The buffering effect of perceived organizational support on the relationship between emotional demands and engagement.

Bachelor Thesis Personeelwetenschappen

Author: S.P.M.G. Bastings
Supervisor: R.J.A. Steegh

May 2019
Abstract
Engagement is an important achievement for organizations, because this increases performance and decreases burnout complaints. Therefore, this study focuses on a possible antecedent of engagement, namely emotional demands. Furthermore, to investigate a response on emotional demands, research was done on perceived organizational support and if this would weaken the negative relationship between emotional demands and engagement. These expectations were based on the Job-Demands Resources model. It was a secondary data analysis study, and cross-sectional design was used to collect this data. Data of 354 employees were used to test our hypotheses. Analyses were conducted with Hayes’ PROCESS Macro, and showed no support for both the negative relationship between emotional demands and engagement, and the interaction effect of perceived organizational support on this relationship. In addition, another analysis with the same model was done. Here instead of engagement, emotional exhaustion was used as dependent variable. This analysis showed support for a positive relationship between emotional demands and emotional exhaustion. The interaction effect of perceived organizational support still was not the case. Limitations of this research, as also avenues for future research and practical implications are discussed in this study.

Introduction

Every organization focusses on performance, as this is a crucial element of organizational survival (Kaplan, 2001). A low performance increases the chance to fail as organization in society, therefore organizations strive for the highest possible performance (Kaplan, 2001). Consequently, it is important for organizations to know how they can increase their performance. A concept which is frequently explored in relationship to performance is engagement (Bakker, Demerouti, & Ten Brummelhuis, 2012; Christian, Garze, & Slaughter, 2011; Rich, Lepine, & Crawford, 2010).

Engagement is defined as “a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption” (Bakker, Schaufeli, Leiter, & Taris, 2008, p. 187). Moreover, engagement has a positive effect on performance, which means the higher the levels of engagement, the higher their performance will be (Bakker et al., 2012; Christian et al., 2011; Rich et al., 2010). Thus, when organizations want their employees to be engaged, because this results in higher performance, they need to know the antecedents of engagement. Hence, research on engagement is relevant for organizations and therefore this research will focus on a possible antecedent of engagement.

There are lots of studies on the effect of job demands on engagement, however it would be interesting to focus on different types of job demands, because this shows whether these different types have the same effect as the complete concept job demands (Crawford, LePine, & Rich, 2010; Hakanen, Schaufeli, & Ahola, 2008). Therefore, emotional demands is the possible antecedent this research focusses on. Emotional demands can be defined as emotionally charged interactions at work (Xanthopoulou, Bakker, & Fischbach, 2013). For example, police officers who have to interact with criminals, could experience emotional demands. Emotional demands are seen as job demands, which are “those physical, psychological, social, or organizational aspects of the job that require sustained physical or psychological effort or skills and are therefore associated with certain physiological or psychological costs” (Bakker, Demerouti, Taris, Schaufeli, & Schreurs, 2003, p.20). Because of this insight and using the Job Demands-Resources (JD-R) model to connect emotional demands and engagement, a negative relationship between emotional demands and engagement is expected.

It was stated in former research that it would be interesting to investigate which concept could be a response against emotional demands (Peng, Wong, & Che, 2010). Therefore, perceived organizational support (POS) is added as moderator of the relationship between emotional
demands and engagement. POS is chosen because emotional demands and engagement relate to the feelings of employees and POS includes the feelings of employees about the organizational support. So all concepts used in this research concern the feelings of employees. In former research POS and engagement are often studied together, and these were found to be positively related (Biswas & Bhatnagar, 2013). However, POS is rarely studied as moderator in combination with engagement. Because POS possibly is a response against emotional demands and this relationship is not investigated in former research, it is interesting to enclose POS as moderator of the relationship between emotional demands and engagement. POS can be defined as the extent to which employees feel their contributions being valued by the organization and to which the organization cares about their well-being (Eisenberger, Huntington, Hutchison, & Sowa, 1986). By looking at the JD-R model, it is expected that POS buffers the relationship between emotional demands on engagement, thus POS weakens this negative relationship. In other words, when someone has a high level of emotional demands the level of engagement will decrease, however when this person experiences POS, the level of engagement will not decrease as much due to POS.

This research contributed to the literature, because of the statements made in former research it would be interesting to investigate different types of job demands and to investigate which concept could be a response against emotional demands (Crawford et al., 2010; Hakanen et al., 2008; Peng et al., 2010). Furthermore, the JD-R model in this research is used in a different way. According this model, job demands normal are related to burnout and job resources to engagement. However, in this research focusses on the relationship between job demands and engagement.

Besides scientific contributions, there are also practical contributions of the current study. First, organizations strive for the highest possible engagement, because there is evidence that engagement has a positive effect on performance (Christian et al., 2011; Kaplan, 2001; Rich et al., 2010). When an antecedent of engagement is found to have a significant effect on engagement, organizations can use this knowledge to increase employee engagement and therfore performance. The higher the engagement the more dedicated employees are to their organizations, and so employees are more willing to give their best (Bakker & Schaufeli, 2008). Besides, higher levels of engagement, lead to lower turnover intentions (Timms, Brough, O’Driscoll, & Siu, 2015). Therefore, organizations would like to have engaged employees and the knowledge to achieve this. Besides that, engagement is seen as the opposite of burnout (Schaufeli, Salanova, Bakker, &
Gonzalez-Roma, 2001). When employees experience burnout, this likely costs the organization money and time, because of the employee’s plausible absence. So, it is important to know how to prevent emotional demands leading to burnout, or in this case, prevent emotional demands from decreasing engagement. Due to this, it is important to investigate the relationship between emotional demands and engagement and how POS influences this relationship.

Hence, the research question is: Does the interaction between emotional demands and perceived organizational support relate to engagement?

Theoretical Framework

In this section comprehensive definitions of engagement, emotional demands and POS are given. Furthermore, the relationships between these concepts are explained through theory and empirical evidence.

The relationship between emotional demands and engagement

As mentioned earlier, emotional demands can be defined as emotionally charged interactions at work (Xanthopoulou et al., 2013). In other words, it is the frequency an employee is exposed to situations which are emotionally demanding (Bakker et al., 2005). This implies situations that require much emotional effort (Tuckey & Hayward, 2011). For example, doctors and nurses who have to interact with patients, can experience emotional demands.

Engagement is defined as “a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption” (Bakker et al., 2008, p.187). Vigor refers to a high energy level and a mental resilience on the work floor, whereas dedication refers to the state in which someone will experience enthusiasm, significance and challenge, and is strongly involved in his or her work (Bakker & Demerouti, 2008). Absorption is seen as a state of being highly concentrated, in which employees are full of their work, and have difficulties to detach themselves from their work (Bakker & Demerouti, 2008). Engaged employees are enthusiastic, have high levels of energy, and because they are engrossed in their work, time flies while working (Bakker & Demerouti, 2008).

