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The role of psychological flexibility in the demands-exhaustion-performance relationship

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Employees in the service sector deal with a variety of emotional job demands due to interactions with clients. Emotional job demands often result in heightened levels of emotional exhaustion and decreased levels of performance. The current study aims to explore whether the adaptive behavioural pattern of psychological flexibility diminishes the negative impacts of emotional job demands on emotional exhaustion and subsequent performance. Data were collected from 116 nonprofit service workers, using self-report questionnaires (i.e., baseline) and diaries (i.e., follow-up). The results suggest that psychological flexibility is negatively a:s~ociated with emotional exhaustion and positively associated with performance. In addition, psychological flexibility is found to attenuate the negative effects of emotional job demands on emotional exhaustion and performance. Finally, the results reveal that the attenuating role of psychological flexibility diminishes if employees are already exhausted. The results support the importance of personal resources, like psychological flexibility, in buffering the negative effects of emotional job demands on emotional exhaustion and performance. However, employees no longer benefit from high levels of psychological flexibility when facing high levels of exhaustion due to excessive emotional job demands.

Keywords: Service jobs; Emotional demands; Psychological flexibility; Emotional exhaustion; Performance; ACT.

The service sector has become the largest employment sector in most developed countries (Lee & Wolpin, 2006). The quality of the service provided is largely determined by the interaction between the customer and the service provider (Bowen & Schneider, 1988; Burgers, de Ruyter, Keen, & Streukens, 2000). Due to frequent contact with clients within the service sector, emotional job demands are of particular importance here. These demands can be defined as those aspects of the job that require sustained emotional effort due to interactions with clients (de Jonge & Dormann, 2003). For example, employees in the service sector confront many human problems (e.g., disease, suffering, and sadness) and may have problematic, emotionally consuming interactions with clients (Dorman & Zapf, 2004). Additionally, dealing with these situations requires the expression of (organizationally desired) emotions that are not always genuinely felt by employees (i.e., emotional labour; Grandey, 2003; Hochschild, 1979).

Emotional job demands are likely to be costly in terms of psychological effort, threatening the resources of individuals (Muraven & Baumeister, 2000). Indeed, several studies (e.g., Morris & Feldman, 1996; Wharton, 1993) have revealed that emotional job demands often manifest in emotional exhaustion, which is, in turn, likely to decrease performance levels (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001).

In an effort to explore ways of minimizing such negative effects for employees and subsequently for organizations, the present study examines whether a behavioural pattern-psychological flexibility-may buffer the negative consequences of emotional job demands within the service sector. Psychological flexibility refers to an ability to focus on the present moment, including an active, open, and

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non judgemental embracement of internal experiences, with a reduced tendency to control these internal experiences. And, depending upon what the situation affords, it also refers to the ability to persist with or change one's behaviour in the pursuit of one's chosen goals or values (Bond, Flaxman, & Bunce, 2008; Hayes, Luoma, Bond, Masuda, & Lillis, 2006). Psychologically flexible employees are expected to be able to cope better with emotional job demands because they are open and nonjudgementally aware of these demands, which requires less effort than the process of dealing with or resisting them (Baer, 2003; Hayes et al., 2006). Psychologically flexible employees are, therefore, proposed to be less exhausted by emotional job demands. Furthermore, because psychologically flexible employees perceive such demands in an open and nonjudgemental manner, more attentional resources are available to effectively deal with these demands. Subsequently, emotional job demands do not interfere with value- and-goaldirected behaviour. In the work environment, psychologically flexible individuals are therefore expected to be more persistent and committed to required tasks and, therefore, better able to notice and respond effectively to performance-related contingencies in the work environment (Bond, Hayes, & Barnes-Holmes, 2006). However, because emotionally exhausted employees are less likely to respond to performance-related cues available in the environment (Demerouti et al., 2001), the aforementioned positive effects of psychological flexibility may not be as strong in conditions of high exhaustion.

THEORETICAL FRAMEWORK

Emotional job demands, emotional exhaustion, and performance

Emotional job demands are the aspects of a job that require sustained emotional effort by employees (Brotheridge & Lee, 2002; de Jonge & Dormann, 2003). Service employees work on the front line and act as boundary-spanners, linking the organization and the public it serves. The nature of service work is demanding, not only in terms of mental and physical effort (e.g., time pressure, work overload) but also in terms of emotional effort (e.g., Chebat & Kollias, 2000). It is important to note that these. emotional job demands go beyond considering emotions as a reaction to various conditions of the organizational environment. Rather, our focus is on how service-sector employees deal with emotional issues and stimuli as a requirement of their jobs (Zapf, 2002). Accordingly, emotional job demands refer to the affective component of work and the degree to which work causes emotionally stressful situations (Peeters, Montgomery, Bakker, & Schaufeli, 2005, p. 45), for example, the need to manage the emotions expressed during service interactions or deal with irate or angry customers (de Jonge & Dormann, 2003). Not surprisingly, emotional job demands have been found to be associated with negative mental health outcomes, including emotional ex-· haustion (e.g., Abraham, 1998; Bakker, Demerouti, & Euwema, 2005; Brotheridge & Grantley, 2002; Zapf & Holz, 2006).

Emotional exhaustion is considered the core dimension of job burnout (cynicism and reduced professional efficacy are the other two dimensions) (Maslach, Schaufeli, & Leiter, 2001). Importantly, emotional exhaustion may be conceptualized as the first stage of burnout, and therefore, it provides a critical point for intervention (e.g., Maslach, 2003). Emotional exhaustion involves feelings of fatigue, being used up, irritability, frustration, and wearing out-depleting the resources of the employee (Maslach & Jackson, 1981). The service industry offers a classic setting for the study of emotional exhaustion. Indeed, Jackson, Schwab, and Schuler (1986, p. 630) defined burnout as a "state of emotional exhaustion caused by excessive psychological and emotional demands made on people helping people". Accordingly, service jobs are often graded among the most stressful jobs in modern countries (e.g., D'Ausilio, 1997). In this context, issues such as emotional job demands, emotional exhaustion, and performance are relevant to the functions of service employees and warrant further investigation.

