# Off-the-job embeddedness moderates work intensity on employee stress

## INTRODUCTION

A feature of the modern world of work is the increase in work intensity (Chowhan *et al*., 2019; Huo *et al*., 2019; Kohont & Čehovin Zajc, 2020). The literature describes work intensity as the level of effort expected by employers of their employees in carrying out their work (Brown, 2012; Fein *et al.*, 2017). Here we distinguish between work intensity and work intensification. Work intensity relates to the effort required of an employee *at a point in time*, while work intensification relates to the *change* in work effort expected of the employee over time (Burke et al., 2010). Work intensity has two forms (Green, 2004). *Intensiv*e work intensity relates to the effort, pressure and urgency experienced by employees to convert inputs to output, such as the speed of work (Green, 2004), the reduction of unproductive, idle or break time (Roberts, 2007), and tighter deadlines (Paškvan and Kubicek, 2017). *Extensive* work intensity relates to the working hours an employee is expected to work (Green, 2004), beyond the usual workday. As the hours of work have stabilised for most non-managerial employees (Burke et al., 2010; Ruppanner & Maume, 2016), this paper will focus on the implications of intensive work intensity.

The literature has demonstrated that higher levels of work intensity is associated with negative employee outcomes, such as employee stress (Bamberger et al., 2015; Boxall and Macky, 2014; Burke *et al*., 2010; Zeytinoglu *et al.*, 2007), emotional exhaustion (Boekhorst *et al*., 2017; Huo *et al*., 2019), and reduced personal efficacy and work involvement (Neirotti, 2020). This stress has consequences for employee performance (Kelliher and Anderson, 2010; Macky and Boxall, 2008) and physiological and psychosomatic harm (Chowhan *et al*., 2019; Franke, 2015). The work-life balance literature has demonstrated that work intensity can have consequences for the employee's life out of work, adding to work-

life conflict (Michel et al, 2011) and negatively impacting life satisfaction (Boekhorst *et al*., 2017).

This paper proposes that an employee's off-the-job embeddedness can buffer the negative consequences of work intensity. Conservation of resources (COR) theory predicts that employees with higher levels of work intensity are likely to experience more stress (Hobfoll, 1989). Drawing on the social support resource variant of COR (Hobfoll *et al*.,1990) as well as job embeddedness theory (JET) (Mitchell *et al*., 2001), we propose that employees with higher levels of off-the-job embeddedness (OffJE) are likely to report lower levels of stress than employees experiencing the same level of work intensity but have lower levels of OffJE. This occurs because more embedded employees will have better access to friendship and community-based resources which can be used to better cope with the demands of work intensity (Mitchell *et al*., 2001; Singh, Early View).

Our paper contributes to the literature in several ways. First, this paper explores a way for organisational managements to better deal with the negative consequences of work intensity. As Sparham and Sung (2007) have argued, increases in work intensity can increase organisational performance although this performance improvement may come at the cost of reduced welfare and retention of employees (Chowhan *et al*., 2019). This paper investigates a potential means of ameliorating the adverse consequences of work intensity. This research points to a means of increasing organisational sustainability and employee welfare during times of economic growth and transformation. Second, this paper contributes to our understanding of the role of social support derived from non-work sources. There is substantial literature that examines the impact of social support from *within* the workplace (Huo *et al*., 2019), from line managers and co-workers. This paper argues that employees can benefit from sources of social support located *outside* the organisation, such as friends and family, connection to the people and activities of the local community (Authors, 2018).

Third, this paper develops our understanding of the potential impact of OffJE. Employee embeddedness has grown as an explanation of why people stay in their jobs (Lee *et al.*, 2017) and cope with adverse circumstances (Authors, 2019). However, this literature has largely understated the significance of OffJE (Zhang *et al*. 2012; Singh et al., Early view). This paper extends the JET to demonstrate that an employee's involvement in their life outside the workplace, represented by off-the-job embeddedness, can ameliorate negative workplace experience. Finally, this paper adds to the growing literature that integrates employee job embeddedness and the conservation of resources theory (Kiazad *et al*., 2015; Authors, 2018; Singh et al, Early view).

