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The Mediating Roles of Affect and Coping Strategy in the Relationship Between Trait Mindfulness and Burnout Among French Healthcare Professionals

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Abstract:

The present study explored the mediating roles of affects and coping strategies in the relationship between mindfulness and burnout among a sample of French healthcare professionals. A total of 180 professionals (mean age = 30.10 years) from various health and social care centers in different parts of France completed a questionnaire that contained measures of mindfulness, emotional experience (positive vs. negative affects), coping strategies, and the three dimensions of burnout. Results indicated that trait mindfulness protects healthcare professionals from burnout (especially the emotional exhaustion and depersonalization dimensions). In addition, coping strategies and affects mediate the link between trait mindfulness and emotional exhaustion. More specifically, participants with a low degree of mindfulness reported more negative affects and greater use of emotion-focused coping strategies. These findings suggest that trait mindfulness and positive affects help these professionals maintain a high level of personal accomplishment through the use of problem-focused coping strategies. Based on our results, recommendations could be drawn up to protect healthcare professionals from burnout and enhance their personal accomplishment.

Keywords: trait mindfulness, burnout, positive affects, negative affects, coping strategies

Since the Industrial Revolution, working conditions have changed considerably, sometimes with negative consequences for the well-being of people at work. *Burnout* is one such consequence, and healthcare workers are particularly affected (Raab, 2014). Long working hours and emotional demands (Jeoffrion et al., 2014) can cause stress, depression, and anxiety (Moir et al., 2016). In the hospital context, two types of factors can trigger these disorders: organizational factors linked to health structures, and factors inherent to the profession and its emotional demands (Erudel & Saint-Dizier de Almeida, 2017). Nevertheless, some protective factors can prevent burnout, such as social support, decision latitude, suitable working conditions, skill development, group cohesion, and organizational commitment (Lemoine et al., 2017; Li et al., 2014; Maslach & Leiter, 2016). To adapt to all the changes that have come about, workers can also draw on individual resources and personal strategies (Jamieson & Tuckey, 2017). These individual resources have attracted considerable attention from researchers, as many studies have shown that they can help workers alleviate work-related stress.

Mindfulness has become a particular focus of research in recent years, and it has already been the subject of numerous studies (Jamieson & Tuckey, 2017; Rau & Williams, 2016; Williams & Kabat-Zinn, 2011). Several of them have demonstrated the beneficial impact of mindfulness on psychological health in general (Bartlett et al., 2019; Gauthier et al., 2015; Tan et al., 2016; Tuckey et al., 2018), opening up the way for research on its potential impact on psychological health at work. Indeed, a number of studies have already shown that mindfulness protects against burnout (Cohen-Katz et al., 2005; Hülshager et al.,

2013; Puolakanaho et al., 2018; Taylor & Milllear, 2016). The originality of the present research lays in the exploration of the processes underlying the link between mindfulness and burnout by examining the mediating role of affects and coping strategies. Mindfulness may promote positive affects at work and influence the types of coping strategies used, thereby preventing health problems and burnout (Taylor & Milllear, 2016).

Mindfulness

Origin of the Concept

The concept of *mindfulness* comes from contemplative Buddhist traditions, including Theravada Buddhism (Ana^o layo, 2019; Olendzki, 2011). The ground reaking work by Kabat-Zinn (1990) on mindfulness-based stress reduction triggered considerable inter- est within the scientific community (Brown & Ryan, 2003; Glomb et al., 2011; Good et al., 2016; Rau & Williams, 2016). The founding texts of Theravada Buddhism already mention trait mind- fulness. These early texts describe innate differences between people in their ability to maintain their attention. These differences are recorded in the *Puggalapannatti*, a treatise contained in the *Abhidhamma*, one of the three collections of Buddhist teachings (Anuruddha & Bodhi, 2000; Rau & Williams, 2016). The *Pugga- lapannatti*, meaning the description of the personalities or types of characters, exhibits a psychological understanding that can be likened to the more modern model of personality typologies.

Different Forms of Mindfulness

Researchers have identified two forms of mindfulness, derived from the different empirical definitions: *state* mindfulness (Bishop et al., 2004; Kabat-Zinn, 1990) and *trait* (or *dispositional*) mindful- ness (Brown & Ryan, 2003). According to Brown and Ryan (2003), there are intraindividual and interindividual variations in the pro- pensity to maintain attention. *State mindfulness* is defined as “a sensitivity to the observation of present experiences occurring in the field of thought, feelings and sensations changing from instant to instant by regulating the center of attention” (Bishop et al., 2004, p. 232). *Trait* mindfulness is regarded as a psychological skill, conceptualized as a disposition and an ability to be attentive to what is happening in everyday life (Brown & Ryan, 2003). Trait mindfulness emerges at an early age, as a result of childhood attachment processes and childhood experiences (Pepping & Duvenage, 2016). It seems to exist independently of other forms of mindfulness (Rau & Williams, 2016). This form of mindfulness refers to an individual’s ability to be more conscious and a tendency to remain so in a stable way over time and on a daily basis (Brown et al., 2007). Individuals differ in their ability to maintain their attention in the present moment (Brown & Ryan, 2003; Pepping & Duvenage, 2016). People with high levels of trait mindfulness perform better on emotion and behavior regulation (Anicha et al., 2012).

According to some authors, trait mindfulness is present in all individuals and can be enhanced by meditation training (Brown & Ryan, 2003; Weinstein et al., 2009). However, few studies have investigated its impact on psychological health at work in a French cultural context, hence the originality of the present study.