Emotional exhaustion arising from emotional job demands may subsequently affect the ability of individuals to perform job tasks. The mediating role of emotional exhaustion in the relationship between emotional job demands and performance has been confirmed by a number of studies (e.g., Bakker, Demerouti, & Verbeke, 2004; Demerouti et al., 2001). The demands-exhaustion-performance relationship is theoretically consistent with the Job Demands-Resources (JD-R) perspective (Demerouti et al., 2001), which suggests that employees facing a high level of emotional job demands become exhausted and are drained from resources needed to properly execute their job tasks. The demands-exhaustion-performance relationship refers to one side of the JD- R model (cf. Bakker & Demerouti, 2007; Bakker et al., 2004). In the complete model, another side is also included linking employee job resources through motivational processes to outcomes. In this article, however, we will not elaborate further on this motivational mechanism.

Consistent with the extant research and as a basic proposition in this study, we expect the following:

Hypothesis 1: Emotional exhaustion mediates the negative association between emotional job demands and performance.

The role of psychological flexibility Psychological flexibility is a concept originally developed within Acceptance and Commitment Therapy (ACT), one of the more recent, empirically based theories of psychopathology (Hayes, Strosahl, & Wilson, 1999). Following the ACT's model of psychological flexibility, the Hexagon model, psychological flexibility consists of six functional processes. These processes are highly interactive and reinforce one another; these processes can be categorized under two main processes of acceptance and commitment (Hayes et al., 2006). Acceptance refers to a willingness to experience thoughts, feelings, and sensations, especially negative ones (e.g., fear or+grief), without having to control or avoid them, or let them determine one's actions. It involves an open; noncontrolling, or nonjudgemental manner to deal with internal experiences (Bond & Bunce, 2003; Hayes et al., 2006). Commitment refers to the process of persisting and changing behaviour towards valued goals, remaining committed and persistent in achieving those goals (Hayes et al., 2006). Psychological flexibility thus reflects an ability to contact the present moment while embracing internal experiences without attempting to control them, and depending upon what the situation affords, persist with or change one's behavior in the pursuit of one's chosen goals or values (Bond et al., 2008; Hayes et al., 2006).

Previous studies have shown that psychological flexibility affects employees' mental health (Bond & Bunce, 2000; 2003; Bond et al., 2008; Hayes et al., 1999). Because psychologically flexible employees are more likely to accept and nonjudgmentally embrace negative psychological events (including thoughts and emotions) than try to control, change, or resist these events, they are less likely to exhaust resources, such as energy and attention, and have more resources available to effectively respond to job demands and to avoid becoming exhausted (Baer, 2003; Hayes et al., 2006). Accordingly; we propose the following:

Hypothesis 2a: Psychological flexibility is negatively associated with emotional exhaustion.

In addition, previous studies have shown that psychological flexibility affects work performance (Bond & Bunce, 2003; Bond et al., 2008). The process of acceptance involves little effort, so employees may have more resources available to handle job tasks · (Bond & Bunce, 2003; Bond & Hayes, 2002). Furthermore, the commitment component of psychological flexibility facilitates goal-directed behaviour, such that highly flexible individuals have more attentional resources and are more sensitive to performance-related contingencies of reinforcement in their work environment, also referred to as "goal-related context sensitivity" (Bond et al., 2006, 2008). Also, highly flexible employees are more likely to (continue to) engage in goal-directed behaviour (e.g., achieving targeted goals or being an effective worker), even when confronted with negative or difficult thoughts, emotions and sensations (Bond & Bunce, 2003). Flexible employees are therefore expected to be more persistent in meeting required tasks. We therefore propose the following:

Hypothesis 2b: Psychological flexibility is positively associated with performance.

We go beyond these direct effects of psychological flexibility, proposing that psychological flexibility is likely to attenuate the adverse effects of emotional job demands on service employees. First, we examine the degree to which psychological flexibility buffers the association between emotional job demands and emotional exhaustion. Recent literature on the JD-R model suggests that personal resources are crucial for buffering the impact of job demands on emotional exhaustion. Individual differences in personal resources have been proposed to relate to the ability to cope with adverse and overwhelming job situations (e.g., Bakker et al., 2004; Jex, Bliese, Buzzell, & Primeau, 2001; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). As already noted, the current study expects that individuals differ in their ability to cope with emotional demands because they differ in their level of psychological flexibility. There are two reasons for this proposed effect of psychological flexibility. First, from a JD-R perspective (Demerouti et al., 2001), psychological flexibility may prevent strain accumulation in relation to emotionally demanding work conditions. More specifically, psychological flexibility means that employees do not need to invest resources in actively regulating (suppressing or transforming) their emotional reactions, and thus, they have more attentional resources available to deal effectively with emotional job demands. Second, psychologically flexible employees may interpret or frame job demands as simply part of the normal workday in an open, nonelaborative, and nonjudgemental manner (Hayes et al., 2006; Lazarus, 1966). Taking these considerations into account, we propose:

Hypothesis 2c: Psychological flexibility attenuates the association between emotional job demands and emotional exhaustion.

Second, we examined the degree to which psychological flexibility buffers the association between emotional exhaustion and performance. We propose that employees high on psychological flexibility are less likely to be disturbed or excessively entangled in (i.e., fused with) negative emotional reactions (such as exhaustion) when they do occur because they are better able to cope with negative situations (Bond et al., 2006; Bond & Bunce, 2003). In addition, due to their high level of commitment to valued goals, such employees may be less distracted by exhaustion, and-being more target oriented-pursue their goals regardless of any endemic effects in their emotional state. In other words, they do not let themselves be driven by the immediate, current state of exhaustion, nor do they perceive their exhaustion as an obstacle to goal attainment. Formally, we propose:

Hypothesis 2d: Psychological flexibility attenuates the association between emotional exhaustion and performance.