## CONSERVATION OF RESOURCES THEORY

### *The general principles of COR theory*

Conservation of resources (COR) theory explains why adverse conditions at work–such as work intensity–can lead to employee stress, and how employee embeddedness may minimise this effect. COR theory holds that people seek to acquire and retain resources that improve the quality of their life and will actively resist the loss of these resources (Hobfoll, 2001). Threats and the actual loss of these resources leads to stress (Pingel *et al*., 2019) and is likely to lead to reduced performance in the workplace and lower quality of life outside the workplace (Tabor *et al*, 2019). A surplus of resources has the opposite effect, enabling a state of wellbeing (Hobfoll, 2001). Resources are understood to be 'anything perceived by the individual to help attain his or her goals' (Halbesleben *et al*, 2014, p. 1138), and are 'those objects, personal characteristics, conditions or energies that are valued by the individual (Hobfoll, 1988, p. 26). These resources may be internal – possessed by oneself, such as a personality characteristic or energy – or external, not possessed by oneself but available to be used, such as social support or access to a line of credit at a bank (Hobfoll, 1988).

When existing resources are threatened, COR theory holds that people can deploy other resources to hold off or minimise potential resource loss or to be invested in order to acquire additional resources for future use through replenishment (Halbesleben, 2006). For example, an employee with greater physical health, such as stamina or psychological resilience, can use those resources to better cope with the resource depletion of longer working hours. A property developer may be able to withstand a market downturn if they are able to access bridging finance. The threat of unemployment can be reduced by investing savings in further education that can improve the employee's performance in their current job or their prospects in finding an alternative job.

In the COR perspective, people react more quickly and decisively to threats of resource loss than to opportunities to acquire new resources; a small or perceived threat to *existing* resources is likely to prompt a bigger response than the opportunity to acquire *new* resources (Wolter *et al*., 2019). Those with less resources will act more quickly to protect those resources than those with more resources (Hobfoll *et al*., 2018). Sudden resource loss can spark a downward spiral of further resource loss. Here, each round of resource loss leads to additional stress that demands ameliorative resources and the use of further resources to prevent additional loss. This drain leads to growing and accelerating resource loss (Wu *et al*., 2019). A resource gain spiral may occur but is relatively unlikely and is slow to start and difficult to maintain compared to a resource loss spiral (Gross *et al*., 2019). During times of resource threat, the resource holder will evaluate the nature and consequences of the threat and determine if they are able to protect their resources. If confident, resources can be successfully used to prevent or minimise resource loss, and if possible, to obtain additional resources. If not confident, the resource holder will act defensively to safeguard existing resources. In the case of employees confronted by higher levels of work intensity, this may

prompt the employee to experience stress, reduce organisational citizenship behaviours and to minimise other forms of voluntary work-related effort.

*Social support as a resource*

In the social support resource variant of COR theory (Hobfoll *et al*, 1990), social support 'may be seen as the providing, bolstering, or facilitating the provision of each of the four types [objects, personal characteristics, conditions or energies] of resources' (Hobfoll and Stokes, 1988, p. 502), increasing the resources available to a person at a time of need. Social support in this paper is the 'assistance and protection given [by] others' (Langford *et al*., 1997, p. 95) and those 'social interactions or relationships that provide individuals with actual assistance' (Hobfoll and Stokes, 1988, p. 488). Social support can assist an individual to cope with the current demands of their environment, acting to prevent, buffer or offset the depletion of resources (Hobfoll *et al*., 1990). The benefit of social support can be both *actual,* by increasing the availability of tangible resources, and *perceived*, by the recipient's increased belief in the availability of objects, conditions and energies (Hobfoll *et al*., 1990).