The relationship between emotional demands and engagement can be explained by using the JD-R model. This model focusses on the relationship between the (dis)balance of job demands and job resources on the one side and performance on the other side (Bakker, Demerouti, &
Verbeke, 2004). Job demands are defined as “those physical, social, or organizational aspects of the job that require sustained physical or psychological effort and are therefore associated with certain physiological or psychological costs” (Demerouti, Bakker, Schaufeli, & Nachreiner, 2001, p.501). Contrary, job resources are defined as “those physical, psychological, social, or organizational aspects of the job that either/or (a) reduce job demands and the associated physiological and psychological costs; (b) are functional in achieving work goals; (c) stimulate personal growth, learning and development” (Demerouti et al., 2001, p.501). According to the JD-R model, burnout and engagement mediate this relationship (Bakker et al., 2004). Job demands have a positive relationship with burnout. So when an employee is faced with more job demands their levels of burnout will similarly increase (Bakker et al., 2004). This can be explained by the fact that job demands lead to more strain, which will cause burnout complaints (Bakker et al., 2004; Peng et al., 2010; Schaufeli & Bakker, 2004). However, burnout in turn has a negative effect on performance, so when an employee is faced with a high level of burnout, performance is likely to decrease (Bakker et al., 2004). Job resources will stimulate intrinsic motivation, in the form of engagement (Llorens, Schaufeli, Bakker, & Salanova, 2007; Peng et al., 2010; Schaufeli & Bakker, 2004). Thereby job resources have a positive effect on engagement. So when an employee is faced with more job resources their levels of engagement will similarly increase (Bakker et al., 2008; Demerouti et al., 2001; Schaufeli & Bakker, 2004). This on its turn has a positive effect on performance, and thereby higher levels of engagement will increase performance (Bakker et al., 2004).

Engagement is often seen as the opposite of burnout (Bakker et al., 2004; Schaufeli & Bakker, 2004; Schaufeli et al., 2001). Burnout can be defined as “a work-related stress reaction that can be found among employees in a wide variety of occupations” (Bakker, Emmerik, & Euwema, 2006, p.465). It is characterized by three elements, emotional exhaustion, cynicism and efficacy (Bakker et al., 2006; Schaufeli & Bakker, 2004). Two out of three elements of burnout are the opposites of two out of three elements of engagement (Schaufeli & Bakker, 2004). Emotional exhaustion is the opposite from vigor and cynicism is the opposite from dedication (Schaufeli & Bakker, 2004). Keeping this in mind while having a look at the relationship between job demands and engagement, job demands will lead to more strain, which will decrease the intrinsic motivation in the form of engagement (Llorens et al., 2007; Peng et al., 2010; Schaufeli & Bakker, 2004). This points out a negative relationship between job demands and engagement.
So when an employee is faced with high levels of job demands, the levels of engagement will similarly decrease.

As mentioned previously, emotional demands are a form of job demands (Bakker & Demerouti, 2008). When employees experience emotional demands, situations which require a lot of emotional effort are faced (Bakker et al., 2005; Tuckey & Hayward, 2011; Xanthopoulou et al., 2013). Emotional effort is a psychological effort, because it has a psychological impact on an employee. For example, a fireman who has to save people from a burning house, can require psychologically a lot. Furthermore, psychological effort is associated with psychological costs, and so emotional effort is also associated with psychological costs. Therefore, when employees face high levels of emotional demands they will be faced with costs. Likely, this will have a negative relationship with engagement, as employees are not intrinsically motivated by high demands, but instead preoccupied with psychological costs (Llorens et al., 2007; Peng et al., 2010). Consequently, high emotional demands over an extensive period could result in burnout (Bakker & Demerouti, 2008). In sum, when the emotional demands are high, this will have a negative effect on engagement, and so the levels of engagement will decrease.

There is not many research done about the relationship between emotional demands and engagement. Many research is done about the relationship between job demands and engagement, and this relationship is found to be negative (Crawford et al., 2010; Hakanen et al., 2008). Because emotional demands are job demands, and in some studies emotional demands are included in the concept job demands, it is expected that emotional demands also decrease engagement (Crawford et al., 2010). Therefore, is expected that the relationship between emotional demands and engagement is negative. Hence, looking at the JD-R model and empirical evidence, the following hypothesis can be stated:

_Hypothesis 1: Emotional demands are negatively related to engagement._

**Moderating role of perceived organizational support on the relationship between emotional demands and engagement**

In former research on emotional demands, Peng et al. (2010) stated it would be interesting for future research to investigate which concept would be a response to emotional demands. Therefore, POS is added as moderator. POS is chosen, because it concerns the perception of the employees about being valued and cared about by the organization and the aid the employee feels
from the organization. Just like emotional demands and engagement include the experiences of an employee. So all concepts used in this research concern the experiences of the employees. POS can be seen as a response from both the employee and organization. An organization can increase POS by increase the given supervisor support, show there is justice in the organization, or increase POS with tangible rewards (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002; Roch & Shanock, 2006; Silbert, 2005). An employee can increase POS by showing positive affectivity, avoid aggressive or withdrawal behaviors and be conscientiousness (Rhoades & Eisenberger, 2002). POS is often studied in combination with engagement, and there is found to be a direct positive relationship between those concepts (Biswas & Bhatnagar, 2013; Caesens & Stinglhamber, 2014; Gupta, Agarwal, & Khatri, 2016). However, POS is rarely studied as moderator in combination with engagement. Therefore, this research will investigate if POS could be a response against emotional demands and moderate the relationship between emotional demands and engagement.

As mentioned before, POS can be defined as the extent to which employees feel their contributions being valued by the organization and in which the organization cares about their well-being (Eisenberger et al., 1986). Furthermore POS is “the assurance that aid will be available from the organization when it is needed to carry out one’s job effectively and to deal with stressful situations” (Rhoades & Eisenberger, 2002, p.698). Important to note is that POS is not the extent to which the organization really values and cares about its employees and the aid the organization gives, but the perception of the employees about being valued and cared about and the aid the employees feel from the organization (Eisenberger, Fasolo, & Davis-LaMastro, 1990; Rhoades & Eisenberger, 2002). Due to employees experiencing high levels of POS an employee feels more committed to the supervisor, but also to the whole organization itself (Wayne, Shore, & Liden, 1997). Because of this, an employee who experiences high levels of POS creates feeling of obligation, and therefore feels like he or she has to do everything in favor of the organization. For example he or she wants to behave in such a way the organizational goals are reached (Wayne et al., 1997). For example, by learning and developing himself/herself.

To explain how POS is related to emotional demands and engagement the JD-R model can be used. As mentioned earlier, employees who experience high levels of POS, will create feelings of obligation, and therefore feels like he or she has to do everything for the organization (Wayne et al., 1997) Besides, he or she would behave in such a way organizational goals are reached
(Wayne et al., 1997). Because of this, employees want to learn and develop themselves, for example by voluntary attending trainings or being extra motivated to reach goals. As mentioned, job resources are “those physical, psychological, social, or organizational aspects of the job that either/or (a) reduce job demands and the associated physiological and psychological costs; (b) are functional in achieving work goals; (c) stimulate personal growth, learning and development” (Demerouti et al., 2001, p.501). So, the wish someone has to learn and develop him- or herself, follows from a job resource (Demerouti et al., 2001). Furthermore, employees who experience POS leads to willing to achieve the organizational goals, which is also in agreement with the definition of a job resource. Therefore, it can be stated POS is a job resource.