Combining mediation by emotional exhaustion and moderation by psychological flexibility

So far, we have theorized about emotional exhaustion mediating the emotional demands-performance association and psychological flexibility moderating both steps in this linkage. The combination of mediation and moderation effects in analytical models is one of the big challenges in current psychological research (Bond et al., 2008; Muller, Judd, & Yzerbyt, 2005). Given the nature of the aforementioned hypotheses, we now theorize further on how psychologically flexibility moderates the demands-exha ustio n-perfo rmance associa tr on. More specifically, the current study aims to investigate whether psychological flexibility attenuates the mediation effect of emotional exhaustion in the demands-performance association. We propose that psychologically flexible employees are Jess exhausted by emotional job demands because they perceive these demands in a nonjudgemental manner. Although these employees might perceive similar demands and similar negative experiences due to these demands, they are better able to cope with these negative experiences due to embracing instead of fighting or being disturbed by these events. This way of handling emotional job demands takes also less energy, such that these highly flexible employees have more attentional resources available to deal effectively with these demands. Furthermore, if emotionally exhausted, psychologically flexible employees are better able to cope with this adverse state and do not perceive their exhaustion as an obstacle to the performance of work-related goals. Formally, we propose:

Hypothesis 3: Psychological flexibility attenuates the mediation effect of emotional exhaustion in the job demands-performance association.

Figure 1 presents the proposed research model with the aforementioned hypotheses.

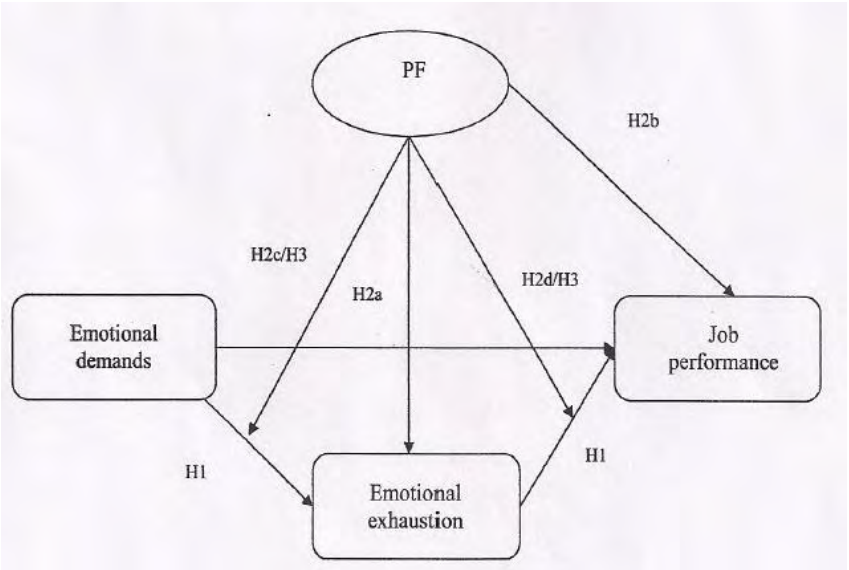

Figure 1. The conceptual model and hypotheses. We extend prior research by disentangling the role of psychological flexibility in the emotional job demands-emotional exhaustion-job performance chain. More insight in this role can lead the way to introducing one of the most successful innovations in clinical psychology (ACT or Acceptance and Commitment Therapy) into the realm of work and organizational psychology).

METHOD

Participants

One hundred and twenty service providers were identified through the network of family and friends related to five research assistants. We chose to select employees from nonprofit organizations because recent studies suggest that this sector has grown significantly in most Western countries over recent years (e.g., Lee & Wolpin, 2006). Nonprofit organizations furthermore face challenges similar to those faced by the for-profit sector, making the two sectors more similar than previously thought (e.g., Hume, Sullivan Mort, Liesch, & Winzar, 2006). More importantly, a recent large-scale study among the Dutch workforce *(N* = 20.000) shows that emotional demands in The Netherlands are higher in the nonprofit sector (e.g., health care and education) than in the for-profit sector (e.g., trade and transport & communication) (Koppes, de Vroome, Mo!, Janssen, & Van den Bosche, 2009).

The research assistants contacted 150 potential respondents both directly (first-hand acquaintances) and indirectly (based on referrals by their"frie'nds/ colleagues/family members, some of whom had already been invited to participate in the study). Such a convenience sample is often applied when using diary methods, which require a considerable amount of time and dedication on part of respondents and may be more easily expected from relatives and friends (Conway & Briner, 2002; Higgins, McClean, & Conrath, 1985). Since we wanted to have a homogeneous sample, with respondents that experience emotional job demands due to interaction with clients for a significant part of the week, participants had to meet the following criteria: **(1)** be employed in a nonprofit service organization, (2) have direct contact with customers for at least 50% of working time; (3) have a nonmanagerial position, (4) have a job relating to the core business of the organization, and (5) have a full-time job with a contract of at least 30 hours per week. Moreover, we sought to create a balanced sample in terms of gender and age. Accordingly, the research assistants were instructed to approach equal numbers of male/female and younger/older employees.

Four respondents-at closer inspection-failed to meet abovementioned criteria and were excluded. from our analyses. Due to our balanced sampling method, participants were almost evenly distributed in terms of gender and age. The sample consisted of a slightly higher number of women (56.9%), which is probably due to the fact that more women than men work in the nonprofit service sector in The Netherlands (Statistics Netherlands, 2009). The mean age was approximately 40 years *(SD* = 12.4), which is in line with Dutch labour force statistics (Statistics Netherlands, 2009). Forty-three per cent of the respondents had what is known in The Netherlands as a "low educational level" (i.e., had some schooling, graduated from high school, or graduated from vocational/technical college), and 57% had received a BA degree or higher (i.e., "high educational level" in The Netherlands). The average amount of direct service contact with customers was 79.4% *(SD* = 15.3) of working time. Finally, 16% of the respondents worked in the government sector, 24% in the education sector, 48% in the health sector, and 12% in other smaller service sectors.

