Dimensions of social support in the experience of work engagement in middle age: A Northern Finland Birth Cohort 1966 Study

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So far, the relationship between the various dimensions of social support and work engagement has not been widely examined in the literature. In this study, we examined the relationship of social support at work (from a colleague or supervisor) and social support in one’s private life (from a spouse, relative or friend) with various dimensions of work engagement (vigor, dedication and absorption). The participants (N = 5,259, 52.7% women) came from the Northern Finland Birth Cohort 1966 study. Social support was evaluated with the Social Support Questionnaire (SSQ), and work engagement was assessed with a short version of the Utrecht Work Engagement Scale (UWES-9). The data were analyzed using linear regression analyses. The results showed that high social support at work (p < 0.001) and in one’s private life (p < 0.001) were associated with higher total work engagement, higher vigor, higher dedication, and higher absorption. These findings were adjusted for gender, marital status, education and occupational status. The results were essentially unchanged when they were additionally adjusted for job strain and effort-reward imbalance. To conclude, our findings indicate that the experience of overall social support may play a role in the experience of work engagement.

Key words: Employees, private life, social support, supervisors and colleagues, well-being at work, work engagement.

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INTRODUCTION

Contemporary work offers people increasing possibilities for self-actualization, occupational development and a sense of meaningfulness (Jiang & Johnson, 2018), but at the same time, mental and emotional demands at work have risen (Maslach, Schaufeli & Leiter, 2001; Siegrist, Starke, Chandola et al., 2004). Contemporary organizations need engaged employees who are proactive and committed to high quality performance (Bakker & Leiter, 2010). Along with this, there has been increasing interest toward how work engagement could be promoted.

Work engagement is characterized by vigor, dedication and absorption (Schaufeli & Bakker, 2004). Vigor consists of high levels of energy, high mental resilience at work, and high persistence when encountering challenges or difficulties at work (Schaufeli et al., 2002). Dedication, in turn, is defined as a strong involvement in one’s work and is characterized by a sense of significance and enthusiasm (Schaufeli et al., 2002). Absorption refers to a state of being fully concentrated and happily engrossed in one’s work (Schaufeli et al., 2002). It is often defined as a positive motivational and emotional state of mind at work (Schaufeli & Bakker, 2010). Taken together, engaged employees are highly energetic and self-efficacious, and they create their own positive feedback because of their positive attitude and activity level (Bakker, Albrecht & Leiter, 2011).

Work engagement has a significant and comprehensive influence on an individual’s well-being at work and in other contexts. Specifically, work engagement is closely linked to better job performance (Bakker & Bal, 2010; Kašpárková, Vaculík, Procházková & Schaufeli, 2018; Yongxing, Hongfei, Baoguo & Lei, 2017), success at work (Bakker & Bal, 2010; Bakker, Demerouti, & Ten Brummelhuis, 2012; Kašpárková et al., 2018), the productivity of the organization (Harter, Schmidt & Hayes, 2002), higher organizational commitment (Kim et al., 2017), and reduced employee turnover (Simpson, 2009). Moreover, work engagement also increases job satisfaction and enjoyment (Bakker, Schaufeli, Leiter & Taris, 2008; Gark, Dar & Mishra, 2018). Finally, work engagement is related to better coping with stressors (Sonnett, Mojza, Demerouti & Bakker, 2012) and higher resilience (Kašpárková et al., 2018). Overall, as work engagement is a key factor for well-being at work, it is important to study factors that may explain work engagement.

Since work engagement is linked to a variety of positive outcomes, it is necessary to investigate factors that could promote work engagement. One crucial factor could be social support. Social support can be examined at work and in one’s private life. Social support in private life refers to the aid and assistance provided by family members, friends, neighbors and important others (Barrera, Sandler & Ramsay, 1981). Social support at work includes two types of support: collegial and supervisory support. Collegial social support refers to, for example, the degree of social and emotional integration and trust among colleagues and the assistance with work tasks given by colleagues (Karasek & Theorell, 1990). Supervisory support, in turn, refers to the amount of emotional support (e.g., expressions of empathy), feedback and guidance, and material support (i.e., preparing resources and a budget to promote a subordinate’s work performance) received from the supervisor (Blanchnamvan, 2003).

Regarding the relationship between work engagement and social support, previous studies have suggested there is a relationship...
between social support at work and work engagement (Caesens, Stinglhamber & Luypaert, 2014; Orgambidez-Ramos & Almeida, 2017). It has been suggested that social support at work has an important role in work engagement in nursing (Nasurdin, Ling & Khan, 2018; Othman & Nasurdin, 2013), in education (Minghui, Lei, Xiaomeng & Posmesilc, 2018) and in the trading, finance and banking sectors (Taipale, Selander, Anttila & Nätti, 2011).

Importantly, however, there have been four limitations in the previous evidence regarding social support and work engagement. First, previous studies have not investigated separately social support at work and in private life. However, based on the matching hypothesis, social support at work and in private life may be differently related to work engagement. Specifically, the hypothesis postulates that job resources should be relevant and fit to the particular job demands in order to have a positive effect on work-related outcomes (De Jonge, Demerouti & Dormann, 2014; Peeters & Le Blanc, 2001). Consequently, social support in private life may not be related to work engagement. For example, job demands may include material or substance-related tasks whereas social support from family members, for example, may mostly fulfill emotional needs.