This research expects a negative relationship between emotional demands and engagement. So when there are high levels of emotional demands, the levels of engagement will similarly decrease. However, when adding POS as moderator in this relationship, a job resource is added. When a job resource, in this case POS, is added as moderator on the relationship between emotional demands and engagement, a buffering effect arises (Shantz, Alfes, & Latham, 2016). This means the job resources will compensate the job demands, and the disbalance between the job demands and job resources decreases (Shantz et al., 2016). According to the JD-R model job resources stimulate employee’s intrinsic motivation in the form of engagement (Llorens et al., 2007). So, when a job resource is added, a stimulant of intrinsic motivation, engagement is added, which buffers the negative effect of the strain caused by job demands on engagement (Llorens et al., 2007; Peng et al., 2010; Schaufeli & Bakker, 2004). In this case, POS stimulates the intrinsic motivation in the form of engagement, which buffers the negative effect of the strain caused by the emotional demands. Due to this POS will weaken the relationship between emotional demands and engagement.

The moderating role of POS on the relationship between emotional demands and engagement has not been studied before to the researcher’s knowledge. POS and engagement are often studied together, but in a direct relationship. This relationship between POS and engagement is found to be positive (Biswas & Bhatnagar, 2013; Caesens & Stinglhamber, 2014; Gupta et al., 2016). This is in agreement with the JD-R model due to POS being a job resource which has a positive effect on engagement (Bakker et al., 2004). POS is studied before as moderator between strain (X) and engagement (Y) and in that study, POS was found to weaken the negative effect of strain on engagement (Zacher & Winter, 2011). Strain is a consequence from high levels of job
demands, and therefore this confirms our theory that a job resource, in this case POS, can buffer the consequences of job demands on engagement (Peng et al., 2010; Schaufeli & Bakker, 2004).

Hence, taking into account the empirical evidence and the JD-R model, the following hypothesis can be stated:

**Hypothesis 2:** Perceived organizational support moderates the relationship between emotional demands and engagement, such that perceived organizational support weakens the negative relationship between emotional demands and engagement.

![Conceptual Model](image)

*Figure 1: Conceptual Model.*

**Method**

**Research design and procedure**

The current study was a secondary data analysis study, meaning that data gathered by different researchers were used to gain insights in the hypothesized relationships. Data were collected using a cross-sectional research design. Thirteen master’s students of Human Resource Studies, at Tilburg University, collected these data. Data were collected on employee and team (i.e. managers) level, using questionnaires. However, in this research the data were applied as a single-source investigation, because only the data of employees were used.

Each of the thirteen master’s students selected teams with at least three employees and one manager within different companies, by using convenience sampling. This means the master’s students selected teams which were conveniently available to them. Inside these teams, random sampling was used to select five employees when the teams existed of six employees or more. These employees and their manager were asked to participate in the master’s student’s studies.
The questionnaires were sent online to employees and managers using Qualtrics software and were distributed on paper. On the frontpage of the questionnaire information was given about the aim of the study, how respondents needed to fill in the questionnaire and that data would be treated confidential and anonymous. Anonymity was guaranteed by the fact that the employees was not asked to give their name during the questionnaire. The Ethics Review Board of Tilburg School of Social and Behavioral Sciences approved the questionnaire. To make sure the employees and manager participated voluntarily they were asked to sign that they agree with study participation.

Sample

533 respondents who worked in different sectors and organizations were asked to fill in the questionnaire. 394 questionnaires were returned, which gave a response rate of 73.9%. Some employees had not completed the questionnaire. Therefore, the employees whom had missing values on questions about the variables used in this research were list-wise deleted out of the data. Hence the sample used for this research consisted of 354 respondents.

All socio-demographic characteristics of the sample are shown in Table 1, Appendix A. The socio-demographic characteristics of the variables that could potentially influence the relationships between the core variables are displayed in Table 2. From the respondents 58.8% were female and 41.2% were male. The age varied between 16 years and 64 years \( (M = 36.5, SD = 11.86) \). The respondents worked on average 8.7 years in their organizations. 48.9% were a regular full-time employee, 29.1% were a regular part-time employee and 22% had a temporary contract. The respondents worked in different sectors. Mainly in government (15.3%) and the social work, youth care and childcare sector (11.9%). Most respondents (43.5%) received Bachelor Applied University or University degree as highest educational degree. Notable was following; from the eighty-three teams, twelve of the teams were from an employment agency, there were seven supermarket teams (sales teams and quality teams), there were several teams who work in healthcare, child care and elderly care.

To check if the sample used in this research was large enough to base the conclusions on, the rule of thumb was used. This rule says at least 10 respondents per variable are needed (Sauerbrei, Royston, & Binder, 2007). In this research six variables were applied, three core variables and three control variables, which means the sample should consist of at least 60
respondents. The sample used in this study consisted of 354 respondents, and thereby was large enough to base the conclusions on.

With a Chi-Square test was checked if the sample corresponded with the working population of the Netherlands. This was measured for sex, highest educational degree and job status. The sample was compared with information from the CBS (Centraal Bureau voor de Statistiek) about the working population in the Netherlands in the year 2018. Analysis revealed that the sample was neither representative for employees in terms of job status ($\chi^2 = 4.018, df = 1, p < .05$), nor for employees in terms of highest educational degree ($\chi^2 = 213.683, df = 5, p < .05$). The sample included more female employees than male employees. However, the amount of female and male employees was significantly different from the Dutch labour market ($\chi^2 = 9.262, df = 1, p < .05$).

**Table 2**

Demographic characteristics (control variables) of sample

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Amount</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (in years)</td>
<td>353</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>36.53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>11.86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>354</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>208</td>
<td>58.8</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>146</td>
<td>41.2%</td>
<td></td>
</tr>
<tr>
<td>Job status</td>
<td>354</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular Full-Time Employee</td>
<td>173</td>
<td>48.9</td>
<td></td>
</tr>
<tr>
<td>Regular Part-Time Employee</td>
<td>103</td>
<td>29.1</td>
<td></td>
</tr>
<tr>
<td>Temporary Employee</td>
<td>78</td>
<td>22.0</td>
<td></td>
</tr>
</tbody>
</table>

**Measures**

In this study, the concepts emotional demands, POS and engagement were used. Before the results could be analyzed, first was checked if there were outliers and missing values. Missing values were list-wise deleted. Furthermore, construct validity was tested by principle components analysis (PCA), in which the factors were chosen based on the criteria of eigenvalue larger than 1.
Criteria for this analysis were checked, namely if the Bartlett’s test of sphericity was significant and if the Kaiser-Meyer-Olkin (KMO) was higher than .6. Cronbach’s alpha ($\alpha$) was used for measuring the internal consistency of the scale (i.e. reliability). A value of alpha above .7 is good, .6 or between .6 and .7 is acceptable and below .6 is unacceptable (Evers, Lucassen, Meijer, & Sijtsma, 2009). Furthermore, to determine if the reliability was acceptable, it was checked if the item total correlation was above .3 and also the ‘Cronbach’s alpha if item deleted’ was checked.

**Emotional Demands** were measured with a shortened version (3 out of 7 items) of a scale by Van Veldhoven, De Jonge, Broersen, Kompier, and Meijman (2002). An example of an item was: “In my job, I am confronted with things that are personally touching”. Emotional demands were measured on a five-point Likert scale, ranging from 1 = totally disagree to 5 = totally agree. The PCA showed emotional demands had one factor, which explained 77.6% of the total variance in emotional demands. The KMO value was .719, from which it can be concluded that the scale is valid. The Bartlett’s test of sphericity was significant ($p < .05$). Item total correlation was above .3 for every item. Cronbach’s alpha ($\alpha = .855$) implied the reliability of the scale was good (Evers et al., 2009). Furthermore, ‘Cronbach’s alpha if item deleted’ was for every item lower than .855.

