DARK PERSONALITY TRAITS AND THE USE OF SOURCES OF GUIDANCE AT WORK: A COMPARISON BETWEEN THE UNITED STATES AND BRAZIL

Traços sombrios de personalidade e o uso de fontes de orientação no trabalho: uma comparação entre os Estados Unidos e o Brasil

André Luiz Mendes Athayde[1]
Claudio Vaz Torres[2]
Stephanie J. Thomason[3]

1 Universidade Federal de Minas Gerais (UFMG), Montes Claros, Minas Gerais, Brazil.
2 Universidade de Brasília (UnB); Campus Universitário Darcy Ribeiro, Brasília-DF, Brazil.
3 University of Tampa (UT), Tampa, Flórida, United States of America.

ABSTRACT

Purpose: The objective of this research was to statistically test significant correlations between dark personality traits and employee's use of sources of guidance when dealing with different events at work, comparing the United States and Brazil.

Methodology: 220 employees from a Brazilian university and 166 employees from an American university filled out a paper-and-pencil questionnaire comprised of two previously-validated scales. Based on the theoretical review about the constructs, 10 hypotheses were raised to be empirically tested through Pearson correlation (*r*) tests.

Findings: The dark personality trait Machiavellianism was positively correlated with the use of Informal Rules and negatively correlated with the use of Formal Rules and Procedures as a guidance source at work in the American sample. In addition, the dark personality trait Psychopathy was negatively correlated with the use of Formal Rules and Procedures as a guidance source at work in the Brazilian sample.

Practical implications: The findings have implications for administrators and human resource professionals, who can benefit from knowledge about correlations between dark personality traits and employee's attitude of relying on sources of guidance at work, especially when it comes to recruiting and selecting processes.

Limitations: Although the research was restricted to correlations, it elaborated a robust ground for causality investigations.

Originality: The investigation involved two countries with a cross-cultural approach. In an international and multicultural scenario, it becomes strategic to deeper investigate specificities of work-related constructs in different nations, aiming at effective and contextualized management practices.

Keywords: Organizational behavior; psychology.

RESUMO

Objetivo: O objetivo desta pesquisa foi testar correlações estatisticamente significantes entre traços sombrios de personalidade e o uso de fontes de orientação por colaboradores ao lidarem com diferentes situações no trabalho, comparando-se os Estados Unidos e o Brasil.

Metodologia: 220 colaboradores de uma universidade brasileira e 166 colaboradores de uma universidade americana preencheram um questionário papel-e-caneta composto por duas escalas previamente validadas. Baseando-se na revisão teórica sobre os construtos, 10 hipóteses foram levantadas para serem empiricamente testadas por meio de testes de correlação de Pearson (*r*).

Resultados: O traço sombrio de personalidade Maquiavelianismo correlacionou-se positivamente com o uso de Regras Informais e negativamente com o uso de Regras Formais e Procedimentos na amostra americana. Ademais, o traço sombrio de personalidade Psicopatia correlacionou-se negativamente com o uso de Regras Formais e Procedimentos na amostra brasileira.

Implicações práticas: Os achados apresentam implicações para administradores e profissionais de recursos humanos, os quais podem se beneficiar do conhecimento concernente à correlação entre traços sombrios de personalidade e a atitude de colaboradores de se respaldarem em fontes de orientação no trabalho, em especial no que diz respeito a processos de recrutamento e seleção.

Limitação: Embora a pesquisa tenha se restringido a correlações, elaborou base robusta para investigações de causalidade.

Originalidade: A investigação envolveu dois países com uma abordagem transcultural. Em um cenário internacional e multicultural, torna-se estratégico investigar mais profundamente as especificidades de construtos relacionados ao trabalho em diferentes nações, visando a práticas de gestão eficazes e contextualizadas.

Keywords: Comportamento organizacional; psicologia.

1 INTRODUCTION

Sources of information are used by employees in order to interpret and respond to the events they experience at work. These sources of information on which employees rely to handle different situations at work are attitudes known in the literature as sources of guidance (SOGs) (Peterson, Smith, Bond, & Misumi, 1990). Smith, Peterson, and Schwartz (2002) state that the following groups of SOGs are among the most frequent in a wide variety of cultural contexts and situations at work: the individual's own experience; social sources, such as superiors, subordinates, specialists, and co-workers; impersonal sources, such as formal rules, procedures, and informal norms; and country beliefs.

The aforementioned SOGs may be used by employees in order to respond to events they encounter at their work environment. But what are those work events handled by employees? Work events include anything that triggers an employee's conscious attention (Smith, Peterson, & Schwartz, 2002), such as situations in which subordinates are doing consistently good work; equipment or machinery used in the department seems to need replacement; another department does not provide the resources or support required; among other work situations (Peterson, Barreto, & Smith, 2016).

According to classical contingency leadership models (e.g., Sheridan & Vredenburgh, 1984), some work tasks and work settings are more structured than others, which means that leaders act according to how structured a task or setting is. Peterson et al. (1990), however, proposed something different. According to them, employees' work varies over time, according to the situations they are dealing with. This means that employee's attitudes and behavior must change over the course of a day or week to correspond with changes in the events that they are encountering. Such variability in attitudes and behavior in response to changing situations – events – is exactly what is found in work organizations (Peterson et al., 1990). This hypothesis turned out to be known as event-based contingency hypothesis, the background of this investigation.

Even though there is strong literature evidence that employee's use of sources of guidance varies according to the situations they are dealing with, correlations between the use of SOGs at work and employee's internal characteristics are little explored in the national and international literature. Hence, the objective of this research was to statistically test significant correlations between employee's psychological characteristics and their reliance on sources of guidance when dealing with different events at work. This purpose naturally leads us to one specific field: Personality Psychology, which is the area of Psychology that has most deeply and broadly influenced Organizational Behavior (Judge, Klinger, Simon, & Yang, 2008).