Second, the effect of social support on different elements of work engagement has remained uninvestigated. Based on the self-determination theory, individuals have a fundamental psychological need to experience social relatedness with others (Deci & Ryan, 2000). High perceived social support is suggested to be one crucial factor that promotes the fulfillment of this fundamental need (Van den Broeck, Ferris, Chang & Rosen, 2016). However, since social support is related to many emotionally focused outcomes such as higher well-being and better coping with stress (Kauffman & Beehr, 1986; Schaufeli & Bakker, 2010), social support may be more strongly related to the subscales of work engagement that require some level of emotional well-being. Specifically, social support may be especially strongly related to absorption that refers to a positive emotional state of mind at work (Schaufeli & Bakker, 2010). To the best of our knowledge, this has not been investigated before.

Third, the role of social support for work engagement in middle age has remained unclear. Developmental psychology highlights the importance of social relationships and social support in midlife (Antonucci, Akiyama & Merline, 2001). It seems that even though the amount of social relationships may decrease along with increasing age group, the satisfaction of social support seems to grow (Schnittker, 2007). The satisfaction stemming from social support may partly be explained by the fact that older people are usually more confident and satisfied with their lives and that they are investing in sustaining their most supportive relationships (Schnittker, 2007). In addition, work plays a significant role in midlife in terms of identity that is largely defined by work and work has also impact on cognitive capacity as well as on intellectual flexibility (Lachman, 2004).

Finally, it has remained uninvestigated whether experienced work stress modifies the association of social support with work engagement. Social support seems to be very important especially in jobs with high strain (Madsen, Jorgensen, Borritz, Nielsen & Rugulies, 2014). There are mechanisms through which social support enhances well-being. First, social support provides resources to cope with stress and second, social support also increases well-being directly by promoting self-esteem, sense of mastery over life and responding to the need of belonging (Thoits, 2011). Thoits (2011) differentiates between the types (emotional, instrumental) and sources (significant others or similar others) of social support in private life. The effectiveness of social support as stress buffering and enhancing well-being is related to the compatibility of the job demand and the resource (De Jonge et al., 2014). Emotional support from significant others like family members focuses usually to the understanding what the stressor means to the close one and it includes high stress buffering effect whereas for example instrumental support from similar others like colleagues is linked to direct experiential knowledge and provides active coping assistance (Thoits, 2011).

The current study aims to respond to the limitations of previous studies. Specifically, we first investigated whether the association of social support is differently related to different forms of work engagement (i.e., dedication, absorption, and vigor). Second, we investigated whether different types of social support (i.e., social support at work and in private life) are differently related to work engagement. Third, we investigated whether work stress modifies the association of social support with work engagement. We had a fairly large population-based sample including participants in their middle age. We hypothesized that high social support at work and in one’s private life is associated with higher work engagement. We also hypothesized that job stress modifies this association so that social support is associated with work engagement more strongly at higher as compared to lower levels of work stress.

METHODS

Participants

The study sample consisted of participants from the Northern Finland Birth Cohort 1966, a longitudinal research program which aims to promote population-level health and well-being. The cohort started with 12,058 live-born children (with expected birth dates in 1966, they represented 96% of all births in the region in 1966) who have been followed on a regular basis since their antenatal period through health care records, questionnaires and clinical examinations. In this study, we used questionnaire data from the 46-year follow-up study that was collected either by internet or on paper in the year 2012. Of the target population of 10,321 cohort members who were alive and residing in Finland, 6,868 (66.5%) answered a questionnaire on background factors, lifestyle and health, and 6,774 participants (65.6%) answered a questionnaire about economy, work and mental resources. Work-related questionnaire items were only collected from those who were active in working life, that is, they were not unemployed, retired, students or homemakers, so the sample size decreased to 5,376. Analyses were run for the participants without missing values on the study variables. The final sample size included 5,259–5,376 participants in the analyses.

Measures

Work engagement. We used the short version of the Utrecht Work Engagement Scale (UWES-9, Schaufeli et al., 2002) to measure work engagement. The scale includes three dimensions of three items each for a total of nine items (Cronbach’s alpha ≥ 0.9). They are vigor (α = 0.9) (e.g., ‘In my job, I feel strong and vigorous’), dedication (α = 0.9) (e.g., ‘I am enthusiastic about my job’) and absorption (α = 0.9) (e.g., ‘I feel happy when I am working intensely’). The participants responded to all items on a seven-point scale from 0 (never) to 6 (always).
engagement was calculated by summing and averaging the items. The reliability of this scale has also been previously confirmed (Schaufler, Bakker & Salanova, 2003).

