



Universiteit Utrecht

**Workplace social support and its relationship to work-
related well-being and life satisfaction**

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ABSTRACT

This study examines the relationship between social support at the workplace and the life satisfaction of employees. Guided by the theoretical framework of the Job Demands-Resources model, this study examines the mediating role of work engagement and burnout on social support at the workplace, namely perceived organizational support, perceived supervisor support, and perceived co-worker support, and life satisfaction. While using the social support theory, the study also examined whether social support at the workplace counters the relationship between job demands and burnout. In total there were 154 participants (94 women, 60 men) working in different sectors throughout the Netherlands, whereby 64% work full-time, and 36% work part-time. The results of the study show that perceived organizational support was positively associated with life satisfaction and work engagement and burnout explains this relationship. Furthermore, this study indicates that social support at the workplace does not buffer the effect of job demands and burnout. The findings of this study provide insights into the importance of perceived organizational support concerning the life satisfaction of employees. Finally, this study suggests that organizations should put this knowledge into practice to improve the life satisfaction of employees, for instance, by showing them that they care about their employees' well-being.

Keywords: workplace social support, work-related well-being, life satisfaction

1. INTRODUCTION

It is the 21st century, and in the last quarter of the previous century, a lot of social, economic and cultural developments took place, such as the concept of working from home which causes individuals to struggle with balancing the work-life (Peeters, Montgomery, Bakker & Schaufeli, 2005), or the advanced technology (Gallie, 2005). The transformation in the society caused the concept of burnout to grow further in the working population as the work pressure became higher (Schaufeli, Leiter & Maslach, 2009). Instead of focusing on the negative consequences of psychological pressures at the workplace, this study will focus on the positive side, such as predictors of life satisfaction. The predictors that influence the life satisfaction of employees are amongst others, health, for an individual with good health seems to score higher on life satisfaction compared to someone with poor health (Zullig, Valois, Huebner & Drane, 2005); personal resources, such as optimism or self-efficacy are related to life satisfaction (Telef, 2011; Yalçın,

2011) and social environmental characteristics, such as social support, which enhances life satisfaction (Onyishi, Okongwu & Ugwu, 2012).

This present study will focus on the social aspects of the workplace and aims to examine the relationship between social support at the workplace and life satisfaction. Research shows that social support has many benefits for the individual, such as enhanced work engagement of an employee and a decreased chance to end up with a burnout (Hamama, 2012; Murthy, 2017; Ling Suan & Mohd Nasurdin, 2016). Furthermore, life satisfaction is associated with positive outcomes, such as organizational commitment, job performance, and turnover intentions (Erdogan, Bauer, Truxillo & Mansfield, 2012). This indicates that employees with high life satisfaction are most likely to stay employed within the organization with high job performance. Thus, it is beneficial for the organization to have employees with high life satisfaction.

Previous researches regarding life satisfaction have been mainly focused on the non-work population and not as much on the work domain (Erdogan et al., 2012), even though a big part of the life domain of a full-time worker consists of work. Additionally, as the study of Hakanen and Schaufeli (2012) suggests, that work engagement enhances life satisfaction and burnout reduces life satisfaction. Accordingly, this study will thus take the well-being of an employee at their workplace into account when considering the life satisfaction. Additionally, this study examines the influence of social support at the workplace through work-related well-being, namely work engagement and burnout on life satisfaction, while using the health impairment process and motivational process from the Job Demands-Resources model (JD-R model) as a theoretical framework.

Moreover, the social support theory argues that social support can work as a buffer for stress that individuals have to cope with, which can improve their well-being (Lakey & Cohen, 2000). More specifically, according to the JD-R model, job resources, such as social support, counter high job demands that lead to a negative outcome (Bakker & Demerouti, 2007). Guided by the social support theory as well as the JD-R model, this study will, therefore, examine whether social support at the workplace buffers the relationships between job demands and burnout.

1.1 Social support at the workplace

Social support can be provided by several sources: it can be from the organization itself, the supervisor, colleagues but also other environments such as family or friends (Burn, 2016; Sloan, 2012; Gallagher & Vella-Brodrick, 2008). Moreover, it can be provided in many ways, such as through instrumental support (e.g. doing something for the employee), emotional support (e.g. giving care and sympathy), informational support (e.g. sharing relevant information) and appraisal support (e.g. giving constructive feedback) (House, 1981). This study focuses on social support from different sources, such as from the organization, supervisor or co-workers, because these are all highly beneficial to the life satisfaction of individuals as well as for the organization itself (Yucel & Minnotte, 2017; Erdogan et al., 2012).

Social support at the workplace refers to the degree to which employees perceive that their supervisors or employers care about their well-being on the job through providing positive social interaction or resources (Kossek, Pichler, Bodner & Hammer, 2011, p. 292). The study of Semeijn, Van Dam, Van Vuuren and Van der Heijden (2015) found that employees feel more confident coping with difficult work situations when they feel valued and being part of a network of communication and mutual obligations through social support. Based on these findings, this study measures the *perception* of receiving social support, as this perception differs for each individual. To measure social support concerning life satisfaction, it is important to look at the perception of receiving support, as it is the reality experienced from the individual and therefore has an impact on the well-being of that individual (Caesens, Stinglhamber & Luypaert, 2014). Thus, this study aims to capture the perceived social support in the workplace.

1.2 Job Demands-Resources model

The Job Demands-Resources model (JD-R model) is a theoretical framework applied by social scientists for improving the well-being and performance of employees (Demerouti, Bakker, Nachreiner & Schaufeli, 2001). This study uses the JD-R model as a guideline to explain the mediating role of work engagement and burnout between the relation of social support at the workplace and life satisfaction. As social support at the workplace is positively related to life satisfaction (Yucel & Minnotte, 2017), it is expected that work engagement enhances this relation. On the contrary, it is expected that burnout reduces the relation between social support at the

workplace and life satisfaction. These relations will be explained while using the motivational process and the health impairment process of the JD-R model.