Even though there is a relative consensus among researchers in Psychology that five dimensions describe the basic structure of personality, known as the Big Five Model (e.g., Kircaburun et al., 2021), this model does not adequately cover socially aversive traits that are part of a normal range of personality functioning (Lee & Ashton, 2014). This theoretical gap in the literature regarding the dark side of personality was filled by the Dark Triad of Personality (Paulhus & Williams, 2002), indicating that there are three traits that comprise this dark side: Machiavellianism (MAC), Psychopathy (PSY), and Narcissism (NAR). Even though these three traits contain a degree of malevolency that directly affects interpersonal behavior, normal and healthy people can present them at various levels – clinical and subclinical variants (Bergman, Fearrington, Davenport, & Bergman, 2011). The present investigation decided to consider dark personality traits instead of the commonly-used Big Five Model when measuring personality traits because the former is much less explored in the national and international literature than the latter, besides the fact that it complements the Big Five Model.

The present study explored correlations between dark personality traits and employee's use of sources of guidance in two countries: The United States and Brazil. But what is the main reason behind comparing this relationship between two countries? Globalization is characterized not only by an increase in the movement of capital and products, but also by mobilizing workers in different markets (Athayde & Silva, 2019; Athayde, Santos, Fiuza, & Costa, 2019; Silva, Orsi, & Nakata, 2013). In this international and multicultural scenario, it becomes strategic to deeper investigate specificities of work-related constructs in different nations, aiming at effective and contextualized management practices. The United States and Brazil were chosen in the present research, beyond accessibility reasons, because they are largely considered culturally different in cross-cultural research (e.g., Hofstede, 2011).

On the following section, dark personality traits and sources of guidance will be detailed so that study hypotheses may be raised to be empirically tested.

2 THEORETICAL FRAMEWORK

2.1 Dark personality traits

Discussions about the presence of dark personalities in the workplace are frequent in recent scientific studies (Mathieu, 2021; Szabó, Simon, Czibor, Restás, & Bereczkei, 2021). According to Zeigler-Hill and Marcus (2016), a dark personality trait is the one that is prejudicial and relates to the most varied interpersonal difficulties, regardless of the context or even the level of trait that the person presents. This theoretical gap in the literature regarding the dark side of personality was filled by the Dark Triad of Personality (Paulhus & Williams, 2002), indicating that there are three traits that comprise this dark side: Machiavellianism, Psychopathy, and Narcissism. Paulhus and Williams (2002) named these three traits the Dark Triad (DT), for "individuals with these traits share a tendency to be callous, selfish, and malevolent in their interpersonal dealings" (p. 100). All three traits contain a degree of malevolency that directly affects attitudes and behavior.

The Dark Triad sets a misleading profile, which, by its manipulative capacity, manages to escape the consequences (Jonason, Webster, Schmitt, Li, & Crysel, 2012). Therefore, these traits make individuals more capable of extracting what they want from their environment through a social exploratory style, aiming to achieve their own goals only to the detriment of the common good (Jonason, Li, & Teicher, 2010). Nevertheless, dark personality traits do not necessarily imply obstacles or difficulties and may even be associated with certain positive attitudes, as evidenced by recent studies (Salessi & Omar, 2018). Machiavellianism, Narcissism, and Psychopathy present common aspects, such as the tendency to explore and manipulate others, the search for self-promotion, aggressiveness, emotional coldness, and lack of empathy (Jones & Paulhus, 2009). However, the Dark Triad members have legitimacy as distinct constructs (Paulhus & Williams, 2002).

As differentiating elements, it is possible to say that people with psychopathic traits are more hostile, impulsive, and searchers of sensations. Psychopathy is characterized by an intense search for emotions, irresponsibility, low anxiety, antisocial tendencies (Lilienfeld, Watts, & Smith, 2015; Patrick, Fowles, & Krueger, 2009), and impulsive nonconformity, such as questioning authority figures without good cause (Lilienfeld & Widows, 2005). Machiavellians are colder, strategic, delaying bonuses aiming at long-term gains, and present a moral outlook that puts convenience above principle (O'Boyle, Forsyth, Banks, & McDaniel, 2011). Narcissists have a greater sense of superiority, a need to be admired, to constantly reassert their self-esteem, and aggressiveness when their ego is threatened (Rauthman, 2013). Moreover, they present a sense of grandiosity and self-admiration (Wetzel & Robins, 2016), and a great sense of law (Jonason et al., 2012).

Chart 1 summarizes the main authors considered in this study for the construct "Dark personality traits".

Chart 1. **Main authors considered for the construct "Dark personality traits"**

Authors	Approaches
Paulhus and Williams (2002)	First authors to propose the "Dark Triad – DT": Machiavellianism, Psychopathy, and Narcissism. All three traits contain a degree of malevolency that directly affects attitudes and behavior.
Jonason, Li, and Teicher (2010)	Dark personality traits make individuals more capable of extracting what they want from their environment through a social exploratory style, aiming to achieve their own goals only to the detriment of the common good.
Jonason et al. (2012)	The "Dark Triad – DT" sets a misleading profile, which, by its manipulative capacity, manages to escape the consequences.
Zeigler-Hill and Marcus (2016)	A dark personality trait is the one that is prejudicial and relates to the most varied interpersonal difficulties, regardless of the context or even the level of trait that the person presents.
Salessi and Omar (2018)	Dark personality traits do not necessarily imply obstacles or difficulties and may even be associated with certain positive attitudes.
Lilienfeld and Widows (2005); Patrick, Fowles, and Krueger (2009); O'Boyle et al. (2011); Jonason et al. (2012); Rauthman (2013); Lilienfeld, Watts, and Smith (2015); Wetzel and Robins (2016)	Authors who highlighted differentiating elements between the three dark personality traits: Machiavellianism, Psychopathy, and Narcissism.

Source: Elaborated by the authors

2.2 Sources of guidance

Sources of guidance (SOGs) are sources of information that employees rely on – attitudes – in order to interpret and respond to the work situations they encounter (Athayde & Torres, 2020; Pe-

terson et al., 1990). When employees have to deal with work events, they operate within a context of alternative SOGs, many of which extend beyond the individual (Peterson & Smith, 2000). SOGs may include interpretive structures, such as memories, thoughts, and understandings to which new events can be connected, and may also include views on events that would likely to be considered by a manager, employee, subordinate, or friend. In addition, prevailing views in society and organizational documents can be used by organization members to verify what guidelines they can offer.

