Mediation of environmental, personal and social factors in the relationship between the external locus of control and the dysfunctional audit behavior

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Abstract
This research aims to analyze the influence of the locus of external control on dysfunctional audit behavior, mediated by environmental, personal and social factors. The study broaches behavioral aspects in the context of the audit. In order to reach the proposed objective, a descriptive survey was carried out, with a quantitative approach to data analysis. A total of 163 independent auditors registered in the Brazilian Federal Accounting Council took part in the survey. The relationship between the constructs is analyzed by applying the Structural Equation Modeling technique (SEM). The results evident that environmental personal and social factors affect the relationship between the locus of control and the dysfunctional behavior. In this way, it can be concluded that the results presented in this study can provide the regulatory agencies of the audit area, as well as the audit firms, subsidies to evaluate the quality of services provided considering a behavioral perspective.

Keywords: Audit quality; Dysfunctional behavior; Environmental factors; Personal factors; Socialization factors

Resumo
Esta pesquisa tem por objetivo analisar a influência do lócus de controle externo sobre o comportamento disfuncional do auditor, mediada conjuntamente por fatores ambientais, pessoais e de socialização. O estudo aborda os aspectos comportamentais no contexto da auditoria. Para alcançar os objetivos propostos realizou-se pesquisa do tipo levantamento, descritiva, com abordagem quantitativa dos dados. Participaram da pesquisa 163 auditores independentes do Brasil, com cadastro no Conselho Federal de Contabilidade. A relação entre os constructos foi analisada aplicando-se a técnica de modelagem de equações estruturais (MEE). Os resultados evidenciam que os fatores ambientais, pessoais e de socialização afetam conjuntamente a relação entre o lócus de controle externo e o comportamento disfuncional. Deste modo, conclui-se que os resultados apresentados neste estudo podem proporcionar aos órgãos reguladores da área da auditoria, assim como às firmas de auditoria, subsídios para avaliar a qualidade dos serviços prestados, na perspectiva comportamental.

Palavras-chave: Qualidade da auditoria; Comportamento disfuncional; Fatores ambientais; Fatores pessoais; Fatores de socialização
Resumen
Esta investigación tiene por objetivo analizar la influencia del locus de control externo sobre el comportamiento disfuncional del auditor, mediado conjuntamente por factores ambientales, personales y de socialización. El estudio aborda los aspectos conductuales en el contexto de la auditoría. Para alcanzar los objetivos propuestos se realizó investigación del tipo levantamiento, descriptivo, con abordaje cuantitativo de los datos. Participaron en la encuesta 163 auditores independientes de Brasil, con registro en el Consejo Federal de Contabilidad. La relación entre los constructos fue analizada aplicando la técnica de modelado de ecuaciones estructurales (MEE). Los resultados evidencian que los factores ambientales, personales y de socialización afectan conjuntamente la relación entre el locus de control y el comportamiento disfuncional. De este modo, se concluye que los resultados presentados en este estudio pueden proporcionar a los órganos reguladores del área de la auditoría, así como a las firmas de auditoría, subsídios para evaluar la calidad de los servicios prestados, en la perspectiva conductual.

Palabras clave: Calidad de la auditoría; Comportamiento disfuncional; Factores ambientales; Factores personales; Factores de socialización

1 Introduction

Research on auditor’s dysfunctional behavior identifies the assessment of the joint influence of environmental and personal factors (Otley & Pierce, 1996b; Lautania, 2011; Yuen, Philip, Law, Lu & Guan, 2013) and environmental and socialization (Lord & DeZoort, 2001). However, there are no studies that assess the combined influence of environmental, personal and socialization factors on the auditor’s dysfunctional behavior. Thus, it is considered that the behavior of the auditor, in the organizational environment, can be jointly influenced by environmental, personal and social factors.

Dysfunctional behaviors are actions by auditors that result in disqualified audits or that reduce audit quality (Paino, Ismail & Smith, 2010). Dysfunctional behavior, in the context of the audit, is evaluated by different researchers, considering the following types of behavior: premature signing of accounts, underreporting of time and alteration/replacement of audit procedures (Lautania, 2011; Paino, Ismail & Smith, 2014; Alkaoutsar, 2014).

When an auditor does not issue a modified or qualified audit report, the audited financial statements are potentially misleading to users (Francis, 2004). In Brazil, the Securities and Exchange Commission (CVM) establishes internal and external quality control criteria (CVM Instruction No. 308/99). However, the Petrobras corruption scandal led auditing companies to be questioned by the CVM regarding their position on the state-owned company’s financial statements, approved without reservations until the third quarter of 2014 (O Estado de São Paulo, 2015). This indicates that audit quality cannot be easily measured and evaluated, which makes it potentially sensitive to the behavior of individuals.

Research on dysfunctional behavior in auditing identifies that personal factors influence the auditor’s dysfunctional behavior, and one of these factors is the locus of control, which has been used to explain human behavior in organizational contexts (Donnelly, Quirin & O’Bryan, 2011; Lautania, 2011). The locus of control is a concept based on the Social Learning Theory (Rotter, 1966) and seeks characteristics related to people’s perception of the source of control of the events in which they are involved, since an individual can perceive himself as an events controller (internal locus of control) or as being controlled by external factors, such as other people, fate, chance and luck (external locus of control) (Dela Coleta, 1987).