Work engagement is defined as a positive emotional state associated with the work, which is characterized by high levels of vigor, dedication, and absorption (Schaufeli & Bakker, 2004; Schaufeli, Salanova, González-Romá, & Bakker, 2002). Vigor refers to high levels of energy and resilience. Dedication is related to high job involvement by feeling pride in their work. Absorption occurs when an individual is completely concentrated in their work without noticing the time (Schaufeli & Bakker, 2004; Schaufeli et al., 2002). The motivational process of the JD-R model explains that work engagement has a mediating role between the relation of job resources and a positive outcome (Schaufeli & Taris, 2014). Whereas the study of Schaufeli and Bakker (2004) found that work engagement has a mediating role between the relation of the job resources and a positive outcome, this present study aims to find out whether work engagement enhances the relation between social support at the workplace and life satisfaction.

The multidimensional theory of burnout consists of three core components, which are emotional exhaustion, depersonalization, and lack of personal accomplishment (Maslach, 1998). These components can cause an individual to have a low life satisfaction (Hakanen & Schaufeli, 2012). The health impairment process of the JD-R model suggests that burnout has a mediating role between the relation of job resources and a positive outcome (Schaufeli & Taris, 2014). In this case, it indicates that when employees have a low perception of social support, it will lead to a higher chance of burnout, resulting in a lower life satisfaction. By using the JD-R model as a theoretical framework, this study aims to find out whether work engagement and burnout explains the relationship between perceived social support and life satisfaction.

1.3 Social support theory

According to the social support theory, social support can work as a buffer for the stress that individuals are coping with, which can enhance their well-being (Lakey & Cohen, 2000). Additionally, the study of Bakker and Demerouti (2007) suggests that job resources can work as a buffer between the relation of high job demands and a negative outcome. When applying these guidelines, it can be argued that job resources, such as social support at the workplace, can be considered as a buffer for the stressors that employees have to cope with at work and therefore mitigates the effect on burnout. Whereas, studies have shown that social support at the workplace

reduces the negative effect that stressors, such as work stress, high emotional demands, and work overload, have on burnout (Devereux, Hastings, Noone, Firth & Totsika, 2009; Gray-Stanley & Muramatsu, 2011; Kinman, Wray & Strange, 2011). This present study aims to examine the moderating effect that social support at the workplace has on the relationship between job demands (e.g. workload, emotional overload, and mental overload) and burnout.

As aforementioned, social support at the workplace can be provided from different sources, and this study focuses on perceived organizational support (POS), perceived supervisor support (PSS), and perceived co-worker support (PCS). This is because they all contribute to enhancing the life satisfaction of employees (Yucel & Minnotte, 2017). Perceived organizational support is defined as 'the extent to which employees perceive that their contributions are valued by their organization and that the firm cares about their well-being' (Eisenberger, Huntington, Hutchison & Sowa, 1986, p. 501). It also means that the organization supports the needs of the employees by providing resources that can assist them in managing a demand or role (Eisenberger et al., 1986).

Furthermore, perceived supervisor and coworker support refers to employees' beliefs about the extent to which supervisors and coworkers provide instrumental support and emotional assistance (Ng & Sorensen, 2008). The supervisor can express their concern about the well-being of the employees, and by doing so, this can alleviate the strain of the employees, which could lead to a high life satisfaction (Mayo, Sanchez, Pastor & Rodriguez, 2012). As for the co-workers, individuals can turn to them for aid, which can be a solution of dealing with stress experienced at work, as co-workers can provide individuals with emotional support or instrumental support (Sloan, 2012). Emotional support can be provided by listening to the complaints or talking, and instrumental support can be given by dividing the high workload and alleviating their tasks.

In sum, the aforementioned findings regarding perceived organizational support, perceived supervisor support, and perceived co-worker all have in common that they counter the stress that employees are dealing with. While taking the social support theory into account, this study will exploratively examine the buffer effect of social support that is given by the organization, the supervisor, or the co-worker between job demands and burnout. This could also contribute to the scientific knowledge related to this topic.

2. RESEARCH QUESTION

This research focuses on perceived social support at the workplace and its relation to life satisfaction while considering work engagement and burnout as mediators, using the JD-R model. Also, the buffer effect of perceived social support at the workplace between the relationship of job demands (e.g. workload, emotional load, and mental load) and burnout is taken into account, because social support can work as a buffer sometimes.

The first research question is: *'To what extent is there a relation between social support at the workplace (perceived organizational support, perceived supervisor support, perceived co-worker support) and the life satisfaction of employees, and does work engagement and burnout explains this relation?'*

The second research question is: *'To what extent does social support at the workplace counter the relationship between job demands (e.g. workload, mental load, and emotional load) and burnout?'*

The following hypotheses will be tested:

Hypothesis 1: Perceived social support at the workplace is positively associated with the life satisfaction of employees.

Hypothesis 2: Work engagement (Hypothesis 2a) and burnout (Hypothesis 2b) explains the relationship between perceived social support at the workplace and the life satisfaction of employees

Hypothesis 3: Perceived organizational support (Hypothesis 3a), perceived supervisor support (Hypothesis 3b), and perceived co-worker support (Hypothesis 3c) buffer the relationship between job demands (workload, mental overload, and emotional overload) and burnout.