Social support questionnaire (SSQ) We used a modified version of the Social Support Questionnaire (SSQ—Sarason, Levin, Basham & Sarason, 1983) to examine participants’ social support. In the measurements we used, social support in one’s private life (α = 0.8) was constituted of social support from a spouse, friends or relatives, and social support at work (α = 0.9) was constituted of social support from colleagues or supervisors (Sarason et al., 1983). The modified questionnaire (Cronbach’s α = 0.9), included two questions which were related to seven distinct sources of support, for instance, ‘If you face problems, how much support would you receive if wanted that would enhance your mental well-being’ from: (1) spouse, (2) close relative, (3) close friend, (4) colleague, (5) supervisor, (6) occupational health care and (7) employment office. The participants responded to all items on a five-point scale from 1 (much) to 5 (not at all). The questionnaire was shown to be reliable and valid (Sarason, Sarason, Shearin & Pierce, 1987). In the analyses, we used the total score of social support (the mean score of all the items), the score of social support in one’s private life (the mean score of social support from a spouse, friend, or relative), and the score of social support at work (the mean score of social support from a colleague or supervisor). We also investigated the independent associations of collegial and supervisory support on work engagement.

Job strain. Job strain was measured by the Job Content Questionnaire (ICQ, Karasek, 1985) in 2012. Job strain was calculated by dividing job demands (e.g., ‘Your job requires the ability to get along with others’) items by job control (e.g., ‘How much can you affect your work tasks?’) items. That is, job strain is suggested to result from high demands at work combined with low decision latitude (measured with the control items) (Karasek, 1985). Thus, high values of the ratio (job demands/job control) would be in disagreement to 5 (strongly agree) (Karasek, 1985). The Job strain was measured in the study sample. The study sample contains high total score of social support at work (adjusted for social support in one’s private life), and, correspondingly, we predicted work engagement would be influenced by social support in one’s private life (adjusted for social support at work). As additional analyses, we examined whether job strain or effort-reward imbalance moderates the association between social support and work engagement. That is, we reran the analyses so that (1) the interaction between job strain and social support or (2) the interaction between effort-reward imbalance and social support was included in analyses, when predicting work engagement.

Effort-reward imbalance. We used the Occupational Stress Questionnaire (Siegrist et al., 2004) to measure effort-reward imbalance (ERI). Effort was measured with a three-item scale (e.g., ‘I have constant time pressure due to a heavy work load’) (Cronbach’s α = 0.7) and reward with a four-item scale for reward (e.g., ‘I receive the respect I deserve from my superiors’) (α = 0.7). The Effort scale measures employees’ time and energy invested to job. The Reward scale, in turn, assesses the amount of salary, job security and self-acceptance at work (Siegrist, 1996). All the items were rated on a scale from 1 (strongly agree) to 5 (disagree). ERI was calculated by dividing the mean score of effort by the mean score of reward as suggested by Siegrist et al. (2004) and as has been done also previously (Hiningsen, Kivimäki, Elovainio et al., 2005; Landsbergis, Schnall, Warren, Pickering & Schwartz, 1994). There were nine job demand items, rated on a scale from 1 (strongly disagree) to 5 (strongly agree) (Cronbach’s α = 0.9). The job control portion of the questionnaire included 15 items that were also rated on a scale from 1 (strongly disagree) to 5 (strongly agree) (α = 0.9). All the items were reversed so that the higher values referred to higher job strain. Various studies have shown the job content questionnaire to be reliable and valid for measuring psychological job characteristics across nations and occupations (Karasek, Brisson, Kawakami, Houtman, Bongers & Amick, 1998; Niedhammer, 2002; Ostry, Marion, Demers et al., 2001).

Control Variables. We used gender, marital status, education and socioeconomic status as control variables. We adjusted also for job strain (Karasek, 1985) and effort-reward imbalance (Siegrist et al., 2004), as they may act as potential confounders (Sargent & Terry, 2000; Schmitt, 2016).

Statistical analysis First, we investigated whether gender modified the association between social support with work engagement. All the interactions between gender and social support were non-significant. Hence, we ran all the analyses for men and women together.

We used linear regression analyses to investigate the associations of social support with work engagement. Separate analyses were conducted for total work engagement and for the subscales of work engagement (vigor, dedication and absorption). Forms of social support (social support at work, social support in private life, supervisory social support, collegial social support) were inserted to the conducted models separately. That is, separate analyses were conducted for each of them. Model 1 was adjusted for gender, and Model 2 was also adjusted for marital status, education, occupational status, job strain and effort-reward imbalance. Our thought behind presenting two different models, was to ensure the comparability of our findings with future studies. The control variables are likely to vary between studies, which makes fully adjusted results difficult to compare between studies. Reporting Model 1 that only controls for gender, thus increases comparability since all studies are usually able to control for gender and gender-controlled models can then be compared between studies. Including Model 1 is also useful if this study will be used in a meta-analysis in the future.

Finally, we investigated whether social support at work and social support in one’s private life were associated with work engagement independently of each other. We had predicted work engagement would be influenced by social support at work (adjusted for social support in one’s private life), and, correspondingly, we predicted work engagement would be influenced by social support in one’s private life (adjusted for social support at work).

RESULTS The descriptive statistics for the study sample are reported in Table 1. Bivariate associations (Pearson correlations) between the study variables are presented in Table 2. The dimensions of work engagement were positively correlated. Education and occupational status were also positively correlated. Supervisory social support was correlated with higher collegial social support.