Social support can play two roles during times of resource threat (Hobfoll, 1988). First, social support provides potential access to resources not actually possessed, enabling access to the resources held by others. Hu *et al*., (2019), and Mathieu *et al*. (2019) suggest that this aspect of social support can assist through *instrumental* and *informational* support. *Instrumental* support enables better access to necessary goods and services – a friend who can pick up children from school on short notice, pick up supplies from a warehouse, chop firewood in preparation for winter, or provide pre-cooked meals (Mathieu *et al*., 2019). Social support networks can provide *informational support* such as assistance and guidance in solving the various challenges and problems presented by situations of resource threat, or by providing referrals to people who can help in solving these challenges and problems (Hu *et al*., 2019).

Second, social support can provide emotional and appraisal support to a person experiencing the psychological consequences of resource threat. Emotional support relates to giving reassurance, empathy and understanding to a person experiencing difficulty. This has the effect of strengthening 'the positive aspects of the self when stressful times have led one to lose sight of them…and would improve one's perceptions of personal accomplishment' (Halbesleben, 2006, p.1135). *Appraisal support* occurs when a resource holder is mentored, advised or coached, enabling them to make better decisions. People with extensive networks are more likely to be able to access these resources (Marroquín *et al*., 2019).

Although not part of the social support COR tradition, it could also be argued that social support outside the workplace may assist in another way. Following Sonnentag (2012), employees with access to greater levels of social support outside the workplace may be better able to detach and disengage from the burdens of work, because of their greater involvement and engagement in family and community life. As a consequence, employees with greater social support outside work may be better able to recover from the stresses and difficulty of their lives at work (Bennett *et. al.,* 2018). *Work intensity as a form of resource depletion*

Viewed from the perspective of COR theory, work intensity can be understood as a form of role overload (Bacharach et al. 1991), a demand for an employee to provide higher levels of work effort which may be difficult or uncomfortable or potentially harmful (Franke, 2015; Halbesleben, 2006). Here the employee is required to apply finite energetic resources towards coping with the increased work demands, at a greater level than expected, which leads to the depletion of existing resources unless some form of replenishment occurs.

The literature suggests that work intensity is associated with increased employee stress. Bamberger *et al*. (2015) found that employees reporting high levels of work intensity also reported high levels of stress, while employees reporting reported low levels of work

intensity also reported low levels of stress. Boxall and Macky (2014), Burke *et al.* (2010) and Zeytinoglu *et al.* (2007) found similarly. Thus, we hypothesise:

*H1: Work intensity is positively associated with employee stress.*

*Off-the-job embeddedness as a store of social support resources*

Job embeddedness theory (JET) has demonstrated that employee workplace attitudes and behaviours are influenced by their connections to their job and employing organisation as well as their life out of work (Rubenstein *et al*., 2020). These connections have the effect of creating a 'net or a web in which an individual can become stuck' (Mitchell *et al*., 2001, p. 1004) that influences the employee's decisions about workplace effort and commitment as well as their likelihood to consider leaving the organisation. In this literature, employees are attached through their connections to the people, activities and processes of their organisation and community (i.e., *link* embeddedness), by their congruence with the activities, people and culture of their organisation and community (i.e., *fit* embeddedness), and by the loss that they would experience if they left the organisation or community *(*i.e., *sacrifice* embeddedness).

JET and COR researchers have theorised and demonstrated an employee's embeddedness represents an abundance of resources available for preventing resource depletion and enabling future resource acquisition (Halbesleben and Wheeler, 2008; Kiazad *et al*., 2015). Kiazad *et al*. (2015) explains that an employee's embeddedness represents a bundle of resources that can be used by employees to better fulfil the requirements of the job, which can assist the employee to improve their position within the organisation and acquire additional resources. Further, and immediately relevant to this paper, resource abundance better enables the employee to cope with negative experiences within the organisation. Kiazad *et al*. (2014) demonstrate how an employee's fit, link and sacrifice embeddedness can provide specific organisational resources that enable an employee to cope with adverse

circumstances within the organisation, a point also made by Singh *et al*. (2018) and Authors (2018; 2019).

