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INFLUENCE OF BURNOUT ON THE ORGANIZATIONAL COMMITMENT OF HEALTHCARE PROFESSIONALS

Influência do burnout no comprometimento organizacional em profissionais de saúde

La influencia del burnout en el compromiso organizacional de los profesionales de la salud

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ABSTRACT

This article analyzes the influence of burnout syndrome on healthcare professionals' organizational commitment. The extant literature debates the conceptual independence of burnout and organizational commitment. This study contributes to the debate by empirically validating the independence of the two constructs and analyzing the relationship between burnout and three different dimensions of organizational commitment. The analyzed population was formed by doctors and nurses working directly with patients and their families from organizations located in Montes Claros, in the Brazilian state of Minas Gerais. Data was collected using an adapted Maslach Burnout Inventory (MBI) scale (Maslach & Jackson, 1987) and the organizational commitment scale (Meyer et al., 1993), and analyzed using variance-based structural equation modeling. The results suggest that burnout and organizational commitment are independent constructs. Also, it was observed that burnout syndrome negatively affects the employee's affective and calculative commitment to the organization, whereas there was no evidence of a negative relationship between burnout and normative commitment. Implications for theory development and organizational practice are discussed.

Keywords: burnout syndrome, organizational commitment, structural equation modelling, healthcare professionals.

RESUMO

Este artigo busca analisar a influência da síndrome de burnout no comprometimento organizacional por parte de profissionais de saúde. A literatura tem debatido a independência conceitual do bornout e do comprometimento organizacional e o estudo contribui para a discussão ao validar empiricamente tal independência por meio da análise da relação entre burnout e três diferentes dimensões do comprometimento organizacional. A população em estudo inclui médicos e enfermeiras que lidam diretamente com os pacientes e seus familiares, atuando em hospitais, clínicas de tratamento e casas de apoio localizados na cidade de Montes Claros, estado de Minas Gerais. Os dados foram coletados através da aplicação de uma escala adaptada de Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1987) e da escala de comprometimento organizacional (Meyer et al., 1993) e analisados por modelagem de equações estruturais baseada em variância. Os resultados indicam que a síndrome de Burnout e o comprometimento organizacional são construtos independentes. Ainda, pode-se observar que a síndrome de burnout afeta negativamente o comprometimento afetivo e calculativo dos empregados enquanto não foram encontradas evidências de uma relação negativa entre o burnout e o comprometimento normativo. O estudo ainda discute as implicações dos resultados para o avanço teórico e para a prática organizacional.

Palavras-chave: *síndrome de Burnout, comprometimento organizacional, modelagem de equações estruturais, profissionais de saúde.*

RESUMEN

Este artículo busca analizar la influencia del síndrome de burnout en el compromiso organizacional de los profesionales de la salud. La literatura existente debate la independencia conceptual del burnout y el compromiso organizacional. Este estudio contribuye al debate al validar empíricamente la independencia de los dos constructos y al analizar la relación entre el burnout y tres dimensiones diferentes del compromiso organizacional. La población del estudio incluye a médicos y enfermeros que tratan directamente con los pacientes y sus familias en hospitales, clínicas de tratamiento y hogares de apoyo ubicados en la ciudad de Montes Claros, estado de Minas Gerais. Los datos se recopilaron utilizando una escala adaptada del Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1987) y la escala de compromiso organizacional (Meyer et al., 1993), y se analizaron a través del modelado de ecuaciones estructurales basado en varianza. Los resultados indican que el síndrome de burnout y el compromiso organizacional son constructos independientes. Asimismo, se observó que el burnout afecta negativamente el compromiso afectivo y calculatorio del empleado con la organización, mientras que no se evidenció una relación negativa entre el burnout y el compromiso normativo. Se discuten también las implicaciones para el desarrollo teórico y la práctica organizacional.

Palabras clave: *síndrome de burnout, compromiso organizacional, modelado de ecuaciones estructurales, profesionales de la salud.*

INTRODUCTION

Today's organizational environment is characterized by intense international competition and innovative technologies that boost productivity. However, it also affects the employee's routine, workload, and work hours and can ultimately affect their health. Recently, numerous reports have emerged in organizations across different countries pointing out events of burnout syndrome (Barthauer et al., 2019), frequent illnesses (Burke & Fiksenbaum, 2009; Schuster et al., 2014), high absenteeism and turnover (Salmela-Aro & Upadyaya, 2018), lower job satisfaction (Barthauer et al., 2019), and lower affective commitment (Barbosa & Guimarães, 2005).