Table 3 shows the results of the linear regression analyses, when predicting work engagement by social support. High total social support, high social support in private life and high social support at work were also significantly associated with total work engagement (B = 0.50, p < 0.001; B = 0.35, p < 0.001; B = 0.36, p < 0.001; respectively), vigor (B = 0.46, p < 0.001;
Table 1. Descriptive statistics of the study sample

| Variable (range)                  | Mean | SD   | Frequency (%) |
|----------------------------------|------|------|---------------|
| Gender                           |      |      |               |
| Women                            | 2833 | 52.7%|               |
| Marital status (0–1)             |      |      |               |
| In a relationship                | 4228 | 78.9%|               |
| Occupational status (1–3)        | 1.79 | 0.81 |               |
| Job strain (1–5)                 | 1.15 | 0.22 |               |
| Effort-reward Imbalance (1–4)    | 1.20 | 0.53 |               |
| Work engagement (0–6)            | 4.67 | 1.19 |               |
| Vigor (0–6)                      | 4.71 | 1.18 |               |
| Dedication (0–6)                 | 4.62 | 1.32 |               |
| Absorption (0–6)                 | 4.42 | 1.40 |               |
| Social support (1–5)             | 3.11 | 0.68 |               |
| Social support private life (1–5)| 3.84 | 0.81 |               |
| Social support at work (1–5)     | 2.95 | 0.97 |               |
| Supervisory social support (1–5)| 2.67 | 1.14 |               |
| Collegial social support (1–5)   | 3.21 | 1.05 |               |

N = 5259-5376.

\[ B = 0.33, \quad p < 0.001; \quad B = 0.33, \quad p < 0.001; \quad \text{respectively}, \]

dedication \( (B = 0.54, \quad p < 0.001; \quad B = 0.37, \quad p < 0.001; \quad B = 0.39, \quad p < 0.001; \quad \text{respectively}) \) and absorption \( (B = 0.40, \quad p < 0.001; \quad B = 0.27, \quad p < 0.001; \quad B = 0.30, \quad p < 0.001; \quad \text{respectively}) \). High supervisory support and high collegial support were significantly associated with higher total work engagement \( (B = 0.30, \quad p < 0.001; \quad B = 0.27, \quad p < 0.001; \quad \text{respectively}) \) and higher vigor \( (B = 0.28, \quad p < 0.001; \quad B = 0.27, \quad p < 0.001; \quad \text{respectively}) \), higher dedication \( (B = 0.33, \quad p < 0.001; \quad B = 0.30, \quad p < 0.001; \quad \text{respectively}) \) and higher absorption \( (B = 0.26, \quad p < 0.001; \quad B = 0.22, \quad p < 0.001; \quad \text{respectively}) \). Social support explained from 2% to 9% of the variation in work engagement in Model 1.

Table 3 shows the results of the fully adjusted regression analyses (adjusted for gender, marital status, education, job strain and effort-reward imbalance). All the associations between social support and work engagement remained significant and positive. Social support explained from 2% to 5% of the variation in work engagement in Model 2.

Next, we investigated whether social support at work and social support in one’s private life were associated with work engagement independently of each other. When adjusted for gender and social support in one’s private life (Table 4), high social support at work was significantly associated with higher work engagement \( (B = 0.25, \quad p < 0.001) \), higher vigor \( (B = 0.26, \quad p < 0.001) \), higher dedication \( (B = 0.32, \quad p < 0.001) \) and higher absorption \( (B = 0.25, \quad p < 0.001) \). Additionally, when adjusted for gender and social support at work, higher social support in one’s private life was significantly associated with higher work engagement \( (B = 0.20, \quad p < 0.001) \), higher vigor \( (B = 0.19, \quad p < 0.001) \), higher dedication \( (B = 0.20, \quad p < 0.001) \) and higher absorption \( (B = 0.14, \quad p < 0.001) \) (Table 4). Social support in one’s private life explained 1% of the variation in work engagement. Social support at work explained from 1% to 4% of the variation in work engagement.

In the fully adjusted model (adjusted for gender, marital status, education, socioeconomic status, job strain and effort-reward imbalance) (Table 4), all the associations between social support and work engagement remained significant and positive. Social support explained from 1% to 3% of the variation in work engagement.

As additional analyses we examined, whether job strain or effort-reward imbalance moderates the association between social support and work engagement. When adjusted for gender, job strain moderated the association of social support with dedication \( (B = 0.14, \quad p < 0.05) \) but not with the other subscales of work engagement. Additionally, when adjusted for gender, effort-reward imbalance moderated the association of social support with the total score of work engagement \( (B = 0.21, \quad p < 0.05) \) and with the subscales of work engagement (for vigor \( B = 0.16, \quad p < 0.05; \) for dedication \( B = 0.20, \quad p < 0.05; \) and absorption \( B = 0.28, \quad p < 0.05 \)). Taken together, these findings suggested that the association of social support with work engagement was stronger at high than low levels of work stress. In the fully adjusted model (adjusted for gender, marital status, education, socioeconomic status, social support and effort-reward imbalance or job strain), all the significant interaction effects remained, except for the moderating effect of effort-reward imbalance on the association of social support with vigor. Table 5

DISCUSSION

Our results from a large birth cohort-based study showed that various dimensions of social support were associated with higher total work engagement and higher absorption, engagement, and vigor in middle age. To the best of our knowledge, this is the first study to demonstrate that social support even at home plays a role in the experience of engagement at work. We found that all the different subtypes of social support, that is, high social support at work, high supervisory social support, high collegial social support, and high social support in one’s private life were related to higher work engagement.