Mindfulness at Work

Research on mindfulness applied to the field of work and organizations has increased considerably over the past decade (Eby et al., 2020), even if few studies have been conducted in a professional context (Hülsheger et al., 2013). It is regularly the subject of research in the fields of management, human resources and industrial and organizational psychology, but many questions remain unanswered about some empirical associations (Eby et al., 2020; Good et al., 2016; Jamieson & Tuckey, 2017; Reb et al., 2020). Mindfulness enhances job satisfaction and prevents burnout, especially in emotionally demanding jobs (Hülsheger et al., 2013). It has also been shown to be linked to job satisfaction, performance, and the work-

life balance (Hülshager et al., 2013), as well as to commitment to work, positive affects, and well-being at work (Malinowski & Lim, 2015). The expression of positive affects brings advantages in all areas of life, including at work, generating success, and the development of resources (Giluk, 2009; Glomb et al., 2011). In the field of work and organizational psychology, the possible benefits of mindfulness in an organizational framework have been highlighted in several studies (Dane, 2011; Glomb et al., 2011; Lyddy & Good, 2017).

Mindfulness is regarded as a way of reducing vulnerability to stress and emotional distress (Bishop et al., 2004; McConachie et al., 2014). It may, therefore, represent a means of reducing employee burnout (Cohen-Katz et al., 2005; Hülshager et al., 2013; Taylor & Milllear, 2016), enabling people who encounter difficult situations at work to make an appropriate assessment of stressful events and react more appropriately (Hülshager et al., 2013). Mindfulness is negatively associated with anxiety, depressive symptoms, burnout, and negative affects (Roche et al., 2014). Individuals empowered by mindfulness ruminate less on negative incidents and worry less about future failures, thereby reducing perceived stress (Mesmer-Magnus et al., 2017). A mindfulness-based stress reduction protocol has been developed to help healthcare professionals act on their psychological health (Botha et al., 2015; Gilmartin et al., 2017). The meta-analysis by Gilmartin et al. (2017) of the effect of mindfulness on the psychological health of professionals found positive changes in stress, anxiety, and burnout, but no effect on behavior in terms of providing clinical care. The benefits of mindfulness have been shown to include fewer depressive symptoms, improved mood, increased self-efficacy, and empathy (Krasner et al., 2009; McConville et al., 2017). Mindfulness training also has a positive impact on sleep and concentration and reduces negative cognitions (van der Riet et al., 2015).

Accordingly, initiatives such as the development of mindfulness through stress reduction programs are increasingly being introduced in organizations to prevent burnout (Nevill & Haverkamp, 2019).

Affective Experience and Regulatory Strategies at the Heart of the Problem of Healthcare Personnel

Impact of the Assessment of the Work Situation on Emotional Experience

Affects have an impact on employees and, therefore, on organizations. They can be induced by stressful events, the management style of senior managers or leaders, work group characteristics, physical parameters, and organizational rewards and punishments (Brief & Weiss, 2002). Affects, both positive and negative, can also be generated by aspects of work, such as job loss, promotion, well-being at work, pride in a job well done, the achievement of professional goals, or the departure of a valued colleague, and are part of people's working lives (Soares, 2003). In the case of professional caregivers, emotional expression may be governed by the norms prescribed by their role and by their professional organization (Rafaeli & Sutton, 1987). According to the model developed by Lazarus and Folkman (1984), emotional experience is also influenced by the assessment of the situation.

According to Diener et al. (1985), persons who experience positive affects at work have greater energy and show greater commitment to their work (Robert & Vandenberghe, 2018). By contrast, persons with a high level of negative affects feel more subjective distress, unhappiness at work, and emotional exhaustion (Wright & Cropanzano, 1998). They are more likely to be nervous, fearful, anxious, or sad (Watson et al., 1988). Fredrickson (2001) distinguished affects from emotions. According to her, an emotion is a brief individual physiological expression (e.g., facial or bodily) associated with daily events, whereas affects belong to a more general concept and refer to the consciously accessible personal meaning that an individual gives to an event. Put another way, an affect is the meaning that individuals give to their emotion and the word that they associate with their physiological feeling.

Research have shown that emotion regulation is a resource in the workplace (Hülshager et al., 2013). According to the model developed by Lazarus and Folkman (1984), the assessment of the situation influences emotional experience. Feelings of positive affects and the use of problem-focused coping

strategies contribute to the positive reassessment of situations (Pavani et al., 2016; Weinstein et al., 2009). There is empirical evidence of causal relationships between trait mindfulness and affects, with mindfulness preceding an increase in positive affects (Brown & Ryan, 2003; Keng & Tong, 2016; McLaughlin et al., 2019; Weinstein et al., 2009), in both clinical and nonclinical adult populations (Erisman & Roemer, 2010; Giluk, 2009; Quoidbach et al., 2010; Zeng & Gu, 2017). Accordingly, positive and negative affects probably influence the relationship between trait mindfulness and burnout, with positive affectivity constituting a protective factor for individuals, and negative affectivity a vulnerability factor.

Coping Strategies Mediate the Need to Face Emotional Demands

When people are exposed to potentially stressful situations, they apply coping strategies, some of which can protect them from burnout (Burke & Greenglass, 1995).