However, in addition to environmental and personal factors, the literature identifies that the pressures exerted by members of the audit team also influence dysfunctional behavior. Kelley and Margheim (1990) looked at how the characteristics of audit team members can moderate the dysfunctional effects of time budget pressure. Lord and DeZoort (2001) examined the effects of pressure from superiors and peers on auditors’ decisions to prematurely sign financial statements that were materially misstated.

It is noteworthy that the factors related to social aspects evidenced in the literature in the audit environment are limited to the observation of pressure from superiors and peers in the work environment (Kelley & Margheim, 1990; Lord & DeZoort, 2001). In this research, however, we seek to evaluate organizational socialization based on the theory of socialization, whose proposition refers to the pressure that comes from customs, in the way contracts are celebrated and executed, from compliance with the rules that are less imperative because they are not directly nor indirectly sanctioned by any code (Durkheim, 1995).

In this context, the objective of this research is to analyze the influence of the external locus of control in the auditor’s dysfunctional behavior, mediated jointly by environmental, personal and socialization factors.

Research on the auditor’s dysfunctional behavior, evidenced in the literature, identifies personal, environmental and social factors as antecedents of the auditor’s dysfunctional behavior. However, the joint influence of these factors on the auditor’s dysfunctional behavior was not identified. In addition, the application of a construct to assess the socialization factor was not identified.

In the practical aspect, this study is justified by contributing with professional class bodies and with auditing firms insofar as it presents the possibility of evaluating the quality of auditing services from a...
behavioral perspective. By identifying the factors that influence the auditor's dysfunctional behavior, it is possible for audit firms to apply professional development policies that improve dysfunctional behavior, resulting in a higher quality of services provided.

2 Direct Relationship Between the External Locus of Control and the Research Variables

Rotter's (1966) locus of control construct is intended to explain people's perception of who or what controls the events of their life. Studies suggest that positive consequences for the subject are associated with the belief in predominantly internal control, that is, by the subject himself.

Individuals acquire insights into events to explain the reasons why events occur in their lives through social learning. The locus of control is approached by Rotter as a way of explaining, depending on the personality, the beliefs that people have about the source of reinforcement: whether it comes from their own behavior or from external forces (Figueredo, 2005). For the individual who believes he is controlled by external factors such as chance, luck or other people, the probability of reaching a desired goal is lower, since he makes less effort in this direction (Dela Coleta, 1992).

The locus of control has been widely used in behavioral research to explain human behavior in organizational contexts and has been identified as an antecedent for different behaviors (Donnelly et al., 2011).

Dysfunctional behaviors are means for the auditor to manipulate the audit process to achieve the individual performance objective. The reduction in audit quality resulting from actions can be seen as a necessary sacrifice for the individual to survive in the audit environment. It is expected that the greater the individual's external locus of control, the more likely he is to accept the dysfunctional behavior (Donnelly, Quinin & O'Bryan, 2003).

The studies by Donnelly et al. (2003, 2011); Paino et al. (2014); Gorbanpour, Dehnavi and Heyrani (2014) identified that auditors who exhibit external locus of control biases are more likely to reveal greater acceptance of dysfunctional behavior, and that external locus of control has a negative impact on organizational commitment. Sant’ana and Cunha (2016) and Mangiwa, Bandang, Ashari and Lobo (2017) identified a positive relationship between the locus of control and dysfunctional behavior. Kartasari, Tjaraka and Sudaryati (2018) also identified a positive relationship between the external locus of control and the dysfunctional behavior of auditors. This condition occurs because individuals who have an external locus of control are those who believe they can control events and outcomes, including dysfunctional behavior.

Although the locus of control was not evaluated with the environmental variable pressure of time budget, a positive relationship with other environmental factors was identified (Furnham & Drakeley, 1993; Damascena, França & Silva, 2016).

Studies on the relationship of the locus of control with organizational socialization are not identified in the context of the audit. However, Lee (2013) found that there is a positive influence of the internal locus of control on the organizational socialization of bank employees. Likewise, Büttgen, Schumann and Ates (2012) identified that socialization activities positively influenced service providers with an internal locus of control. Considering that research indicates a positive relationship between the internal locus of control and socialization, the relationship between the external locus of control may be negative. Thus, hypotheses H1; H2; H3 and H4:

- **H1**: There is a positive relationship between the external locus of control and auditors’ dysfunctional behavior.
- **H2**: There is a positive relationship between external locus of control and time budget pressure.
- **H3**: There is a negative relationship between external locus of control and organizational commitment.
- **H4**: There is a negative relationship between external locus of control and organizational socialization.

2.1 Relationship between environmental, personal and socialization factors with auditor's dysfunctional behavior

From the work of Rhode (1978), it was known that the primary motivating factor for non-compliance with an audit procedure was, among others, the pressure of the budget of time (Alderman & Deitrick, 1982). The results found by Alderman and Deitrick (1982) confirm that the time budget is indeed paradoxical, because while they have many beneficial characteristics, they are perceived as having the ability to make some auditors act unprofessionally in certain situations.