Off-the-job embeddedness reflects the degree to which the employee has attachments to the community in which they live (Feldman *et al*., 2012; Kiazad *et al*., 2015). The social support literature holds that people who are more involved to their local community are also more likely to hold more extensive social support networks within that community (Herrero and Gracia, 2007; Lin *et al*., 2009). Consequently, those who are more embedded are more likely to hold social support resources and are more capable of using those resources compared to those with less community attachment. This has been demonstrated by Singh *et al*. (2018), who found that perceived support from within the community was positively associated with community embeddedness. In that study, the effect of perceived community and neighbour support predicted employee off-the-job embeddedness and was mediated by perceptions of community psychological safety. Community and neighbour social support prompts a feeling of psychological safety that reduces employee fear and worry (Singh *et al*., 2018), and presumably, will also lead to reduced levels of stress.

As noted earlier, JET theory identifies that an employee's embeddedness may have three types. Here we refocus those types to the relationship with the community. A person's level of community attachment may be the consequence of *fit* with the people, organisations and activities within that community. For example, a person who is actively involved in the local volunteer fire brigade and feels a strong affinity to the purpose of the group preventing and fighting fires (and the people who do the life-threatening fire fighting alongside them), will have a greater *fit* than a resident with less involvement. A person with more involvement with the people in their local communitysuch as other volunteers in the fire brigade, is likely to develop stronger relationships and connections as a result, developing greater link

embeddedness. Accordingly, the more a person is involved, the greater the fit with the activities and link with more people, the greater e a sacrifice it would be to leave.

The social and community psychology social support literature has demonstrated that these activities–the fit and the links, and in turn, the sacrifice embeddedness–creates the potential to build up social support resources (Fasbender *et al*., 2019). This potential is acquired in two ways. First, employees who are more involved in the local community–typified by higher levels of community linkage and fit embeddedness–are more likely to have higher levels of social integration. This creates the potential for greater social support, a point demonstrated throughout the literature (Merino, 2014). Second, following social identity and self-categorisation theory (Hogg and Terry, 2000), an employee with higher levels of community fit embeddedness to a specific group within the community is more likely to form a closer association with people within that group (Merino, 2014).

Accordingly, we propose that employees who perceive themselves to be more embedded have a greater potential to access social support resources and thus are more likely to be able to deploy helpful social support resources in response to work intensity. As a result, more embedded employees potentially will be better able to buffer the negative effect of work intensity. Accordingly, we propose:

*H2: The relationship between work intensity and perceived stress is weaker for employees who have higher levels of off-the-job embeddedness.*

**Method**

*Participants*

Participants were workers employed in a variety of industries in Queensland, Australia. These employees were recruited by third year undergraduate Psychology students enrolled at Queensland regional university and completed the study in 2015. The students made personal contact with potential respondents via social media or face-to-face meetings,

and the respondents completed the survey at a university-based online survey portal. The response rate based on student contact and recruitment was approximately 80%. Responses were received from 391 people with approximately 42% employed as managers and professionals, 34% employed as sales and service professionals, 21% employed in trades, and 3% were volunteers or served in unpaid work. 41% of responses were men and 59% were women, and in accord with the regional university recruitment process, 57% of respondents reported working in regional and rural areas. However, the respondents reporting regional location were based on the "inner regional" designation (Baxter, Hayes, & Gray, 2011), making the overall sample of employees an approximate match to the population distribution across these areas in Australia (ABS, 2017). We used different age categories and respondent percentages were: 19% at 18-25 years of age, 51% at 26-45 years of age, and 30% at 46-65 years of age.

*Measures*

*Stress* was measured as the unweighted mean of ten items from Cohen *et al*.'s (1983) perceived stress scale. These items were measured using 5-point Likert scales, ranging from 1 (Never) to 5 (Very often). An example item is 'In the last month, how often have you felt nervous and "stressed"?' Where necessary items were reverse-coded prior to analysis. The Cronbach alpha score for this scale in this sample was .88.