In the literature, several types of coping strategies have been identified (Lazarus & Folkman, 1984; Paulhan, 1992), including emotion-focused coping (i.e., seeking to manage the emotional reactions induced by a stressful situation), problem-focused coping (i.e., developing an action plan to deal with the situation), and social support coping (i.e., taking advantage of informational and emotional support received from others). Several studies have shown that high degrees of mindfulness favor the use of problem-focused strategies instead of emotion-focused ones (Nevill & Haverkamp, 2019; Palmer & Rodger, 2009; Weinstein et al., 2009). Experiences are considered less stressful when people have a higher degree of mindfulness and the resources needed to deal with them (Keng et al., 2011; Weinstein et al., 2009). Problem-focused coping strategies have been found to mediate the links between trait mindfulness and well-being, positive affects, burnout, and stress (Finkelstein-Fox et al., 2019; Nevill & Haverkamp, 2019; Palmer & Rodger, 2009; Weinstein et al., 2009). Research on the links between positive affects and coping strategies among people with a high level of mindfulness is still scarce and inconsistent (Finkelstein-Fox et al., 2019). In work psychology studies, coping strategies are regarded as mediating processes that can be used as intraindividual resources to cope with stress or burnout (Delicourt et al., 2013; Halbesleben & Buckley, 2004; Lee et al., 2016).

Burnout Among Healthcare Professionals

Burnout is a psychological response to chronic stress (Halbesleben, 2006; Maslach & Jackson, 1981; Maslach & Leiter, 2016). For a long time, burnout was assumed to be specific to professionals involved in relationships with others. However, burnout has been found to affect all professionals (Maslach & Leiter, 2016). It is a syndrome with three dimensions (Maslach et al., 1997; Maslach & Leiter, 1997): emotional exhaustion (depletion of emotional resources), depersonalization (treating people as objects), and reduced personal accomplishment (no longer feeling effective at work). *Emotional exhaustion* is characterized by extreme physical or mental fatigue (Maslach & Leiter, 1997). *Depersonalization* is characterized by “the development of impersonal, negative and cynical attitudes towards the population” (Maslach & Jackson, 1981, p. 99), and was recently labeled as *cynicism* (Maslach & Leiter, 2016). *Reduced personal accomplishment* is defined as the tendency “to evaluate oneself negatively particularly with regard to one’s work with clients” (Maslach et al., 1997, p. 192). This dimension has also been labeled as *inefficacy* (Maslach & Leiter, 2016). Burnout can cause high employee turnover, absenteeism, and reduced performances, and is, therefore, a key concern for organizations (Halbesleben & Buckley, 2004). The organizational and interpersonal determinants of burnout must be studied to understand it better. The causes of burnout can be divided into seven categories: overwork, role conflict, lack of control, insufficient rewards, community breakdown, lack of equity, and conflicting values (Maslach & Leiter, 1997). A three-step sequential model has been developed to define the different stages of chronic stress and the occurrence of burnout (Maslach & Leiter, 1997, 2008). Emotional exhaustion is the first step, leading to the onset of a process of depersonalization or dehumanization. Lack of personal fulfillment at work occurs at the same time.

For several decades, researchers have explored the causes and consequences of burnout. In recent years, the environmental determinants and the role of social support have received particular attention (Halbesleben & Buckley, 2004). Healthcare professionals are particularly vulnerable to burnout, as their work exposes them to human distress. In the course of their work, they are supposed to help or relieve patients, and they are required to invest emotionally, which can become a constraint in the case of emotional exhaustion (Pezet-Langevin, 2006). Certain psychological factors can accentuate burnout, such as personality traits (e.g., neuroticism; Deary et al., 1996) and emotion-based coping strategies (Pezet-Langevin, 2006). Regarding organizational resources, a lack of social support (Lee & Ashforth, 1996; Leiter, 1991; Maslach & Leiter, 2008), work constraints, and a feeling of inequity can increase the risk of burnout (Pezet-Langevin, 2006).

Weinstein et al. (2009) showed that a high degree of trait mindfulness allows individuals to use coping strategies that are adapted to the assessment of stressful situations. These strategies can, therefore, probably mediate the relation between trait mindfulness and burnout, in the sense that they can modify the way a stressful situation is assessed, and thus the likelihood of burnout. If the stressful situation is not resolved, it can lead to an inappropriate coping strategy. Too high a workload or emotional load puts healthcare professionals at a high risk of occupational burnout (Andela et al., 2016; Garrosa et al., 2010; Lemoine et al., 2017).

The Present Study

The present study examined how far trait mindfulness can predict burnout in the workplace and the mediating influence of affects and coping strategies. An individual's degree of mindfulness influences the assessment of a work situation and emotional experience through feelings of positive and negative affects. The latter then influence the choice of coping strategies, thus helping to explain the individual differences that can cause or protect from burnout.

A further aim of this study was to show which personal factors can lead to occupational burnout or not, specifically trait mindfulness. We sought to understand some of the psychological mechanisms that may be involved in this relationship. Emotional experience (i.e., positive or negative affectivity) is just one step in a sequential process (i.e., consequence of the individual's interpretation of the work situation, and determinant of the choice of coping strategy). We believe that it is important to study how the relationship between mindfulness and burnout can be mediated by coping strategies if we want to better understand the consequences of burnout in organizations and possible interventions.

Based on a conceptual model (Figure 1), we hypothesized that high trait mindfulness has a positive effect on the perception of positive affects, and consequently leads individuals to use adapted coping strategies (e.g., problem-focused or social support), leading to greater personal accomplishment at work. By the same token, low trait mindfulness has a negative effect on the perception of negative affects and leads people to use inappropriate coping strategies (e.g., emotion-focused), leading to depersonalization and emotional exhaustion.