Studies by Kelley and Marghein (1990) demonstrate that greater amount of pressure resulted in increased dysfunctional behavior, and Otley and Pierce (1996b) concluded that, in general terms, the likely response of seniors to tight budgets was more likely to underreport time and reduce audit quality. Mangiwa et al. (2017) found that time budget pressure has a positive effect on auditors' dysfunctional behavior. Putu, Rasmini, Budiartha and Widanaputra (2020) identified that time budget pressure is consistently related to dysfunctional behavior, as it is a condition in which the auditor is obliged to perform his/her work efficiently, but with a time constraint, in a tight and rigid time budget. Therefore, the greater the pressure of the time budget, the greater the tendency of the auditor to behave in a dysfunctional way.
According to Allen and Meyer (1990), the commitment model presents three approaches that were called affective, continuity and normative commitment. While what these approaches have in common is the bond between the employee and the organization, the nature of that bond is different. Thus, Meyer, Allen and Smith (1993) take on that the view of organizational commitment is based on the following concepts: a) affective commitment: it is the desire to remain in the organization due to their feelings of challenges and comfort; b) continuity commitment: the employee recognizes that the costs of leaving the organization would be high, depending on the magnitude of the investments; c) normative commitment: it is the obligation to remain in the organization, the result of a feeling of loyalty.

Authors such as Paino, Thani and Idris (2011); Donnelly et al. (2011); and, Ghorbanpour et al. (2014) studied the relationship between organizational commitment and dysfunctional behavior and found that organizational commitment was associated with lower levels of dysfunctional behavior.

Based on a literature review on organizational socialization, Taormina (1997) proposes four dimensions formed by domains, defined as a sphere of influence or activity. The four dimensions are training, understanding, co-worker support, and future expectations.

In this research, the construct of organizational socialization is used, which is a type of socialization. Studies that verified the influence of organizational socialization in other organizational environments are seen in the literature. Lee (2013) demonstrated that the internal locus of control has a positive influence on organizational socialization and that the locus of control and organizational socialization can interact to influence organizational identification. In the context of the audit, Lord and DeZoort (2001) verified the effects of the influence of social pressure on the auditors’ decisions, and a significant difference was identified in the estimates of the balances of the audit accounts of the auditors who had more social influence. In view of the above, the following hypotheses are presented:

H5: There is a positive relationship between time budget pressure and auditor dysfunctional behavior.
H6: There is a negative relationship between organizational commitment and auditor’s dysfunctional behavior.
H7: There is a positive relationship between organizational socialization and auditor's dysfunctional behavior.

2.2 Mediation of environmental, personal and socialization factors in the relationship between the external locus of control and the dysfunctional audit behavior

As for the mediation of personal factors (organizational commitment) between the locus of control and the auditor's dysfunctional behavior, Donnelly et al. (2003) identified that there is a positive influence on the moderation of the organizational commitment variable in the relationship between the locus of control and the intention to change, in dysfunctional behavior. Ghorbanpour et al. (2014) found that there is an impact of the locus of control on organizational commitment, but they did not identify an impact of the locus of control on the acceptance of dysfunctional behavior mediated by organizational commitment. Paino et al. (2014) predicted that there would be a positive effect of mediating organizational commitment, change intention, and auditors’ self-performance on the relationship between locus of control and dysfunctional behavior. Given the above, it is understood that the mediation of organizational commitment needs to be further explored.

As for the mediation of the socialization factor (organizational socialization), in the relationship between the locus of control and the auditor's dysfunctional behavior, it is observed that research in the audit environment using the applied organizational socialization construct in this study was not identified in the literature. However, Lee (2013) investigated the mediating effect of organizational socialization on the relationship between locus of control and organizational identification of bank employees and found that organizational socialization has a positive mediating effect between internal locus of control and organizational identification. Lord and DeZoort (2001) evaluated the effects of the influence of social pressure on the auditors’ decisions, and a significant difference was identified in the estimates of the balances of the audit accounts of the people who had more social influence. Thus, the following hypothesis is presented:
**H8: Environmental, personal and socialization factors jointly mediate the relationship between the external locus of control and the auditor’s dysfunctional behavior**

Figure 1 shows the relationship between the variables investigated in this study, in which the direct relationship between the locus of control and the auditor's dysfunctional behavior is evaluated; the relationship between the locus of control and the variables that represent environmental, personal and socialization factors; as well as the relationship of environmental, personal and socialization factors with the auditor's dysfunctional behavior. It also indicates the relationship between the locus of control and the auditor's dysfunctional behavior, mediated jointly by environmental, personal and socialization factors (H8).

![Diagram of the relationship between variables](image)

**Figure 1 - Theoretical model**  
Source: author’s elaboration.

Recent research on the factors that influence the auditor's behavior has been carried out, however, they use other variables or other relationships, other than those predicted in this study, as predictors of this behavior. Goenawan and Indarto (2021) evaluated organizational commitment as a moderating variable between the variables audit complexity and work stress with auditors' dysfunctional behavior.

Santos and Cunha (2021) evaluated the interrelationship of the influence of the factors trust (personnel), time pressure (environmental) and complexity (task) on judgment and decision making (JTD) in auditing. Bonabi Ghadim and Hafezi (2021) researched the effect of workplace spirituality on auditor dysfunctional behavior and audit quality.

**3 Methodological Procedures**

As for the type of study, it is a descriptive research. The research is developed through a survey and the quantitative method is used to approach the problem. The data collection instrument was a questionnaire.