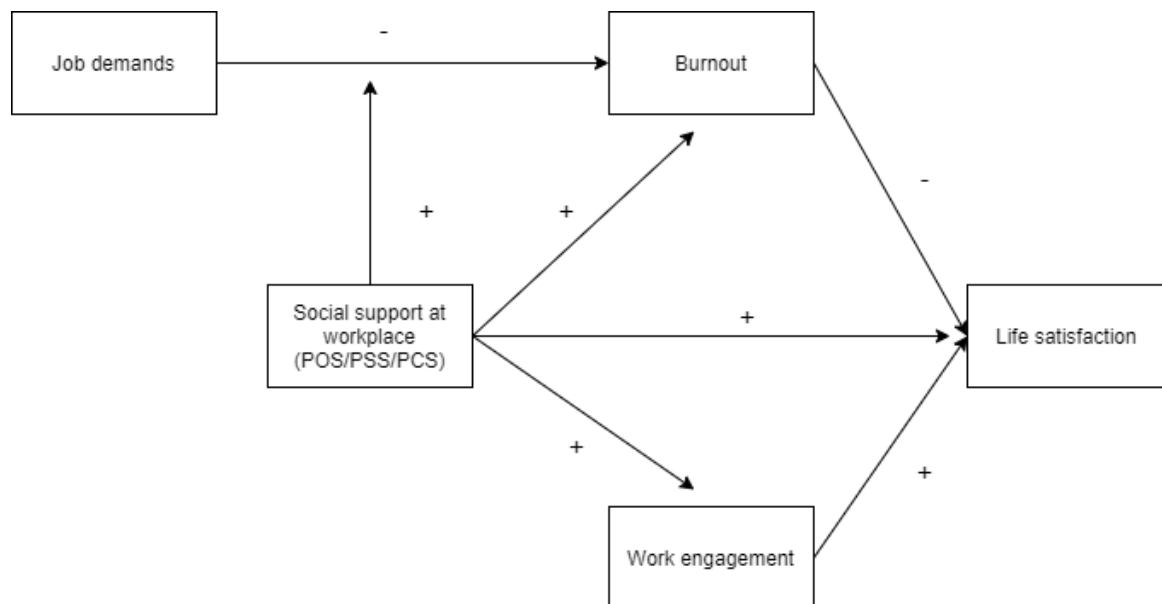


Figure 1: Proposed model of the relationship between workplace social support (perceived organizational support, perceived supervisor support, and perceived co-worker support), work engagement, burnout, job demands, and life satisfaction.

3. METHOD

3.1 Participants

Participants of this research were employees from organizations across the Netherlands from different sectors. This study included employees working part-time, employees working full-time, and interns. The total number of participants consists of 161. Seven participants did not finish their survey since they were unemployed or retired, thus these participants were excluded from the data. The remaining participants were N=154. The age range was between 18 and 67, with an average age of 30. Out of all the participants, there were 39% male participants (N=60), and 61% of the participants were female (N=94).¹

3.2 Procedure

This study used an online survey tool called Qualtrics, with questionnaires provided in English as well as in Dutch. The participants were approached through the method of snowball sampling. First, acquaintances and friends were asked to participate in the survey. After that, the participants were asked to share the link of the survey to other people who would like to participate too. To recruit more people, the survey link was shared through social media, such as LinkedIn and Facebook pages. All data were collected in the period of mid-March till the beginning of April 2020. After the data was retrieved, the dataset was analyzed with the program SPSS.

3.3 Measurements

The survey was divided into seven parts, which will be discussed individually in the following section. The provided questionnaires in the survey can be found in Appendix B.

3.3.1 Job demands

For measuring the job demands, the Job Demands-Resources Scale developed by Jackson and Rothmann (2005) is used. The original scale consists of 48 items, but this present study used only 8 items to measure job demands, namely overload (work, mental and emotional). This scale uses

¹ One participant chose the option 'Other' for gender, this was recoded to male.

a 5-point Likert scale ranging from 0 (never) to 4 (very often). The Cronbach's Alpha of Job demands is measured with .85, which is considered high.

3.3.2 Perceived organizational support

The perceived organizational support was measured with the Survey Perceived Organizational Support (SPOS), which is developed by Eisenberger et al. (1986), and consists of 8 items. This is a short version of their original survey consisting of 36 items, but equally reliable. Questions such as 'My organization cares about my opinions' or 'My organization is willing to help me when I need a special favor' were asked to the participants. The items were measured with a 7-point Likert scale ranging from 1 (Strongly disagree) to 7 (Strongly agree). The Cronbach's Alpha of this variable is .72, which is considered as sufficient.

3.3.3 Perceived supervisor support

For the variable 'perceived supervisor support' the Survey Perceived Supervisor Support (SPSS) was used, which is similar to SPOS, retrieved from the study of Eisenberger et al. (1986). The study of Burns (2016) did the same, and states that perceived supervisor support and perceived organizational support are similar in nature, except that perceived supervisor support is related to the supervisor. An example of a question that has been adapted to measure perceived supervisor support is: 'My supervisor really cares about my well-being'. This variable uses the same scale as the variable 'perceived organizational support', which is a 7-point Likert scale. The Cronbach's Alpha of this scale is .66, which is considered as insufficient.

3.3.4 Perceived co-worker support

The social support scale designed by O'Driscoll (2000) was used to measure the perceived co-worker support. This scale has a reliability of 0.92 and consists of 4 items. An example question is, 'Indicate how often your co-workers provide you with clear and helpful feedback'. The scale ranges from 0 (never) to 4 (always).

3.3.5 Work engagement

Work engagement was measured with the shortened version of the Utrecht Work Engagement scale (UWES-9), which is derived from the study of Schaufeli, Bakker & Salanova (2006). This survey consists of 9 items, and uses a 7-point Likert scale, ranging from 0 = (Never) to 6 = Always

(Every day). An example of the questions asked is: ‘ At my work, I feel bursting with energy’ or ‘At my job, I feel strong and vigorous’. The Cronbach’s Alpha of work engagement is .93, which is considered as a high reliability.