Procedure

We used two instruments for data collection. Participants were asked to first complete a survey (i.e., the "baseline" instrument, measuring the control variables) and then a three-day diary (i.e., the "follow-up" instrument, measuring the study variables). Respondents were instructed to complete the diary over three consecutive working days, beginning 3 or 4 days after completing the survey, such that completion of both research tasks (i.e., survey and diary) would take place over approximately **1** week. The 3-4 day lag was long enough that participants would not accurately recall the content of the survey at baseline while filiing out the diary, yet short enough to reduce drop-out rates. This timing is also in line with prior studies using the diary technique (e.g., Sonnentag, 2003).

Booklets containing the survey and diary were either handed out personally or sent by post. Instructions regarding both research tasks were provided to all participants, mostly via a phone call or a face-to-face meeting. These instructions were also attached to the booklets in an instruction letter. The instruction letter contained information about how to fill out the survey and diary, guaranteed anonymity, highlighted the importance of the research, and provided contact information in case of questions. Special emphasis was given to the timing of the research tasks (i.e., completing the survey first and then, 3-4 days later, starting the 3-consecutive-day diary), furthermore respondents were asked to fill out the ~urveys and diaries at the end of a working day. The average time for completing the survey was 17 minutes. Filling out the diary took approximately 5 minutes a day (these figures were established during a pilot study). To minimize socially desirable responses, anonymity and confidentiality of the data was assured. Respondents were asked to send completed booklets by post (stamped return envelopes were provided), or personally put the envelope with completed booklet in a bag with similar envelopes. After 2 weeks, respondents were reminded by telephone or email. Response rate was exactly 80%.

Measures

All measures are selected from existing scales, and have been proven to be reliable and valid before. Below both the survey and diary measures are described. All diary items are shown in Table 1.

Emotional job demands. These were measured in the diary using five items from the Dutch Questionnaire on the Experience and Assessment of Work ("VBBA" scale; van Veldhoven, de Jonge, Broersen, Kompier, & Meijman, 2002). This scale has been used in other studies (e.g., Bakker et al., 2004; Bakker, van Veldhoven, & Xanthopoulou, 2010), showing good psychometric properties and validity. The original scale uses a frequency-oriented response format (always, often, sometimes, never). This was adapted to the day-level context, participants now responding to a 5-point Likert scale, ranging from (1) "totally not applicable" to (5) "totally applicable". Items were also reworded to the day level (e.g., "Today, did your work require contact with difficult customers?", and "Today, did your work require that you convince/persuade other people?"). Using a pilot study *(n* = 5), we checked for potential difficulties related to using these items at the day level and identified no problems. Cronbach's alphas for Days 1, 2, and 3 were .83, .81, and .86, respectively.

Emotional exhaustion. This was measured both in the survey and in the diary, such that we could control for its baseline score when exhaustion was examined as an outcome variable. The "Utrecht Burnout Scale-general version" (UBOS-A; Schaufeli & van Dierendonck, 200 l) was used to measure emotional exhaustion. The UBOS-A is the general

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Itemdor variables in the diary

Emotional job demands
1. Today, did you have contact with difficult clients or patients at work?
2. Today, did your work require that you convince/persuade people?
3. Today, was your work emotionally demanding?
4. Today, were you confronted at work with things that affect you personally?
5. Today, did you experience emotionally upsetting situations at work?

Answered on a 5-point Likert scale, ranging from (l) "totally not applicable" to (5) "totally applicable".

Emotional exhaustion
1. I feel emotionally drained from this working day.
2. I feel used up due to this working day.
3. I feel burned out from this working day.
4. I feel like I am at the end of my rope at the end of this working day.
5. I felt fatigued when I got up this morning and had to face another day on the job.

Answered on a 5-point Liker! scale, ranging from (l) "totally not applicable" to (5) "totally applicable".

Psychological flexibility
1. Today it was OK if I remembered something unpleasant.
2. My painful experiences and memories made it difficult for me to have a valuable day. *(R)*
3. Today I was afraid of my feelings. *(R)*
4. Today I worried about not being able to control my worries and feelings. *(R)*
5. My painful memories prevented me from having a fulfilling day. *(R)*
6. I was in control of my day.
7. Emotions caused problems today. *(R)*
8. Today it seemed that most people were handling their day better than I did. *(R)*
9. Worries got in the way of my success today. *(R)*
10. My thoughts and feelings did not get in the way today.

Answered on a 5-point Liker scale, ranging from (l) "totally not applicable" to (5) "totally applicable".

Job performance
1. Today, I achieved the objectives of my job.
2. Today, I have met my criteria for job performance.
3. Today, I demonstrated expertise in all job-related tasks.
4. Today, I fulfilled all the requirements of my job.
5. Today, I could manage more responsibility than typically assigned to me.
6. Today, I appeared to be suitable for a higher level role.
7. Today, I was competent in all areas of the job, and handled tasks with proficiency.
8. Today, I performed well in the overall job by carrying out tasks as expected.
9. Today, I planned and organized to achieve objectives of the job and meet deadlines.

Answered on a 5-point Liker/ scale, ranging from (l) "totally not applicable" to (5) "totally applicable".

Dutch version of the "Maslach Burnout Inventory" (Maslach, Jackson, & Leiter, 1996). At baseline, items (e.g., "I feel emotionally drained from my work") were answered using a 6-point Likert scale, ranging from (1) "never" to (6) "always". At the daylevel, these same items were adapted (e.g., "I feel emotionally drained from this working day") and answered, using a shorter, 5-point Likert scale ranging from (1) "totally not applicable" to (5) "totally applicable". Using the same pilot study noted earlier, we checked for potential difficulties related to these items at the day level and again found no problem with the adapted scale. Cronbach's alpha for the baseline instrument was .85, and for Days 1, 2, and 3, the coefficients were .88, .89, and .88, respectively.