**Perceived organizational support** was measured with by Eisenberger et al. (1986). An example of an item was: “My organization really cares about my well-being”. A five-point Likert scale was used to measure POS, ranging from 1 = totally disagree to 5 = totally agree. POS had one factor according to the PCA, and this explained 73.4% of the total variance in POS. The KMO value was .824, from which it can be concluded that the scale is valid. The Bartlett’s test of sphericity was significant ($p < .05$). Item total correlation was above .3 for every item. Cronbach’s alpha ($\alpha = .878$) implied the reliability of the scale was good (Evers et al., 2009). Furthermore, ‘Cronbach’s alpha if item deleted’ was for one of the items higher than .878. This item was “My organization strongly considers my goals and values”, which was mirrored. However, it was not deleted because it was important for the theoretical coherence of the scale, as can be seen in the theoretical framework.

**Engagement** was measured with six items by Schaufeli and Bakker (2003). An example of an item was: “When I get up in the morning, I feel like going to work”. Engagement was measured on a six-point scale, ranging from 1 = almost never to 6 = always. According to the PCA engagement had one factor, which explained 72.0% of the total variance in engagement. The KMO value was .871 from which can be concluded the scale was valid. The Bartlett’s test of sphericity
was significant \((p < .05)\). Item total correlation was above \(.3\) for every item. Cronbach’s alpha \((\alpha = .920)\) implied the reliability of the scale was good (Evers et al., 2009). Furthermore, ‘Cronbach’s alpha if item deleted’ was for every item lower than .920.

**Control Variables** were also included in this research. In former research there was found a positive relationship between age and engagement (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). To exclude the effect of age on engagement, age was included in this research as a control variable. Besides, there was found a relationship between sex and engagement, namely that men experienced higher levels of engagement than women (Banihani, Lewis, & Syed, 2013). Therefore, also sex was included as a control variable. Furthermore, type of contract (job status) was also found to be significantly related to engagement, in such a way that employees with a temporary contract experience lower levels of engagement compared to employees with a regular contract (Guarnaccia, Scrima, Civilleri, & Salerno, 2018). Hence, also job status was included as a control variable in this research.

**Analysis**

The analyses for this research were conducted in IBM SPSS Statistics 24. After loading the data into this program, the data were evaluated and cleaned. The items about variables which were not used in this research were deleted out of the dataset, and respondents who had missing values on the variables used in this research were list-wise deleted. Furthermore, the data were checked for outliers and if items needed to be mirrored. Then, a PCA was performed. Beside this a reliability analysis was done, and the normal distribution was checked, after which the scales were made. Scales were constructed by summing up the items which loaded on one scale and divide by the number of items. For one of the control variables, type of contract, a dummy-variable was created. In this dummy-variable, temporary contract was the reference category and contract regular full-time and contract regular part-time the variables.

Thereafter analyses were conducted with Hayes’ PROCESS Macro. Bias-corrected bootstrap statistics were drawn from five thousand samples in this program. Hayes’ PROCESS Macro can compute a moderation by choosing Model 1 (Hayes, 2013). In Model 1, engagement was included as dependent variable \((Y)\), POS as moderator \((M)\) and emotional demands as independent variable \((X)\). Age, sex and the dummy variables of type of contract, contract regular full-time and contract regular part-time, were included as control variables.
Results

Descriptive statistics

In Table 3 the means (M), standard deviations (SD), Pearson correlations (r) and Cronbach’s alphas (diagonal, 1 through 4) are presented. The results indicate POS has a positive relationship with engagement (r = .374, p < .01) and has a negative relationship with emotional demands (r = -.130, p < .05). Furthermore, age is found to be positively related to both engagement (r = .134, p < .05) and emotional demands (r = .157, p < .01). Emotional demands have a positive relationship with contract regular full-time (r = .158, p < .01). Furthermore, age has a positive relationship with both contract regular part-time (r = .168, p < .01) and contract regular full-time (r = .126, p < .01). Besides, sex has a positive relationship with contract regular part-time (r = .360, p < .01) and a negative relationship with contract regular full-time (r = -.294, p < .01). Also, contract regular part-time and contract regular full time are negatively related to each other (r = -.626, p < .01).

Table 3

Means (M), standard deviations (SD), Pearson correlations (r) and Cronbach’s alpha (on diagonal) for measures.

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Engagement</td>
<td>4.15</td>
<td>.90</td>
<td>.920</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>EmoDem</td>
<td>2.85</td>
<td>1.04</td>
<td>-.055</td>
<td>.855</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>POS</td>
<td>3.70</td>
<td>.71</td>
<td>.374**</td>
<td>-.130*</td>
<td>.878</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Age+</td>
<td>36.53</td>
<td>11.9</td>
<td>.134*</td>
<td>.157**</td>
<td>-.033</td>
<td>/</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Sex±</td>
<td>.59</td>
<td>.49</td>
<td>-.058</td>
<td>.007</td>
<td>-.078</td>
<td>.027</td>
<td>/</td>
</tr>
<tr>
<td>6</td>
<td>Con. Reg.</td>
<td>/</td>
<td>/</td>
<td>.072</td>
<td>.158**</td>
<td>-.058</td>
<td>.126**</td>
<td>-.294**</td>
</tr>
<tr>
<td>7</td>
<td>Con. Reg.</td>
<td>/</td>
<td>/</td>
<td>-.019</td>
<td>-.005</td>
<td>.014</td>
<td>.168**</td>
<td>.360**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. **p < .01 two-tailed *p < .05 two-tailed. + = Age in years ± = 0 refers to male, 1 refers to female. × = Contract Regular Full-Time, dummy-variable of job status. ÷ = Contract Regular Part-Time, dummy-variable of job status.
Hypotheses testing

Both hypothesis 1 and 2 are tested using model 1 of Hayes’ PROCESS Macro. In this model the variables emotional demands, POS and the interaction variable of emotional demands and POS are included. Besides, the control variables, age, sex, contract regular full-time and contract regular part-time are included. The output of this analysis in Hayes’ PROCESS Macro are included in Appendix B. The results of the analyses are presented in Table 4. A visual representation is included in Appendix C.

Model 1 shows the results of the analysis ($F(7, 345) = 10.293, p < .01, r^2 = .173$). Despite model 1 shows a negative effect between emotional demands and engagement, this is not significant ($b_1$-path, $B = -.038, p > .05$). Thus, hypothesis 1 is not supported. Furthermore, there is no significant relationship between the interaction term and engagement ($b_3$-path, $B = -.015, p > .05$). Therefore, hypothesis 2 is neither supported.