Method

Participants and Procedure

The present study was conducted from November 2016 to January 2017. Participants were 180 (24 men and 156 women) health and social care professionals, aged 20–62 years ($M = 30.10$ years, $SD = 10.93$). All the respondents were of European origin, and all of them lived in France. We recruited participants via posts on social media, such as Facebook and LinkedIn, including networks of healthcare professionals, and invited them to complete an online questionnaire. Participants did not receive any reward or remuneration. After giving their informed consent, they were directed to a secure website on the Lime Survey platform. The main

condition for answering the questionnaire was to work in the health or social care field. Completion of the survey took no more than 20 min. To reach the end of the questionnaire, the participants had to answer all the questions. A total of 517 people completed the entire questionnaire. Incomplete questionnaires were not included in the analysis. The sample consisted of nurses (33.3%), doctors (18.8%), nursing assistants (15%), paramedical staff (11.1%; physiotherapists, osteopaths, youth workers, dietitians, psychologists, etc.), employees in the health and social care sector (8.8%), executives in the same sector (4.4%), healthcare support workers (4.4%), social workers (2%), and pharmacists (1.6%). We removed students, unemployed people, and people who did not work in the health sector. Some supplementary information was collected, including age, sex (man or woman), occupation, and socioeconomic status. There were no limits on any of these characteristics. A description of the sample is provided in [Table 1](#).

Measures

All the scales included in the questionnaire were in French.

Figure 1

Hypothetical Relationships Between Mindfulness, Affects, Coping and Burnout

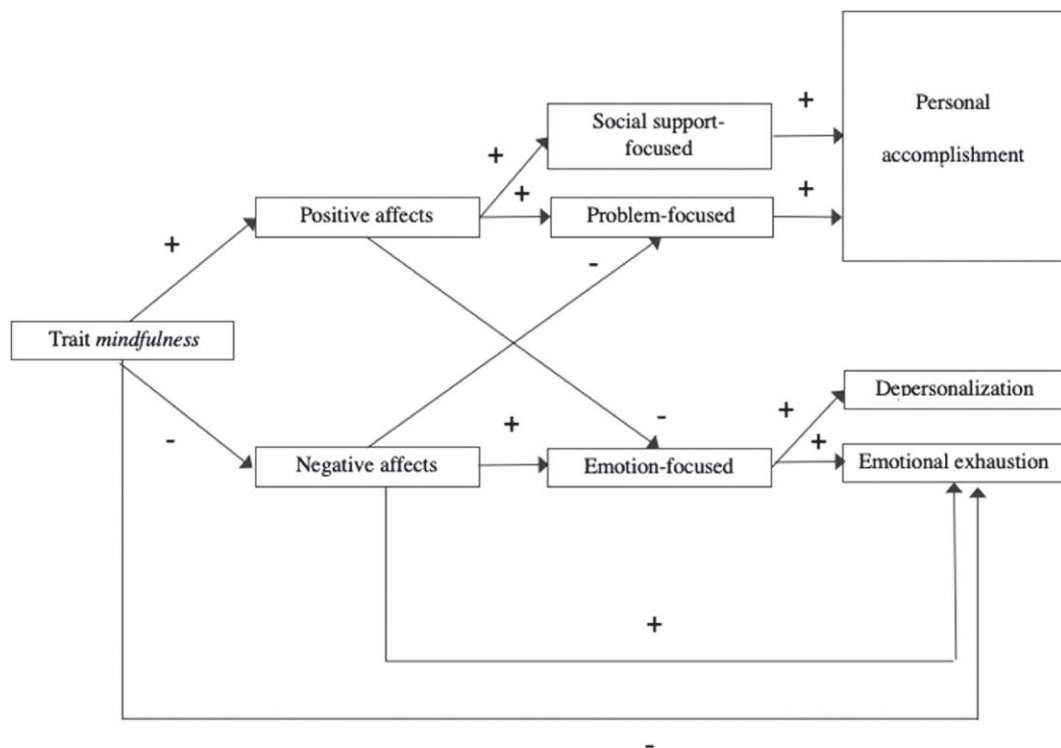


Table 1
Sociodemographic Data Constituting the Sample

		<i>N</i> = 180	%
Gender	Women	156	86.7
	Men	24	13.3
Age	18–25 years	18	10.00
	26–35 years	61	33.90
	36–45 years	50	27.80
	46–55 years	38	21.1
	56 years and over	13	7.2
Profession	Nurses	60	33.33
	Doctor	34	18.88
	Caregivers	27	15
	Paramedical staff	20	11.1
	Employees in the health and care sector	16	8.88
	Managers in the health and care sector	8	4.44
	Medico-psychological aids	8	4.44
	Social workers	4	2.22
	Pharmacists	3	1.66

Trait Mindfulness

Trait mindfulness was assessed with the French version (Jermann et al., 2009) of the Mindfulness Attention Awareness Scale (Brown & Ryan, 2003). Respondents' level of attention or lack of attention to what they do on a daily basis is measured with 15 items (e.g., "I find myself doing things without paying attention to them") that are each rated on a 6-point Likert scale ranging from 1 (*Almost always*) to 6 (*Almost never*). Scores range from 15 (*low level of mindfulness*) to 90 (*high level of attention*). Scores were summed and averaged. In the present study, Cronbach's α was .86.