The population consists of independent auditors registered with the Federal Accounting Council (CFC), totaling 2,927 auditors. For data collection, several actions were carried out, such as contacting the Professional Development Chamber and the registration sector of the CFC, with the Brazilian Institute of Independent Auditors (Ibracon), with the big four and for 11 other independent auditing firms in Brazil, and contact with Regional Accounting Councils (CRCs).

Given the low number of respondents, another action was sought, which was to contact each auditor directly through the professional connection network LinkedIn. The LinkedIn network of connections has been used by researchers as a data collection tool (Tubenchlak, Faveri, Zanini & Goldszmid, 2014; Jacomoss, Morano, Barrichello & Rafałski, 2014). Of the 2,927 auditors, we found that 805 are registered on LinkedIn. Then, the connection invitation was sent to them. It is noteworthy that the LinkedIn system allows sending a link with surveys only after the participant accepts the connection invitation. Thus, of the total of 805 auditors who are registered on LinkedIn, 455 accepted the invitation, to whom the request to participate in the research was sent, along with the questionnaire link. This process took place from October 22, 2016 to February, 2017. With this action, the total number of questionnaires answered was 167. However, four auditors did not agree to participate in the research, totaling a sample of 163 valid questionnaires.

The sample size considered in this research is the one that meets the recommendation for the statistical technique of data analysis, which is the modeling of structural equations applied in the SmartPLS software. Therefore, Hair, Hult, Ringle and Sarstedt (2017) predict that the sample calculation can be performed in the G*Power Program software, and the calculation is performed with a sample reliability of
95%. After performing the calculation, the result points to a minimum sample of 85 auditors. However, Ringle, Silva and Bido (2014) suggest that to have a more consistent model it is interesting to double or triple this value. The number of returns obtained in this research was 163 respondents, very close to double the value indicated.

The locus of control construct is verified using the questionnaire proposed by Rotter (1966), which was modified by Levenson (1973) and adapted to the Brazilian context by Dela Coleta (1987). Time budget pressure is measured with three indicators used in the research by Otley and Pierce (1996a) and, to adapt the questionnaire to the needs of factor analysis, a new indicator is included, taken from the research carried out by Pierce and Sweeney (2004). To identify organizational commitment, we used the questionnaire developed by Meyer et al. (1993), whose adaptation to the Brazilian context was made by Medeiros (1997). For organizational socialization, we used the questionnaire developed by Taormina (2004). As for the variable used to identify dysfunctional behavior, we used the questionnaire adapted by McNamara and Liyanarachchi (2008).

It is noteworthy that in this research the latent variables are formed by subvariables, which allows the evaluation of relationships in higher-order models. According to Hair et al. (2017), first-order models consider a single layer of constructs, but can also be operationalized at higher levels of abstraction, called higher-order models or hierarchical component models. However, the application of the second order model is possible as long as the theory supports this step.

In this research, the variables external locus of control, auditor's dysfunctional behavior, organizational commitment and organizational socialization present higher-order constructs, which allow the evaluation of the first-order structural model.

To evaluate the objectives proposed in this study, we used the Structural Equation Modeling (SEM) technique, which, according to Hair, Black, Babin, Anderson and Tatham (2009), has become attractive to researchers because it provides conditions to test a theory expressed in terms of latent variables and constructs. Data analysis is performed using the Partial Least Squares (SEMPLS) SEM estimation method, which performs the evaluation of the SEM in parts, also called Partial Least Squares - Path Modeling - PLS-PM (Bido, Silva, Souza & Godoy, 2010) and the software used is SmartPLS.

4 Results Presentation and Discussion

Regarding the profile of the auditors participating in the survey, the results show that 79.7% of the auditors who responded to the survey are male. To better elucidate this point, the proportion of men and women was verified in the list of independent auditors registered with the CFC and it was identified that of the 2,927 auditors, 78.9% are men, thus demonstrating that in Brazil there is a predominance of men in the environment of the audit.

Furthermore, it was found that 47.9% are auditors working in big four audit firms. Regarding age, it is observed that the minimum age of auditors is 24 years and the maximum is 70 years. As for the most representative functions, they are partners (37.4%) and managers (36.8%). As for experience, it is observed that 34.4% of the auditors who responded to the survey have up to 9 years of experience in the area and 34.4% have between 10 and 19 years.

To identify the most evident dysfunctional behavior among the auditors who responded to the survey, the average of the subvariables was calculated, and the highest average (2.46) refers to the subvariable underreporting of time, indicating that, in the auditors' perception, this was the behavior they were most involved in. Such results converge with those found by Donnelly et al. (2003; 2011); Shaperoo, Chye Koh and Killough (2003); and Paino et al. (2014), as they also identified that the most evident dysfunctional behavior was the underreporting of time.

To perform the confirmatory factor analysis, it is necessary to verify the internal consistency, the convergent validity and the discriminant validity of the measurement model.

The external locus of control variable model is formed by two subvariables that are the external locus of control – chance (LCEA) and the external locus of control – powerful (LCEP). As for discriminant validity, it meets the Fornell-Larcker criterion. As for the discriminant validity, it is evaluated by the criterion of Heterotrait-monotrait (HTMT). According to Dela Coleta (1987), in the original questionnaire by Rotter (1977) the powerful external locus of control – chance and external locus of control – subvariables receive unified treatment and in later research this also occurs (Donnelly et al., 2011; Lautania, 2011; Paino et al., 2014; Ghobanpour et al., 2014), we chose to evaluate the variable external locus of control as a single first-order variable.