Fatigue syndrome, which is at the base of burnout syndrome, results from a process of continuous stress and work pressures. These events are often observed in professionals who provide services of personal assistance (Barthauer et al., 2019) and are exposed to long working hours, conditions that can be harmful to the cardiovascular system, causing an increase in blood pressure and heart rate (Burke & Fiksenbaum, 2009). The study of burnout gained attention in 2019 when the World Health Organization (WHO) included the syndrome as an occupational disease (WHO, 2019). Other conditions contributing to burnout syndrome are working countless hours, leading to sleep deprivation, increasing fatigue, chronic stress, and poor psychological health (Burke & Fiksenbaum, 2009).

According to Meyer and Allen (1991), organizational commitment explains the involvement or connection of a professional with the organization. Studies such as Mowday et al. (1979) have shown that highly committed employees lead to lower turnover rates and higher productivity and service delivery (Mowday et al., 1979). On the other hand, work stress leading to burnout is related to decreased organizational commitment since employees in such a condition are less susceptible and less dedicated to achieving the organization's goals (Gemlik et al., 2010).

Healthcare professionals are often submitted to substantial emotional demands in the workplace, engaging in activities such as monitoring the patients and their families in situations of suffering and health deterioration. Also, these professionals are susceptible to making mistakes and being unable to offer certain care due to extra or external demands (Kalliath et al., 1998; Enginyurt et al., 2016; Ryu & Kim, 2016; Santos & Santos, 2015; Zhou et al., 2014; Zhou et al., 2018.). Thus, amidst a daily routine of intense interpersonal contact, healthcare professionals tend to develop symptoms of burnout (Monteiro & Carlotto, 2014; Santos & Santos, 2015; Trindade & Lautert, 2010; Zanatta & Lucca, 2015). Recent studies examining the context of the COVID-19 pandemic pointed out several problems among healthcare professionals, such as insomnia (Drager et al., 2020), considerable psychological strain, symptoms of depression (Matsuo et al., 2020), fatigue, susceptibility to medical error (Alikhani et al., 2020), and emotional contagion (Joshi & Sharma, 2020).

Against this backdrop, it is worth exploring the relationship between the consequences of burnout syndrome and the workers' organizational commitment, considering that high burnout rates affect the organization by reducing employees' satisfaction, increasing turnover, and influencing commitment. The relationship between these elements is little explored

in the literature and is a topic for future empirical studies (see Barthauer et al., 2019). From a pragmatic point of view, the possible relationship between burnout and organizational commitment can explain low organizational productivity and high turnover (Guido et al., 2012), leading to a decrease in organizational performance. In this scenario, this research is relevant to elaborate organizational diagnosis. Given this theoretical and empirical gap in the literature, this study theoretically analyzes and empirically tests the influence of burnout syndrome on the organizational commitment of healthcare professionals.

The literature on burnout syndrome has increased over the past few decades. A search conducted in the Emerald, Science Direct, Sage, and Wiley databases, offered elements that strengthen the justification for this work. A search in international databases for articles that included the word "burnout" in the title, abstract, or keywords resulted in 146 articles on burnout syndrome published from all dates to 2020, and eight of them related to burnout and organizational commitment (Enginyurt et al., 2016; Hollet-Haudebert et al., 2011; Kalliath et al., 1998; Ryu & Kim, 2016; Zhou et al., 2014; Zhou et al., 2018). However, these eight studies are limited to exploring single cases (Enginyurt et al. 2016; Gemlik et al., 2010; Kalliath et al., 1998) or a single group of professionals, such as nurses (Ryu & Kim, 2016; Zhou et al., 2014; Zhou at al., 2018). This research empirically contributes to the literature by analyzing a network of hospitals and clinics in Montes Claros, a city in the Brazilian state of Minas Gerais, Brazil, rather than only one organization. Also, this study focuses on healthcare professionals as a whole instead of on a specific group of workers carrying out the same function.

The second contribution lies in the fact that the relationship between organizational commitment and burnout syndrome has not yet been studied in the Brazilian context, to the best of our knowledge, which may help us understand the impact of burnout in the country's organizations. Also, it is crucial to increase the understanding of burnout's influence on organizational commitment in national and international scopes, especially regarding the predictive influence of burnout on commitment.

BACKGROUND AND HYPOTHESES DEVELOPMENT

Burnout syndrome

Burnout can be understood as a strong response to chronic stress or stressors in day-to-day relationships between worker-client and worker-organization. The syndrome is triggered when the individual lacks coping strategies to manage work stressors (Maslach & Jackson, 1981; Maslach et al., 2009). The study of burnout is not limited to the phenomenon as an individual stress response. It has to do with the individual's relationships in the workplace (Maslach et al., 2009).