*Work intensity* was measured using the three-item work intensity scale devised for the 2012 Australian Workplace and Life Index. As this scale is not reported elsewhere, we list all of the items: 'Working at very high speed,' 'Working to tight deadlines' and 'It often seems like you have too much work for one person to do.' These items were constructed and developed to measures the aspect of work intensity as reflected in particular attention to effort expended per unit of time working, which equates to the pace of production of goods or services. As the first two items were measured using 7-point Likert scales and the third used

a 4-point scale, we cannot accurately calculate the absolute level of employee perceived work intensity across the three items of the scale. However, we calculated *work intensity* as the mean of the z-scores of the three items. The Cronbach alpha score for this scale in this sample was .70.

*Off-the-job embeddedness.* Following Ng and Feldman (2012), off-the-job embeddedness was measured using a five-item version of Crossley *et al*.'s (2007) reflective global job embeddedness scale, where 'community' was substituted for references to 'the organisation.' This scale asked respondents about their attachment to the community where they live. An example item is 'I'm too caught up in this community to leave.' These items were measured using 5-point Likert items, ranging from 1 (Strongly disagree) to 5 (Strongly agree). Confirmatory factor analysis found this measure to adequately explain the data: $\chi^2(3) = 7.22$, p=.06 *ns*; CFI=.99; TLI=.99; SRMR = .01; RMSEA =.02, 90% CI[.00, .08].The Cronbach alpha score was .90.

*Gender.* Respondents were asked their gender. A dummy variable was created, with female respondents coded as 0, and male respondents as 1.

*Age.* Respondents were asked to specify their age. Age was coded into 15 categories of five-year age spans (1: Less than 18, 2:18-25, 3: 26-30, 4: 31-35… 15: 85 or above).

*Tenure.* Tenure was calculated as the total number of months the employee had been in that position.

*Life Satisfaction (Present)* was measured as the unweighted mean of the five items of the present life satisfaction subscale developed by Pavot *et al*. (1998). A sample item is 'I am satisfied with my current life'. The Cronbach alpha score for this sub-scale in this sample was .89.

***Procedures***

*Confirmatory factor analysis*

We undertook confirmatory analysis to confirm the factor structure of the measurement model, comparing a three-factor model (work intensity, off-the-job embeddedness, and stress) with a two-factor model (work intensity and stress as one factor, and off-the-job embeddedness). The three-factor model had adequate fit ($\chi^2$/df = 3.33, *p*=.06; CFI=.91; TLI=.89; RMSEA =.077, 90% CI[.069, .085]).The two-factor model report had poorer fit ($\chi^2$/df = 8.63, *p*=.07; CFI=.66; TLI=.99; RMSEA =.135, 90% CI[.127, .142]). The three-factor model had better fit, overall ($\Delta\chi^2$= 637, $\Delta$df=1, $\Delta$p =.00).

*Regression*

The hypotheses were examined using Hayes (2017) PROCESS macro, which used 1,000 percentile bootstrap samples to estimate 95% confidence intervals. Dawson's (2014) excel spreadsheet was used to plot the interaction.

*Use of control variables*

Following Bernerth and Aguinis's (2016) recommendations, we controlled for gender, age, organisational tenure and present life satisfaction. As men and women acquire and use social support differently, gender was included (Antonucci and Akiyama, 1987; Eagly and Wood, 1991). We controlled for employee age and organisational tenure, which are associated with employee characteristics but predict employee attitudes and outcomes differently (Bedeian et al., 1992). We also controlled for life satisfaction, as life satisfaction and stress are negatively associated (Boekhorst *et al*., 2017).