3.3.6 Burnout

For the measurement of burnout, this study uses the Utrechtse Burnout Scale (UBOS) retrieved from Schaufeli and Van Dierendonck (2000). This scale measures three components, which are, competence, exhaustion, and cynicism. To reduce the overlap with work engagement, the component competence was left out in the measurement. Therefore, this scale consists of 9 items measured with a 7-point Likert scale (0= never to 6 = always). The reliability of this scale is measured with a Cronbach’s Alpha of .92, which is considered as high.

3.3.7 Life satisfaction

The satisfaction with life scale from Diener (1985) is used for measuring the life satisfaction of the employees. It consists of 5 items with a 7-point Likert scale ranging from 1= (strongly disagree) to 5= (strongly agree). Examples of questions are: ‘I am satisfied with my life’ or ‘The conditions of my life are excellent’. The reliability of the items of life satisfaction was high with a Cronbach’s Alpha of .88.

3.4 Demographics

The included demographics are the age, gender, job position, working sector and amount of working hours per week of the participants. The amount of hours is divided into two types, which are: part-time workers and full-time workers. In this study, part-time employees are those who work less than 32 hours (<32 hours) and full-time employees are those who work 32 hours or more (\geq 32 hours). As for the working sector, this is divided into the following options:

- Healthcare and welfare
- Trade and services
- ICT
- Justice, security and public administration
- Media and communication

- Education, culture and science
- Engineering, production and construction
- Hospitality
- Transport and Logistics

3.5 Analysis

In the analysis phase, there were several analyses conducted. First, the relation between all the variables was tested by using a correlation analysis. Then a hierarchical multiple regression with all the predictors as well as the demographics was carried out while using the ENTER method. After that, a mediation analysis was carried out to gauge whether work engagement and/or burnout mediates the relationship between perceived social support and the life satisfaction of employees. This was done by using SPSS and PROCESS and the bootstrapping method of 5000 samples. Finally, the moderation effect of social support at the workplace between job demands and burnout was tested while using hierarchical multiple regression. For all the analyses, the program SPSS was used, in addition, PROCESS was used as an extra tool for the mediation analysis.

3.6 Ethical aspects

In this study, the ethical issues are being considered and given attention. The surveys were completely anonymous, but the participants were still being informed and reassured about the privacy of the data. Furthermore, they had to fill in the informed consent before entering the research. The topic regarding well-being can be considered as a sensitive subject for the participants, which is why everyone was notified in advance about the possibility of dropping out at any given moment without giving a reason. This will prevent participants from getting unintentionally emotional about this subject. The goal of this research is mainly to gain more knowledge and insight about the relationship between perceived social support at the workplace and the well-being of employees, and not to provoke certain feelings or emotions. The informed consent can be found in Appendix A.

4. RESULTS

4.1 Participants characteristics

The participants in this study were employees from different sectors, but most of them were from the sector Trade and service (N=49), followed by the sector Education, Culture and Science (N=23) and Engineering, Production, and Construction (N=20). Table 1 gives an overview of the total amount of participating employees from different sectors.

Table 1. Frequency table of the working sector

Working sector	<i>N</i>	<i>Percent</i>
Charity	1	0.6
Education, Culture and Science	23	14.9
Engineering, Production and Construction	20	13.0
Healthcare and welfare	13	8.4
Hospitality	14	9.1
IT	19	12.3
Justice, Security and Public administration	7	4.5
Media and Communication	4	2.6
Trade and Service	49	31.8
Transport and Logistics	4	2.6
Total	154	100

Another characteristic that is measured is the number of hours the employees were working per week. This was divided into part-timers (< 32) and full-timers (≥ 32). The interns were also divided into two categories, namely as part-timer or full-timer because there were not enough interns to make a separate category. Eight participants did not fill in their working hours per week, due to an error in the system. This has been recoded to 32 hours, because at the beginning of the distribution of the survey only participants who work full-time completed it. As a result, 99 participants work 32 hours or more (64.3%) and 55 participants work less than 32 hours (35.7%).

Table 2. Frequency table of the amount of working hours per week

Amount of working hours	<i>Frequency</i>	<i>Percent</i>
Part-timer (< 32)	55	35.7
Full-timer (≥ 32)	99	64.3
Total	154	100

Note: N=154

4.2 Descriptive results

A descriptive analysis was conducted to examine the mean scores of all variables. Thereafter a correlation analysis was carried out to make a comparison of the scores of all variables and each demographic variable, which were: age, gender, and the working hours per week. The results can be found in Table 3.

First of all, the correlations regarding social support will be discussed. Results of the Pearson correlation indicated that there was a negative relationship between perceived organizational support and job demands ($r=-.26$, $p<.01$), as well as between perceived organizational support and burnout ($r=-.32$, $p<.01$). Results also showed that perceived organizational support was positively associated with work engagement ($r=.30$, $p<.01$). This implies that when an individual scores higher on perceived organizational support, this reduces the score of job demands and burnout, and enhances the score of work engagement. Moreover, a small positive correlation was found between life satisfaction and perceived organizational support ($r=.21$, $p<.01$) as well as for perceived co-worker support ($r=.17$, $p<.05$). This indicates that perceived organizational support and perceived co-worker support have a positive influence on life satisfaction.