The auditor's dysfunctional behavior variable is composed of the subvariables premature signing of accounts (CDAPC), alteration/replacement of audit procedures (CDASPA) and underreporting of time (CDSH). After evaluating the factor loading, the discriminant validity, the Fornell-Larcker criterion, as well as the HTMT, all subvariables that form the dysfunctional behavior variable remained in the construct.

As for the organizational commitment variable, when evaluating the discriminant validity between the constructs, it is observed that the square root of each construct is greater than the relationship between them, meeting the Fornell-Larcker criterion. However, the discriminant validity by the criterion of Heterotrait-
monotrait (HTMT) of the subvariable instrumental organizational commitment (COI) with the subvariable normative organizational commitment (CON) is greater than 1.0. As there is no theoretical basis to transfer the questions to another subvariable, Hair et al. (2017) suggest removing the subvariable that does not meet the HTMT criterion from the model. In this way, the instrumental organizational commitment (COI) subvariable is removed from the model.

When evaluating the organizational socialization variable, which presents a second-order variable, it appears that the subvariables help from co-workers (SOAC); understanding (SOE); and, future expectation (SOEF) present composite reliability above the established parameter. After the adjustments, it is observed that for the validation of the organizational socialization (SO) variable, it is necessary to remove the model from the understanding (SOE) and training (SOT) subvariables, as they presented composite reliability above 0.95. In addition, the values of the discriminant validity criteria (Fornell-Larcker and HTMT) were above the established limit. Therefore, the questions that represent the subvariables organizational socialization assistance from co-workers (SOAC) and organizational socialization future expectations (SOEF) remain.

To evaluate the structural model, the following indicators are verified: a) collinearity; b) coefficients of the path structural model; c) coefficient of determination ($R^2$ value); d) size of the $f^2$ effect; e) Blindfolding and Predictive Relevance, which is the value of $Q^2$; and f) effect of the size of $q^2$. The limits of the structural model assessment criteria are shown in Table 1.

### Table 1

<table>
<thead>
<tr>
<th>Exogenous variable</th>
<th>$R^2$</th>
<th>$Q^2$</th>
<th>Endogenous variable</th>
<th>Path coefficient</th>
<th>Sig. $p$-value</th>
<th>VIF</th>
<th>$f^2$</th>
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LCE: external locus of control; CD: dysfunctional behavior; COA: affective organizational commitment; CON: normative organizational commitment; POH: time budget pressure; SOAC: organizational socialization assistance from colleagues; SOEF: organizational socialization future expectations.

Source: research data

Collinearity is evaluated by the variance inflation factor (VIF) and the results indicate that the VIF values meet the limits of 0.2 and 5, demonstrating that there are no critical levels of collinearity between the constructs.

The variance of the endogenous variables is evaluated through the coefficient of determination ($R^2$), which seeks to explain the model’s predictive capacity.

As for the values of $f^2$, it is observed that the effects of the variables pressure on the budget of time (POH) (0.115) and dysfunctional behavior (0.130) are considered medium. The other effects are considered low.

The value of $Q^2$ for the organizational socialization future expectations (SOEF) subvariable is below zero (-0.019), therefore, this subvariable has no predictive relevance for the endogenous construct. The other variables have values above zero, indicating that they contribute to the construct.

The effects of the affective organizational commitment variable (-0.002), normative organizational commitment (0.005), time budget pressure (0.058), organizational socialization help from colleagues (0.039) and organizational socialization future expectations (0.019), are considered small.

### 4.1 Results Presentation

In this subsection, we show the results found and evaluate the relationships predicted in the research (figure 2). It is noteworthy that the relationships are evaluated considering the first-order variables.
When verifying the predictive value of the exogenous variable external locus of control over the endogenous variables, it is identified that the external locus of control exerts greater predictive power on the variable pressure of the time budget (LCE->POH=0.32; p-value =0.000), followed by the subvariable affective organizational commitment (LCE->COA=-0.25; p-value=0.000). The relationship with the other variables is not significant.

As for the relationship of exogenous variables with the dysfunctional behavior variable, it is observed that the subvariable with the highest predictive power is organizational socialization with co-worker help (SOAC -> CD = 0.42; p-value = 0.001), followed by the budget pressure variable of time (POH->CD = 0.33; p-value = 0.000) and the variable organizational socialization future expectations (SOEF->CD = -0.33; p-value = 0.021), finally the subvariable affective organizational commitment (COA-> CD = -0.17; p-value = 0.024).

As for the subvariable organizational socialization help from colleagues (SOAC), it has a positive relationship with dysfunctional behavior, while the socialization future expectations (SOEF) has a negative relationship with dysfunctional behavior. The difference between the relationships may be related to the fact that co-worker assistance (SOAC) is seen as an activity that is mainly related to the emotional needs of employees and organizational socialization future expectations (SOEF) is defined as the measure in that an employee expects to have a rewarding career in the organization (Taormina, 1997).

Table 2 shows the assessment of the mediation of environmental (time budget pressure), personal (organizational commitment) and socialization (organizational socialization) factors in the relationship between the external locus of control and the auditor's dysfunctional behavior.