*Assessment of common method bias*

As this study is reliant on cross-sectional data, and work intensity is necessarily measured by self-reported data (Bamberger *et al*., 2015), we assessed the extent of common method bias using the common latent factor method outlined by Podsakoff *et al*. (2003). We identified that the common method bias within the dataset inflated estimates by an average of

14%. This represents a relatively low level of bias compared to the average estimated bias of 25% reported in Williams *et al*.'s (1989) meta-analysis.

**RESULTS**

Table 1 reports on the descriptive statistics of the data. The stress, work intensity, and off-the-job embeddedness measures displayed the expected relationships with each other, such as the positive relationship between stress and work intensity ($r$ = .23; $p$ < .001).

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Table 1 about here

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The hypotheses were tested using Hayes' (2017) PROCESS macro using Model 1 using 1,000 percentile bootstrapped samples. The results of this moderator regression are reported in Table 2.

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Table 2 about here

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Hypothesis 1 predicted that employees experiencing higher levels of work intensity will also experience greater perceived work stress. In this case, work intensity had a positive relationship with employee perceptions of stress ($b$ = 0.37, $t$(377) = 3.22, SE = 0.12, $p$ < .01). Hypothesis 1 was supported.

Hypothesis 2 proposed that off-the-job embeddedness would dampen the negative relationship between work intensity and employee stress such that employees with higher levels of embeddedness are less likely to report increasing work intensity. As can be seen in Table 2, there was a statistically significant interaction effect ($b$ = -0.09, $t$(377) = -2.24, SE = 0.04, $p$ < .05). We then estimated simple slopes at a low (16$^{th}$ percentile) and high level (84$^{th}$ percentile) of OffJE. The simple slope for employees with low levels of off-the-job

embeddedness was statistically significant ($b$ = 0.20, $t$(377) = 4.09, SE = 0.05, $p$ = .001). Work intensity had a statistically insignificant relationship with stress for employees with high levels of off-the-job embeddedness. Employees at the 84$^{th}$ percentile of the moderator's range reporting no effect of work intensity on stress level ($b$ = 0.04, $t$(377) = 0.86, SE = 0.05, $p$ > .05). Johnson-Neyman analysis found that off-the-job embeddedness had a diminishing effect on the work intensity-stress relationship from the 0$^{th}$ to the 70$^{th}$ percentile (3.4 in a scale range of 1 to 5), and no effect thereafter. Thus, increasing levels of off-the-job embeddedness were associated with a weakening relationship between work intensity on an employee's perception of stress. Figure 1 depicts the interaction. Hypothesis 2 is supported.

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Figure 1 about here

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**DISCUSSION**

Intensive work intensity–where an employee is required to routinely exert great effort –is a feature of the modern work world as employers seek to obtain productivity improvement in an increasingly competitive globalised marketplace (Chowhan, *et al*., 2019; Fein *et al*., 2017; Huo *et al*., 2019; Kohont and Čehovin Zajc, 2020). For employers, the strategy of work intensity can lead to increased employee performance through higher short-term output. However, this performance improvement may be accompanied by growing employee stress, emotional exhaustion, physical and psychosocial harm, and reduced employee workplace performance (Chowhan, *et al*., 2019; Kelliher and Anderson, 2010; Sparham and Sung, 2007). How can employers prevent these negative outcomes from occurring?

In this paper we proposed and demonstrated that employee work intensity is associated with employee stress. We argued that work intensity is associated with a threat to resources because such intensity demands that employees exert additional effort during their workday. From the perspective of the conservation of resources theory such a threat, if constant and continued across many workdays, is likely to lead to stress. Accordingly, work intensity represents the increase in work expectations and demands, compared to the employee's expectations and perceived resource reserves, and represents a threat to the employee's quality of working life and the equilibrium of their work-and-family life.