Over the last three decades, only 12 theoretical-empirical studies about this construct were developed from an event-management perspective. The main results for some of these studies will be presented hereafter. First, Peterson et al. (1990) developed a questionnaire to ask employees from five electronics plants in four countries – the United States, the United Kingdom (UK), Japan, and Hong Kong – to what extent they used five SOGs to respond to two categories of events: day-to-day situations and unusual problems. The results indicated that employees responded differently to the five SOGs in the four countries. The correspondence between reliance on co-workers for day-to-day and unfamiliar events was higher for respondents in the USA and UK than for those in Japan and Hong Kong.

Smith, Peterson, and Schwartz (2002) tested the hypothesis that the predominant values of members of an organizational culture lead them to rely on certain SOGs to respond to what happens around them. By using samples from 53 different countries, they tested whether value differences at the cultural level could predict typical SOGs used to handle work events.

Peterson et al. (2010) investigated the influence of employee's personal values and of the use of guidance sources on e-mail use. The study was developed in Canada, the English-speaking Caribbean, Nigeria, and the USA. Results showed that e-mail use was positively associated with work contexts that show high reliance on Specialists, Subordinates, and Informal Rules.

Smith et al. (2011) investigated the use of SOGs by 7,701 employees in 56 countries in dealing with work events, and the moderating role of national culture in this relationship. Correlations between the sources of guidance that employees use and the perceived effectiveness of how well these events are handled were employed. These correlations were predicted to vary in relation to dimensions of national culture. Results showed that reliance on one's Own Experience, on Formal Rules and Procedures, and on one's Subordinates was positively correlated with perceived effectiveness globally.

Chart 2 summarized the main authors considered in this study for the construct "Sources of Guidance".

Chart 2. **Main authors considered for the construct "Sources of Guidance"**

Authors	Approaches
Smith and Peterson (1988)	First authors to propose that employees' work varies over time, according to the situations (events) they are dealing with, and not according to how structured a work task or a work setting is. This hypothesis turned out to be known as event-based contingency hypothesis.
Peterson et al. (1990); Peterson and Smith (2000); Smith, Peterson, and Schwartz (2002); Peterson et al. (2010); Smith et al. (2011).	Authors who empirically tested, over the years, the use of Sources of Guidance at work across different nations.
Athayde and Torres (2020)	First authors to propose a theoretical model for the internal antecedents of the use of Sources of Guidance at work, establishing a possible connection between personality traits, personal values, and the use of Sources of Guidance.

Source: Elaborated by the authors

2.3 Study hypotheses

Based on the theoretical review about the constructs, 10 study hypotheses – detailed in Table 1 – were raised to be empirically tested.

Table 1. **Study hypotheses**

Hypothesis	Description
H1	Once Psychopathy, Machiavellianism, and Narcissism are personality disorders, even though normal and healthy people can present at various levels (Bergman et al., 2011), it is expected that the three dark personality traits will present low means.
H2	Once the sources of guidance measured by the Managerial Decision Questionnaire Global (Mdq1GL) are among the most frequent in a wide variety of cultural contexts and events at work (Smith, Peterson, & Schwartz, 2002), it is expected that reliance on all SOGs will present high means.
H3	Once reliance on Formal Rules and Procedures as a guidance source at work has been proven to be strong universally (Smith et al., 2011), it is expected that reliance on this specific SOG will present a high mean.
H4	As Psychopathy is characterized by lack of empathy (Jones & Paulhus, 2009) and antisocial tendencies (Lilienfeld, Watts, & Smith, 2015), it is expected that people who score high on Psychopathy will rely significantly on impersonal SOGs, such as Formal Rules and Informal Rules.
H5	As Psychopathy is characterized by irresponsibility (Patrick, Fowles, & Krueger, 2009), it is expected that people who score high on Psychopathy will score less in Formal Rules and Procedures.
H6	As Psychopathy is characterized by impulsive nonconformity, such as questioning authority figures without good cause (Lilienfeld & Widows, 2005), it is expected that people who score high on Psychopathy will rely less on Superiors.
H7	As machiavellian personality is characterized by a moral outlook that puts convenience above principle (O' Boyle Jr, Forsyth & McDaniel, 2011), it is expected that people who score high on Machiavellianism will rely more on Informal Rules and less on Formal Rules and Procedures.
H8	As narcissists have a greater sense of superiority (Rauthman, 2013), it is expected that people who score high on Narcissism will rely less in co-workers, because co-workers are in the same organizational level.
H9	As narcissists have a sense of grandiosity and self-admiration (Wetzel & Robins, 2016), it is expected that people who score high on Narcissism will significantly rely on their Own Experience.
H10	As narcissists have a great sense of law (Jonason et al., 2012), it is expected that people who score high on Narcissism will rely significantly on Formal Rules and Procedures. By being examples of law-abiding employees, narcissists will pursue respect and admiration.

Source: Elaborated by the authors

3 METHOD

The American sample was comprised of employees from a private university, chosen based on accessibility reasons, with a total of 9,304 enrolled students; 25 undergraduate courses; 33 graduate courses; 1,600 full-time, part-time, and vendor-contracted employees; and 60 buildings (including 11 residence halls). The Brazilian sample was comprised of employees from a federal university campus, also chosen due to accessibility reasons. The refereed campus is comprised of 1,200 enrolled students – 10 of them international students –; 6 undergraduate courses; 8 graduate courses; 350 full-time, part-time, and vendor-contracted employees; and 20 buildings – including 01 residence hall.

The sampling technique used in this study was non-probabilistic by convenience, according to which the most available individuals are selected to provide the necessary information (Hair, Black, Babin, Anderson, & Tathan, 2009). The sample size for the present study was defined by following recommendations from Cohen (1992) for power calculation in studies of this nature: it was

applied an average effect (w) of 0.25, with significance level of 0.05, and a desired statistical power of 0.80. The minimum sample size calculated with the software G*Power 3.1 was 115 for correlations.

