

Lean Leaders Inspiring Employee Engagement in a Healthcare Setting

Desirée H. van Dun (d.vandun@hofp.nl)

Faculty of Behavioural, Management and Social Sciences, University of Twente, the Netherlands

and House of Performance, Utrecht, The Netherlands, and

Paul Uittenbogaard (paul.uittenbogaard@symbiosismc.nl)

VU University, The Netherlands

and Symbiosis Management Consultancy, Amstelveen, The Netherlands

Abstract

Leaders are assumed to play a key role in sustainability of lean work practices. This study focuses on the leaders' impact on employee engagement during the implementation of lean practices. The first part of this exploratory longitudinal study within a Dutch primary healthcare facility is reported. The employees of one team completed a survey and noted, during eight weeks, their sources of engagement in a diary. Additional site visits and interviews were held. Preliminary findings indicate that leaders may strengthen engagement by reducing non-medical workload via lean work practices. The resulting three propositions may guide future research in this field.

Keywords: Kaizen, Employee Engagement, Leadership

Introduction

In order to survive in the long run, organizations need to engage their employees to become more- client centered, more cost efficient, and be able to contribute to constant improvement and innovation of both products and procedures. Many healthcare organizations adopted lean practices, which have been associated with employee engagement in terms of their willingness to constantly improve their work processes (Graban, 2012). However, lean may lead to 'unhealthy' job re-design (i.e., increasing job demands and decreasing job resources) (Hasle, Bojesen, Jensen and Bramming, 2012), with as results: worker job stress (Conti, Angelis, Cooper, Faragher and Gill, 2006) and 'corporate anorexia' (Radnor and Boaden, 2004). These significant negative effects instigated various empirical examinations of the relation between lean, Job Demands-Resources theory (JD-R), and employee engagement (Cullinane, Bosak, Flood and Demerouti, 2014; De Treville and Antonakis, 2006; Schaufeli and Bakker, 2004).

Recently, JD-R theorists as well as OM scholars started to highlight *leaders* as key enablers of employee (lean) engagement: through their facilitation and balancing of job demands and job resources (Schaufeli, 2015) and the development of employees' personal resources (Schaufeli and Taris, 2014). In particular, one's psychological capital (PsyCap) is positively related to employee engagement (Gruman and Saks, 2011; Newman, Ucbasaran, Zhu and Hirst, 2014; Sweetman and Luthans, 2010).

We argue that, if supportive lean leadership is available, lean work practices positively affect employee engagement through the re-balancing of (new and/or extra) job demands

and job resources and the development of individual employees' PsyCap. At the same time, we explore the expected *reciprocal effects*: engaged employees develop their PsyCap, contribute towards rebalancing demands and resources, and thereby contribute towards a more sustainable lean implementation. Hence, our research question: Does engaging leadership moderate the relation between lean work practices and employee engagement, through activation of job demands, job resources, and personal resources?

Theoretical Framework: Inspiring High Employee Engagement

If implemented well, lean may lead to higher employee engagement. Employee engagement is defined as “a positive, fulfilling, work related state of mind that is characterised by vigour, dedication, and absorption” (Cullinane *et al.*, 2014, p. 2999; Schaufeli, Martinez, Pinto, Salanova and Bakker, 2002). Especially in work situations characterized by challenging job demands, e.g. while implementing lean practices, job and personal resources are important sources of employee engagement (Bakker and Demerouti, 2014). Job *demands* are “physical, social or organisational aspects of the job that require physical and/or cognitive effort and therefore are associated with certain physiological and psychological costs” (Cullinane *et al.*, 2014, p. 3001). Examples are: work pressure, dealing with demanding clients, or emotionally demanding situations like organisational change. Job *resources* refer to those physical, psychological, social or organisational aspects of the job that help to achieve work goals; they can reduce the associated costs of job demands and can also stimulate personal growth, learning and development (Cullinane *et al.*, 2014). Such job resources may include: feedback from clients, social support from co-workers, and supervisory coaching. JD-R theory generally sees job demands to negatively affect employee engagement, while job resources are suggested to have a positive effect.