We also found that the full effect of work intensity in creating employee stress on may not be experienced by some employees. Namely, for employees with a higher level of connection to the people and activities of their community, this attachment may be sufficient to reduce, and even completely neutralise the resource threat inherent in the work intensity. This attachment – here operationalised as off-the-job embeddedness–is argued to represent a particular type of resource abundance. It is this moderating role of job embeddedness that is the major contribution of the paper to the literature. In respect to why this moderation effect occurs, we can assume that connection to the local community creates the potential and likelihood of the employee cultivating social support networks. These social support networks can assist the employee in coping with the various resource threats represented by work intensity, at least in comparison to those employees with less extensive off-the-job embeddedness.

These findings have several theoretical and practical implications. First, this paper demonstrates that employers and employees can benefit from social support from outside the organisation. As noted earlier, there is a substantial literature that demonstrates that supervisors and co-workers can provide social support resources that increase the satisfaction, commitment and performance of employees. This paper shows that an employee's life *out of*

*work* can also create social support resources for employees, embodied in their off-the-job embeddedness, which can assist the employee in coping with challenging experiences *within* the workplace. This paper adds to the growing literature that integrates the conservation of resources literature and the job embeddedness theory.

Second, even if it is not possible to restructure work processes to prevent the growth of work intensity, employers can invest in employment practices that improve employee coping capacity through their support ofrelationships outside the organisation. For example, an organisation could adopt flexible working hour arrangements and working from home arrangements enabling an employee to better participate in their local community, such as involvement in their children's school or in local sporting, cultural and religious groups. Flexible working arrangements can offer employees additional time in their communities during hours of peak activities, enabling better and more consistent engagement in communities, which can build off-the-job embeddedness. However, caution must be used when employers implement flexible working practices because these practices can also increase work intensity for some employees (Kelliher and Anderson, 2010).

In addition, as a personal benefit, compensation systems could provide employees paid time away from work in the form of community service hours. Such arrangements might allow employees to develop further off-the-job embeddedness while allowing the organisation to honour obligations towards corporate social responsibility participation. In so doing, the organisation would obtain the indirect benefit of community impact: these schemes could enable employees to use their skills and expertise through corporate-sponsored volunteering in local community organisations, such as providing pro-bono services to welfare and advocacy organisations or social enterprises. Such schemes could assist employees in potentially creating personal satisfaction and community connectedness, and thus increase the potential for social support from outside the organisation, while also

**Commented [EF1]:** This is an amazingly good idea. I wonder if anyone has even done this?

providing a salutary effect in the community. Also, this paper suggests that an organisation might benefit in multiple ways from providing resettlement assistance. The use of relocation advisers, for example, by human resource departments might help settle and embed new employees into local areas and provide a seed for future high levels of off-the-job embeddedness.

Finally, such arrangements may also provide organisations with competitive advantages. Encouraging employee coping capacity through innovative employment practices may increase the agility of organisations struggling to cope with changes in technological innovation, production processes, and the product market that require employees to quickly adapt to new circumstances. Such arrangements may enable the organisation to attract and retain staff through the cultivation of a community-engaged, work-life aware employer brand that would appeal to particular employees. Further, this employer brand may assist the organisation in rebranding itself in the consumer market as an employee-friendly and community-involved corporate citizen.

***Limitations***

The findings of this paper are subject to limitations. The first limitation of this paper is that our analysis is based on a single source, self-reported cross-sectional dataset. Although theory and field work have routinely demonstrated that work intensity leads to stress – rather than stress leading to work intensity – we are unable to make firm statements about the direction of causation without longitudinal data.. Although we are confident the data is not significantly skewed by common method bias, the reliance on single-source, self-reported cross-sectional data weakens our confidence in the estimates of effect size. Further research based on longitudinal data is needed.

Second, the sample was drawn from participants recruited by students enrolled at a university in regional Australia. Although these participants were working adults, they were

recruited via convenience sampling within Queensland; as a consequence, the data may not be fully reflective of the types of jobs and pressures for work intensity typical across the broader workforce in Australia. As noted, our sample respondents were recruited from mostly regional and rural workers. A broader sample will also enable us to clarify if this effect varies substantially between large employers and geographical regions. In a highly urbanised nation such as Australia, it is also unclear whether this finding would differ based on samples of employees from rural communities versus employees of urban origin.