Affects

Positive (e.g., interested) and negative (e.g., nervous) affects were assessed with the 20 items of the Positive and Negative Affect Schedule (Watson et al., 1988). Participants had to think about the emotions that they had experienced during the previous week and give their responses on a 5-point Likert scale ranging from 1 (*Not at all*) to 5 (*Very strongly*). The different responses to the items were sorted according to the two factors (i.e., positive and negative). After calculating the two overall scores per participant, we calculated the mean score. Scores for each factor ranged from 10 (*low level of positive or negative affects*) to 50 (*high level of positive or negative affects*). In the present study, Cronbach's α was .86 for positive affects and .88 for negative affects.

Coping Strategies

We used the 27 items of the French version (Cousson et al., 1996) of the Ways of Coping Checklist Revised (Vitaliano et al., 1985) to assess coping strategies. Participants are instructed to remember a stressful situation. They then have to rate statements on a four-point scale: *No*, *Rather no*, *Rather yes*, and *Yes*. Three factors are measured by this checklist. The first factor (10 items; e.g., "I established an action plan and I followed it") corresponds to problem-focused coping ($\alpha = .77$), the second (9 items; e.g., "I wanted the situation to go away or end") to emotion-focused coping ($\alpha = .74$), and the third (8 items; e.g., "I talked to

someone about how I was feeling”) to social support ($\alpha = .73$). Participants’ responses to the items were sorted according to these three factors. Total scores for self-reported problem-focused ranged from 10 (*very little used strategy*) to 40 (*frequently used strategy*), for emotion- focused coping, they ranged from 9 (*very little used strategy*) to 36 (*frequently used strategy*), and for social support, they ranged from 8 (*very little used strategy*) to 32 (*frequently used strategy*). After calculating the overall score per participant, we calculated the mean score.

Burnout

Burnout was assessed with the 22 items of the Maslach Burnout Inventory (MBI; [Maslach & Jackson, 1981](#)), translated into French ([Dion & Tessier, 1994](#)). The MBI probes all three dimensions of burnout: emotional exhaustion (9 items; e.g., “I feel emotionally drained from my work), depersonalization (5 items; e.g., “I feel I treat some recipients as if they were impersonal “objects”), and personal accomplishment (8 items, e.g., “I can easily create a relaxed atmosphere with my recipients”). Total emotional exhaustion scores ranged from 0 (very low) to 54 (very high), total depersonalization scores from 0 (*very low*) to 30 (*very high*), and total personal accomplishment scores ranged from 0 (*very low*) to 30 (*very high*). A strong tendency to burnout was indicated by high scores on the emotional exhaustion and depersonalization dimensions and a low score on personal accomplishment. In the present study, Cronbach’s alphas were .92 for emotional exhaustion, .71 for depersonalization, and .80 for personal accomplishment. We calculated the mean overall score.

Sociodemographic Variables

Sociodemographic data (i.e., age, sex, number of years of service in current job, socioeconomic status, and number of years worked in the profession) were collected at the end of the questionnaire.

Results

Statistical Analyses

We ran statistical analyses to examine the relationships between the variables and test the hypotheses. Preliminary data cleaning, examination for completeness, and descriptive, means, standard deviations, and correlation of population and reliability analyses were conducted using SPSS 20.0 software. The internal consistency of the scales was assessed with Cronbach’s alpha. The structural validity of the scales included in our questionnaire was not tested. In this section, we cite the articles that tested the factorial structure of the scales during their validation in French. No modifications were made to the way that the scores were originally calculated.

All subsequent analyses were conducted using AMOS version 16 software. A structural equation model was calculated to test the hypothetical model with the different variables.

Descriptive Analysis

Descriptions of all the independent and dependent variables are provided in [Table 2](#). The minimum threshold for internal consistency recommended in the scientific literature is 0.70 ([Cronbach, 1984](#)). We can see in [Table 2](#) that Cronbach’s α was above 0.70 for all the scales. Internal consistency was, therefore, considered satisfactory.

Table 2
Descriptive Analysis

Scales	Number of items	Rank	Mean scores	Standard deviation
<i>MAAS</i>				
Mindfulness trait	15	15–90	56.11	10.96
<i>MBI</i>				
Emotional exhaustion	22	0–54	30.13	14.36
Personal accomplishment		0–48	43.86	8.02
Depersonalization		0–30	12.18	6.66
<i>PANAS</i>				
Positive affects	20	10–50	34.56	6.87
Negative affects		10–50	20.36	7.60
<i>WCC-R</i>				
Problem-focused	27	10–40	28.71	5.56
Emotion-focused		9–36	21.87	5.56
Social support		8–32	19.99	5.22

Note. $N = 180$.

Intercorrelational Analysis

Correlations among all the observed variables are reported in Table 3. Analysis revealed that trait mindfulness was significantly negatively related to burnout in general, and to emotional exhaustion ($r = -.55$, $p < .01$) and depersonalization ($r = -.46$, $p < .01$) in particular. It was not correlated with personal accomplishment.

Trait mindfulness was significantly positively related to positive affects ($r = .30$, $p < .01$) and negatively related to negative affects ($r = -.44$, $p < .01$). It was significantly negatively related to emotion-focused coping strategies ($r = -.31$, $p < .01$). It was not related to either social support or problem-focused coping strategies. The latter were significantly negatively linked to emotional exhaustion ($r = -.16$, $p < .01$), but the correlation was weak. Emotion-focused coping strategies were significantly positively linked to emotional exhaustion ($r = .38$, $p < .01$).