The mediation of environmental, personal and socialization factors in the relationship between the external locus of control and dysfunctional behavior in the direct effect between the variable external locus of control (LCE) and dysfunctional behavior (DC) is 0.101 with a significance level of 0.091 and the indirect effect is 0.169 (p-value=0.000). Thus, it is a complete mediation, as the direct effect (0.101; p-value=0.091) is not significant and the indirect effect (0.169; p-value=0.000) is significant and points in the same direction (positive), indicating that the relationship between the external locus of control and dysfunctional behavior depends on the mediating variables (Hair et al., 2017).
### Table 2
Mediation of environmental, personal and socialization factors in the relationship between the external locus of control and the auditor’s dysfunctional behavior

<table>
<thead>
<tr>
<th>Exogenous variable</th>
<th>Endogenous variable</th>
<th>Path coefficient</th>
<th>Sig. p-value</th>
<th>Indirect effect</th>
<th>Sig. p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCE</td>
<td>CD</td>
<td>0.101</td>
<td>0.091</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>POH</td>
<td>0.321</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>COA</td>
<td>-0.257</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>COM</td>
<td>-0.170</td>
<td>0.132</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SOAC</td>
<td>0.114</td>
<td>0.114</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SOEF</td>
<td>0.039</td>
<td>0.372</td>
<td>0.169</td>
<td>0.000</td>
</tr>
<tr>
<td>LCE</td>
<td>POH</td>
<td>0.336</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>COA</td>
<td>-0.177</td>
<td>0.024</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>COM</td>
<td>0.111</td>
<td>0.182</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CD</td>
<td>0.111</td>
<td>0.182</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SOAC</td>
<td>0.421</td>
<td>0.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SOEF</td>
<td>-0.336</td>
<td>0.021</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LCE: external locus of control; CD: dysfunctional behavior; COA: affective organizational commitment; CON: normative organizational commitment.

Source: research data

It is observed that the value of the relationship between the external locus of control (ECL) and dysfunctional behavior, when evaluated with only one of the mediating variables, is significant, however, when evaluated considering the mediation of all variables together, the value is not significant. This result demonstrates that the impact of the external locus of control is transferred to the mediating variables (environmental, personal and socialization factors), when evaluated together.

### 4.2 Results Discussion

In this subsection we discuss the results, firstly on the direct relationship between the locus of control and the research variables; then on the direct relationship between environmental, personal and socialization factors with the auditor's dysfunctional behavior; and, finally, mediation.

#### 4.2.1 Direct relationship between the control locus and the research variables

The results show that there is a positive relationship between the variable external locus of control and the auditor's dysfunctional behavior (LCE->CD=0.137; p-value=0.037), indicating that the greater the external locus of control, the greater the involvement of the auditor in dysfunctional behaviors. Thus, hypothesis H1 is confirmed: There is a positive relationship between the external locus of control and the auditors' dysfunctional behavior.

When comparing this result with the literature, we observe that research has shown that auditors who perceive themselves as having a greater external locus of control tend to be more accepting of dysfunctional behavior (Donnelly et al., 2003, 2011; Lautania, 2011; Paino et al., 2014; Alkaustar, 2014; Ghorbanpour et al., 2014).

As for the pressure of the time budget, it is noteworthy that no studies were found in the literature that assess the relationship between the external locus of control and the pressure of the time budget. However, Damascena et al. (2016) found that accountants with greater external locus of control are less resilient in the adaptation process in a context of changing norms. In this research, the relationship between external locus of control and time budget pressure (LCE->POH=0.323; p-value=0.000) is positive. Therefore, hypothesis H2 is not rejected: There is a positive relationship between the external locus of control and the pressure of the time budget.

This result indicates that auditors with a greater external locus of control feel more pressured by the time budget, as they recognize that the time budgets provided for carrying out the audits were not easy to comply with or adequate to carry out the audits.

When verifying the relationship between the external locus of control and the organizational commitment subvariables, it is observed that there is a negative effect of the external locus of control variable on the affective organizational commitment subvariable (LCE->COA=-0.257; p-value=0.000), indicating that auditors with a greater external locus of control have less affective organizational commitment. Affective organizational commitment refers to the desire to remain in the organization due to their feelings of challenge and comfort (Allen & Meyer, 1990). As for the relationship between the external locus of control (LCE) and normative organizational commitment (CON), it is not significant.

Thus, the results indicate that auditors who attribute the events of their lives to individuals with greater power, fate or chance tend to feel less linked and integrated to the audit firm, that is, less affectively committed. Such results identify that the external locus of control is an antecedent to the lack of affective
commitment, which allows audit firms to identify more clearly what type of commitment auditors develop with the organization and, from that, to develop actions in the sense of alleviating the lack of affective organizational commitment. Thus, hypothesis H3: There is a negative relationship between the external locus of control and organizational commitment, is not rejected.

The results converge with those found by Donnelly et al. (2003, 2011); Ghorbanpour et al. (2014). In addition, in a survey carried out with big four auditors in southern Brazil, Sant’ana and Cunha (2016) identify that there is no relationship between the control locus and organizational commitment. In this case, it should be noted that their survey was applied only to big four auditors, while this one is applied to big four and non-big four auditors. Such results indicate that there is a need for further studies to assess the relationship between the external locus of control and the auditor's organizational commitment.