Emotional exhaustion, depersonalization, and reduced personal accomplishment are the three dimensions of the individual's exhaustion, components that refer to the employee's basic

stress (Maslach et al., 2009). These dimensions encompass physical and psychological aspects in individuals, such as loss of sensitivity (or feeling), and lack of concern and interest (Maslach et al., 2009). Depersonalization can be defined as the development of negative attitudes and feelings, such as cynicism, related to people who seek the services offered by these professionals and show signs of loss of idealism, irritability, distance from work activities, depersonalization, negative or inappropriate attitudes with clients (Maslach et al., 2009). Reduced personal accomplishment concerns the individual's negative perception of themselves and their professional achievements, causing depression, low self-esteem and morale, reduced productivity, and increased inability to cooperate and compete (Maslach et al., 2009).

Thus, the burnout syndrome can manifest through physical, emotional, and mental signs and symptoms (Barthauer et al., 2019; Schuster et al., 2014; Silva & Vieira, 2015). Emotional exhaustion is linked to feelings such as depression, helplessness, hopelessness, increased tension, and family conflicts, increased negativity and decreased positivity in affective states, and causing, in many cases, the employee's social isolation (Maslach & Jackson, 1981).

Organizational commitment

Organizational commitment is demonstrated through the worker's intention to stay and make efforts in favor of the organization, manifested by the convergence between personal and organizational values, loyalty between employer and employee, and the worker's identification with the organization (Meyer et al., 2004; Meyer & Maltin, 2010; Mowday et al., 1979). It is important to highlight different perspectives and measurement procedures, but this also leads to a lack of consensus on the definition of the construct organizational commitment (Meyer, 2015, 2016; Vandenberghe & Panaccio, 2012). This work acknowledges these different perspectives and adopts the broad definition by Meyer and Allen (1991) that comprises affective, normative, and calculative dimensions of organizational commitment.

According to Meyer and Allen (1991), from an attitudinal and behavioral perspective, organizational commitment can occur in a three-dimensional model presented by three-dimensional links: affective, normative, and calculative. Affective commitment (AC) is identified by affection, identification, emotional connection, involvement, and intimacy between organization and employee (Meyer, 2015, 2016; Meyer & Allen, 1997; Meyer et al., 2012), causing feelings of loyalty, appreciation, effort, admiration, and desire to remain in the organization, creating "emotional attachment" between the individual and the organization (Mowday et al., 1979). Therefore, organizations prefer AC due to the employees' identification with the organization's ideals (Falce et al., 2019). Normative commitment (NC) is characterized by the employee's moral obligation to the employer. In this perspective, loyalty to the organization exists due to an individual's internal idea or norm based on duty, principles, and ethics. Thus, the individual remains committed to the company regardless of improvements or increased levels of job satisfaction over the years. The employee is committed simply because they feel a moral obligation and to reward the company with their permanence since leaving the organization

would be perceived as disloyal (Falce et al., 2019; Meyer & Allen, 1991). The greater the affective and normative commitments, the lower the intentions to leave the organization (turnover) (Laura et al., 2013). Finally, calculative commitment (CC) occurs when the worker compares the material costs between continuing or leaving the job, without affective thoughts (Meyer, 2016). Therefore, the worker engaged in a calculative manner remains in the organization for convenience, which can be a problem for the organization if workers stop perceiving their resignation as an inconvenience (Falce et al., 2019).

These three dimensions of organizational commitment are a psychological state that (a) characterizes the individual's relationship with the organization and (b) has implications for the decision to continue or leave the organization (Meyer & Allen, 1991).

Hypotheses development

The relationship between burnout syndrome and organizational commitment has significant implications for workers' health and organizational performance (Maricutoiu et al., 2017). The link between the constructs divides scholars between researchers who consider organizational commitment and burnout as opposites (Cole et al., 2012; Maslach et al., 2009) and scholars who believe these constructs are different but connected (Maricutoiu et al., 2017; Schaufeli & Salanova, 2014). This study adopts the view that organizational commitment and burnout are different constructs as they reflect different forms of well-being (Maricutoiu et al., 2017; Schaufeli & Salanova, 2014), and we apply structural equation modeling to validate this conceptual differentiation empirically

Authors such as Barbosa and Guimarães (2005), Maricutoiu et al. (2017), Kalliath et al. (1998), Hollet-Haudebert et al. (2011), Zhou et al. (2014), Enginyurt et al.(2016), Ryu and Kim (2016), and Zhou et al. (2018) have examined the relationship between the constructs analyzed here. In their research, Barbosa and Guimarães (2005) studied the relationship between the three dimensions of burnout and affective commitment.

Emotional exhaustion can be understood as a situation of depletion of personal energy, in which the worker presents situations of personal exhaustion and lack of equity in relation to the organization, affecting the perception of individuals and making them less dedicated to tasks causing the level of affection of workers toward the organization to decrease (Maricutoiu et al., 2017; Maslach et al., 2009).

Affective commitment can be understood as the subject's feeling of identification, involvement, and emotional connection with the organization (Almeida, 2012). People with high levels of affective commitment want to stay in organizations because they share similar values and goals.