Table 4
Unstandardized regression coefficients, p-values and standardized errors of emotional demands on engagement, moderated by perceived organizational support

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Coeff.</th>
<th>SE</th>
<th>95% CI</th>
<th>t</th>
<th>$r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1: $F(7, 345) = 10.293**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EmoDem</td>
<td>$b_1$</td>
<td>-.038</td>
<td>[-.124, .048]</td>
<td>-.860</td>
<td>.173</td>
</tr>
<tr>
<td>POS</td>
<td>$b_2$</td>
<td>.485**</td>
<td>[.361, .609]</td>
<td>7.697</td>
<td></td>
</tr>
<tr>
<td>Interaction $\Delta$</td>
<td>$b_3$</td>
<td>-.015</td>
<td>[-.135, .106]</td>
<td>-.236</td>
<td></td>
</tr>
<tr>
<td>Age+$</td>
<td></td>
<td>.011**</td>
<td>[.003, .019]</td>
<td>2.718</td>
<td></td>
</tr>
<tr>
<td>Sex±</td>
<td></td>
<td>-.026</td>
<td>[-.216, .165]</td>
<td>-.268</td>
<td></td>
</tr>
<tr>
<td>Reg_Full×</td>
<td></td>
<td>.146</td>
<td>[.092, .383]</td>
<td>1.208</td>
<td></td>
</tr>
<tr>
<td>Reg_Part÷</td>
<td></td>
<td>.020</td>
<td>[-.246, .286]</td>
<td>.151</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td>3.713**</td>
<td>[3.291, 4.135]</td>
<td>17.309</td>
<td></td>
</tr>
</tbody>
</table>

Note. *$p < .05$, **$p < .01$. CI = confidence interval, [.., ..] = [lower limit confidence interval, upper limit confidence interval]. $\Delta = $ interaction term EmoDem*POS. + = Age in years ± = 0 refers to male, 1 refers to female. × = Contract Regular Full-Time, dummy-variable of job status. ÷ = Contract Regular Part-Time, dummy-variable of job status, temporary job status is the reference category.

Main effect on the dependent variable: engagement
Additional Analysis

As mentioned before, there is no significant relationship between emotional demands and engagement ($b_1$-path, $B = -.038, p > .05)$. Burnout is seen as the opposite of engagement (Bakker et al., 2004; Schaufeli & Bakker, 2004; Schaufeli et al., 2001). According to the JD-R model, emotional demands cause strain, which will cause burnout complains. Therefore, a positive relationship between emotional demands and burnout is expected. Looking at the buffering effect, job resources gain salience when employees are confronted with high job demands (Bakker et al., 2004; Peng et al., 2010; Zacher & Winter, 2011). POS will increase intrinsic motivation, and accordingly buffer the strain which is caused by the emotional demands. Therefore, POS will weaken the relationship between emotional demands and burnout. Emotional exhaustion is considered as the core concept of burnout, and therefore give the best representation of whether emotional demands have a positive effect on emotional exhaustion and if this relationship is moderated by POS (Bakker et al., 2006). Therefore, an additional analysis is conducted to see whether the relationship between emotional demands and emotional exhaustion and the moderating effect of POS on this relationship is significant.

The additional analysis is conducted in the same way as the first analysis is, namely using model 1 of Hayes’ PROCESS Macro. The control variables of age, sex, contract regular full-time and contract regular part-time are included as well as emotional demands, POS and the interaction variable of emotional demands and POS. Furthermore, as depended variable emotional exhaustion is included. The output of this analysis in Hayes’ PROCESS Macro are included in Appendix D.

The results of the analyses are presented in Table 5. A visual representation is included in Appendix E. The model ($F(7, 345) = 10.860, p < .01, r^2 = .181$) shows the direct effects of emotional demand and POS on emotional exhaustion as well as the interaction effect. Emotional demands have a significant positive relationship with emotional exhaustion ($b_1$-path, $B = .205, p < .01$). Furthermore, POS has a significant negative relationship with emotional exhaustion ($b_2$-path, $B = -.226, p < .01$). However, the interaction variable of emotional demands and POS, has no significant relationship with emotional demands ($b_3$-path, $B = -.061, p > .05$).
Table 5

Unstandardized regression coefficients, p-values and standardized errors of emotional demands on emotional exhaustion, moderated by perceived organizational support

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>Coef.</th>
<th>SE</th>
<th>95% CI</th>
<th>t</th>
<th>r²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1: ( F(7, 345) = 10.860** )</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EmoDem</td>
<td>( b_1 )</td>
<td>.205**</td>
<td>.034</td>
<td>[.138, .271]</td>
<td>6.061</td>
</tr>
<tr>
<td>POS</td>
<td>( b_2 )</td>
<td>-.226**</td>
<td>.049</td>
<td>[-.322, -.131]</td>
<td>-4.652</td>
</tr>
<tr>
<td>Interaction ( \Delta )</td>
<td>( b_3 )</td>
<td>-.061</td>
<td>.047</td>
<td>[-.154, .032]</td>
<td>-1.285</td>
</tr>
<tr>
<td>Age+</td>
<td></td>
<td>-.003</td>
<td>.003</td>
<td>[-.009, .003]</td>
<td>-1.074</td>
</tr>
<tr>
<td>Sex±</td>
<td></td>
<td>-.186**</td>
<td>.075</td>
<td>[-.334, -.039]</td>
<td>-2.493</td>
</tr>
<tr>
<td>Reg_Full×</td>
<td></td>
<td>.000</td>
<td>.093</td>
<td>[-.183, .183]</td>
<td>.002</td>
</tr>
<tr>
<td>Reg_Part÷</td>
<td></td>
<td>-.037</td>
<td>.104</td>
<td>[-.243, .168]</td>
<td>-.356</td>
</tr>
<tr>
<td>Constant</td>
<td></td>
<td>2.121**</td>
<td>.166</td>
<td>[1.795, 2.447]</td>
<td>12.801</td>
</tr>
</tbody>
</table>

Note. *p < .05, **p < .01. CI = confidence interval, [.XXX, .XXX] = [lower limit confidence interval, upper limit confidence interval]. \( \Delta \) = interaction term Emodem*POS. + = Age in years ± = 0 refers to male, 1 refers to female. × = Contract Regular Full-Time, dummy-variable of job status. ÷ = Contract Regular Part-Time, dummy-variable of job status.

Main effect on the dependent variable: emotional exhaustion

Discussion

This study focused on emotional demands as possible antecedent of engagement and explored whether POS could weaken the relationship between emotional demands and engagement. To investigate whether these relationships exist, the research question, “Does the interaction between emotional demands and perceived organizational support relate to engagement?”, was analyzed using data of 354 employees. Unfortunately, analysis did not support the direct negative effect of emotional demands and the interaction effect of emotional demands and POS on engagement. Because of this outcome, the question raised if emotional demands and the interaction effect of emotional demands and POS would have a significant effect on burnout, the seen opposite of engagement (Bakker et al., 2004; Schaufeli & Bakker, 2004; Schaufeli et al., 2001). Because of this an additional analysis was conducted with emotional exhaustion, the core element of burnout, as dependent variable (Wright & Bonett, 1997). The additional analysis provided support for the direct positive relationship between emotional demands and emotional exhaustion. The interaction effect of emotional demands and POS on emotional exhaustion was not supported. Notable was that POS has a strong significant direct relationship with both
engagement and emotional exhaustion, but the positive relationship with engagement was stronger compared to the negative relationship with emotional exhaustion. This can be seen in Table 4 and 5.