Structural Model of the Mediating Effects of Affects and Coping Strategies on Relations Between Trait Mindfulness and the Three Burnout Dimensions

The results of the structural equation analysis modeling the paths shown in the theoretical model (Figure 1) are set out in Figure 2. This analysis was carried out to gain an overview of the different links between the variables. Only the variables highlighted in the previous intercorrelational analyses were included in this analysis. For this reason, social support coping strategies were not entered in the model. This meant that when we wanted to test the model, we did not include the relationships between mindfulness, affects, and social support coping strategies. A good model fit was demonstrated by the adjustment indices, $\chi^2(12) = 9.336$, $p < .674$, $\chi^2/df = 0.778$, root mean square error of approximation = 0.000, normed fit index = 0.940, standardized root mean square residual = 0.034, adjusted goodness of fit index = 0.961, confirmatory fit index = 1.000. In accordance with assumptions, specific relationships between trait mindfulness, affects, coping strategies, and the three burnout dimensions were identified. Positive and negative affects, together with coping strategies, mediated the relationships between trait mindfulness and the three burnout dimensions (emotional exhaustion, depersonalization, and personal accomplishment). Trait mindfulness was directly linked to both depersonalization and emotional exhaustion. Positive affects and problem-focused coping partially mediated the link between trait mindfulness and personal accomplishment.

Trait mindfulness was positively associated with positive affects ($\beta = 0.313$, $p < .001$), which were positively associated with personal accomplishment ($\beta = 0.475$, $p < .001$). Problem-focused coping was positively related to personal accomplishment ($\beta = 0.210$, $p > .001$). The connection between mindfulness

and emotional exhaustion was partially moderated by negative affects and emotion-focused coping strategies. Mindfulness was negatively linked to both depersonalization ($\beta = -0.354, p < .001$) and emotional exhaustion ($\beta = -0.317, p < .001$). This relationship was partially mediated by negative affects ($\beta = 0.443, p < .001$) and emotion-focused coping ($\beta = 0.061, p > .05$). Positive affects ($\beta = -0.186, p < .05$) were negatively related to emotion-focused coping strategies.

Negative affects were positively related to both emotional exhaustion ($\beta = 0.464, p < .001$) and depersonalization ($\beta = 0.253, p < .001$). In this model, mindfulness, coping strategies, and professional accomplishment were not directly related to each other.

Discussion

The objective of this research was to investigate the role of trait mindfulness as a predictor of burnout among healthcare professionals. Trait mindfulness may affect the way a situation is assessed, and thus influence emotional experience. It does so through feelings of positive or negative affects. These feelings then have an impact on the strategies used to cope with work situations.

In this study, we identified the predictive value of trait mindfulness with regard to burnout and the influence of the personal resources put in place through the use of affects and coping strategies. Results showed that trait mindfulness can serve as a means of protecting against burnout ([Taylor & Millear, 2016](#)) and increasing personal accomplishment, providing that it is combined with positive affects and problem-focused coping strategies. The originality of our results was to show that the association between a lower degree of trait mindfulness, negative affects, and emotion-focused coping strategies is a vulnerability configuration that can lead to increased feelings of depersonalization and emotional exhaustion. Furthermore, negative affects and emotion-focused coping strategies accentuate the link between mindfulness and burnout.

Theoretical Implications

Influence of Mindfulness

Results also indicated that trait mindfulness was a good predictor of the three burnout dimensions (emotional exhaustion, depersonalization, and personal accomplishment) when it was partly moderated by affects and coping strategies. These results are consistent with the results of previous studies showing that mindfulness can be

Table 3
Intercorrelational Analysis of Measured Variables

Variables	1	2	3	4	5	6	7	8	9	10
1. Age	—									
2. Gender	.00	—								
3. Mindfulness trait	.07	-.09	—							
4. Problem-focused	.04	-.06	.10	—						
5. Emotion-focused	-.09	.08	-.31**	-.16*	—					
6. Social support	.03	.00	.09	.42**	.09	—				
7. Emotional exhaustion	.05	.01	-.55**	-.17*	.38**	-.00	—			
8. Personal accomplishment	.24**	.14	.09	.25**	-.13	.19**	.06	—		
9. Depersonalization	-.09	-.13	-.46**	-.07	.22**	-.08	.58**	-.05	—	
10. Positive affects	.03	.07	.30**	.12	-.26**	.10	-.28**	.48*	-.25**	—
11. Negative affects	-.17*	.09	-.44**	-.20**	.47**	-.05	.63**	-.12	.41**	-.17*

Note. $N = 180$.

* $p < .05$. ** $p < .01$.