The third dimension of burnout syndrome concerns the worker's reduced personal accomplishment in relation to the organization, commonly related to an individual's negative responses to themselves and their professional achievements, leading to depression, low self-esteem and morale, reduced productivity, and increased inability to cooperate and compete (Maslach et al., 2009).

Thus, burnout may negatively influence affective commitment and therefore we hypothesize:

H1.1 Burnout negatively affects affective commitment.

According to Almeida (2012), emotional exhaustion can be understood as a general sense of fatigue and frustration experienced by workers when their emotional resources are completely depleted.

On the other hand, the calculative commitment is linked to the calculations made by the individual related to the costs of leaving or staying in the organization. Individuals who commit to the organization in a calculative way do so for strategic reasons or for convenience since they are reluctant to give up the investments (social, financial, etc.) accumulated over the years of their career (Almeida, 2012).

According to Meyer and Allen (1991), this type of commitment can be seen as an ongoing action resulting from a personal recognition that calculates the costs associated with leaving the company. Therefore we hypothesize:

H1.2 Burnout positively affects calculative commitment.

Emotional exhaustion is a feeling of exploration and exhaustion of the emotional capacity of the being (Maslach et al., 2009) where individuals are obliged to present high-quality work within short deadlines and without due recognition, generating uncertainties about the permanence in the organization, emotional fatigue and decrease in organizational affection (Maslach et al., 2009). The worker remains in the organization because they understand that this act symbolizes loyalty and gratitude for the years of employment relationship (Almeida, 2012). They feel an obligation to stay, an "imposition" from the other organization members.

It is assumed that the more emotionally exhausted the worker is in relation to his work, the lower the bonds of affection and, consequently, the less the normative commitment and feelings of loyalty. The normative commitment is an obligation to remain in the organization because they consider preserving themselves at work morally correct, regardless of the status achieved or the perceived satisfaction, reflecting the individual's loyalty to their organization (Meyer & Allen, 1991).

Depersonalization can be seen as a lack of a link between the individual, the organization, and its customers in which the worker shows coldness and disinterest in the day-to-day work. The workers with high levels of depersonalization, indifference, and cynicism have low levels of loyalty to the organization and a low normative commitment. So, we hypothesize:

H1.3 burnout negatively affects normative commitment.

METHOD

It is a descriptive, empirical, and cross-sectional research (Hackett, 1981) with a case study of hospitals, treatment clinics, and support houses located in the city of Montes Claros, in the Brazilian state of Minas Gerais. The population was comprised of healthcare professionals working with patients and their families. The sample selection followed the criterion of non-probability sampling for accessibility (Hackett, 1981), and the G* Power software was used to indicate a minimum required sample of 119 responses to run the test. Before the data collection, the project was presented to the Brazilian Ethics Committee, registered on "*Plataforma Brasil*" (national database to record research involving human beings) – CAAE number 88370318.0.0000.5155 and report number 2.636.009.

The questionnaires were delivered in person, in January 2019, to healthcare professionals (doctors and nurses) working in seven different organizations located in the city of Montes Claros —- MG: Two hospitals (oncological and radiological sectors), two oncological clinics, and three health clinics. The return was 151 respondents, which met the minimum calculated by G. Power of the tests of structural equation modeling.

The data collection instrument consisted of a survey structured in three parts. The first part sought to gather sociodemographic data (gender, marital status, education, time in the institution, time in function, and position). The second part was based on the Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1987), composed of 22 questions (emotional exhaustion, depersonalization, and reduced personal accomplishment).

The manual by Maslach et al. (1996) guided the analysis of the questionnaires applied. According to the authors, higher mean scores in the subscales "emotional exhaustion" and "depersonalization" correspond to higher degrees of burnout. In contrast, lower mean scores in the subscale "personal accomplishment" correspond to higher degrees of burnout. However, this study follows the discussion mentioned by Maslach et al. (2009, p. 9) and adopts a negative end of the dimension supporting the third subscale, i.e., "reduced personal accomplishment." Thus, the three subscales and the degree of experienced burnout are positively correlated, where higher mean scores in the subscales emotional exhaustion, depersonalization, and reduced personal accomplishment correspond to higher degrees of burnout.

The third part of the questionnaire consists of the organizational commitment scale (Meyer et al., 1993), adapted to the Brazilian context by Siqueira (2001), which consists of three dimensions of organizational commitment: affective, calculative, and normative. The questionnaire uses a five-point Likert scale, ranging from "strongly agree" to "strongly disagree."

