of Machiavellianism stood out, indicating students' greater agreement to the assertions: "It's not wise to tell my secrets" and "There are things I hide from other people because they don't need to know." The individualistic cultural values also stood out among the others, above all, in the agreement that "Self-realization is the basis for success," "Self-esteem is essential for my motivation at university and / or work" and "The working relationship is a transaction. commercial and unfamiliar".

The study also observed that students' cultural values differ and are positively associated in the presence of the three traits of the Dark Triad. Excessive manifestation of characteristics of assertiveness, focus on material success, competitiveness, ambition, self-realization, self-esteem, self-interest, advantageous and calculating exchange relationship may imply behaviors that compromise student's conduct in the classroom and in their professional life, as well as creating a masculine and individualistic environment. On the other hand, students who have revealed themselves to be more gifted did not accept social inequalities, dependence, subordination, and are not afraid to express disagreement with superior decisions. This implies a new view of students in regard to the hierarchy in the family and in the academic and professional environment, which can lead to good postures when moderately expressed.

The findings also suggest that male students from private schools showed greater propensity to characterize the triad, implying that male students are more Machiavellian, narcissistic and psychopathic. With regard to parental education, those with Specialization, Master's and Doctorate degrees have children with greater disposition for Machiavellian and narcissistic traits, implying that the higher the

parental titles, the greater the influence for the use of strategies and ambition. And students with incomplete high school have children who are more likely to have psychopathy traits.

Finally, the findings demonstrated that the three traits corroborate the probability of students' externalizing individualistic and masculine cultural values. These findings, therefore, signal to the subjects involved in the teaching-learning process the perception that there is a relationship between the Dark Triad's personality traits and cultural values, while allowing for the discussion on educational policy making and ethics training courses, with a view to introducing students to the consequences of attitudes that point to individualistic cultural values and the high personality traits of the Dark Triad.

This study is limited to these analyses, without, however, addressing the technical or practical aspects of accounting education, although the results draw educators' attention to the importance and greater emphasis on IES 4 (2015) which points out that Accounting education should be based on ethical principles and attitudes that consider independence, objectivity, integrity, confidentiality, reliability, commitment and responsibility. Thus, the findings suggest the continuation of studies, especially to investigate, comparatively, Brazilian students with students of other nationalities, in order to observe whether cultural values and personality traits change if compared to the results obtained here.

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