Our study supports earlier research (Caesens et al., 2014; Nasurdin et al., 2018; Orgambidez-Ramos & Almeida, 2017; Othman & Nasurdin, 2013; Taipale et al., 2011) on the association between social support at work and work engagement. Our findings also support JD-R theory in that social support is part of the job resources fostering work engagement (Bakker & Demerouti, 2007; Demerouti, Bakker, Nachreiner & Schaufeli, 2001). The results were also in line with preceding research that showed the importance of social support for general well-being at work (Bakker & Xanthopolou, 2013; Liu, Li, Ling & Cai, 2016; Sarason, Pierce & Sarason, 1990) which in turn was associated with job performance (Bakker & Demerouti, 2007). Our study promotes these earlier studies and in addition, can draw more generalizable conclusions as our results were not limited to a specific work sector due to our large general population-based sample.

Previous studies have obtained national differences in the link between social support and work engagement. That is, the association is suggested to be weaker in Finland than many other countries (such as Germany, Hungary, the Netherlands, Portugal, Sweden and the UK) (Taipale et al., 2011). Our study found that there is comparatively strong association between social support and work engagement also in Finland. This may be partly explained by that our study included a fairly large population-
Table 2. Bivariate correlations between study variables

|   | 1. Gender | 2. Marital status | 3. Education | 4. Occupational status | 5. Job strain | 6. ERICA | 7. Work engagement | 8. Vigour | 9. Dedication | 10. Absorption | 11. SSb private life | 12. SS at work | 13. Supervisory SS | 14. Collegial SS | 15. Social support sum |
|---|-----------|-------------------|-------------|-----------------------|--------------|---------|-------------------|---------|-------------|--------------|-------------------|--------------|-------------------|-------------|-------------------|
| 1 | 1.00      |                   |             |                       |              |         |                   |         |             |              |                   |              |                   |             |                   |
| 2 | -0.06**   |                   |             |                       |              |         |                   |         |             |              |                   |              |                   |             |                   |
| 3 | 0.10**    | 0.01              |             |                       |              |         |                   |         |             |              |                   |              |                   |             |                   |
| 4 | -0.05**   | 0.07**            | 0.51**      |                       | -0.10**      | -0.34** |                   |         |             |              |                   |              |                   |             |                   |
| 5 | 0.29**    | -0.03*            | -0.01       |                       | -0.18**      |          |                   |         |             |              |                   |              |                   |             |                   |
| 6 | 0.10**    | -0.01             | 0.05**      |                       | 0.14**       |          |                   |         |             |              |                   |              |                   |             |                   |
| 7 | 0.12**    | 0.50**            | 0.06**      | 0.12**                | -0.10**      | -0.34** |                   |         |             |              |                   |              |                   |             |                   |
| 8 | 0.11**    | 0.04**            | 0.03        | 0.06**                | -0.09**      | -0.32** | 0.94**            |         |             |              |                   |              |                   |             |                   |
| 9 | 0.11**    | 0.06**            | 0.07**      | 0.13**                | -0.10**      | -0.33** | 0.96**            | 0.83**  |             |              |                   |              |                   |             |                   |
| 10| 0.10**    | 0.05**            | 0.10**      | 0.18**                | -0.05**      | -0.19** | 0.78**            | 0.66**  | 0.75**      |              |                   |              |                   |             |                   |
| 11| 0.19**    | 0.16**            | -0.00       | 0.01                  | -0.00        | -0.14** | 0.25**            | 0.24**  | 0.24**      | 0.17**      |                   |              |                   |             |                   |
| 12| 0.06**    | 0.05**            | 0.02        | -0.05**               | -0.22**      | 0.30**  | 0.30**            | 0.30**  | 0.30**      | 0.22**      | 0.42**            |              |                   |             |                   |
| 13| 0.00      | 0.05**            | 0.01        | -0.08**               | -0.29**      | 0.29**  | 0.28**            | 0.28**  | 0.28**      | 0.21**      | 0.32**            | 0.32**      |                   |             |                   |
| 14| 0.11**    | 0.04**            | 0.02        | 0.00                  | -0.01       | -0.11** | 0.25**            | 0.25**  | 0.25**      | 0.17**      | 0.44**            | 0.44**      | 0.88**            | 0.58**      |                   |
| 15| 0.13**    | 0.10**            | -0.02       | -0.02                 | -0.21**      | 0.30**  | 0.29**            | 0.29**  | 0.29**      | 0.20**      | 0.79**            | 0.79**      | 0.79**            | 0.69**      | 0.72**            |