Employees were first invited via e-mail to participate in the study, and were asked to specify a day and time when the questionnaire (paper-and-pencil) could be administered to them in person. The official websites of the two universities were used to obtain employees' e-mail addresses. Out of the 193 answered questionnaires in the USA, 27 were discarded because they had more than 10% of missing values per case. Data collection took place from February 13th 2019 to April 30th 2019. Out of the 233 answered questionnaires in Brazil, 13 were discarded because they had more than 10% of missing values. Data collection took place from June 3rd 2019 to October 29th 2019. The number of valid questionnaires left was 166 in the USA and 220 in Brazil.

Dark personality traits were measured by the instrument "Dark Triad Dirty Dozen – DTDD", validated by Jonason and Webster (2010), which is considered the most used concise instrument to measure the Dark Triad (Jonason & Middleton, 2015). This scale has 12 items, equally distributed among the three factors. Participants are asked to express their level of agreement (ranging from 1 = "Strongly Disagree" to 5 = "Strongly Agree") to statements, such as "I often use deception or lies to get what I want" (Machiavellism), "I'm used to being cynical" (Psychopathy), and "I often expect special favors from others" (Narcissism). For the Brazilian sample, the Portuguese version was adopted, previously validated by Monteiro (2017).

The applied data collection instrument regarding the use of sources of guidance (SOGs) in the management of work events was the Managerial Decisions Questionnaire – Global (Mdq1GL), which was piloted by Peterson (1987) and later revised by Peterson, Barreto, and Smith (2016), in its English and Portuguese versions. The events – situations – described in the Mdq1-GL were selected as likely to occur within the work of any type of organization in any nation: "When one of your subordinates is doing consistently good work"; "When some of the equipment or machinery used in your department seems to need replacement"; "When another department does not provide the resources or support you require"; "When there are differing opinions within your own department"; "When you see the need to introduce new work procedure into your department"; and "When the time comes to evaluate the success of new work procedures".

The phrasing for each event was: "When [event] …, to what extent are the actions taken affected by each of the following?". For each event, the question was followed by a listing of nine sources of guidance, described as follows: a) "Formal rules and procedures" (FRP); b) "Unwritten rules about 'How we do things around here'" (informal rules - IR); c) "My subordinates" (SUB); d) "Specialists" (SPE); e) "Other people at my level" (co-workers - CWO); f) "My superior" (SUP); g) "Opinions based on my own experience and training" (OEX); h) "Beliefs which are widely accepted in my country about what is right" (country beliefs – CB); and i) "People outside this organization" (POU). Responses were made on 5-point Likert-type scales, anchored by terms ranging from 1= "not at all" to 5= "to a very great extent".

The first event, related to subordinates, was discarded in the present study, once this event applies only to managers, and the present research does not differ managers from non-managers. Further, for the same reason, the source of guidance "subordinates" was also discarded from the other five events left in the present study. So, compared to the original questionnaire (Mdq1GL) by Peterson, Barreto, and Smith (2016), the questionnaire used in the present research has one less event and one less source of guidance. Nevertheless, it is important to point out that this does not mean data loss, given the fact that the reliance on SOGs, in previous studies, was measured by calculating a mean across all events, that is, the events were not analyzed separately. The same procedure was adopted in the present research.

The final part of the questionnaire covered sociodemographic items, and, as described earlier, the questionnaire was administered in person (paper-and-pencil), once the electronic application, even being more convenient, would greatly limit comparability of the present research with previous studies on SOGs.

Statistical analyses were performed by using the software IBM® SPSS® Statistics 20.0 (Statistical Package for Social Sciences). Following recommendations by Tabachnick and Fidell (2001) and by Miles and Shevlin (2001), the variables were checked for their normal distribution. Additionally, bias in scale use was eliminated by mean-centering of guidance source ratings provided by each respondent. At last, descriptive statistics and Pearson correlation tests (r) were run in order to discuss differences between the United States and Brazil.

Scores for the three dark personality traits were computed by taking the means of the items that index each trait. A "z-score" was then created for each dark personality trait (Fisher transformation test), centralizing these scores. Finally, a mean score was computed across all five events for each source of guidance. Guidance source scores were created by mean-centering the raw scores for each respondent. To do so, the score for reliance on each source for handling each event was subtracted from the mean score for all sources across all events for each respondent. Reliance on each of the eight sources was then averaged across the five events. This procedure was done in all previous studies on SOGs.

The magnitude of correlation coefficients in the two samples was analyzed according to Cohen's guidelines (1992 apud Field, 2009). Correlation coefficients around 0.1 are indicative of a small effect (in this case, the effect explains 1% of the total variance); coefficients around 0.3 are indicative of a medium effect (in this case, the effect explains 9% of the total variance), and coefficients around 0.5 are indicative of a large effect (in this case, the effect explains 25% of the total variance).

4 RESULTS AND DISCUSSION

Respondents' sociodemographic characteristics for categorical variables and interval variables are summarized in Tables 2 and 3 respectively.

Table 2. **Respondent's sociodemographic characteristics – Categorical variables**

Variable		USA (%)	Brazil (%)
Position	Managers	29.5	53.6
	Non-managers	70.5	46.4
Sex	Male	40.4	49.1
	Female	59.6	50.9
Education	No college or university	1.8	1.4
	Some college or university education	31.3	29.5
	Completed undergraduate degree	16.3	10.0
	Some graduate education	7.8	7.3
	Completed Master's degree	22.9	15.4
	Study towards a second Master's degree or Ph.D.	3.6	5.5
	Completed second Master's degree or completed Ph.D.	16.3	30.9

Source: Elaborated by the authors.

Table 3. **Respondents' sociodemographic characteristics – Interval variables**

Variable		Mean	SD
Age	USA	37.8	14.3
	Brazil	35.7	11.0
Number of children living at home	USA	0.4	0.8
	Brazil	0.6	0.9
Work hours per week	USA	36.8	11.9
	Brazil	36.1	11.9
Years in the present organization	USA	6.6	6.3
	Brazil	7.2	7.4
Years in the present department	USA	5.5	5.8
	Brazil	5.7	5.81
Years in the present position	USA	4.3	4.9
	Brazil	5.8	6.1

Source: Elaborated by the authors.

Table 2 shows that the majority of the American sample was comprised of female respondents who do not occupy a managerial position and who present an intermediate education level. The majority of respondents in the Brazilian sample was comprised of a balanced number between managers and non-managers, a balanced number between men and women, and of respondents with a higher education level.