As for perceived co-worker support, it was found that perceived co-worker support and burnout were negatively correlated ($r=-.30$, $p<.01$), and that perceived co-worker support and work engagement were positively associated ($r=.29$, $p<.01$). This means that perceived co-worker has a positive effect on work engagement and that lowly perceived co-worker support leads to a higher chance of burnout. When examining the scores of perceived social support concerning age and gender, a negative correlation was found between perceived organizational support and age ($r=-.18$, $p<.05$) and a positive correlation between gender and perceived organizational support ($r=.18$, $p<.05$). This suggests that female and younger participants score higher on perceived organizational support compared to older male participants.

Furthermore, it was found that perceived organizational support and perceived supervisor support were positively correlated with each other ($r=.72$, $p<.01$). This indicates that there is a high probability of multicollinearity, which implies that the changes of one variable are associated with shifts in another variable, which will make the results less accurate. Additionally, the reliability of perceived supervisor support was on the lower side ($\alpha = .66$). For these reasons, the variable perceived supervisor support is not used in further analyses.

Secondly, in the correlation analysis, it was found that job demands were positively associated with burnout ($r = .55, p < .01$), and were negatively associated with life satisfaction ($r = -.19, p < .05$). This suggests that participants with a higher score on job demands also scored higher on burnout, but lower on life satisfaction. Lastly, job demands ($r = -.19, p < .05$) and burnout ($r = -.41, p < .01$), were negatively associated with life satisfaction, and work engagement were positively associated with life satisfaction ($r = .39, p < .01$). This indicates that job demands and burnout have a negative influence on life satisfaction and work engagement has a positive influence on life satisfaction.

Table 3. Correlation matrix

	M	SD	1	2	3	4	5	6	7	8	9	10
1. Gender			x									
2. Age	30.08	10.36	-.29**	x								
3. Working hours per week	33.54	12.70	-.19*	.30**	x							
4. POS	4.91	1.06	.18*	-.18*	-.002	x						
5. PSS	5.08	1.00	.18*	-.25**	.01	.72**	x					
6. PCS	2.46	0.90	.13	-.15	-.09	.13	-.01	x				
7. Job Demands	1.96	0.72	-.16*	.06	.28*	-.26**	-.18*	-.09	x			
8. Burnout	1.99	1.36	-.12	-.05	.20*	-.32**	-.19*	-.30**	.55**	x		
9. Work engagement	3.67	1.39	.14	.02	.13	.30**	.23**	.29**	-.04	-.36**	x	
10. Life satisfaction	4.65	1.23	-.04	-.03	-.14	.21**	.07	.17*	-.19*	-.41**	.39**	x

N = 154
 Gender (1= male; 2= female)

* Correlation is significant at the 0.05 level (2-tailed)
 ** Correlation is significant at the 0.01 level (2-tailed)

4.3 Hierarchical multiple regression analysis

To test the hypotheses, a three-stage hierarchical multiple regression was conducted with life satisfaction as a dependent variable. The demographic variables, namely age, gender, and working hours per week was entered at stage one of the regression to be controlled for in the other stages, as they might predict the dependent variable. Perceived organizational support, perceived co-worker support, and job demands were entered at stage two, work engagement and burnout at stage three. In Table 4, the regression statistics are reported.

The hierarchical multiple regression revealed at stage one, that the demographic variables accounted for 2.2% of the variation in life satisfaction, but there were no significant contributors. Introducing the social support variables and job demands explained an additional 7.4% of the variation in life satisfaction, with perceived organizational support contributing significantly to the

regression model, $F(3,147) = 2.58, p=.02$. When all eight independent variables were included in stage three of the regression model, only burnout and work engagement were significant predictors of life satisfaction. These variables explained an additional 15.2% of the variation in life satisfaction and this change in R^2 was significant, $F(2,145) = 5.95, p<.01$. Together the eight independent variables accounted for 24.7% of the variance in life satisfaction.

Table 4. Summary of Multiple regression analysis

Independent variables	R^2	ΔR^2	Adjusted R^2	Beta	p
Model 1	.02	.02	.002		
1. Age				.02	.84
2. Gender				.02	.86
3. Working hours per week				-.14	.09
Model 2	.10	.07	.06		
4. Age				.05	.56
5. Gender				-.03	.69
6. Working hours per week				-.11	.21
7. Perceived organizational support				.18	.04*
8. Perceived co-worker support				.14	.09
9. Job demands				-.11	.20
Model 3	.25	.15	.21		
10. Age				-.04	.66
11. Gender				-.07	.39
12. Working hours per week				-.09	.27
13. Perceived organizational support				.04	.66
14. Perceived co-worker support				-.01	.91
15. Job demands				.003	.97
16. Burnout				-.29	.01**
17. Work engagement				.29	.01**

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

4.4 Mediation

To test hypothesis 2, a mediation analysis was conducted to examine whether work engagement (H2a) and/or burnout (H2b) explains the relationship between the two different sources of perceived social support and life satisfaction. This was carried out by using the program PROCESS macro version 3.3 and SPSS. In the analysis, the outcome variable was life satisfaction. The

predictors were perceived organizational support and perceived co-worker support and the mediators were work engagement and burnout.

Multiple regression analyses were conducted for each component of the proposed mediation model. First, it was found that perceived organizational support was positively associated with life satisfaction ($B=.18, t(153)=2.10, p=.04$). Then it was found that perceived organizational support enhances work engagement ($B=.29, t(153)=3.60, p<.01$) and that perceived organizational support reduces burnout ($B=-.20, t(153)=-2.96, p<.01$). These findings can be found in Table 5a and Table 5b. Lastly, results indicated that work engagement was positively associated with life satisfaction ($B=.29, t(153)=3.46, p<.01$) and that burnout was negatively associated with life satisfaction ($B=-.29, t(153)=-2.89, p<.01$).