As for the organizational socialization variable, no significant relationship was identified with any of the variables, thus, hypothesis H4 is rejected: There is a negative relationship between the external locus of control and organizational socialization. It is observed that no research was found in the auditing environment that evaluated the relationship between the locus of control and organizational socialization.

### 4.2.2 Direct relationship between environmental, personal and socialization factors with auditor's dysfunctional behavior

The results show that the pressure on the time budget has a positive effect on dysfunctional behavior (POH->CD=0.336; p-value=0.000), identifying that the greater the pressure on the time budget perceived by the auditors, the greater their dysfunctional behavior. Therefore, hypothesis H5 is not rejected: There is a positive relationship between the pressure of the time budget and the auditor’s dysfunctional behavior. It is noteworthy that the relationship between the pressure of the time budget was the first variable identified in the studies as a predictor of dysfunctional behavior. Thus, the results converge with the studies carried out by Alderman and Deitrick (1982); Kelley and Margheim (1990); Otley and Pierce (1996a); Pierce and Sweeney (2004); McNamara and Liyanarachchi (2008).

Thus, it is inferred that the pressure of the time budget continues to be a factor that influences the auditor's dysfunctional behavior and can have future consequences. According to Alderman and Deitrick (1982), taking work home and not reporting the time exacerbates the problem, as budgets from previous years are often used as guides to develop new budgets. In this way, various elements of control can be inadvertently lost during the planning, execution and evaluation of an audit. In addition, if the time allocated to budgets is indiscriminately reduced, the likelihood of poor audit work is increased. According to McNamara and Liyanarachchi (2008), auditors' responses to time budget pressure can have a significant effect on audit quality.

With regard to the relationship between organizational commitment and dysfunctional behavior, the subvariables affective organizational commitment and normative organizational commitment are evaluated. The relationship between affective organizational commitment and dysfunctional behavior is negative (COA->CD=-0.177; p-value=0.024), while the relationship between normative organizational commitment and dysfunctional behavior is not significant. Thus, hypothesis H6 is not rejected: There is a negative relationship between organizational commitment and dysfunctional behavior.

The evaluation of this relationship was identified in the literature by Otley and Pierce (1996b) who found mixed results for the relationship between organizational commitment and dysfunctional behavior, as they present evidence of a negative effect for premature signing of accounts and behavior that reduces audit quality, and positive relationship between organizational commitment underreporting time. Paino et al. (2014) point out that organizational commitment is negatively related to dysfunctional behavior.

Regarding the variable organizational socialization with dysfunctional behavior, it is observed that the subvariable organizational socialization helping co-workers has a positive relationship (SOAC->CD=0.421; p-value=0.001) and organizational socialization future expectations has a negative relationship (SOEF->CD=-0.336; p-value=0.021). Therefore, with regard to hypothesis H7: There is a positive relationship between organizational socialization and the auditor's dysfunctional behavior, if the subvariable organizational socialization future expectations are considered, the hypothesis is rejected. However, if the subvariable organizational socialization help from colleagues is considered, whose relationship is positive, the hypothesis would not be rejected.

It is observed that the question with the highest average in this variable is SOAC2 (my co-workers are usually willing to offer help or advice). This result converges with the results of the study by Lord and DeZoort (2001) which found that the pressure of social influence from within the audit firm is stronger than formal instructions. They also converge with the results found by Coram, Glavovic, Ng, and Woodliff (2008) who identified that auditors perceive the different acts of reducing audit quality based on social consensus.

In view of the results, it can be inferred that the greater the help from co-workers, the greater the involvement in dysfunctional behaviors, which indicates that the incentive to dysfunctional behavior can be transmitted in social relationships within the audit firm, through assistance or peer advice. Agoglia, Hatfield and Lambert (2015) highlight that managers can encourage the underreporting of time due to their own interests, even if this is not in line with the audit firm's principles.
Also, it is identified that organizational socialization future expectations presents a negative relationship with dysfunctional behavior (SOEF->CD=-0.336; p-value=0.021), indicating that the higher the future expectation, the lower the involvement in dysfunctional behaviors. Future expectation refers to how much the employee expects their career to be rewarding in the organization, in terms of promotions and job retention.

In this way, when evaluating the multidimensionality of the variables, it is possible to verify more clearly the social aspects that most influence dysfunctional behavior, because according to Zanelli, Borges-Andrade and Bastos (2014), when a group of relationships becomes a reference, it starts to play a normative role in the behavior of the individual, and norms are shared through the various encounters in which there are social relationships. The norms can be known by all the members of the group without being written down. In this way, socialization plays a very strong power role in organizations and this power can be used in favor of the pursuit of organizational objectives or against these objectives.

4.2.3 Mediating effect of environmental, personal and socialization factors on the relationship between the external locus of control and the auditor's dysfunctional behavior

When evaluating mediation, the model with the first order variables (subvariables) is used and the results demonstrate that the direct effect between the variable external locus of control (LCE) on the variable dysfunctional behavior (DC) is not significant (LCE->CD=0.101, p-value=0.091, while the indirect effect value (0.169) is significant (p-value=0.000), indicating that the mediation is complete.