Table 3, in turn, shows that, both in the American and Brazilian samples, respondents are aged around 35-37 years, with up to one child living at home, and with a weekly workload of, approximately, 36-37 hours.

In the USA, the most significant correlations ($p < 0.01$) were found between Position x OEX ($p = 0.21$), Sex x OEX ($p = -0.20$), Education x IR ($p = 0.27$), and Education x CB ($p = -0.20$). These results suggest that, in the American sample, male managers are the ones who rely more on their Own Experience as a source of guidance at work. Furthermore, employees with a higher education level are the ones who rely more on Informal Rules and less on Country Beliefs as guidance sources at work.

In Brazil, the most significant correlations ($p < 0.01$) were found between Position x Superior ($p = -0.28$), Position x OEX ($p = 0.27$), Education x IR ($p = 0.18$), Education x SPE ($p = -0.20$), Education x SUP ($p = -0.29$), and Education x OEX ($p = 0.18$). These results suggest that, in the Brazilian sample, managers are the ones who rely less on Superiors and more on their Own Experience as guidance sources at work. Moreover, employees with a higher education level are the ones who rely more on Informal Rules and on their Own Experience, as well as are the ones who rely less on Specialists and Superiors as guidance sources at work.

Two correlations were common between the USA and Brazil: a positive correlation between position and Own Experience, and a positive correlation between education level and Informal Rules. In both countries, the results indicating that managers are the ones who rely more on their Own Experience may be related to the fact that they might be more experienced employees, and this experience might naturally be relevant to them when dealing with a variety of events at work. Likewise, in both countries, the results indicating that highly-educated employees are the ones who rely more on Informal Rules may be related to the fact that their broader knowledge in their field might enable them to think of alternative solutions structured though Informal Rules, going beyond Formal Rules and Procedures for a variety of situations at their work environment. Hence, a higher education level might lead them to consider the importance of Informal Rules in the organizational scenario.

Regarding the American sample, the highest dark-personality-trait mean was Narcissism (M=2.54; SD=0.85), and the highest means for guidance sources were Superiors (M=3.75; SD=0.77), Formal Rules and Procedures (M=3.51; SD=0.73), and Informal Rules (M=3.19; SD=0.86). With respect to the Brazilian sample, the highest dark-personality-trait mean was Narcissism (M=2.41; SD=0.90), and the highest means for guidance sources were Superiors (M=3.78; SD=0.82), Formal Rules and Procedures (M=3.77; SD=0.73), and Coworkers (M=3.19; SD=0.75).

Focusing on the main objective of the research, that is, to statistically test significant correlations between dark personality traits and the use of sources of guidance at work, results for the American and Brazilian samples are presented, respectively, in Tables 4 and 5.

Table 4. Correlations between the study constructs – USA

	PSY	MAC	NAR	FRP	IR	SPE	CWO	SUP	OEX	CB	POU
PSY	1										
MAC	,491**	1									
NAR	,324**	,546**	1								
FRP	-0,07	-,153*	-0,15	1							
IR	0,07	,217**	0,10	-,156*	1						
SPE	-0,01	0,01	-0,04	0,01	-,206**	1					
CWO	-0,02	-0,10	-0,04	-,261**	-,303**	-,246**	1				
SUP	0,06	-0,08	-0,12	,163*	-0,05	-0,14	-0,01	1			
OEX	0,08	0,11	0,10	-,305**	-0,14	-,307**	,229**	-,157*	1		
CB	-0,08	-0,03	0,11	-0,06	-,307**	-,308**	-0,04	-,324**	0,02	1	
POU	-0,04	-0,05	-0,02	-,221**	-0,11	,296**	-,305**	-,419**	-,306**	0,02	1

Note. **p < 0.001; *p < 0.01

Table 5. Correlations between the study constructs – Brazil

	PSY	MAC	NAR	FRP	IR	SPE	CWO	SUP	OEX	CB	POU
PSY	1										
MAC	,453**	1									
NAR	,243**	,561**	1								
FRP	-,195**	-0,04	-0,05	1							
IR	0,06	0,00	0,09	-,262**	1						
SPE	0,07	0,04	0,09	-,161*	0,05	1					
CWO	-0,03	-0,06	-0,10	-0,06	-,243**	-,147*	1				
SUP	-0,06	-0,02	0,03	,176**	-,377**	-0,09	0,13	1			
OEX	0,08	-0,11	-0,10	-,263**	-0,01	-,290**	0,03	-,275**	1		
CB	0,00	0,06	0,07	-,219**	-,177**	-,262**	-,305**	-,245**	-0,01	1	
POU	0,10	0,11	-0,04	-,278**	0,01	-0,07	-,265**	-,355**	-0,08	0,06	1

Note. **p < 0.001; *p < 0.01

With respect to the dark personality traits of Psychopathy, Machiavellianism, and Narcissism, literature points out that they are personality disorders, even though they present subclinical variants, being personality traits that normal and healthy people can possess at various levels (Bergman et al., 2011). So, according to study hypothesis 1 (H1), it was expected that dark personality traits would present low means. In fact, both in the USA and in Brazil, mean scores were close to one – minimum score in the scale. Narcissism was the dark personality trait with the highest mean both in the USA (M=2.54; SD=0.85) and in Brazil (M=2.41; 0.90).

Regarding the use of guidance sources at work, Smith, Peterson, and Schwartz (2002) state that the following groups of SOGs are among the most frequent in a wide variety of cultural contexts and events at work: the individual's own experience, based on previous experience and training; social sources, based on superiors, subordinates, specialists, co-workers, and people outside organ-

ization; impersonal sources, based on formal rules or informal norms; and beliefs that are spread in a nation. All aforementioned groups of SOGs were present in the instrument Managerial Decision Questionnaire Global (Mdq1GL), administered in the present research. Because of that, according to study hypothesis 2 (H2), it was expected that none of the eight guidance sources would present mean scores close to one – minimum score in the scale. This expectation was confirmed for seven SOGs, expect for People Outside Organization, which was the guidance source with the lowest mean both in the USA (M=1.99; SD=0.80) and in Brazil (M=1.64; SD=0.71). Moreover, both in the USA and in Brazil, Superiors (M=3.75; SD=0.77; M=3.78; SD=0.82) and Formal Rules and Procedures (M=3.51; SD=0.73; M=3.77; SD=0.73) were the SOGs with the highest means. Specifically regarding Formal Rules and Procedures, this result has theoretical support, as reliance on them has been proven to be strong universally (Smith et al., 2011), as it was expected by study hypothesis 3 (H3).