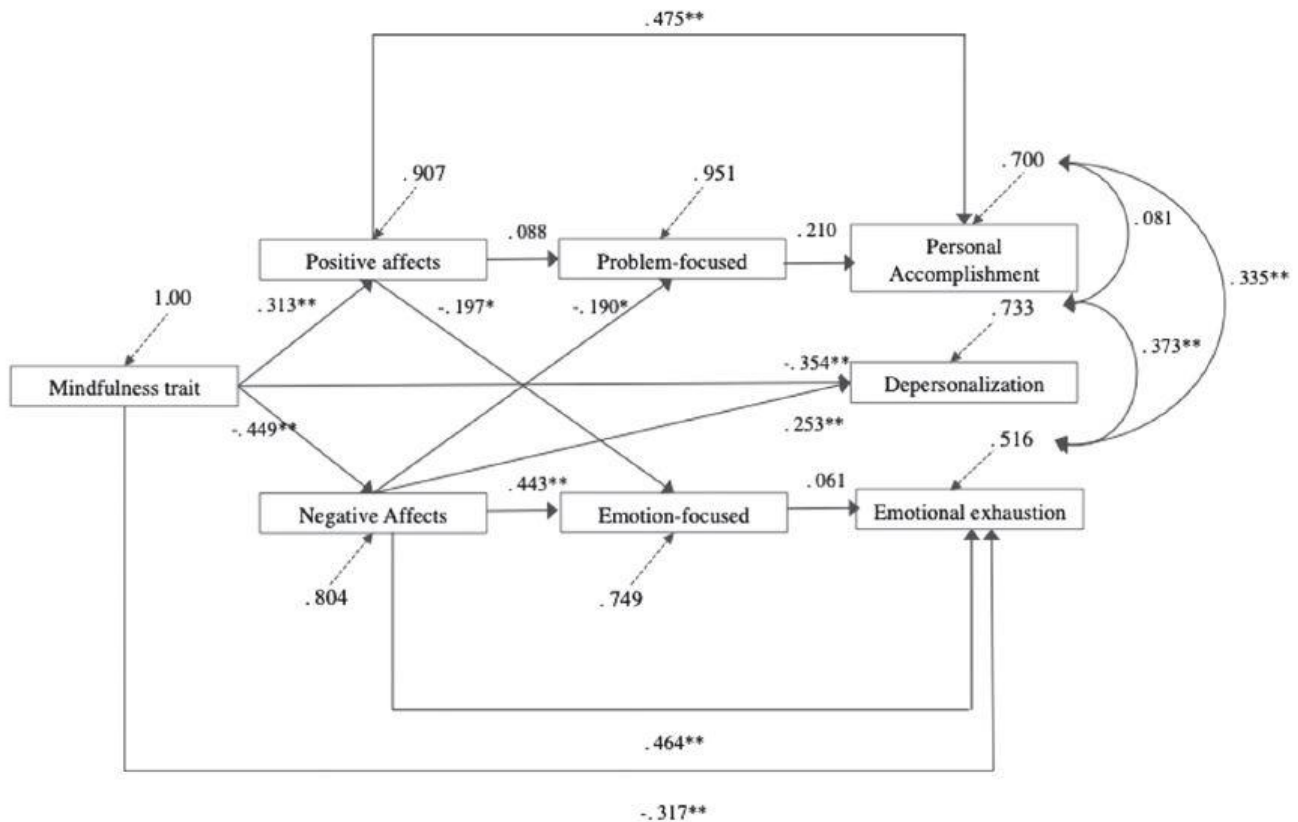
a protective factor against negative events and stressful situations (Botha et al., 2015; Salvarani et al., 2020; Westphal et al., 2015). Like Keng et al. (2011) and Weinstein et al. (2009), and we found that a high level of mindfulness favors a resource-centered assessment of work situations, resulting in more positive affects and fewer negative affects at work. According to these authors, attenuation through mindfulness of the cognitive assessment of a stressful event allows for better emotion regulation and the use of appropriate coping strategies (Keng et al., 2011; Weinstein et al., 2009).

Trait mindfulness can be viewed as a personological variable that contributes to the reassessment of a stressful situation.

According to Lazarus and Folkman's (1984) model, environmental and personological variables influence mediating processes before resorting to immediate- or long-term effects. Trait mindfulness enables individuals to remain conscious over time and maintain their attention in the present moment, thereby allowing them to more accurately assess or reassess a difficult situation, using strategies that can resolve it. Thus, trait mindfulness is a variable that can probably influence individuals' assessment of work situations and allow them to accept what happens. This more accurate situation assessment increases their feelings of positive affects and their use of problem-oriented coping strategies and makes them less prone to occupational burnout by enhancing their personal fulfillment at work.

Figure 2

Results of Structural Equation Model Estimating Relationships Between Mindfulness, Affects, Coping and Burnout



Role of Mediating Processes, Affects and Coping Strategies

Regarding the role of affects as protective or vulnerability factors, our results were in line with those of [Robert and Vandenberghe \(2018\)](#), indicating that affects significantly modulate the relationships between mindfulness, coping strategies, and burnout. Furthermore, they showed that individuals who express negative affects exhibit higher levels of emotional exhaustion. In the present study, positive affects allowed participants with a high degree of mindfulness to feel greater personal accomplishment, whereas negative affects moderated the relationship between mindfulness and both emotional exhaustion and the feeling of depersonalization. When trait mindfulness is associated with positive affects and appropriate coping strategies, it can be regarded as a personal resource for coping with burnout.

We hypothesized that emotion-focused coping strategies mediate the relationship between mindfulness and burnout. They, therefore, seem less suitable for dealing with stressful situations. This result is in line with observations in other studies ([Delicourt et al., 2013](#); [Finkelstein-Fox et al., 2019](#); [Leiter, 1991](#); [Nevill & Havercamp, 2019](#); [Palmer & Rodger, 2009](#)), in which the emotion-focused coping style was associated with greater emotional exhaustion. There are several possible explanations for these results. The scale used to measure emotion-focused coping strategies assesses dimensions, such as avoidance, guilt, threat minimization, and self-accusation ([Bruchon-Schweitzer, 2001](#)), and these strategies are used more to escape from the present moment than to accept a stressful situation. They are not useful for enhancing full present and awareness of automatic thought patterns ([Berghmans et al., 2012](#)). According to [Garland et al. \(2009\)](#), mindfulness is a regulatory mechanism that intervenes in cognitive processing when individuals use a positive reassessment strategy. Furthermore, [Bruchon-Schweitzer \(2001\)](#) argued that there are clear links between vigilant coping and problem-focused coping, and between avoidant coping and emotion-focused coping. In this sense, the results of the present study converge with those of

Weinstein et al. (2009). These authors demonstrated that individuals with a high degree of mindfulness use vigilant rather than avoidant coping strategies, adopting problem- focused coping to actively tackle and resolve difficult situations.