Psychological flexibility. This was measured in the diary, using the 10-item Acceptance and Action Questionnaire (AAQ-II; Bond et al., 2008). Psychological flexibility was measured at day level for two main reasons. First, the current study aims to measure the potential advantages of psychological flexibility in a specific work context. We are therefore especially interested in the use of this behavioural style within this actual day-in, day-out work context. To measure this as specifically as possible we decided to adjust the items to the day level. Second, this measurement method provides some advantages, providing the possibility to explore whether psychological flexibility is indeed a relatively stable behavioural pattern across working days or rather a changeable, daily expression. We adopted an existing Dutch translation of this scale, for which reliability and validity have been confirmed (Jacobs, Kleen, De Groot, & A-Tjak, 2008). The original items were adapted to the day level (e.g., "I was afraid of my feelings today") and responded to using a 5-point Likert scale ranging from (1) "totally not applicable" to (5) "totally applicable". Using the same pilot study noted earlier, we checked for potential difficulties related to these items at the day level and identified no problems. Cronbach's coefficient alphas for Days 1, 2, and 3 were .73, .75, and .76, respectively. Although to some extent malleable and receptive to development through trammg, psychological flexibility is an adaptive behavioural pattern with some stability and generalizability (Bond et al., 2008). Accordingly, the 3-day scores were aggregated to a single score, which is considered more reliable and valid than scores measured at a single moment in time (Bolger, Davis, & Rafaeli, 2003). The I\vg-index was calculated for the three diary days for the psychological flexibility variable, denoting the degree to which the ratings of individuals from the three days were interchangeable (Bliese, 2000). Across the 116 diaries, the mean r_{wg} was .873, which is considered good and justifies aggregation (Grawich & Munz, 2004). We therefore used the mean score of psychological flexibility over the 3 consecutive days.

Job performance. This was measured both in the survey and diary, such that we could control for its baseline score when job performance was examined as the outcome variable. Nine items from the "Task-based job performance" scale (Goodman & Svyantek, 1999) were used to measure performance. At baseline, items (e.g., "I achieve the objectives of my job") were answered, using a 7-point Likert scale, ranging from (1) "never applicable" to (7) "always applicable". At the day level, these same items were adapted (e.g., "Today, I achieved the objectives of my job") and answered, using a shorter, 5-point Likert scale ranging from (1) "totally not applicable" to (5) "totally applicable". No problems were identified in the adapted day-level items during pilot testing. Cronbach's coefficient alpha for the baseline instrument was .82, and for Days 1, 2, and 3, the coefficients were .85, .90, and .88, respectively.

Control variables

In addition to the baseline scores of emotional exhaustion and performance described previously, we controlled for the number of weekly work hours in all analyses to rule out possible spurious relations (e.g., Spurgeon, Harrington, & Cooper, 1997) and the amount of working time (percentage) interacting with customers (e.g., Acker, 1999) as potential confounders of job demand effects. Finally, we controlled for gender and age by means of our balanced sample. Both variables have been identified as related to emotional job demands, emotional exhaustion (e.g., Vermeulen & Mustard, 2000), and/or performance (e.g., Wright & Bonett, 1997).

Statistical analysis

Each participant provided data for the baseline survey (e.g., baseline emotional exhaustion, baseline performance, contract hours, service percentage) and the day-level diary (e.g., emotional demands, emotional exhaustion, performance). Day-level data were also' used to create a person-level measure of psychological flexibility. The 3-day scores of psycho-logical flexibility were aggregated to a higher level, because psychological flexibility is a behavioural pattern with some stability and generalizability. The result is a set of hierarchically structured data, where Level 1 data represents day-level measures that are nested within individuals (Level 2) data, i.e., at the person level. We performed hierarchical linear modelling for our data analyses (Bryk & Raudenbush, 1992), using the MLwiN statistical software.

The baseline variables were included as control variables. An individual's level of performance or feelings of exhaustion on a specific day may not be solely the result of individual's day-level predictors (e.g., emotional demands) on that day. An individual's general tendency to be exhausted or have a high/low performance level may also affect exhaustion and performance on a specific day.

RESULTS

Table 2 illustrates the means, standard deviations, and correlations among the study variables. The bivariate results indicate that baseline and day-level exhaustion measures correlate, $r = .51$, $p < .001$, as do baseline and day-level performance, $r = .46$, $p < .001$. Emotional job demands correlate positively with emotional exhaustion, $r = .53$, $p < .001$, and negatively with performance, $r = -.19$, $p < .01$. Table 2 also indicates a positive correlation between emotional exhaustion and performance, $r = .31$, $p < .0$ L- Finally, psychological flexibility correlates inversely with emotional job demands, $r = -.33$, $p < .01$, and emotional exhaustion, $r = -.48$, $p < .01$, and positively with performance, $r = .30$, $p < .01$.

To test Hypothesis I (which posited that emotional exhaustion mediates the association between emotional job demands and performance), we applied the three-step procedure for testing mediation (MacKinnon, Fairchild, & Fritz, 2007), using a series of multilevel analyses. The results are presented in Table 3. First, we tested whether the independent variable (i.e., emotional job demands) accounted for variation in the presumed mediator (i.e., emotional exhaustion). A multilevel analysis confirmed that when controlling for emotional exhaustion at baseline, emotional job demands positively relate to exhaustion at the day level, $b = .374$, $p < .005$ (see Model 2 of Table 3). Second, we tested whether the presumed mediator-emotional exhaustion-accounted for variation in the dependent variable when controlling for this same variable at baseline. As shown in Table 3 (see Model 3), emotional exhaustion associates with performance, $b = -.192$, $p < .005$. The third, final condition required testing whether the previously significant effect of emotional job demands on performance decreases when controlling for the mediator. As shown in Table 3, after entering emotional exhaustion, the coefficient for emotional job demands dropped both in magnitude and statistical significance, becoming insignificant, from $b = -.094$, $p < .01$ (see Model I-without exhaustion) to $b = -.012$, $p = ns$ (see Model 3, with exhaustion included), and suggesting the mediation effect of emotional exhaustion.