In this research, it is evident that the external locus of control influences the environmental, personal and socialization factors and these, in turn, influence the auditor's dysfunctional behavior. Thus, the relationship of the external locus of control with dysfunctional behavior is not direct, but mediated by the pressure of the budget of time, affective and normative organizational commitment and by organizational socialization, help from co-workers and future expectations.

In view of the results, it is inferred that environmental, personal and socialization factors jointly mediate the relationship between the external locus of control and the auditor's dysfunctional behavior. Thus, the gap identified in carrying out this research is filled, which was to evaluate the joint effect of environmental, personal and socialization factors in the relationship between the external locus of control and dysfunctional behavior and to evaluate organizational socialization from an established construct in literature.

5 Conclusions and Recommendations

The general objective of this study was to analyze the influence of the external locus of control on the auditor's dysfunctional behavior, mediated jointly by environmental, personal and socialization factors. It is observed that mediation was evaluated by applying the model with the first-order variables (affective and normative organizational commitment, organizational socialization, help from co-workers and future expectations), and the results demonstrate that the direct effect of the external locus of control on the dysfunctional behavior is not significant, while the value of the indirect effect is significant, indicating that the mediation is complete. Therefore, it appears that the external locus of control influences the pressure of the budget of time, the organizational commitment and the organizational socialization and these factors, in turn, jointly influence the dysfunctional behavior.

It is also identified that the dysfunctional behavior in which the auditors were most involved in the last year was the underreporting of time, indicating that, in response to the tight time budget, they work more, however, they charge up to the limit of time foreseen in the budget.

It appears that the relationship between affective organizational commitment and dysfunctional behavior is negative, indicating that auditors with lower affective organizational commitment are more likely to engage in dysfunctional behaviors. The results allow us to infer that by encouraging affective commitment, the involvement of auditors in dysfunctional behaviors can be reduced.

Regarding the relationship between organizational socialization and dysfunctional behavior, it is evident that socialization with the help of colleagues has a positive relationship with the auditor's dysfunctional behavior, while organizational socialization with future expectations has a negative relationship. Thus, it appears that auditors who receive help or advice from colleagues and help to adjust to the organization are more likely to engage in dysfunctional behaviors, which indicates that dysfunctional behavior may be informally communicated in socializing with colleagues of the audit environment. This result allows auditing firms to seek to identify how socialization occurs among co-workers and develop actions to minimize the intention to promote dysfunctional behavior.

Given the above, we concluded that the involvement of auditors in dysfunctional behaviors is not related to isolated factors, but that environmental, personal and socialization factors jointly influence dysfunctional behavior. The behavior of the auditor inserted in the organizational context is influenced by the controls established in the audit environment (environmental factor), the way he perceives the organization and whose reaction depends on his personal characteristics (personal factor), and is also influenced by the
social environment with which he maintains relationships (social factor). In addition, it appears that the influences do not happen in isolation, but concomitantly.

In addition to jointly evaluating the factors that influence dysfunctional behavior and evaluating organizational socialization from a theoretical perspective, this research evaluates the first-order variables of the constructs of organizational commitment and organizational socialization. The evaluation of relationships considering the subvariables (first order) brings important contributions to the advancement of behavioral research in the audit environment, because when considering the multidimensionality of the constructs, it can be seen that auditors have different perceptions about dimensions of the same construct.

Low quality audits can lead auditors to produce reports that do not reveal failures in controls or even fraud in the audited organizations, and disqualified reports can induce investors to make wrong decisions, impacting the financial market. The consequences for the financial market can be disastrous, leading small and large investors to lose considerable amounts of investment.

The research contributes in the practical aspect, both for professional agencies and for auditing firms, suppliers, financiers and the financial market, as there is some difficulty in evaluating the quality of audit services after they are performed and they can be susceptible to the behavior of the controller. In addition, professional agencies will be able to expand the assessment of audit quality and develop policies that consider dysfunctional behavior as an element linked to the quality of the services provided.

Assessing the quality of the audit based on the auditor's behavior and identifying the factors that influence dysfunctional behavior can be fundamental to assessing the quality of audit services. By underreporting work time, changing or replacing audit procedures, or prematurely signing audit accounts, auditors can produce reports that do not meet the quality requirements necessary for funders, suppliers and investors to make sound decisions.

As limitations of the research, we mention the lack of control of the bias caused by the self-report, typical of research of this nature. Theoretical limitations are mainly related to the existence of uncontrolled intervening variables in the performance of this work, which may also have an effect on the auditor's dysfunctional behavior. In this regard, further research is needed to determine whether the variables omitted in this study also lead to dysfunctional behaviors.

In this way, the research can be extended and deepened to identify and evaluate the extent to which auditors engage in dysfunctional behaviors influenced by their own interests or those of their superiors, and how managers can influence their subordinates to engage in such behavior. In addition, to verify other environmental, personal and socialization factors, which were not investigated in this research, but which may influence dysfunctional behavior in the audit environment.

References


Mediation of environmental, personal and social factors in the relationship between the external locus of control and the dysfunctional audit behavior


NOTES

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Conception and elaboration of the manuscript: L. C., Cunha, P.R. Cunha
Data collection: L. C. Cunha, P.R. Cunha
Data analysis: L. C. Cunha, P.R. Cunha
Discussion of results: L. C. Cunha, P.R. Cunha
Review and approval: L. C. Cunha, P.R. Cunha

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CONFLICT OF INTERESTS
Does not apply.

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