Limitations and Future Directions

This exploratory cross-sectional study had six methodological limitations.

First, the mindfulness measure was based on a specific conceptualization of trait mindfulness. The use of the Mindfulness Attention Awareness Scale (Brown & Ryan, 2003) to measure trait mindfulness has been questioned in several articles (Grossman, 2011; Rau & Williams, 2016; Tomlinson et al., 2018). Unlike other scales, it only measures a one-dimensional construct of mindfulness. The concept of trait mindfulness has not yet a under validation according to the authors and distinct concept in the scientific literature (Rau & Williams, 2016), and it is difficult to use a single self-report measure to explore different degrees of mindfulness. To address these limitations, we relied on recent research showing that trait mindfulness is conceptually different from state mindfulness and can be increased through meditation-based interventions (Carmody et al., 2008; Csillik & Tafticht, 2012; Shahar et al., 2010; Shapiro et al., 2008). We chose to use this scale, because all the existing questionnaires were self-report measures of trait mindfulness (Grossman & Van Dam, 2011). The Mindfulness Attention Awareness Scale is one of the most widely used measures (Mesmer- Magnus et al., 2017; Rau & Williams, 2016) in research, and the French version shows good psychometric qualities (Jermann et al., 2009). Furthermore, this scale is fast to complete, as it only has 15 items.

Second, our results could not be generalized to other types of population, as our sample was mainly female.

Third, concerning the measurement of affect, the present study did not assess the frequency of emotions in real time, as we wanted to measure general tendencies through positive and negative trait affects: this seemed more relevant when looking for links to trait mindfulness.

Fourth, to assess the variables of this study, we used scales such as Mindfulness Attention Awareness Scale, Positive and Negative Affect Schedule, and Ways of Coping Checklist Revised, which are general measures. To encourage participants to think about their work when responding to these different scales, the title of the questionnaire and the description referred to well-being at work. Furthermore, at many points in the questionnaire, we emphasized that it focused on what people feel or how they react in the workplace. In future studies, we will insert control variables to check that these instructions are sufficiently clear and well- respected.

Fifth, as our study relied on cross-sectional data, we could not reach any conclusions concerning the causality and directionality of the relationships among mindfulness, affects (i.e., positive and negative), coping strategies (i.e., problem-focused, emotion- focused, and social support), and burnout (i.e., emotional exhaus- tion, depersonalization, and personal accomplishment). As we were mentioned in the Introduction, several studies have shown mind- fulness to have causal links with affects, coping strategies, and burnout. Competing models should be tested in future longitudinal research, to allow bidirectional links to be observed between these variables. Despite this limitation, our results allowed us to extend current knowledge on the possible links between trait mindfulness, affects, coping strategies, and burnout. Sixth, we failed to take account of how organizational factors such as social climate, organizational justice, and social support inside and outside the organization may influence burnout, even though these factors can prevent illbeing and enhance well-being at work (Desrumaux, 2012).

The present study focused on variables related to personality and individual strategies, but this is not enough to overcome burnout (Maslach & Leiter, 2016). For example, to protect caregivers from burnout, it is important to take account of group cohesion and organizational commitment (Li et al., 2014).

In future studies, it would be interesting to combine the quantita- tive method with a qualitative one

involving mindfulness training and interviews, to understand the meaning of our results and deepen our research. Larger and more heterogeneous samples will have to be recruited. Future research should also explore the mechanisms underlying the relationship between mindfulness and burnout and its impact on assessing psychosocial risks in an occupational context. In this sense, it would be interesting to conduct a randomized study combining qualitative and quantitative methods before, during, and after a mindfulness-based intervention in several different organizations, to understand its impact on workers in different workplace settings.

Practical Implications

The results of the present study confirmed the theoretical links between mindfulness, affects, coping strategies, and occupational burnout, indicating that mindfulness, together with positive affects and problem-focused coping strategies, may prove to be protective of burnout. People can develop their capacity for mindfulness through multiple activities, such as meditation with MBSR and MBCT programs, and seek out positive emotions through hobbies or other interests. Identifying strategies, establishing action plans and projects, or developing training in the use of other regulatory strategies (e.g., savoring) can also protect individuals against the onset of burnout.

In an organizational context, it, therefore, seems relevant for assessments of psychosocial risks to include a measure of mindfulness. Burnout could be prevented by developing this psychological capacity through training. In addition, individuals could be encouraged to use coping strategies that are adapted to the *anxiety-provoking* situations that may occur in an organizational context (Strub & Steiler, 2013; Weinstein et al., 2009). Attention levels can affect the way that a situation is assessed, particularly in the health field, where decisions can have an impact on human lives. Emotional reactions and their consequences, such as the onset of occupational burnout or errors in decision-making or patient management, can be alleviated by a careful assessment of the situation.

Conclusion

The study of trait mindfulness may open up new avenues for future research related to burnout. The results of the present study highlighted the relationships between mindfulness and burnout, as well as the relationships between mindfulness and coping strategies and emotional experience among individuals working in the health-care sector. Mindfulness seems to be a protective factor against burnout, especially emotional exhaustion, and is, therefore, relevant to the study of burnout. Interventions should be used to develop this psychological skill in individuals, to modulate their perception of stressful situations and, ultimately, protect them from burnout.

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