Because both a-path and b-path were significant, mediation analyses were tested using the bootstrapping method with bias-corrected confidence estimates (MacKinnon, Lockwood & Williams, 2004; Preacher & Hayes, 2004). In the present study, the 95% confidence interval of the indirect effect was obtained with 5000 bootstrap examples (Preacher & Hayes, 2008). Results of the mediation analysis confirmed the mediating role of work engagement between the relation of perceived organizational support and life satisfaction ($B=.09, CI .02$ to $.18$), as well as the mediating role of burnout between the relation of perceived organizational support and life satisfaction ($B=.11, CI .04$ to $.20$). Besides, results of the multiple regression indicated that the direct effect of perceived organizational support on life satisfaction became non-significant ($B=.04, t(153)=.45, p=.65$) when controlling for work engagement and burnout, thus suggesting full mediation.

Table 5a. Summary of multiple regression analysis with burnout as the dependent variable.

Independent variables	R ²	Δ R ²	Adjusted R ²	Beta	p
Model 1	.08	.08	.06		
1. Gender				-.10	.21
2. Age				-.15	.08
3. Working hours per week				.26	.01**
Model 2	.42	.34	.39		
4. Gender				-.01	.91
5. Age				-.18	.01**
6. Working hours per week				.11	.13
7. Job demands				.45	.01**
8. Perceived organizational support				-.20	.01**
9. Perceived co-worker support				-.25	.01**

a. Dependent variable: Burnout

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

Table 5b. Summary of multiple regression analysis with work engagement as the dependent variable.

Independent variables	R ²	Δ R ²	Adjusted R ²	Beta	p
Model 1	.03	.03	.01		
1. Gender				.16	.06
2. Age				.05	.55
3. Working hours per week				.05	.54
Model 2	.18	.16	.15		
4. Gender				.11	.18
5. Age				.13	.13
6. Working hours per week				.04	.61
7. Job demands				.06	.50
8. Perceived organizational support				.29	.01**
9. Perceived co-worker support				.27	.01**

a. Dependent variable: Work engagement

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

On the contrary, it was found that the relation between perceived co-worker support and life satisfaction ($B=.14$, $t(153)=1.74$, $p=.09$) was not significant. Additionally, there was conducted a mediation analysis to examine the indirect effect of burnout and work engagement between perceived co-worker support and life satisfaction. First, it was found that perceived co-worker

support was negatively related to burnout ($B = -.25$, $t(153) = -3.83$, $p = .01$) and positively related to work engagement ($B = .27$, $t(153) = 3.53$, $p = .01$). Then, the results suggested that work engagement was positively associated with life satisfaction ($B = .29$, $t(153) = 3.46$, $p = .01$) and that burnout was negatively associated with life satisfaction ($B = -.29$, $t(153) = -2.89$, $p = .01$).

Because both a-path and b-path were significant, mediation analyses were tested using the bootstrapping method with bias-corrected confidence estimates (MacKinnon et al., 2004; Preacher & Hayes, 2004). Results of the mediation analysis confirmed the mediating role of work engagement between the relation of perceived co-worker support and life satisfaction ($B = .11$, $CI .03$ to $.22$), as well as the mediating role of burnout between the relation of perceived organizational support and life satisfaction ($B = .13$, $CI .04$ to $.24$). To conclude, results show that perceived co-worker support has an indirect effect on life satisfaction via work engagement and burnout, but it is not directly related to life satisfaction.

4.5 Moderation

To test the hypothesis that perceived organizational support and perceived co-worker support reduce the relation between job demands and burnout and thus work as a buffer, a hierarchical multiple regression analysis was conducted. In the first step, three demographic variables and three variables were included: gender, age, working hours per week, job demands, perceived organizational support, and perceived co-worker support. These variables accounted for a significant amount of variance in burnout, $R^2 = .42$, $F(8,145) = 17.55$, $p < .001$. To avoid potentially problematic high multicollinearity with the interaction term, the variables were centered, and an interaction term between job demands and perceived organizational support, as well as between job demands and perceived co-worker support, was created.

In the next step, the interaction terms were added to the regression model. It was found that all main effects were significant ($p < .01$), but for the two interaction effects, it turned out to be non-significant. This indicates that perceived social support has no buffer effect between the relation of job demands and burnout. The results are displayed in Table 6.

Table 6. Hierarchical multiple regression of burnout on the interaction between job demands and the two sources of social support

Independent variables	R ²	Δ R ²	Adjusted R ²	Beta	p
Model 1	.42	.42	.39		
1. Gender				-.01	.91
2. Age				-.18	.01**
3. Working hours per week				.11	.13
4. Job demands				.45	.01**
5. Perceived organizational support				-.20	.01**
7. Perceived co-worker support				-.25	.01**
Model 2	.43	.01	.39		
8. Gender				-.02	.82
9. Age				-.17	.02*
10. Working hours per week				.11	.13
11. Job demands				.44	.01**
12. Perceived organizational support				-.18	.01**
14. Perceived co-worker support				-.23	.01**
15. Job demands X POS				-.06	.41
17 Job demands X PCS				-.07	.28

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

5. DISCUSSION

This research aimed to answer the following questions: *‘To what extent is there a relation between social support at the workplace (perceived organizational support, perceived supervisor support, perceived co-worker support) and the life satisfaction of employees, and does work engagement and burnout explain this relation?’* and *‘To what extent does social support at the workplace counter the relationship between job demands (e.g. workload, mental load, and emotional load) and burnout?’* To answer these questions, the three aforementioned hypotheses in Chapter 2 will each be discussed here individually.