For data collection and analysis, procedures were followed as outlined by Anderson and Gerbing (1988), Podsakoff et al. (2003), and Williams et al. (2009). Structural equation modeling was adopted to assess and discuss the conditions and assumptions put forward in this study and assess possible limitations and cautions regarding the interpretation of results. The model was applied using the software SMARTPLS and LVPLS (Hair et al., 2014; Kline, 2005; Tabachnick & Fidel, 2007).

RESULTS

A total of 151 questionnaires were collected. Most respondents (96 or 63.6%) were female, and 54 (or 35.8%) were male. The distribution per age showed a concentration of participants between 25 to 35 years old (64.9%) – 15.9% up to 25 years old, 22.7% between 26 and 30 years old, and 26.7% between 31 and 35 years old. Most respondents were single (41.1%) or married (40.4%). As for education, 49% had specialized training, and 13.9% had completed high school. Most respondents had worked at the organization for between 1 and 5 years (49%), 39% of the respondents were physicians, 61% were nurses.

According to Kline (2005), there is a risk of redundancy in the database when high correlations between variables occur. This may be prevented by analyzing whether correlations are greater than 0.90 in absolute terms. The results indicated that no indicators had a variance inflation factor greater than the limit of 10 (Hair et al., 2014). When analyzing the mean of the MBI dimensions (Table 1), we obtained an average of 2.3 for depersonalization, 2.0 for emotional exhaustion, and 2.0 for reduced personal accomplishment. Based on Maslach et al. (1996), burnout syndrome may be identified when high scores are observed in the subscales of depersonalization and emotional exhaustion and when low scores are observed in the subscale of personal accomplishment (or high scores are observed in the negative end of the third dimension, i.e., "reduced personal accomplishment) (Maslach et al., 2009).

Table 1. Classification of mean, median, and standard deviation by Burnout syndrome dimensions

Dimension	Mean	Median	Standard Deviation
Depersonalization	2.3	2.2	0.7
Emotional exhaustion	2.0	1.9	0.7
Reduced personal accomplishment	2.0	1.9	0.6

Source: Research Data (2018).

From the MBI results screen, the studied population had we can see an average of 2.3 for depersonalization, 2.0 for emotional exhaustion and 2.0 for low professional achievement. According to Maslach et. al. (1996), the Burnout syndrome can be identified when high scores are observed for the dimensions Depersonalization and emotional exhaustion, as well as low scores for the low professional accomplishment dimension. (Table 1). Depersonalization can be understood as demotivation, lack of enthusiasm, and professional interest, and can be linked to unsuccessful career expectations that are like those presented in this research, revealing a low average of depersonalization of the sample, indicating that workers rarely express themselves in a cold and impersonal way with their patients (Andrade et al., 2012).

The results of the analysis of the structural organizational commitment and its dimensions are shown in Table 2. It is possible to observe an average of about 3.6 for the affective commitment, 2.7 for the calculative commitment, and 2.7 for the normative commitment. This scenario confirms that a single individual can present more than one dimension of organizational commitment at the same time, as suggested by Falce et al. (2019).

Table 2. Classification of mean, median, and standard deviation by organizational commitment dimensions

Dimension	Mean	Median	Standard Deviation
Affective commitment	2.3	2.2	0.7
Calculative commitment	2.0	1.9	0.7
Normative commitment	2.0	1.9	0.6

Source: Research Data (2018).

The highest average of respondents surveyed was found in the affective dimension of commitment (3.6). It happens when the worker gets emotionally involved in the organization, identifying with its goals, mission, and values. Soon, the worker starts actively contributing to the organization's well-being (Meyer et al., 1993). A higher average in this dimension is considered important for the greater involvement of professionals in the organization (Falce et al., 2019). The calculative commitment and the normative commitment showed averages of around 2.7 each. The first relates to the worker's calculation when deciding to remain in the company, which is usually associated with costs. The second is seen as an obligation or norm constraining the employee so they remain in that organization. Lower rates in these two dimensions are desired, as this result indicates greater involvement with the organization, greater performance, and less chance of turnover (Doargajudhur & Dell, 2019; Mills & Fullagar, 2017).

The quality of the measure was checked by assessing the measures' dimensionality, as Gerbing and Anderson (1988) suggested. The number of existing dimensions on a scale was applied, and more than one dimension was identified in the constructs "burnout" and "organizational commitment," thus validating the scales' dimensions. Other criteria analyzed were KMO measure greater than 0.70 (with an acceptable minimum of 0.60), the average variance extracted greater than 50% (the desirable level must be greater than 60%), and the commonalities surpassing the 0.40 threshold (Tabachnickm & Fidell, 2007). The research KMOs were depersonalization 0.65; emotional exhaustion 0.90; reduced personal accomplishment 0.76; affective commitment (AC) 0.94; calculative commitment (CC) 0.82; and normative commitment (NC) 0.82.