To explain the significant positive relationship between emotional demands and emotional exhaustion, the JD-R model can be looked at. This model states, job demands will have a positive effect on burnout because job demands lead to more strain, which will cause burnout (Bakker et al., 2004; Bakker et al., 2003; Demerouti et al., 2001). Due to the fact that emotional demands are job demands and emotional exhaustion is the core element of burnout, it makes sense emotional demands also result in more emotional exhaustion (Bakker et al., 2004; Bakker & Demerouti, 2008; Halbesleben & Bowler, 2007; Wright & Bonett, 1997). Because of this theory and this study, it can be stated that higher levels of emotional demands will lead to higher levels of emotional exhaustion. These findings demonstrate that decreasing the emotional demands will prevent emotional exhaustion and burnout. The additional analyses showed a significant positive relationship between POS and engagement. This can also be explained by the JD-R model, because POS is a job resource which has, according to this model, a positive relationship with engagement (Bakker et al., 2004; Schaufeli & Bakker, 2004). The JD-R model shows, a job resource will stimulate the intrinsic motivation in the form of engagement (Llorens et al., 2007). Furthermore, the analyses showed a significant negative relationship between POS and emotional exhaustion. This can be explained by the buffering effect of the JD-R model. The buffering effect explains that job resources (in this case POS) can buffer job demands (Bakker et al., 2005; Xanthopoulou et al., 2013). Job demands lead to strain, while job resources stimulate the intrinsic motivation (Llorens et al., 2007). So when there are high levels of job resources and thereby high levels of intrinsic motivation, this will decrease the level of strain and thereby the level of burnout (Bakker et al., 2005; Xanthopoulou et al., 2013). When people experience high levels of POS, this will lead to more intrinsic motivation, less strain and less emotional exhaustion, which is the core element of burnout (Wright & Bonett, 1997). Due to these findings, it has been demonstrated that by increasing POS the levels of engagement will increase and burnout will be prevented.

Unfortunately, there are also some non-significant relationships. First, the expected negative relationship between emotional demands and engagement is not supported. This can be explained by the fact that engagement in this study was seen as the opposite of burnout. This insight was used to explain the relationships between emotional demands, emotional exhaustion,
and engagement. However, only two out of three elements of engagement and burnout are opposites. Vigor is seen as the opposite of exhaustion and dedication is seen as the opposite of cynicism (Schaufeli & Bakker, 2004). The third elements, absorption and inefficacy, are not opposites of each other. So the used reasoning cannot accurately explain the negative relationship between emotional demands and engagement.

Furthermore, the expected interaction effect of POS on the negative relationship between emotional demands and engagement is not supported. This can be explained by the fact that the direct relationship between emotional demands and engagement is neither supported. Which indicates there could be no significant interaction effect of POS on this relationship. Anyway the reasoning about the interaction effect of POS is correct, because there is a significant positive relationship between POS and engagement, which confirms that a job resource can buffer the negative effect of a job demand (Bakker et al., 2005).

The interaction effect of POS on the positive relationship between emotional demands and emotional exhaustion is neither supported. According the JD-R model this relationship should be significant, because POS does increase the intrinsic motivation and thereby buffers the strain caused by emotional demands. The non-significant interaction effect can be explained by the reasoning, it is difficult for employees to feel emotional demands as well as organizational support, when these are caused by the same source. When job demands are caused by the organization, support from colleagues is found to be more valuable than support from the supervisor or the organization (Jones, Fletcher, & Ibbetson, 1991). Therefore, POS is not the right job resource to buffer emotional demands.

**Limitations and options for improvement**

This study has also some limitations. First, according the Chi-Square test which has been conducted, the sample is not representative for the Dutch working population. On the levels of sex, highest educational degree and job status the sample diverges from the Dutch working population. The non-representative sample could have influenced the results of the study, for example there was a higher percentage female in the sample compared to the Dutch working population. The non-representative working population, could be developed due to the use of convenience sampling. The network from Masters’ students does not include all parts of the Dutch working
population, it includes more people with a high educational degree. The sample would probably be more representative when using random sampling instead of convenience sampling.

Second, a cross-sectional design was used to collect data. The data was collected on one moment in time. Therefore, no statements can be made about the causality based on the data. There is also a risk of reverse causality present in the data. This means the dependent variable has an effect on the independent variable, not as expected the reverse (Warner, 2013). This is no problem in this study, because the causality is defined by good theory. The JD-R model proved to be useful in many settings. Yet, when measuring data at one moment, the state of well-being of a person can affect the answers. For example, when a person just had a conflict, the answers possibly will be more negative. This can result in biased data, which can be solved using longitudinal data collection (collect data multiple times) instead of cross-sectional data collection.

Third, the data is collected from employees only, so self-report measures were used. Employees themselves gave answers about their levels of engagement, POS, etc. It would be better when these concepts also were measured in another way. For example, by asking supervisors. However, in this study this self-report is not a problem, while these concepts include the way the employees feel. For one of the concepts, POS, it is difficult to ask others, because it involves the way an employee experiences the support. When supervisors are asked to make an indication about the amount of emotional demands in a workplace, this could give more insight in the emotional demands of an employee.

Furthermore, in this research it is assumed engagement and burnout are opposite concepts. However, only two out of three elements of engagement and burnout are opposites. By assuming that engagement and burnout are opposites, which is not completely correct, wrong expectations may arise. This can be solved by looking at engagement and burnout as different concepts.

**Avenues for future research**

Based on findings in this study, new questions arise. Seeing engagement and burnout as opposites, this study assumed the effect of job demands on engagement would be the opposite of the effect of job demands on burnout (Bakker et al., 2004; Schaufeli & Bakker, 2004; Schaufeli et al., 2001). By looking at the results, the question arises if the JD-R model can be used the way it was in this study, because the JD-R model only explains the relationships between job demands and burnout and job resources and engagement, not between job resources and burnout or job
demands and engagement. It would be interesting to see whether the relationship between emotional demands and engagement is significant as it is mediated by burnout.

Furthermore, the interaction effect of POS was not significant on the relationship between emotional demands and emotional exhaustion. This could be explained by the fact that both the support and demands are caused by the organization. In this case support from colleagues is found to be more valuable than support from supervisors or the organization (Jones et al., 1991). It would be interesting to investigate the relationship between emotional demands and emotional exhaustion moderated by the perceived support from colleagues.

Practical implications

Every organization strives for the highest possible performance, the question is how to achieve this (Kaplan, 2001). Since this study focusses on a possible antecedent of engagement, which increases performance, this study is interesting for organizations (Bakker et al., 2012; Christian et al., 2011; Crawford et al., 2010).

This study shows a significant effect of both emotional demands and POS on emotional exhaustion, which is the core element of burnout (Bakker et al., 2006). Burnout is a big problem in the Netherlands, and is still increasing. According statistics of CBS, the amount of people with burnout complaints has risen from 13 percent in 2015 to 16 percent in 2017. Due to the way of working in the Netherlands, it is expected this will continue to increase over the next years. In the interviews done for this study (which can be seen in Appendix F), the interviewees recognize the increasing amount of people with burnout complaints. Replacing these workers costs the organization lots of money, because they have to pay double for one working place. Main reason for an organization to decrease burnout complaints.

This study showed the levels of emotional demands increase the levels of burnout. Therefore, it is important to know how to deal with emotional demands. According to one of the interviewees, emotional demands cannot always be prevented. This interviewee gave an example about a nurse who had to tell the family their relative died. For this nurse, this is emotionally demanding. The interviewee explained in the cases, emotional demands cannot be prevented, it is important to keep the level of emotional demands as low as possible. For example, preparing employees for these demands on forehand, by giving training on such situations. And after
emotionally demanding situations it is important to help employees to deal with those demands, by offering talks with social workers or confidants.