Third, subsequent research would need to use more detailed measures of intensive work intensity. In this paper we relied on a three-item measure of work intensity, where two items were measured on a 1 to 7 scale and the remaining item was measured on a 1 to 4 scale. This necessitated the use of a work intensity measure based on z-scores. Although the subsequent regression analysis was unaffected, we were unable to assess the absolute level of work intensity, limiting our analysis.

Finally, subsequent studies should explicitly test this finding in a variety of high and low work intensity and stress environments and occupations. The analysis of this paper demonstrates that off-the-job embeddedness dampens the effect of work intensity at low levels of stress. In this sample, 93% of respondents reported a stress level below 3.5 in a five-point scale. We would expect that employees face a wide range of work intensity and stressful working circumstances across the labour market.

**Commented [EF2]:** Excellent point

*Directions for future research*

In respect to future research, longitudinal studies are needed to test for reciprocal relationships and interactions between increasing off-the-job embeddedness and the increase in actual and perceived social support, as well as testing for changes in work intensity over time (such as work intensification) affecting stress. In addition, studies using multi-level analysis would clarify nesting effects based on metropolitan, inner regional, and rural areas.

These studies should also seek out a broad range of workplaces, with different levels of intensity and employee stress, to clarify whether the effect of off-the-job embeddedness varies.

Another very important venue for future research would be to examine the effects of social networks on providing social and instrumental support, based on the common effect indices within social network analyses methods. Social network analyses can be considered both a method and a multi-disciplinary area of inquiry (Bright *et al*., 2012). It is rapidly developing in areas such as criminology, health, and sociology (Bright *et al*., 2012; Hulme *et al*., 2018). Through the articulation of off-the-job embeddedness, relationships with key social network analyses constructs, such as participants' network centrality and structural holes within broader networks , have strong potential to allow off-the-job embeddedness researchers to accurately test propositions regarding origins of social and instrumental support within off-the-job support networks (Grover, 2018). Furthermore, we suggest the incorporation of social network analyses can also provide conceptual and theoretical advancements within job embeddedness theory as related to the antecedent conditions for resources. A related point is that different aspects of social networks, such as strength, coherence and usage, may vary based on the type of community – regional, rural or urban. In our sample 57% of respondents reported working in regional and rural areas, but due to the problem of decreasing statistical power, we did not want to split our sample into two groups of regional and rural versus urban. However, it is a variable that should be considered for future research in respect to sampling strategy and moderation analyses.

Finally, the issue of work intensity arising from personally motivated conditions, such as loving work or having an intrinsic need for performance above and beyond expectations, should also be examined. In this study based on the framing of the questionnaire around clear distinctions between the work and life domains, we read the context and the related

wording of our items such ‘Working at very high speed’ to amount to management-inflicted work intensity. Although we did not specifically ask the question of why employees were experiencing work intensity, this likely has important implications for its effects. For example, Flow Theory suggests that the types of personal perceptions regarding the meaningfulness of felt intensity would be related to stress reactions (Barthelmäs & Keller, 2021). Therefore, we suggest that questions related to the reasons or motivations for work intensity would be helpful to include in the future research.

**CONCLUSION**

This paper has demonstrated that work intensity is associated with employee stress. This paper also demonstrates that employee off-the-job embeddedness acts to dampen the negative relationship between work intensity and employee stress. The more an employee is involved, attached and connected to people to the community where they work, the lower the effect of work intensity appears to be. Much remains to be learned about the antecedents and complex effects associated with work intensity and off-the-job embeddedness. However, this paper provides a useful foundation for a moderating effect of off-the-job embeddedness on the relationship between work intensity and employee stress. Reducing employee stress is a paramount concern, and more so in the globalised age of international competition. Thus, we propose that ‘living local’ in the experience of off-the-job embeddedness can be a remedial focus for both employees and organisations.

**Commented [EF3]:** Nice ending

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