The partial least squares method was used since it is robust to deviations from the normal distribution (Hair et al., 2014). All the indicators obtained appropriate levels of reliability, with a significant load at the level of 1% (T value> 2.23). When analyzing the discriminant validity, understood as the degree to which measurements of different constructs have correlations that corroborate the premise that both represent different factors (Netemeyer et al., 2003), the method suggested by Fornell and Larcker (1981), which consists of comparing the average variance extracted from the constructs with the shared variance between the theoretical constructs (R2 obtained through the correlation of the estimated scores in the PLS). When the shared variance between structures exceeds the internally explained variance (of indicators), there is evidence of discriminant validity (Table 3). This supports the assumption (Cole et al., 2012; Maslach et al., 2009) that burnout and organization commitment are conceptually different constructs.

The reliability assessment was also followed, this step being the attempt to estimate the percentage of the variance of this scale that is free of random errors (Hair et al., 2014). Usually, Cronbach's alpha is used to estimate the reliability of the scales (Nunnally & Bernstein, 1994). However, this measure only evaluates the error-free variation that occurs at a single moment in the measurement and is therefore considered an internal consistency measure (Netemeyer et al., 2003). Usually, Cronbach's alpha values greater than 0.8 suggest that the scales have adequate consistency (Netemeyer et al., 2003), but limits of up to 0.6 may be accepted for studies involving pioneering scale applications (Nunnally & Bernstein, 1994). Discriminant validity is violated, if the construction explains the variability of another construction more than of itself (R2> AVE), with the exception of secondary factors and sub-dimensions. As a result, for all major factors, evidence of discriminatory validity was obtained, as shown in Table 3.

Table 3. Evaluation of discriminant validity and general quality of measurement

	1	2	3	4	5	6	7	8
1) Burnout	0.83	0.91	0.92	0.91	-0.53	-0.69	-0.69	-0.10
2) Emotional exhaustion	0.83	0.64	0.76	0.73	-0.56	-0.69	-0.69	-0.15
3) Depersonalization	0.85	0.58	0.53	0.76	-0.48	-0.63	-0.63	-0.06
4) Reduced personal accomplishment	0.82	0.54	0.57	1.00	-0.41	-0.56	-0.56	-0.06
5) Organizational Commitment	0.28	0.31	0.23	0.17	0.48	0.89	0.89	0.71
6) Affective commitment	0.48	0.48	0.40	0.32	0.79	0.62	1.00	0.33
7) Calculative commitment	0.47	0.47	0.40	0.31	0.78	1.00	1.00	0.32
8) Normative commitment	0.01	0.02	0.00	0.00	0.51	0.11	0.10	0.59
AVE	0.83	0.64	0.53	1.00	0.48	0.62	1.00	0.59
CR	0.94	0.90	0.82	1.00	0.72	0.96	1.00	0.88
CA	0.90	0.86	0.71	1.00	0.55	0.96	1.00	0.82

Source: Research Data (2018).

Based on the proposed methods, it is possible to attest to the discriminating validity of all the model's construct pairs, proving that they measure different aspects of the phenomenon of interest (Nunnally & Bernstein, 1994). In the measurement quality measures, we have the AVE, which means how much each construct explains the variability of its indicators; the R2, which

is the correlation squared and, when compared to the AVE of another construct, shows how much the construct explains about the other constructs; composite reliability and Cronbach's alpha, which are measures of measurement quality and represent how much of the construct's variability is free of random errors. The cut point suggested by Hair et al. (2014) is at least 0.60 for composite reliability (CR), 0.50 for average variance explained (AVE), and 0.60 for Cronbach's alpha (CA).

Based on the tests carried out, Burnout syndrome showed significant results for CR (0.94), AVE (0.83), and CA (0.90). Emotional exhaustion, depersonalization, and reduced personal accomplishment also obtained significant responses. Thus, both the construct and its dimensions can be considered reliable in this research (Gemlik et al., 2010). In the tests performed with the organizational commitment construct and its dimensions, the following results were obtained: organizational commitment CR (0.72), AVE (0.48), and CA (0.55).

This section presents the test of the structural model of the study, which was done here by applying the structural equation modeling technique, given the potential to test models for measuring interrelationships between constructs in a single approach, in addition to considering the impact measurement error in the estimates (Fornell & Larcker, 1981; Podsakoff et al., 2003). In general, structural equation modeling refers to techniques that aim to test covariance structures that are widely used by software such as LISREL (Hair et al., 2014).

However, as noted above, the study data do not follow a normal distribution, so their applicability in this study would be limited. Moreover, ultimately, the ideal sample for testing this model using the traditional structural approach would be 10153 cases (the number of non-redundant elements in the covariance matrix). For this reason, partial least squares (PLS) estimation was sought as an alternative (Hair et al., 2014). The method requires a minimum sample of 10 to 5 times the indicator block of the construct with the highest number of indicators or the construct with the largest number of independent variables (Chin, 2010). It allows a test with at least 45 answers, with an ideal threshold of 180 answers. This allowed the model to be tested using the PLS approach. In terms of hypotheses tested, weights, standard error, T-tests, meaning, and hypothesis test results are presented below (Table 4 and Figure 1).