This study showed a positive effect of POS on engagement and a negative effect of POS on burnout. These relationships were recognized by the interviewees. According to the interviewees it is important to ask employees the way they want to be supported. Due to this, employees feel the organization cares about them. Organizations can increase POS by increasing the given supervisor support. Other ways to increase POS can be; Offering development opportunities or exchanges with other companies. Providing tangible rewards, for instance a bonus when an employee works hard. Show there is justice in place in the organization.

For organizations it is important to focus on high levels of engagement and less burnout, this will lead to higher levels of performance and less turnover intentions!
References


Evers, A. V. A. M., Lucassen, W., Meijer, R., & Sijtsma, K. (2009). *COTAN, beoordelingssysteem voor de kwaliteit van tests (geheel herziene versie)*.


Hakanen, J. J., Schaufeli, W. B., & Ahola, K. (2008). The job demands-resources model: a three-
Sauerbrei, W., Royston, P., & Binder, H. (2007). Selection of important variables and
determination of functional form for continuous predictors in multivariable model building.
Statistics in Medicine, 26(1), 5512–5528. https://doi.org/10.1002/sim
Unpublished Manuscript: Department of Psychology, Utrecht University. https://doi.org/10.1037/t01350-000

### Appendix A

**Table 1**

*Demographic characteristics of sample*

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Amount</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (in years)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>353</td>
<td>36.53</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td></td>
<td>11.86</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>208</td>
<td>58.8</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>146</td>
<td>41.2%</td>
<td></td>
</tr>
<tr>
<td>Job Tenure (in years)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>314</td>
<td>8.66</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td></td>
<td>9.94</td>
<td></td>
</tr>
<tr>
<td>Job status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular Full-Time Employee</td>
<td>173</td>
<td>48.9</td>
<td></td>
</tr>
<tr>
<td>Regular Part-Time Employee</td>
<td>103</td>
<td>29.1</td>
<td></td>
</tr>
<tr>
<td>Temporary Employee</td>
<td>78</td>
<td>22.0</td>
<td></td>
</tr>
<tr>
<td>Educational degree</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary School</td>
<td>7</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>Secondary School</td>
<td>36</td>
<td>10.2</td>
<td></td>
</tr>
<tr>
<td>Vocational Education</td>
<td>89</td>
<td>25.1</td>
<td></td>
</tr>
<tr>
<td>Bachelor Applied University/University</td>
<td>154</td>
<td>43.5</td>
<td></td>
</tr>
<tr>
<td>Master University/PhD</td>
<td>66</td>
<td>18.6</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>.6</td>
<td></td>
</tr>
<tr>
<td>Size Organization</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤ 25 employees</td>
<td>40</td>
<td>11.3</td>
<td></td>
</tr>
<tr>
<td>26-50 employees</td>
<td>29</td>
<td>8.2</td>
<td></td>
</tr>
<tr>
<td>51-100 employees</td>
<td>36</td>
<td>10.2</td>
<td></td>
</tr>
<tr>
<td>101-200 employees</td>
<td>42</td>
<td>11.9</td>
<td></td>
</tr>
<tr>
<td>201-500 employees</td>
<td>14</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>501-1000 employees</td>
<td>14</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>&gt;1000 employees</td>
<td>179</td>
<td>50.6</td>
<td></td>
</tr>
<tr>
<td>Sector</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction and production industry</td>
<td>2</td>
<td>.6</td>
<td></td>
</tr>
<tr>
<td>Retail</td>
<td>33</td>
<td>9.3</td>
<td></td>
</tr>
<tr>
<td>Financial services and insurance</td>
<td>41</td>
<td>11.6</td>
<td></td>
</tr>
<tr>
<td>Catering and residential recreation</td>
<td>17</td>
<td>4.8</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>15</td>
<td>4.2</td>
<td></td>
</tr>
<tr>
<td>Government</td>
<td>54</td>
<td>15.3</td>
<td></td>
</tr>
<tr>
<td>Social work, youth care and childcare</td>
<td>42</td>
<td>11.9</td>
<td></td>
</tr>
<tr>
<td>Transport and logistics</td>
<td>13</td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td>Healthcare</td>
<td>37</td>
<td>10.5</td>
<td></td>
</tr>
<tr>
<td>Consultancy</td>
<td>26</td>
<td>7.3</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>74</td>
<td>20.9</td>
<td></td>
</tr>
</tbody>
</table>
Appendix B

Hayes’ PROCESS Macro Output

Run MATRIX procedure:

************* PROCESS Procedure for SPSS Release 2.16.3 *************

Written by Andrew F. Hayes, Ph.D.       www.afhayes.com

**************************************************************************

Model = 1
Y = Engagement
X = EmoDeman
M = POS

Statistical Controls:
CONTROL= age      sex      Reg_Full      Reg_Part

Sample size
353

**************************************************************************

Outcome: Engagement

Model Summary

<table>
<thead>
<tr>
<th>R</th>
<th>R-sq</th>
<th>MSE</th>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>.416</td>
<td>.173</td>
<td>.685</td>
<td>10.293</td>
<td>7.000</td>
<td>345.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

Model

coeff | se  | t    | p    | LLCI  | ULCI  |
constant | .3713 | .214 | 17.309 | .000 | 3.291 | 4.135 |
POS | .485 | .063 | 7.697 | .000 | .361 | .609 |
EmoDeman | -.038 | .044 | -.860 | .446 | -.124 | .048 |
int_1 | -.015 | .061 | -.236 | .851 | -.135 | .106 |
age | .011 | .004 | 2.718 | .009 | .003 | .019 |
sex | -.026 | .097 | -.268 | .792 | -.216 | .165 |
Reg_Full | .146 | .121 | 1.208 | .241 | -.092 | .383 |
Reg_Part | .020 | .135 | 1.151 | .875 | -.246 | .286 |

Product terms key:

int_1   EmoDeman   X   POS

R-square increase due to interaction(s):

<table>
<thead>
<tr>
<th>R2-chng</th>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>.000</td>
<td>.035</td>
<td>1.000</td>
<td>345.000</td>
<td>.851</td>
</tr>
</tbody>
</table>

**************************************************************************

Conditional effect of X on Y at values of the moderator(s):

<table>
<thead>
<tr>
<th>POS</th>
<th>Effect</th>
<th>se</th>
<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>-.709</td>
<td>-.027</td>
<td>.082</td>
<td>-.333</td>
<td>.739</td>
<td>-.188</td>
<td>.134</td>
</tr>
<tr>
<td>.000</td>
<td>-.038</td>
<td>.049</td>
<td>-.763</td>
<td>.446</td>
<td>-.134</td>
<td>.059</td>
</tr>
<tr>
<td>.709</td>
<td>-.048</td>
<td>.064</td>
<td>-.742</td>
<td>.458</td>
<td>-.175</td>
<td>.079</td>
</tr>
</tbody>
</table>
Values for quantitative moderators are the mean and plus/minus one SD from mean. Values for dichotomous moderators are the two values of the moderator.

**************************************************************************

Data for visualizing conditional effect of X on Y
Paste text below into a SPSS syntax window and execute to produce plot.

DATA LIST FREE/EmoDemand POS Engagement.
BEGIN DATA.
-1.044 -.709 3.828
.000 -.709 3.800
1.044 -.709 3.771
-1.044 .000 4.183
.000 .000 4.144
1.044 .000 4.104
-1.044 .709 4.538
.000 .709 4.488
1.044 .709 4.438
END DATA.
GRAPH/SCATTERPLOT=EmoDemand WITH Engagement BY POS.
* Estimates are based on setting covariates to their sample means.