Notes: N = 5259-5376.
Effort-Reward Imbalance.
Social Support.
**p < 0.01.
*p < 0.05.
### Table 3. Results of gender adjusted and fully adjusted linear regression analyses of social support (SS) with work engagement (models 1 and 2)

|                      | Vigour | Dedication | Absorption |
|----------------------|--------|------------|------------|
| Work engagement      |        |            |            |
| B                    | SE     | Adj. R²    | R² change  | p         |
| SS sum               |        |            |            |           |
| Model 1              |        |            |            |           |
| SS sum               | 0.50   | 0.02       | 0.09       | 0.08      | <0.001 | 0.46 | 0.02 | 0.08 | 0.07 | <0.001 | 0.54 | 0.03 | 0.09 | 0.08 | <0.001 | 0.40 | 0.03 | 0.05 | 0.04 | <0.001 |
| SS private life      | 0.35   | 0.02       | 0.07       | 0.06      | <0.001 | 0.33 | 0.02 | 0.06 | 0.05 | <0.001 | 0.37 | 0.02 | 0.06 | 0.05 | <0.001 | 0.27 | 0.02 | 0.04 | 0.02 | <0.001 |
| SS work              | 0.36   | 0.02       | 0.10       | 0.09      | <0.001 | 0.33 | 0.02 | 0.09 | 0.07 | <0.001 | 0.39 | 0.02 | 0.10 | 0.09 | <0.001 | 0.30 | 0.02 | 0.05 | 0.04 | <0.001 |
| SS supervisory       | 0.30   | 0.01       | 0.10       | 0.08      | <0.001 | 0.28 | 0.01 | 0.08 | 0.07 | <0.001 | 0.33 | 0.03 | 0.09 | 0.08 | <0.001 | 0.26 | 0.02 | 0.06 | 0.04 | <0.001 |
| SS collegial         | 0.27   | 0.02       | 0.07       | 0.06      | <0.001 | 0.27 | 0.02 | 0.06 | 0.05 | <0.001 | 0.30 | 0.02 | 0.07 | 0.06 | <0.001 | 0.22 | 0.02 | 0.04 | 0.03 | <0.001 |

**Model 2**

|                      | Vigour | Dedication | Absorption |
|----------------------|--------|------------|------------|
| Work engagement      |        |            |            |
| B                    | SE     | Adj. R²    | R² change  | p         |
| SS sum               |        |            |            |           |
| Model 1              |        |            |            |           |
| SS sum               | 0.39   | 0.02       | 0.19       | 0.05      | <0.001 | 0.36 | 0.02 | 0.16 | 0.04 | <0.001 | 0.44 | 0.03 | 0.18 | 0.05 | <0.001 | 0.34 | 0.03 | 0.10 | 0.03 | <0.001 |
| SS private life      | 0.27   | 0.02       | 0.18       | 0.03      | <0.001 | 0.25 | 0.02 | 0.16 | 0.03 | <0.001 | 0.29 | 0.02 | 0.16 | 0.03 | <0.001 | 0.22 | 0.02 | 0.09 | 0.02 | <0.001 |
| SS work              | 0.28   | 0.02       | 0.19       | 0.05      | <0.001 | 0.25 | 0.02 | 0.17 | 0.04 | <0.001 | 0.31 | 0.02 | 0.19 | 0.05 | <0.001 | 0.25 | 0.02 | 0.11 | 0.03 | <0.001 |
| SS supervisory       | 0.22   | 0.01       | 0.19       | 0.04      | <0.001 | 0.20 | 0.01 | 0.16 | 0.03 | <0.001 | 0.24 | 0.02 | 0.17 | 0.04 | <0.001 | 0.21 | 0.02 | 0.10 | 0.03 | <0.001 |
| SS collegial         | 0.23   | 0.01       | 0.18       | 0.04      | <0.001 | 0.20 | 0.02 | 0.16 | 0.03 | <0.001 | 0.26 | 0.02 | 0.18 | 0.04 | <0.001 | 0.19 | 0.02 | 0.10 | 0.02 | <0.001 |

**Notes:** Gender was used as control variable in Model 1, aN = 5248-5250, bN = 5245-5146, cN = 5231-5232, dN = 5148-5150, eN = 5232-5233. Gender, marital status, education, socioeconomic status, job strain and effort-reward imbalance were used as control variables in Model 2, aN = 5141-5143, bN = 5137-5138, cN = 5120-5122, dN = 5041-5043, eN = 5123-5124, Unstandardized beta *Standard error of estimate. SS – Social support.