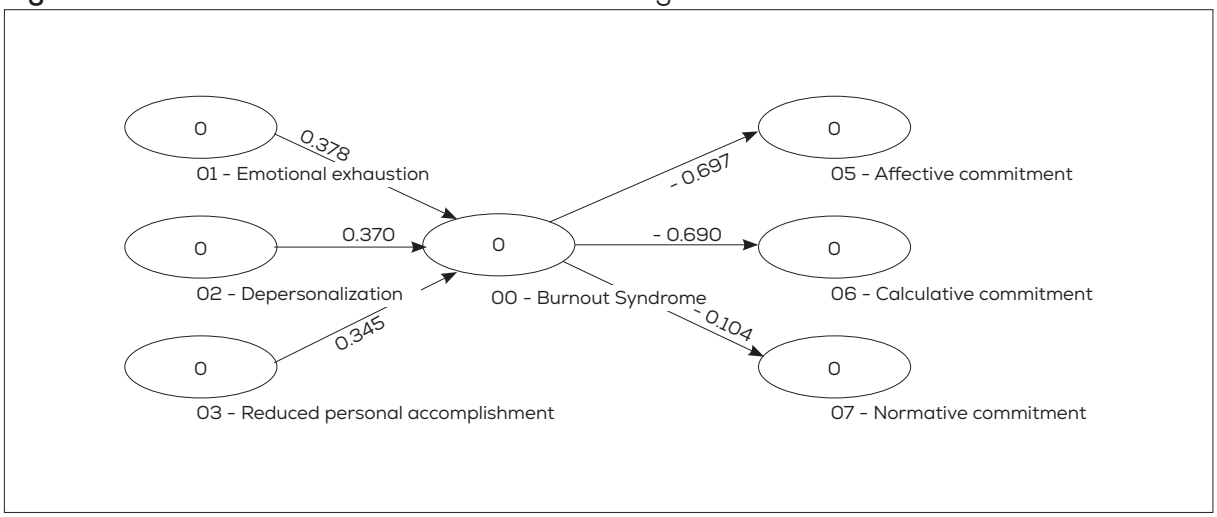
Table 4. Result of the proposed model hypothesis

H	Relations	ORI	SD	T	Results
1.1	Burnout -> Affective commitment	-0.70	0.05	15.14	Supported
1.2	Burnout -> Calculative commitment	-0.69	0.05	14.34	Supported
1.3	Burnout -> Normative commitment	-0.10	0.11	0.98	Not Supported

Font: Research Data (2018).

a) ORI is the standardized weight obtained for the complete sample; b) SD is the standard deviation of the estimate; C) The T value is the ratio of the non-standard weight to its standard error.

Figure 1. Estimated model in PLS: standardized weights and R2



We find that the evidence supports H1.1 and H1.2 that the two constructs influence each other. However, H1.3 is not supported.

Regarding the hypotheses, primarily H1.1, we find that the burnout syndrome influenced significantly (p-value = 0.00) and negatively (β = -0.70) the affective commitment, consistent with Maricutoiu et al. (2017) and Almeida (2012). Burnout syndrome negatively influences affective commitment, thereby reducing the affective bond of workers, which may result in higher turnover. This finding also indicates that burnout can reduce worker identification with the organization.

Regarding the relationship between burnout and calculative commitment, H1.2, was also supported. Consistent with the literature (Almeida, 2012; Santos & Santos, 2015) a significant (p-value = 0.00) and negative (β = -0.69) influence was observed. This finding suggests that burnout also reduces the worker's relationship with the organization, even those that have strong emotional ties. In this sense, burnout produces problematic results for the organization and can generate an impact on turnover since there is a calculative commitment. The worker thinks of the cost of leaving the organization, and health complications can bring one more point of weight in the decision to stay in the job.

However, the evidence has not supported H1.3, which raises questions about why burnout does not negatively impact normative commitment, as the literature pointed out. In this sense, Meyer and Allen (1991) conceptualize normative commitment as an obligation to remain in the organization because they consider the a moral action, and perhaps this moral sense stands out as the condition within the issue of the impacts of burnout syndrome. Even in conditions of health risk characterized by the syndrome, the worker may maintain a moral compass as a marker of responsibility to the organization.

The GoF measure was calculated as an indicator of the model's general predictive power, showing that the proposed model explains 43% of the data's general variability.