The first hypothesis anticipated that perceived social support at the workplace was positively associated with the life satisfaction of employees. Results showed that out of the social support from three different sources, only perceived organizational support was significantly associated with life satisfaction. This means that the hypothesis is partially confirmed. Whereas the study of Yucel and Minnotte (2017) found that social support at the workplace from all three sources was related to life satisfaction, this is incongruent to the findings of this present study. As this present study suggests, perceived co-worker support and life satisfaction are not significant ($p=.09$). An explanation for this is because this study used P-value .05 to have a bigger power to detect a deviation from the null hypothesis (Field, 2013). However, when considering using P-value .10, it could be stated that perceived co-worker support is positively associated with life satisfaction. Furthermore, the mean score of perceived co-worker support was at the midpoint of the scale, which makes it harder to find significant results. This suggests that further research is necessary to determine the relationship between perceived co-worker support and life satisfaction.

The second hypothesis: *Work engagement (Hypothesis 2a) and burnout (Hypothesis 2b) explain the relationship between perceived social support at the workplace and the life satisfaction of employees* is also partially confirmed. Results showed that both work engagement and burnout have a mediating role in the relation of perceived organizational support at the workplace and life satisfaction. While following the motivational process of the JD-R model, with the assumption that work engagement explains the relationship of social support on life satisfaction, a full mediation was found. This finding implies that perceived organizational support is associated with increased life satisfaction through work engagement. Also, hypothesis 2b is partially confirmed with results showing that burnout explains the relationship of perceived organizational support on

life satisfaction. This finding is congruent with the health impairment process of the JD-R model, which suggests that perceived organizational support reduces burnout and in turn, it enhances life satisfaction (Schaufeli & Taris, 2014). Altogether, these outcomes are in line with the theoretical framework of the JD-R model (Demerouti et al., 2001). Furthermore, this study contributes to the scientific knowledge regarding the relation of perceived organizational support and life satisfaction and the mediating role of work engagement and burnout in this relationship.

In terms of the relation between perceived co-worker support and life satisfaction, the findings in this present study indicate that these are not significant. However, results showed that perceived co-worker support had an indirect impact on life satisfaction through work engagement and burnout. Nevertheless, this does not confirm the mediating role work engagement or burnout between the relationship of perceived co-worker support and life satisfaction. Conclusively, this research can still be seen as the first step towards more research with regards to this particular topic.

Contrary to the expectation, hypothesis 3 is not confirmed. The hypothesis anticipated that: *perceived organizational support (Hypothesis 3a), perceived supervisor support (Hypothesis 3b) and perceived co-worker support (Hypothesis 3c) buffer the effect between job demands (workload, mental overload, and emotional overload) and burnout*. The social support theory claims that social support alleviates the stress that individuals are coping with at work (Lakey & Cohen, 2000). The results, however, showed that perceived organizational support, perceived co-worker support, and job demands were related to burnout, but no buffer effect was found. This finding can be explained by the statement that Schaufeli and Taris (2014) made in their study, which is: ‘the joint effect of job demands and job resources on burnout adds little beyond their additive effects’ (p. 48). In this case, it indicates that even though the main effects between the predictors and the independent variable ‘burnout’ were found, social support at the workplace did not counter the relation between job demands and burnout.

To summarize, the findings indicate that out of the three different sources of social support, only perceived organizational support is positively associated with life satisfaction. In addition, it appeared that work engagement and burnout explains the relationship between perceived organizational support and life satisfaction. Furthermore, only main effects were found between the predictors, namely job demands and social support at the workplace, and burnout, but no buffer effect.

6. LIMITATIONS & FUTURE RESEARCH

The first limitation is related to the research design. This research was cross-sectional, which limited the study to find causal relationships. An implication for future research could be to use a longitudinal research design to examine the cause-and-effect relationships between the different constructs.

Another limitation is that the results were not very generalizable due to a couple of reasons. Firstly, the period that this study took place was during the corona crisis, which means that the answers that participants provided might not be representative of their experience in their 'normal' life. There is a possibility that employees got more or less social support during that period. Also, individuals could be struggling with finding a work-life balance in this period, considering that the majority of the population was required to work at home (Peeters et al., 2005). The disruption in the work-life balance between workspace and private space can cause individuals to have more stress leading to burnouts. More research has to be conducted for this period.

Another explanation is that the participants in this study are employees from different sectors. Each sector has different job demands, and this study did not focus on one specific sector, which makes the results less generalizable to a bigger population. At the same time, it is not a limitation because it gives broader insights regarding this topic. Future research could conduct a follow-up study focusing on specific sectors and to get a higher external validity, more participants have to be included.

Regarding the findings of perceived supervisor support, it was found that it was strongly correlated with perceived organizational support. Therefore, it was decided to leave the variable 'perceived supervisor support' out of the regression analyses. As the goal of the regression analysis was to isolate the relationship between each independent variable and dependent variable, however, due to the strong correlation between perceived supervisor support and perceived organizational support, there was a possibility that changes in one of the variables were associated with shifts in the other variable. The multicollinearity reduced the precision of the estimated coefficients, which weakened the statistical power of the regression model (Franke, 2010). Future research should focus more on the differences between social support from the organization and the supervisor to get more insights. Another option is to use a different scale to measure perceived supervisor support because the scale that was used for perceived organizational support and perceived supervisor support was almost similar to each other.

Practical implications

As a practical implication, organizations could use this information to improve the work environments of employees by providing them social support to enhance life satisfaction. Social support can be expressed in many ways, such as by providing employees with more feedback or more appreciation (House, 1981). Workshops could be organized to provide organizations with knowledge on how to provide employees with social support in an effective way. Also, this study could raise awareness within organizations that it is important for them to show employees that they care about their employees' well-being as this can be beneficial to the organization as well as the well-being of employees (Pomaki, DeLongis, Frey, Short & Woehrle, 2010; Thoits, 2011).