Table 4 confirms both Hypotheses 2a and 2b. More specifically, psychological flexibility associates negatively with emotional exhaustion (see Model 1), $b = -.458$, $p < .005$) but positively with performance (see Model 2), $b = .225$, $p < .05$). In addition, Table 4 provides support for Hypothesis 2c, which posited that psychological flexibility would attenuate the association between emotional job demands and emotional exhaustion (see Model 1), $b = -.197$, $p < .05$. At the same time, Hypothesis 2d, which · stated that psychological flexibility would attenuate the association between emotional exhaustion and performance, was rejected, $b = -.015$, *ns*.

Hypothesis 3 proposed that psychological flexibility would moderate the mediating role of emotional exhaustion in the association between emotional job demands and performance. To test this hypothesis, we followed conventions by using three hierarchical linear regression equations specified by Muller et al. (2005). A prototypical case of moderated mediation suffices three requirements. The first step in Table 5 partially confirms the first requirement, the results reveal that performance associates significantly with emotional job demands, $b = .061$, $p < .05$. However, in contrast with the first requirement (i.e., that the interaction effect of the independent variable and. the moderator is insignificant), performance is significantly associated with the interaction effect of emotional demands and psychological flexibility, $b = -.195$, $p < .05$.

TABLE 2
Means, standard deviations (SD), and bivariate correlations for all study variables

Variable	*Mean*	*SD*	*Range*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*
I. Contract hours	35.05	4.52	30-40	–	-.175	-.043	-.016	-.019	-.136*	-.048	-0.082
2. Service percentage	79.39	15.24	50-100			.064	.077	-.063	-.127*	.052	.216**
3. Emotional demands	2.33	0.94	1-5				.528**	.385**	-.325**	-.190**	-.115*
4. Emotional exhaustion	1.83	0.83	1-5				–	.508**	-.478**	-.306**	-.122*
5. Emotional exhaustion baseline	2.39	0.75	1-6					–	.312**	.160**	-.070
6. Psychological flexibility	4.22	0.45	1-5						–	.296**	.109*
7. Performance	3.86	0.65	1-5								.457**
8. Performance baseline	5.40	0.74	1-7								

$N = 116$. *$p < .05$, **$p < .01$.

TABLE 3

Multilevel estimates for models predicting the mediating role of emotional exhaustion on the relationship between emotional job demands and performance

	Model 1			*Model 2*			*Model 3*		
	Performance			*Emotional exhaustion*			*Performance*		
	Estimate	*SE*	*t*	*Estimate*	*SE*	*t*	*Estimate*	*SE*	
Control variables									
Contract hours	-0.004	0.009	-0.444	0.004	0.010	0.400	-0.003	0.009	-0.333
Service percentage	-0.002	0.003	-0.667	0.004	0.003	1.333	-0.001	0.003	-0.333
Step 1									
Constant	2.192	0.530	4.135***						
Emotional demands	-0.094	0.037	-2.541**						
Performance baseline	0.398	0.059	6.746***						
Step 2									
Constant				-0.416	0.507	-0.821			
Emotional demands				0.374	0.044	8.500***			
Emotional exhaustion baseline				0.404	0.066	6.121***			
Step 3									
Constant							2.380	0.516	4.612***
Emotional demands							-0.012	0.041	-0.293
Emotional exhaustion							-0.192	0.043	-4.465***
Performance baseline							0.381	0.057	6.684***
-2 log likelihood			541.761			637.107			522.769
Level I variance	0.142	0.027		0.160	0.033		0.132	0.026	
Level 2 variance	0.187	0.017	~	0.257	0.024		0.178	0.017	

N = 116 service employees, and N = 348 observations r=s < .01, ***p < .005

TABLE 4

Multilevel estimates for models predicting the moderating role of psychological flexibility in the relationship between emotional demands and emotional exhaustion and the relationship between emotional exhaustion and performance

	Model 1: Emotional exhaustion			*Model 2: Performance*		
	Estimate	*SE*	*t*	*Estimate*	*SE*	
Control variables						
Contract hours	-0.007	0.009	-0.778	0.000	0.009	0.000
Service percentage	0.002	0.003	0.667	-0.000	0.003	-0.000
Constant	2.370	0.748	3.168***			
Emotional demands (ED)	0.298	0.043	6.930***			
Emotional exhaustion baseline	0.334	0.061	5.475***			
Psychological flexibility (PF)	-0.458	0.106	-4.321 ***			
ED x PF	-0.197	0.099	-1.990*			
Constant				1.212	0.710	1.707*
Emotional exhaustion (EE)				-0.165	0.043	-3.837***
Performance baseline				0.370	0.056	6.607***
Psychological flexibility (PF)				0.225	0.100	2.250*
EE x PF				-0.015	0.085	-0.176
-2 log likelihood			611.065			517.914
Level 1 variance	0.111	0.027		0.123	0.025	
Level 2 variance	0.257	0.024		0.179	0.017	

N = 116 service employees, and N = 348 observations. *p < .05, ***p < .005.

Although the results already revealed that there is no prototypical moderated mediation, we followed the remaining steps of Muller et al., (2005), to gain understanding in the role of psychological flexibility in the demands-exhaustion-performance association. The results reveal that the remaining two requirements stated by Muller et al. are met. Psychological flexibility has a significant interaction effect with emotional demands on employees feelings of exhaustion, b = -.197, p < .05. Moreover, emotional exhaustion is significantly associated with the job performance of employees while controlling for all other variables, b = -.159, p < .001. These results meet the second requirement, revealing that the

TABLE 5

Multilevel estimates for models predicting the moderated mediation effect on day level performance