According to study hypothesis 4 (H4), once Psychopathy is characterized by lack of empathy (Jones & Paulhus, 2009) and antisocial tendencies (Lilienfeld, Watts, & Smith, 2015), it was expected that people who scored high on Psychopathy would rely significantly on impersonal SOGs, such as Formal Rules and Informal Rules. This hypothesis was rejected both in the USA and Brazil. In the USA, there was no significant correlation between Psychopathy and impersonal SOGs. In Brazil, it was found a significant correlation between Psychopathy and Formal Rules and Procedures, however, a negative correlation ($r = -0.19$, $p < 0.001$), and no significant correlation between Psychopathy and Informal Rules.

Furthermore, according to study hypothesis 5 (H5), once Psychopathy is characterized by irresponsibility (Patrick, Fowles, & Krueger, 2009), it was expected that people who scored high on Psychopathy would score less in Formal Rules and Procedures. This hypothesis was rejected in the USA, once there was no significant correlation between Psychopathy and Formal Rules and Procedures. However, in Brazil, this hypothesis was accepted, once there was a significant correlation between them ($r = -0.19$, $p < 0.001$). Still regarding Psychopathy, according to study hypothesis 6 (H6), once this dark personality trait is also characterized by impulsive nonconformity, such as questioning authority figures without good cause (Lilienfeld & Widows, 2005), it was expected that people who scored high on Psychopathy would rely less on Superiors. This hypothesis was rejected in both countries, given the fact that there was no significant correlation between these two constructs.

According to study hypothesis 7 (H7), as Machiavellian personality is characterized by a moral outlook that puts convenience above principle (O' Boyle et al., 2011), it was expected that people who scored high on Machiavellianism would rely more on Informal Rules and less on Formal Rules and Procedures. This hypothesis was supported in the USA, once it was found a positive correlation between Machiavellianism and Informal Rules ($r = 0.21$, $p < 0.001$) and a negative correlation between Machiavellianism and Formal Rules and Procedures ($r = -0.15$, $p < 0.01$). The same hypothesis was rejected in Brazil, once no significant correlation was found between these constructs.

Furthermore, according to study hypothesis 8 (H8), once narcissists have a greater sense of superiority (Rauthman, 2013), it was expected that people who scored high on Narcissism would rely less in co-workers, because co-workers are in the same organizational level. Similarly, according to study hypothesis 9 (H9), once narcissists have a sense of grandiosity and self-admiration (Wetzel & Robins, 2016), it was expected that people who scored high on Narcissism would significantly rely on their Own Experience. Study hypotheses 8 and 9 were rejected in both countries due to the absence of significant correlations.

At last, still regarding Narcissists, according to study hypothesis 10 (H10), once they have a great sense of law (Jonason et al., 2012), it was expected that people who scored high on Narcissism would rely significantly on Formal Rules and Procedures. It was believed that, by being examples of law-abiding employees, Narcissists would pursue respect and admiration in their work environment. Nevertheless, this hypothesis was also rejected, due to the absence of significant correlations.

Regarding the magnitude of correlation coefficients in the American sample, an effect between small and medium was identified between the dark personality trait Machiavellianism and the source of guidance Formal Rules (-0.153, p<0.01) and between the dark personality trait Machiavellianism and the source of guidance Informal Rules (0.217, p<0.001). When it comes to the magnitude of correlation coefficients in the Brazilian sample, an effect between small and medium was identified between the dark personality trait Psychopathy and the source of guidance Formal Rules (-0.195, p<0.001). A large effect was identified only between the dark personality traits Machiavellianism and Narcissism, both in the American and Brazilian samples (0.546 and 0.561, respectively; p<0.001).

Table 6 summarizes the hypotheses that were supported and the ones that were rejected by the empirical results of the present investigation.

Table 6. **Hypotheses x Results**

Hypothesis	Description	Result
H1	Once Psychopathy, Machiavellianism, and Narcissism are personality disorders, even though normal and healthy people can present at various levels (Bergman et al., 2011), it is expected that the three dark personality traits will present low means.	Supported
H2	Once the sources of guidance measured by the Managerial Decision Questionnaire Global (Mdq1GL) are among the most frequent in a wide variety of cultural contexts and events at work (Smith, Peterson, & Schwartz, 2002), it is expected that reliance on all SOGs will present high means.	Supported
H3	Once reliance on Formal Rules and Procedures as a guidance source at work has been proven to be strong universally (Smith et al., 2011), it is expected that reliance on this specific SOG will present a high mean.	Supported
H4	As Psychopathy is characterized by lack of empathy (Jones & Paulhus, 2009) and antisocial tendencies (Lilienfeld, Watts, & Smith, 2015), it is expected that people who score high on Psychopathy will rely significantly on impersonal SOGs, such as Formal Rules and Informal Rules.	Rejected
H5	As Psychopathy is characterized by irresponsibility (Patrick, Fowles, & Krueger, 2009), it is expected that people who score high on Psychopathy will score less in Formal Rules and Procedures.	Rejected (USA) Supported (Brazil)
H6	As Psychopathy is characterized by impulsive nonconformity, such as questioning authority figures without good cause (Lilienfeld & Widows, 2005), it is expected that people who score high on Psychopathy will rely less on Superiors.	Rejected
H7	As machiavellian personality is characterized by a moral outlook that puts convenience above principle (O' Boyle Jr, Forsyth & McDaniel, 2011), it is expected that people who score high on Machiavellianism will rely more on Informal Rules and less on Formal Rules and Procedures.	Supported (USA) Rejected (Brazil)
H8	As narcissists have a greater sense of superiority (Rauthman, 2013), it is expected that people who score high on Narcissism will rely less in coworkers, because co-workers are in the same organizational level.	Rejected
H9	As narcissists have a sense of grandiosity and self-admiration (Wetzel & Robins, 2016), it is expected that people who score high on Narcissism will significantly rely on their Own Experience.	Rejected
H10	As narcissists have a great sense of law (Jonason et al., 2012), it is expected that people who score high on Narcissism will rely significantly on Formal Rules and Procedures. By being examples of law-abiding employees, narcissists will pursue respect and admiration.	Rejected

Source: Elaborated by the authors

5 FINAL REMARKS

The present research successfully achieved its main objective: to statistically test significant correlations between dark personality traits and employee's reliance on sources of guidance when dealing with different events at work, comparing the United States and Brazil.