7. CONCLUSION

In sum, the purpose of this study was to provide more insights regarding the relationship between perceived social support at the workplace and life satisfaction, while examining the mediating role of work engagement and burnout in this relation. Ultimately, out of the three different sources of social support, which are perceived organizational support, perceived supervisor support, and perceived co-worker support, it was found that only perceived organizational support was positively related to life satisfaction. Guided by the JD-R model, the results also confirmed the mediating role of burnout and work engagement between the relation of perceived organizational support and life satisfaction. Furthermore, the main effects were only found between the predictors, namely job demands and social support at the workplace, and burnout, but no buffer effect. Altogether, these results provide insights into the importance of perceived organizational support concerning the life satisfaction of employees. Thus, organizations should put this knowledge into practice to improve the life satisfaction of employees, for instance, by showing them that they care about their employees' well-being.

8. LITERATURE

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Appendix A - Informed Consent

Dear participant,

Thank you for choosing to participate in this research, which is part of the Master program Social, Health and Organizational Psychology at the University of Utrecht. This research aims to gain more knowledge about the relationship between workplace social support and work-related well-being and life satisfaction of employees. The questionnaires are short, so it will only take 5 to 10 minutes for you to complete it. Furthermore, the gathered data will be stored in a safe place. There is no personal information required when participating, thus everyone remains anonymous.

Informed consent

By entering this survey, you voluntarily agree to participate in this research. If for any reason you feel uncomfortable answering the questions, you can withdraw at any given moment without consequences. The data is guaranteed to be anonymized. By completing this survey, you've given the researcher the consent to make use of the provided information. By continuing and going to the next page, you declare that you have read and understood the information concerning this study. If there are any questions regarding this research, you can contact me or my supervisor.

Shirley Ho – s.k.j.ho@students.uu.nl

Jan Fekke Ybema (supervisor) - J.F.Ybema@uu.nl

Appendix B - Survey

Demographic variables

- What is your age?

- What is your gender?
Male/Female/Other
- What is your current job position?

- How many hours do you work per week?

- In what sector do you work?

Perceived organizational support

Answers are given on a 7-point Likert scale (1= Strongly disagree, 2= Moderately disagree, 3= Slightly disagree 4= Neither agree nor disagree, 5= Slightly agree, 6= Moderately agree, 7= Strongly agree).

1. The organization values my contribution to its well-being.
2. The organization fails to appreciate any extra effort from me.
3. The organization would ignore any complaint from me.
4. The organization cares about my well-being.
5. Even if I did the best job possible, the organization would fail to notice.
6. The organization cares about my general satisfaction at work.
7. The organization shows very little concern for me.
8. The organization takes pride in my accomplishments at work.

Perceived supervisor support

Answers are given on a 7-point Likert scale (1= Strongly disagree, 2= Moderately disagree, 3= Slightly disagree 4= Neither agree nor disagree, 5= Slightly agree, 6= Moderately agree, 7= Strongly agree).

1. My supervisor values my contribution to its well-being.
2. My supervisor fails to appreciate any extra effort from me.

3. My supervisor would ignore any complaint from me.
4. My supervisor cares about my well-being.
5. Even if I did the best job possible, my supervisor would fail to notice.
6. My supervisor cares about my general satisfaction at work.
7. My supervisor shows very little concern for me.
8. My supervisor takes pride in my accomplishments at work.

Perceived co-worker support

Answers are given on a 5-point Likert scale (0= Never, 1=Sometimes, 2= Often, 3= Very Often, 4= Always).

1. My colleagues give me helpful information or advice.
2. My colleagues are sympathetic and give me advice.
3. My colleagues give me clear and helpful feedback.
4. My colleagues give me practical assistance.

Job demands

Answers are given on a 5-point Likert scale (0=Never, 1= Sometimes, 2= About half of the time, 3=Often, 4= Very often).

1. Do you have too much work to do?
2. Do you work under time pressure?
3. Do you have to be attentive to many things at the same time?
4. Different people expect different things of me in my work
5. Do you have to give continuous attention to your work?
6. Do you have to remember many things in your work?
7. Are you confronted in your work with things that affect you personally?
8. Do you have contact with difficult people in your work?
9. Does your work put you in emotionally upsetting situations?

Burnout

Answers are given on a 7-point Likert scale (0= Never, 1= A few times a year or less, 2= Once a month or less, 3=A few times a month, 4= Once a week, 5= A few times a week, 6= Every day).

1. I feel mentally exhausted because of my work.

2. I have my doubts about the usefulness of my work.
3. Working a whole day is a heavy burden for me.
4. I feel burned out by my work.
5. I noticed that I have gotten too much distance from my work.
6. I am not as enthusiastic about my work as I was in the past
7. At the end of the working day, I feel empty.
8. I feel tired when I get up in the morning and have another working day in front of me.
9. I have become more cynical about the effects of my work.

Work engagement

Answers are given on a 7-point Likert scale (0= Never, 1= A few times a year or less, 2= Once a month or less, 3=A few times a month, 4= Once a week, 5= A few times a week, 6= Every day).

1. At my work, I feel bursting with energy.
2. At my job, I feel strong and vigorous.
3. I am enthusiastic about my job.
4. My job inspires me.
5. When I get up in the morning, I feel like going to work.
6. I feel happy when I am working intensely.
7. I am proud of the work that I do.
8. I am immersed in my work.
9. I get carried away when I am working.

Life satisfaction

Answers are given on a 7-point Likert scale (1= Strongly disagree, 2= Moderately disagree, 3= Slightly disagree 4= Neither agree nor disagree, 5= Slightly agree, 6= Moderately agree, 7= Strongly agree).

1. In most ways, my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.