### Table 4. Results of gender adjusted and fully adjusted linear regression analyses when investigating the independent associations of social support at work and social support in one’s private life with work engagement (model 3 and 4)

|                      | Vigour | Dedication | Absorption |
|----------------------|--------|------------|------------|
| Work engagement      |        |            |            |
| B                    | SE     | Adj. R²    | R² change  | p         |
| SS private life      |        |            |            |           |
| Model 3              |        |            |            |           |
| SS private life      | 0.20   | 0.02       | 0.11       | 0.02      | <0.001 | 0.19 | 0.02 | 0.10 | 0.01 | <0.001 | 0.20 | 0.02 | 0.11 | 0.01 | <0.001 | 0.14 | 0.03 | 0.06 | 0.01 | <0.001 |
| SS work              | 0.25   | 0.02       | 0.06       | 0.03      | <0.001 | 0.26 | 0.02 | 0.10 | 0.04 | <0.001 | 0.32 | 0.02 | 0.11 | 0.05 | <0.001 | 0.25 | 0.02 | 0.06 | 0.03 | <0.001 |

**Model 4**

|                      | Vigour | Dedication | Absorption |
|----------------------|--------|------------|------------|
| Work engagement      |        |            |            |
| B                    | SE     | Adj. R²    | R² change  | p         |
| SS private life      | 0.16   | 0.02       | 0.20       | 0.01      | <0.001 | 0.16 | 0.02 | 0.18 | 0.01 | <0.001 | 0.16 | 0.02 | 0.19 | 0.01 | <0.001 | 0.12 | 0.03 | 0.11 | 0.00 | <0.001 |
| SS work              | 0.23   | 0.02       | 0.20       | 0.03      | <0.001 | 0.20 | 0.02 | 0.18 | 0.02 | <0.001 | 0.26 | 0.02 | 0.19 | 0.03 | <0.001 | 0.21 | 0.02 | 0.11 | 0.02 | <0.001 |

**Notes:** Gender, social support at work and social support in one’s private life were used as control variables in Model 3, aN = 5226. SS – Social support. Gender, marital status, education, socioeconomic status, job strain and effort-reward imbalance were used as control variables in model4, aN = 5118-5119. SS – Social support.
Table 5. The subscales of work engagement

| Work engagement | Vigour | Dedication | Absorption |
|-----------------|--------|------------|------------|
| BS              | Adj. $R^2$ | $R^2_{change}$ | $p$ |
| SE              | Adj. $R^2$ | $R^2_{change}$ | $p$ |
| Model 1         | 0.11 | 0.11 | 0.00 |
| SS*Job straina | 0.21 | 0.14 | 0.00 |
| SS*ERIBc       | 0.19 | 0.13 | 0.00 |

Notes: aSocial support, bGender, social support and job strain were used as control variables, N = 5232. bEffort-Reward imbalance, cGender, social support and ERI were used as control variables, N = 5242.

dGender, marital status, education, socioeconomic status, job strain and social support were used as control variables, N = 5154.

dGender, marital status, education, socioeconomic status, job strain and social support were used as control variables, N = 5143.

eGender, marital status, education, socioeconomic status, job strain and social support were used as control variables, N = 5134.

Nasurdin, 2013; Taipale et al., 2011; Nurmayanti, Thoyib & Irawanto, 2014). Remote work, flexible hours and other kinds of work arrangements are examples which help employees to receive more social support in their private lives and combine their work and private lives which in turn is related to a better work engagement (Siu, Lu, Brough et al., 2010). There is also evidence that social support from a supervisor has a positive impact on work and family balance.

Social support demonstrated the strongest association with dedication. Our study provides support for the earlier finding that job resources, such as social support, specifically promote dedication (Schaufeli & Bakker, 2004). Social support was also associated with vigor which supports an earlier finding that social job resources facilitate the experience of vigor (Blanco-Donoso, Garrosa, Moreno-Jimenez, de Almeida & Villela-Bueno, 2017).

Social support in one’s private life and social support at work were both associated with higher work engagement, but social support at work explained more of the variation of work engagement than social support in one’s private life. Previous studies have found an association between social support at work and work engagement (Caesens et al., 2014; Nasurdin et al., 2018; Orgambidez-Ramos & Almeida, 2017; Othman & Nasurdin, 2013; Taipale et al., 2011), but this study was the first to demonstrate the role of social support in one’s private life for work engagement.

The supervisory support and collegial support had similar associations with work engagement. The finding that supervisory support and collegial support have the same kind of association with work engagement is a new contribution of this study as prior literature has typically proposed that supervisory support plays a larger role in work engagement than collegial support (Bakker, Hakanen, Demerouti & Xanthapoulou, 2007). Earlier research has suggested that supervisory support is related to job satisfaction and affective commitment (Ugur & Emin, 2010), and it has been shown to reduce turnover intention (Fukui, Wu & Salyes, 2019). Supervisory support is also seen as an important resource in maintaining work and family balance which promotes well-being at work (Jang, 2009). Peer and collegial support also have an impact on employee engagement. Previous research has shown that peer and collegial support influences employees’ work attitudes (Xanthopoulou, Baker, Heuven, Demerouti & Schaufeli, 2008). Our findings revealed that collegial and supervisory support might be affecting employees’ work engagement but that should be confirmed in longitudinal intervention studies. It has been proposed earlier that supervisors and peers are an essential resource in stimulating work engagement (Xanthopoulou, Baker, Heuven, Demerouti & Schaufeli, 2008).