The main finding in the American sample was that employees who score high on the dark personality trait Machiavellianism are the ones who rely more on Informal Rules and less on Formal Rules and Procedures as a guidance source at work. Informal rules may be seen by American

employees with high score on Machiavellianism as a way to put convenience and informality above principle. The main finding in the Brazilian sample was that employees who score high on the dark personality trait Psychopathy are the ones who rely less on Formal Rules and Procedures, which may be justified by the fact that Psychopathy is characterized by irresponsibility.

These findings have implications for organizational administrators, decision makers, and psychologists. The development of human resources policies can benefit from knowledge about correlations between dark personality traits and employee's attitude of relying on sources of guidance when dealing with different events at work, especially when it comes to recruiting and selecting processes. If a company, for instance, fosters the use of formal rules and wishes that its employees rely mostly on standard operating procedures at work, the findings of the present research point out, per country, which dark personality traits are significantly correlated with this SOG. Hence, the present research sheds light on important psychological characteristics that, although are socially aversive, are also part of a normal range of personality functioning and proved to be theoretically and empirically correlated with a very important work-related construct.

A natural limitation is that this study was restricted to exploring statistically significant correlations between the constructs, however, it elaborated a robust ground upon which causalities may be investigated in future studies in the United States and Brazil. The findings of the present study suggest that the dark personality trait Machiavellianism is important to be included in the predictive model of the use of Informal Rules and in the predictive model of the use of Formal Rules and Procedures as guidance sources in the United States. In addition, the findings suggest that the dark personality trait Psychopathy is important to be included in the predictive model of the use of Formal Rules and Procedures as a guidance source in Brazil. Hence, as opportunities for future research, it is suggested that causality studies be carried out through multiple linear regression, advancing the investigations between dark personality traits and employee's use of sources of guidance carried out cross-culturally in the present investigation.

REFERENCES

Athayde, A. L. M., & Torres, C. V. (2020). Guidance sources at work: Let's look inside us? *International Journal of Interdisciplinary Social Science Studies – IJISSS*, 6(1), 14-22.

Athayde, A. L. M., Santos, C. L. T., Fiuza, G. D., & Costa, A. C. R. (2019). Gestão Internacional de Pessoas: Novas Possibilidades de Pesquisa. *Revista Pretexto*, 20(2), 67-86.

Athayde, A. L. M., & Silva, L. S. O. (2019). Gestão Internacional de Pessoas: Uma análise bibliométrica da produção científica em periódicos brasileiros, 2000-2017. *Revista de Carreiras & Pessoas – ReCaPe*, 9(3), 414-442.

Bergman, S. M., Fearrington, M. E., Davenport, S. W., & Bergman, J. Z. (2011). Millennials, narcissism, and social networking: What narcissists do on social networking sites and why. *Personality and Individual Differences*, 50(5), 706-711.

Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155–159.

Field, A. (2009). *Descobrindo a Estatística usando o SPSS*. Porto Alegre, Brazil, Artmed.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2009). *Análise multivariada de dados*. Porto Alegre, RS: Bookman.

Hofstede, G. (2011). Dimensionalizing Cultures: The Hofstede Model in Context. *Online Readings in Psychology and Culture*, 2(1), 1-26.

Jonason, P. K., & Webster, G. D. (2010). The Dirty Dozen: A concise measure of the Dark Triad. *Psychological Assessment*, 22(2), 420-432.

Jonason, P. K., Li, N. P., & Teicher, E. A. (2010). Who is James Bond? The Dark Triad as an agentic social style. *Individual Differences Research*, 8(2), 111-120.

Jonason, P. K., Webster, G. D., Schmitt, D. P., Li, N. P., & Crysel, L. (2012). The antihero in popular culture: Life History Theory and the Dark Triad personality traits. *Review of General Psychology*, 16(2), 192-199.

Jonason, P. K., & Middleton, J. P. (2015). Dark Triad: The "dark side" of human personality. In J. D. Wright (Ed.), *International Encyclopedia of the Social & Behavioral Sciences* (Vol. 5, pp. 671-675). Oxford, UK: Elsevier.

Jones, D. N., & Paulhus, D. L. (2009). Machiavellianism. In M. R. Leary, & R. H. Hoyle (Eds.), *Handbook of Individual Differences in Social Behavior* (Vol. 1, Chap. 7, pp. 93-108). New York, NY: Guilford Press.

Judge, T. A., Klinger, R., Simon, L. S., & Yang, I. W. F. (2008). The contributions of personality to organizational behavior and psychology: findings, criticisms, and future research directions. *Social and Personality Psychology Compass*, 2(5), 1982-200.

Kircaburun, K., Sural, I., March, E., Balta, S., Emirtekin, E., & Griffiths, M. D. (2021). Study addiction and 'dark' personality traits: a cross-sectional survey among emerging adults. *Journal of Addictive Diseases*, 39(3), 307-315.

Lee, K., & Ashton, M. C. (2014). The Dark Triad, the Big Five, and the HEXACO model. *Personality and Individual Differences*, 67, 2-5.

Lilienfeld, S. O., & Widows, M. R. (2005). *Psychopathic Personality Inventory Revised: Professional manual*. Lutz, FL: Psychological Assessment Resources.

Lilienfeld, S. O., Watts, A. L., & Smith, S. F. (2015). Successful psychopathy: A scientific status report. *Current Directions in Psychological Science*, 24(4), 298-303.

Mathieu, C. (2021). *Dark Personalities in the Workplace*. Academic Press, United States.