	Model 1			Model 2			Model 3		
	Performance			Emotional exhaustion			Performance		
	Estimate	SE	t	Estimate	SE	t	Estimate	SE	
Control variables									
Contract hours	-0.000	0.009	~0.000	-0.007	0.009	-0.777	-0.002	0.009	-0.222
Service percentage	-0.001	0.003	-0.333	0.002	0.003	0.667	-0.000	0.003	-0.000
Step I									
Constant	0.342	0.685	0.499						
Emotional demands (ED)	-0.061	0.037	-1.649*						
Performance baseline	0.391	0.055	7.109**						
Psychological flexibility (PF)	0.375	0.095	3.947**						
ED x PF	-0.195	0.090	-2.166*						
Step 2									
Constant				2.370	0.748	3.168***			
Emotional demands (ED)				0.298	0.043	6.930***			
Emotional exhaustion baseline				0.334	0.061	5.475***			
Psychological flexibility (PF)				-0.458	0.106	-4.321 ***			
ED x PF				-0.197	0.099	-1.990*			
Step 3									
Constant							1.086	0.705	1.540
Emotional demands (ED)							-0.003	0.040	-0.075
Emotional exhaustion (EE)							-0.159	0.046	-3.457***
Performance baseline							0.381	0.055	6.927***
Psychological flexibility (PF)							0.259	0.099	2.616**
ED x PF							-0.251	0.098	-2.561**
EE x PF							0.079	0.092	0.859
-2 log likelihood			526.262			611.065			511.592
Level 1 variance	0.110	0.023		0.111	0.027		0.111	0.023	
Level 2 variance	0.190	O.o!8		*0.251*	0.024		0.18	0.017	

N = 116 service employees, and *N* = 348 observations. *$p < .05$, **$p < .01$, ***$p < .005$.

moderation takes place on the first step of the mediating association because there is not a significant interaction effect of psychological flexibility and emotional exhaustion on task performance, $b = .079$, $p = ns$. Finally, there is a significant interaction effect of psychological flexibility and emotional exhaustion on job performance, $b = -.251$, $p > .01$, affirming the last requirement.

The requirements of Muller et al. (2005) referred to a prototypical moderated mediation. The results reveal that this is not the case. However, the results indicate that psychological flexibility does affect the associations between the demands-exhaustion-performance relationship. Two interesting results can be found in Table 5. First, the mediating effect of emotional exhaustion is still evident after controlling for the moderating effect of psychological flexibility. The results show that emotional job demands associate negatively with performance, $b = -.061$, $p < .05$, and that this association between emotional job demands and performance becomes insignificant (see Model 3), $b = -.003$, $p = ns$, after controlling for the mediator emotional exhaustion, directly and in interaction with psychological flexibility (see Model 3), $b = -.159$, $p < .005$. This points to a fully mediated model.

Second, Table 5 shows an interaction effect of psychological flexibility and emotional job demands on performance (see Model 1), $b = -.195$, $p < .01$, indicating that psychological flexibility buffers the association between emotional job demands and performance. More importantly, this interaction effect of emotional demands and psychological flexibility on job performance, $b = -.195$, $p < .05$, becomes stronger after controlling for the mediating variable, exhaustion, $b = -.251$, $p < .01$. These results show that emotional exhaustion of employees affects the attenuating effect of psychological flexibility' on the emotional job demands-performance association.

DISCUSSION

Our study expands on previous research on emotional aspects of service jobs by demonstrating the potential advantages of an adaptive behavioural pattern, psychological flexibility, in attenuating the negative effects of emotional job demands and emotional exhaustion. In this respect, the study responds to the call for more research on *personal* resources (rather than job and organizational

resources, such as job autonomy and supervisor support), the possession of which may be an important determinant of employee adaptation to work environments (e.g., Bakker et al., 2004; Demerouti et al., 2004; Xanthopoulou et al., 2007).

More specifically, the current study indicates that psychologically flexible service employees may not only experience lower levels of exhaustion and higher levels of performance but may also frame emotional job demands as less threatening to their well-being, thus keeping their focus on goal attainment rather than being distracted by the demands of their work environment or letting these demands develop into exhaustion. These results are consistent with JD-R theory, which suggests that personal resources can diminish the negative impact of emotional job demands on exhaustion. Job resources are energetic reservoirs that individuals may use when demands are overwhelming. To date, research has mostly focused on job and organizational resources, such as social support (e.g., Schaufeli & Bakker, 2004) and job control (Abraham, 1998). Recent literature on- the JD-R model (e.g., Xanthopoulou et al-; 2007) suggests, however, that personal resources are crucial in buffering the impact of job demands on emotional exhaustion. The present study extends this line of research by demonstrating the potential role of psychological flexibility as a personal resource in the stressor (emotional job demands) strain (emotional exhaustion) association. Although there is no prototypical case of moderated mediation (Muller et al., 2005), the present study shows, consistent with JD-R model (Demerouti et al., 2001), that psychologically flexible employees are less likely to become exhausted by the emotional content of work. This, in turn, results in higher performance levels among psychologically flexible employees-as demonstrated by our study.

Of particular interest for our discussion are two findings. First, we were unable to support Hypothesis 2d, which suggested that psychological flexibility would attenuate the association between exhaustion and performance. Second, we found that emotional exhaustion suppresses the buffering effect of psychological flexibility on the association between emotional job demands and performance. Considering these two findings in combination, it appears that psychologically flexible employees, while generally more resilient to job demands and subsequent exhaustion, are not protected from the effects of exhaustion as such and, when facing a high level of exhaustion, may not benefit any further from their flexibility. All in all, these results emphasize the importance of reducing strain-related feelings among employees, as well as the importance of identifying exhausted employees at early stages, to avoid negating the potential benefits associated with high personal resources and the contribution of such employees in delivering good performance when on-the-job emotional demands are high. Thus while increasing psychological flexibility among employees may be a useful work intervention, it is also important to redesign work to ensure adequate breaks and high levels of job control such that employees do not become emotionally exhausted.

While we cannot be certain of the underlying mechanism of psychological flexibility, a study by Martinez-lfiigo, Totterdell, Alcover, and Holman (2007) offered initial insights on the mechanism involved. On the basis of data drawn from 345 general practitioners in Spain, these researchers concluded that the positive association between emotional job demands (in the form of surface acting) and emotional exhaustion was partially mediated by the level of psychological effort. Combining these findings with the findings of the current study implies that being psychological flexible reduces the psychological effort involved in dealing with emotional job demands, for example because flexible employees are not resisting, fighting against, or avoiding the consequences of these demands but actively and nonjudgementally embracing them. Another potential underlying mechanism of psychological flexibility may be related to job control, such that highly flexible employees show greater sensitivity towards environmental contingencies. These employees might see and utilize any job control opportunity present in the work environment (e.g., Bond et al., 2008) and subsequently deal with emotional job demands more effectively than employees low in psychological flexibility.