DISCUSSION AND CONCLUSION

The findings of this study have important implications and contributions to the scholarly literature and implications for business practice. The worker's spatial and affective organizational commitment helps to clearly identify goals, tasks performed, and institutional activities, keeping the employee motivated and prone to perform better (Falce et al., 2019). When showing symptoms of burnout, the professional loses their bond and affective involvement with the organization. They start to make more calculations about job efforts, reducing work for pleasure and working out of contractual obligation. However, our findings do not support the assumption that burnout reduces normative commitment. As burnout may severely constrain the energy available for organizational tasks, it may not change the employee's loyalty, and thus the normative commitment may not be affected.

The results support the idea that burnout syndrome can negatively affect the employee's affective and calculative organizational commitment. This study contributed to filling gaps in the scholarly literature and responds to calls for research by Kalliath et al. (1998), Zhou et al. (2014) Enginyurt et al. (2016), Ryu and Kim (2016), Zhou et al. (2018), Falce et al. (2019), and Barbosa and Guimarães (2005). The authors stressed the need to investigate other organizations, not just a single profession or organization. By proving the influence of burnout on organizational commitment, it is noted that the negative effects of burnout bring negative results for workers and organizations. In addition, both constructs are part of the scope of important health bodies and committees, such as the World Health Organization (WHO), the International Society of Pediatric Oncology, and the Society for Industrial and Organizational Psychology, especially the WHO that adds burnout as an occupational disease.

As for organizations, we can infer that the professionals with high levels of chronic stress, emotional exhaustion, depersonalization, and reduced personal accomplishment can show decreased productivity rates and end up harming the feeling of belonging and commitment to the company. We believe that companies can use these results to coordinate strategies that help to avoid burnout syndrome for employees, as well as for strategies that encourage the growth of affective commitment. These strategies emphasize quality of life and the promotion of health for employees (Enginyurt et al., 2016; Ryu & Kim, 2016; Zhou et al., 2018). This study contributes to the discussion on the relationship between burnout syndrome and organizational commitment and raises reflective questions for the individual, society, and organization. This study empirically supported the negative relationship between burnout and affective and calculative commitment, except for the relationship with normative commitment. The purpose here is to show that the organizational reality of professionals can have a positive and negative impact on their lives. In a positive way, the worker can connect affectively with the organization and have a more positive bond with the organization, consequently, increasing the benefits for the organization and also maintaining the health of the worker. In a negative way, the professional bond can present fatigue, depersonalization, generating low productivity, in addition to being highly linked to side bets (calculated commitment) and normative commitment, indicating a feeling of high

"obligation" and low pleasure in the work performed. However, burnout may not undermine the employee's loyalty to the organization and organizations may sometimes incorrectly draw this conclusion from the lower affective commitment of the employee with burnout syndrome.

This study filled some important empirical gaps in the human resources and administrative sciences, bringing beneficial results for future research on the subject, and contributing to scholarly theories and research. In addition, it is assumed that studies on Burnout syndrome and organizational commitment are related to themes that show great growth in academia, such as quality of life and promotion of worker well-being, and should serve as a stimulus for new ones. Organizations and their managers can use the data and analysis carried out in this study to develop preventive measures and actions to prevent the spread of the syndrome in their institutions, as well as to enhance the forms of the employee's bond with it.

Like many empirical studies, it has also faced limitations worth considering. First, the sample size suggests that it is impossible to draw generalized conclusions for the healthcare sector. The missing data and outliers indicated that not everyone understood the questionnaires. In addition, there was a lack of data correlating concepts in the healthcare field with certain occupational variables, such as length of service. Another limitation was the difficulty accessing healthcare professionals who, because of their remarkably busy schedules, often could not complete the questionnaire.

The results found in this study present some divergences with scholarly research. Based on the findings, suggestions for future research include addressing topics on organizational commitment and turnover; burnout, performance, and productivity; and further investigations on both constructs (burnout and organizational commitment), socio-demographic variables (especially gender), and different professions. Further suggestions refer to research on the affective dimension of commitment as a coping mechanism for burnout and other occupational syndromes. A longitudinal study with the sample is recommended, since a large part of the respondents were working in the function for less than five years in the same organization and these variables may change over the years. In addition, this study could be extended to other occupational settings, extending to a larger variety of job categories.

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CONFLICT OF INTEREST

The authors have no conflicts of interest to declare.

AUTHORS' CONTRIBUTIONS

Jefferson Lopes La Falce: Conceptualization, Data curation, Formal Analysis, Funding acquisition; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Writing – original draft; Writing – review & editing.

Camila Bretas Santos: Conceptualization, Data curation, Formal Analysis, Funding acquisition; Investigation; Project administration; Resources; Validation; Visualization; Writing – review & editing.

Cristiana Fernandes De Muylder: Validation; Visualization; Methodology; Writing – review & editing.

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