************************** ANALYSIS NOTES AND WARNINGS **************************

Level of confidence for all confidence intervals in output: 95.00

NOTE: The following variables were mean centered prior to analysis:
EmoDemand POS

NOTE: Some cases were deleted due to missing data. The number of such cases was: 1

NOTE: All standard errors for continuous outcome models are based on the HC3 estimator

------ END MATRIX ------
Appendix C

Statistical model

![Diagram showing the statistical model with regression coefficients.]

Figure 2: Statistical model with regression coefficients.

Note. *p < .05, **p < .01. Figure is presented without control variables, however, presented relationships are controlled for these variables, please see Table 3 for their regression coefficients.
Appendix D

Hayes’ PROCESS Macro Output

Run MATRIX procedure:

************** PROCESS Procedure for SPSS Release 2.16.3 **************

Written by Andrew F. Hayes, Ph.D.       www.afhayes.com

**************************************************************************

Model = 1
Y = EmEx
X = EmoD
M = POS

Statistical Controls:
CONTROL= sex      age      Reg_Full      Reg_Part

Sample size
353

**************************************************************************

Outcome: EmEx

Model Summary

<table>
<thead>
<tr>
<th>R</th>
<th>R-sq</th>
<th>MSE</th>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>.425</td>
<td>.181</td>
<td>.403</td>
<td>10.860</td>
<td>7.000</td>
<td>345.000</td>
<td>.000</td>
</tr>
</tbody>
</table>

Model

coeff     se   t      p      LLCI    ULCI
constant  2.121 .166 12.801 .000 1.795   2.447
POS     -.226 .049 -4.652 .000 -.322   -.131
EmoD    .205 .034  6.061 .000  .138    .271
int_1   -.061 .047 -1.285 .228 -.154   .032
sex     -.186 .075 -2.493 .014 -.334   -.099
age     -.003 .003 -1.074 .285 -.009   .003
Reg_Full .000 .093 .000 .142 -.183   .183
Reg_Part-.037 .104 -.356 .201 -.243   .168

Product terms key:

<table>
<thead>
<tr>
<th>int_1</th>
<th>EmoD</th>
<th>X</th>
<th>POS</th>
</tr>
</thead>
</table>

R-square increase due to interaction(s):

<table>
<thead>
<tr>
<th>R2-chng</th>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>int_1</td>
<td>.004</td>
<td>1.461</td>
<td>1.000</td>
<td>351.000</td>
</tr>
</tbody>
</table>

**************************************************************************

Conditional effect of X on Y at values of the moderator(s):

<table>
<thead>
<tr>
<th>POS</th>
<th>Effect</th>
<th>se</th>
<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>-.7151</td>
<td>.2465</td>
<td>.0578</td>
<td>4.2660</td>
<td>.0000</td>
<td>.1329</td>
<td>.3602</td>
</tr>
<tr>
<td>.0000</td>
<td>.2032</td>
<td>.0351</td>
<td>5.7832</td>
<td>.0000</td>
<td>.1341</td>
<td>.2723</td>
</tr>
<tr>
<td>.7151</td>
<td>.1599</td>
<td>.0412</td>
<td>3.8793</td>
<td>.0001</td>
<td>.0788</td>
<td>.2410</td>
</tr>
</tbody>
</table>
Values for quantitative moderators are the mean and plus/minus one SD from mean.
Values for dichotomous moderators are the two values of the moderator.

**************************************************************************

Data for visualizing conditional effect of X on Y
Paste text below into a SPSS syntax window and execute to produce plot.

DATA LIST FREE/EmoD POS EmEx.
BEGIN DATA.
-1.0442 -.7151 1.5991
 .0000 -.7151 1.8566
 1.0442 -.7151 2.1140
-1.0442 .0000 1.4821
 .0000 .0000 1.6943
 1.0442 .0000 1.9065
-1.0442 .7151 1.3651
 .0000 .7151 1.5321
 1.0442 .7151 1.6991
END DATA.
GRAPH/SCATTERPLOT=EmoD WITH EmEx BY POS.

* Estimates are based on setting covariates to their sample means.

**********************************************************************
ANALYSIS NOTES AND WARNINGS ****************************

Level of confidence for all confidence intervals in output:
95.00

NOTE: The following variables were mean centered prior to analysis:
   EmoD    POS

NOTE: Some cases were deleted due to missing data. The number of such cases was:
   37

NOTE: All standard errors for continuous outcome models are based on the HC3 estimator

------- END MATRIX ------
Appendix E

Statistical model

![Diagram of the statistical model with regression coefficients.]

Figure 3: Statistical model with regression coefficients.

Note. *p < .05, **p < .01. Figure is presented without control variables, however, presented relationships are controlled for these variables, please see Table 4 for their regression coefficients.
Appendix F

Summary interviews

Two interviews were conducted with a HR professional who works within the healthcare sector, and a HR professional who works within the construction and production industry.

They both recognized the importance of engagement inside an organization, since they mentioned they experienced less turnover intentions with employees who had high levels of engagement towards the organization. Therefore, they were interested in the antecedents of engagement.

In both organization emotional demands play a major part. Within the healthcare sector examples were given like; take care for people who are hurt, find people who have died, and tell family members their relative passed away. Within the construction and production industry examples were given like; due to business within the company, employees had to work six days a week, with more than eight hours, and from them was expected to be fully concentrated the whole time.

They both noticed high levels of emotional demands caused burnout symptoms. For example, in the healthcare sector the amount of people who had a burnout were very high, because they can’t prevent all the emotional demands in the work. In the construction and production industry a high amount of people sick caused by a burnout was seen after a few weeks working six days a week fully concentrated. So, when the level of emotional demands became too high, people could not work anymore because of a burnout.

About the relationship between emotional demands and engagement was said that low levels of emotional demands could increase engagement, for example treat people who are hurt could lead to more engagement and more willingness to help. However, when levels of emotional demands become too high, it definitely decreases engagement.

In the healthcare sector there were regulations to keep the level of emotional demands as low as possible. For example, in the healthcare sector a nurse regularly has to announce to family member, their relative has passed away. Because this can be emotionally very demanding for this nurse, he or she first is offered a training how to handle this conversation best. Furthermore, after the announcement is made, the nurse is offered to talk about it with a social worker. They noticed
after they introduced these two inventions, trying to prevent emotional demands and offer conversations with a social worker, the amount of people with a burnout decreased.

Furthermore, in the construction and production industry, besides social workers, confidants play an important role in dealing with emotional demands. Because when emotional demands are caused by rules from the management or supervisor, they prevent the management or supervisor discover these emotional demands are because of rules they made. The fact is, they do not want to put themselves in a bad light with their supervisory or management. Therefore, they prefer talking to a confidant, because they cannot tell the supervisor or management.

Both within the healthcare sector and the construction and production industry, perceived organizational support has a clear effect on engagement. For example, in the health care learning and develop opportunities are offered recently, and after this, they experienced people are willing to do more for the organization and the levels of engagement increased according a questionnaire they held. In the construction and production industry they support their employees recently by exchanged with other companies, trainings, etc. After interviewing some employees about this, they discovered employees saw this as development opportunities and therefore the level of engagement increased by most employees. They liked the feeling the organization thought and cared about them.

According the two interviewees, it could be that perceived organizational support buffered the effect of emotional demands, but this was not noticeable in their organization.