Taken together, our results suggest that psychological flexibility holds promising opportunities for organizational behaviour research, in general, and occupational health psychology, in particular. The current study is one of the first to examine psychological flexibility at the day level. The results show that psychological flexibility can be reliably measured at the day level. Psychological flexibility is, furthermore, shown to be stable across days, indicating that employees use their psychological flexible abilities in a consistent way across working days.

Limitations and suggestions for future research

The findings of this study should be considered in light of several limitations, which may also offer research opportunities. First, the current study focused on one side of the JD-R model, the demands-exhaustion-performance linkage. The other side of the model which focuses on a more motivational mechanism was not included. This could explain why Hypothesis 2d, stating that

psychological flexibility attenuates the association between exhaustion and performance, was not supported. One might argue that motivation is especially important in relation to the effect of exhaustion on performance. Job resources are reasoned to exert their motivating potential and lead to high work engagement, low cynicism (i.e., one of the dimensions of burnout), and high performance. Future research might investigate whether including motivational aspects can further explain the associations between psychological flexibility, emotional exhaustion, and performance. Furthermore, additional personal resources could be included in such future studies, for example, emotional intelligence (Donaldson-Feilder & Bond, 2004), self-efficacy, self-esteem, and optimism (Xanthopoulou et al., 2007). Future research might also investigate whether additional personal resources can further explain the associations between emotional demands, emotional exhaustion, and performance. Second, our sample was fairly homogenous as it comprised-only of nonmanagerial service personnel working "irr nonprofit organizations. This limitation has the advantage of minimizing potential confounds to our data (e.g., job level, job type); however, it does limit the generalizability of our findings to other occupations or branches of industry (in particular, for-profit firms). Future studies may wish to investigate samples drawn from other work populations. Furthermore, the current study was conducted in The Netherlands, and future research may wish to investigate samples from other countries to increase the generalizability of the results.

Our analyses controlled for the number of working hours and the percentage of time employees spend in direct interaction with customers as potentially confounding variables. There are probably other relevant control variables that should be examined in future research, for example, contextual or dispositional variables (e.g., psychological strain at the beginning of a working day, Van Gelderen, Reuven, van Veldhoven, Zeelenberg, & Croon, 2007; or negative affect, Bond & Bunce, 2003).

Psychological flexibility was measured at day level, contrary to regular applications of the AAQ. Two remarks can be mentioned regarding this. First, there is a revised measure of the AAQ which could be used in future research (Bond et al., 2011). Second, measuring psychological flexibility at day level opens the opportunity for future research on systematically exploring how the general cognitive behavioural style of psychological flexibility relates to the actual expression of such behaviour on a daily basis. Moreover, one could explore the possibility that psychological flexibility is context-specific, such that an individual is for example more flexible in a home situation than in a work situation.

Finally, our variables were all based on selfreported scales, so the correlations we found may have been inflated due to common-method variance. We minimized this threat by using two different tools (i.e., survey and diary), referring to multiple points in time. However, especially our self-reported job performance measures may have been affected by such common method bias. To the defence of these measures, we may say that we measured performance · at a day level, thereby decreasing the time between job performance and measurement. This is expected to result in more accurate measures of behaviour (Bolger et al., 2003). Nevertheless, future research would be served by further specializing at which moment of the day respondents should fill out the questionnaire. Furthermore including multiple sources of information on job performance and more objective measures, for instance, top-operationalized performance can serve future research.

Implications

Despite these limitations, our findings have several implications for research and practice. With regard to research, our findings extend previous findings on the relationship between emotional job demands and performance via emotional exhaustion. The current study reveals that the behavioural pattern of psychological flexibility influences this relationship in several ways, suggesting that Hayes' (1987) theory of psychological acceptance, which attempted to explain mental health in a way that is most relevant to clinical psychology, may directly pertain to organizational behaviour. Future research regarding the effects of emotional job demands in the service sector should, therefore, include the level of psychological flexibility among employees as a relevant variable.

Furthermore, the present study qualifies previous findings on the positive effects of psychological flexibility when turning to a job-related context. Our results suggest that the potential effects of psychological flexibility are limited to employees who are not (yet) facing high levels of emotional exhaustion. More research is needed to understand the nature of the suppressor effect of exhaustion on the positive impact of psychological flexibility.

In terms of practical implications, psychological flexibility is often referred to as a modifiable individual characteristic, which can be acquired via training programmes (Bond & Bunce, 2000; Bond et al., 2008; Flaxman & Bond, 2010a, 2010b; Hayes et al., 2004), even within relatively short periods of time (see Hayes et al., 2006, for a review). Due to its positive effects on emotional exhaustion and performance, psychological flexibility is highly relevant for organizations to acquire and distribute among personnel. Service organizations may benefit from

assessing and enhancing psychological flexibility among their staff. Psychological flexibility is based on a flexible intervention technology (Acceptance and Commitment Therapy; ACT) that can be successfully delivered in the workplace (e.g., Hayes et al., 2004). This implication is consistent with a number of studies that have previously examined acceptancefocused interventions that train service employees to become more "accepting" in executing their work and improved outcomes such as mental health and job performance (see Bond et al., 2006, for an overview). Based on our results, we propose that organizational efforts to increase psychological flexibility may be most effective if managers recognize that exhaustion can undermine the success of such intervention programs and implement these programs before employees become emotionally exhausted. This could also be turned into advice for employees acquiring skills of psychological flexibility:

Although such skills might help job performance and might prevent the accumulation of strain in the context of emotionally demanding work, these skills do not help once the employee has become tired and

emotionally drained. Psychological flexibility does not substitute for work-related recovery, which points towards a direction for further development of intervention programs. Learning to recognize when recovery is needed would be a useful addition to ACT intervention programmes.

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