Miles, J., & Shevlin, M. (2001). *Applying regression and correlation*. London, UK: Sage Publications.

O'Boyle, E., Forsyth, D. R., Banks, G., & McDaniel, M. A. (2011). A Meta-Analysis of the Dark Triad and Work Behavior: A Social Exchange Perspective. *Journal of Applied Psychology*, 97(3), 557-579.

Patrick, C. J., Fowles, D. C., & Krueger, R. F. (2009). Triarchic conceptualization of psychopathy: Developmental origins of disinhibition, boldness, and meanness. *Development and Psychopatholy*, 21(3), 913-938.

Paulhus, D. L., & Williams, K. M. (2002). The Dark Triad of personality: Narcissism, Machiavellianism, and Psychopathy. *Journal of Research in Personality*, 36, 556–563.

Peterson, M. F. (1987). *Managing organizational events in real state sales offices* (Unpublished manuscript). Texas Tech University, College of Business Administration, Lubbock, TX.

Peterson, M. F., Smith, P. B., Bond, M. H., & Misumi, J. (1990). Personal Reliance on Event-Management Processes in Four Countries, *Group & Organization Studies*, 15(1), 75-91.

Peterson, M. F., & Smith, P. B. (2000). Meanings, organization, and culture: Using sources of meaning to make sense of organizational events. In N. Ashkanasy, C. P. M. Wilderon, & M. F. Peterson (Eds.), *Handbook of organizational culture and climate* (pp. 101-115). Thousand Oaks, CA: Sage.

Peterson, M. F., et al. (2010). Social Structures and Personal Values that Predict E-mail Use: An International Comparative Structure. *Journal of Global Information Management*, 18(2), 57-84.

Peterson, M. F., Barreto, T. S., & Smith, P. B. (2016). Revised sources of guidance measures: Six events and demographic controls. In Roland-Lévy, C., Denoux, P., Voyer, B., Boski, P., Gabrenya Ju, & W. K. (Eds.), *Unity, diversity, and culture: Research and Scholarship Selected from the 22nd Congress of the International Association for Cross-Cultural Psychology* (pp. 213-217). Melbourne, FL: International Association for Cross-Cultural Psychology.

Rauthman, J. F. (2013). Investigating the MACH-IV with Item Response Theory and proposing the Trimmed MACH*. *Journal of Personality Assessment*, 95(4), 388-397.

Salessi, S., & Omar, A. (2018). Psychometric properties of a scale to measure the dark side of personality. *Estudos de Psicologia (Campinas),* 35(2), 159-170.

Sheridan, J. E., Vredenburgh, D. J., & Abelson, M. A. (1984). Contextual model of leadership influence in hospital units. *Academy of Management Journal*, 27(1), 57-78.

Silva, N. B., Orsi, A., & Nakata, L. E. (2013). Análise da Produção Acadêmica sobre Gestão Internacional de Recursos Humanos entre 2001 e 2011. *Revista de Carreiras & Pessoas - ReCaPe*, 3(3), 50-60.

Smith, P. B. & Peterson, M. F. (1988). *Leadership, organizations and culture: An event management model*. Sage, London, UK.

Smith, P. B., Peterson, M. F., & Schwartz, S. H. (2002). Cultural Values, Sources of Guidance, and their relevance to managerial behavior: a 47-Nation Study, *Journal of Cross-Cultural Psychology*, 33(2), 188-208.

Smith, P. B., Peterson, M. F., Thomason, S. J., & Event Meaning Management Research Group (2011). National Culture as a Moderator of the Relationship Between Manager's Use of Guidance Sources, and How Well Work Events are Handled. *Journal of Cross-Cultural Psychology*, 42(6), 1101-1121.

Szabó, Z. P., Simon, E., Czibor, A., Restás, P., & Bereczkei, T. (2021). The importance of dark personality traits in predicting workplace outcomes. *Personality and Individual Differences*, 183, 1-6.

Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics*. New York, NY: Harper Collins.

Wetzel, E., & Robins, R. W. (2016). Are parenting practices associated with the development of narcissism? Findings from a longitudinal study of Mexican-origin youth. *Journal of Research in Personality*, 63, 84-94.

Zeigler-Hill, V., & Marcus, D. K. (2016). A bright future for dark personality features? In V. Zeigler-Hill & D. K. Marcus (Eds.). *The Dark Side of Personality: Science and Practice in Social, Personality, and Clinical Psychology* (Vol.1, Chap. 1, pp. 3-22). Washington, DC: American Psychological Association.

AUTHORS

1. **André Luiz Mendes Athayde.**
Institution: Universidade Federal de Minas Gerais (UFMG), Montes Claros, Minas Gerais, Brazil.
Doctor in Administration from the University of Brasília (UnB); Professor at the Federal University of Minas Gerais (UFMG).
E-mail: andreluizathayde@outlook.com / andreluizathayde@ufmg.br
ORCID: https://orcid.org/0000-0002-2109-2130

2. **Claudio Vaz Torres**
Institution: Universidade de Brasília (UnB); Campus Universitário Darcy Ribeiro, Brasília-DF, Brazil.
Ph.D. in Industrial Organizational Psychology, California School of Professional Psychology, USA.
E-mail: claudio.v.torres@gmail.com
ORCID: http://orcid.org/0000-0002-3727-7391

3. **Stephanie J. Thomason.**
Institution: University of Tampa (UT), Tampa, Flórida, United States of America.
Ph.D. in Business Administration, International Business and Human Resource Management, Florida Atlantic University, USA.
E-mail: sthomason@ut.edu
ORCID: https://orcid.org/0000-0002-8311-6791

Contribution of authors

	[Author 1]	[Author 2]	[Author 3]
1. Definition of research problem	√	√	√
2. Development of hypotheses or research questions (empirical studies)	√	√	√
3. Development of theoretical propositions (theoretical work)	√	√	
4. Theoretical foundation / Literature review	√	√	√
5. Definition of methodological procedures	√	√	√
6. Data collection	√	√	√
7. Statistical analysis	√	√	√
8. Analysis and interpretation of data	√	√	
9. Critical revision of the manuscript	√	√	√
10. Manuscript writing	√		
11. Other (please specify)			