Although the role of social support in one’s private life for work engagement has not been previously examined, some related evidence comes from studies on work and family balance. Social support in one’s private life is closely linked to research on work and family balance which is divided into studies on positive and negative spill over from home to work and from work to home (Barnett, Marshall & Sayer, 1992; Mennino, Rubin & Breitfield, 2005) and conflict between work and family roles (Ismail & Nordin, 2012; Nurmayanti, Thoyib & Irawanto, 2014). Remote work, flexible hours and other kinds of work arrangements are examples which help employees to receive more social support in their private lives and combine their work and private lives which in turn is related to a better work engagement (Siu, Lu, Brough et al., 2010). There is also evidence that social support from a supervisor has a positive impact on work and family balance.
(Hakanen, Peeters & Perhoniemi, 2011; Kossek, Pichler, Bodner & Hammer, 2011). Work engagement has also been shown to have a spillover influence from one colleague to another (Bakker & Demerouti, 2009; Bakker, Van Emmerik & Euwema, 2006) and from one spouse to another (Bakker & Demerouti, 2007). Fairness at workplace and favorable job conditions are examples that promote social support at workplace (Rhoades & Eisenberg, 2002). Thus, research has indicated that both organizational culture and management have significant influence on social support (Parent & Lovelace, 2018; Yukl, 2002). Positive organizational culture is emphasized by creating an environment where employees can be engaged and develop themselves (Parent & Lovelace, 2018).

Our study also revealed that job strain and effort-reward imbalance moderated the association between social support and work engagement. Job strain had moderating effect only for the association between social support and dedication when effort-reward imbalance moderated all the associations between social support and work engagement and its subdimensions. According to our findings, social support has a stronger influence on work engagement in jobs with higher job strain than lower job strain. Our results support prior studies that particularly social support of job resources enhance work engagement especially when job demands are high (Bakker et al., 2007).

Social support has an important role in employees’ lives as we have described here, and social relationships and social support should receive appropriate attention in work organizations.

The mechanism between social support and well-being is presented in literature in two ways; there are studies that underline the stress buffering effect (Cohen & Wills, 1985; Thoits, 2011) and research that emphasize the direct influence of social support to well-being (Thoits, 2011; Wills, 1985). Specifically, the direct effect of social support to well-being and health is mostly characterized by increasing the sense of mattering, self-esteem, mastery, belonging and social influence (Thoits, 2011). In terms of job resources, social support plays a significant role for work engagement because it has positive effects on emotions (Sarason et al., 1983), social relationship and atmosphere at work (Karasek & Theorell, 1990).

Furthermore, work engagement boosts people’s everyday lives in many ways. Engaged employees bring their energy to their homes as well (Rodriguez-Munoz, Sanz-Vergel, Demerouti & Bakker, 2013) and it can have a positive effect on family life. Research indicates that work engagement predicts also increased life-satisfaction and decreased risk of burnout in life generally (Hakanen & Schaufeli, 2012). Rodriguez-Munoz et al. (2013) revealed that work engagement increased also daily happiness of employees and it had also positive effect on spouse’s daily happiness.

Our results suggest that various dimensions of social support might have a role in the experience of work engagement. It is important to pay attention to supervisor and subordinate relationships and leadership skills as well as to teamwork and social relationships in the workplace among colleagues. Social relationships and social support are worth being discussed and regarded in work organizations as they are closely linked to work performance, well-being and productivity (Bakker, Schaufeli, Leiter & Taris, 2008; Harter et al., 2002; Kaśpárková et al., 2018). Work organizations should promote employees’ social relationships and mutual support at work as well as reasonable work-family balance to enable social support in private life as they are both clearly connected to work engagement.

LIMITATIONS AND STRENGTHS

The most important limitation of this study is related to the cross-sectional design from which causal inferences between social support and work engagement cannot be drawn. The use of self-report measures in assessing both predictor (social support) and outcome (work engagement) is another important limitation, and this may lead to a common method bias (Podsakoff, McKenzie, Lee & Podsakoff, 2003). However, we did have different scaling on the measurement items (different kinds of items and differently sized Likert scales, 1 to 4 and 0 to 6, and part of the measurements had reversed scaling) used in this study which reduces the risk of bias (Podsakoff et al., 2003). More importantly, we found significant associations in those analyses examining social support in one’s private life and also while adjusting for social support at work and vice versa. If our findings would be explained by common method bias, this kind of adjustment should erase the association. Self-report surveys are an important way to gather information about subjectively experienced variables such as social support and work engagement, and common method variance may not be as large a source of bias in self-report surveys as has been proposed in the literature (Spector, 2006).

The strengths of this study include the large non-selective population-based sample covering all branches of working life in public and private sectors. We used only well-validated measures in our study. We could also control a variety of factors in our study which helped to generalize the results. However, the association between social support and work engagement needs to be researched in additional national settings.

CONCLUSIONS

To summarize, this study provides insights into the role of social support in the experience of work engagement. The study also points out the importance of social support in one’s private life as well as the role of social support at work. It also showed that collegial support plays almost as important a role as supervisory support. Our findings imply that paying attention to social interaction and social support in workplaces might offer a way to improve support and resources for better work engagement. Furthermore, the role of social support in one’s private life, such as from a spouse, family and friends should be considered in workplaces by providing opportunities for maintaining a better balance between work and one’s private life. However, our study does not provide information on causal associations between social support and engagement which should be investigated with a longitudinal design.

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