Another determinant of employee engagement comes from within the individual, i.e. *personal resources* (Schaufeli and Taris, 2014). Four personal resources have proven to be malleable and these four personal resources are referred to as psychological capital (PsyCap), i.e., “an individual’s positive psychological state of development” characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and when necessary, redirecting paths to goals (hope) in order to succeed and (4) faces with problems and adversity, sustaining and bouncing back and even beyond (resilience) to achieve success” (Newman *et al.*, 2014).

Within the JD-R model theory, leadership has always been included as a job resource. However, according to Schaufeli (2015) it is important to study the impact of leadership in its own right because leaders have the responsibility to balance job demands, job resources, and personal resources in such a way that followers are able to work in an engaged manner. Using self-determination theory (SDT; Deci and Ryan, 2000) the concept of *engaging leadership* was developed. According to SDT, three psychological needs are considered crucial for individuals’ optimal and healthy functioning in the workplace, including needs for autonomy, competence, and relatedness. Moreover, SDT posits that employees are likely to be engaged to the degree that these needs are satisfied (Deci and Ryan, 2012). Van den Broeck *et al.* (2008) found that basic need satisfaction mediates the link between job resources and vigour, the core component of employee engagement. Engaging leaders are aware of this need and thus inspire their followers (enthusing them for their vision and plans), strengthen their followers (granting them freedom and responsibility), and connect their followers (encouraging collaboration and promoting team spirit) (Schaufeli, 2015). Engaging leaders show quite some resemblance

with lean leadership (Van Dun, Hicks and Wilderom, 2017). In this study we integrate leadership and investigate the direct and indirect effects of leadership, through job demands and resources, on employee engagement.

Methods

An exploratory mixed-methods field study was conducted. In the below we elaborate on the research setting and sample, data-collection procedures, and data-analysis.

Research Setting and Sample

The study was done among the members of a primary healthcare organisation in the Netherlands that started to adopt lean work practices in the Summer of 2016. In particular they adopted regular Kaizen events, a weekly updated huddle board, an idea suggestion scheme, and 5S. This setting allows for the examination of lean work practices in relation to employee engagement in a complex, multidisciplinary healthcare setting with highly-skilled professionals (as called for by: Cullinane *et al.*, 2014; D'Andreamatteo, Ianni and Lega, 2015). The organisation bundles 12 different disciplines, including family doctors, pharmacists, and physiotherapists. In the first part of this exploratory research we studied a team of nine people: eight physiotherapists and one support staff member. The sample included eight women and one man with a Bachelor diploma; $M_{age} = 39$ years; $M_{tenure} = 9.78$ years, including two team leaders (one male and one female) who were also practicing physiotherapists and one even managed another medical practice in another city.

Data-Collection Procedures

The health care professionals and their manager were solicited through a mix of quantitative (surveys) and qualitative (weekly diaries, site visits, and interviews) methods.

Survey – At the beginning of the study, all nine caregivers as well as their leaders filled in an online survey; participation took about 15 minutes. Four scales were included (see Table 1 for their Cronbach's alphas):

1) We used members' rating of their leaders' Engaging Leadership (Schaufeli, 2015), consisting of 15 items on a five-point Likert scale ('strongly disagree' to 'strongly agree'). An example item is: "My manager encourages cooperation between team members."

2) Job Demands and Job Resources were measured with eight sub dimensions of the Questionnaire on the Experience and Evaluation of Work (QEEW) (Van Veldhoven, De Jonge, Broersen, Kompier and Meijman, 2002; Van Veldhoven, Prins, Van der Laken and Dijkstra, 2014), on a four-point scale (ranging from 'never' to 'always'). Because the original elaborate QEEW is potentially exhausting, we selected a priori four relevant job demands sub dimensions (9 items in total) and four sub dimensions of job resources (8 items in total); see Table 1 for an overview. This approach follows Schaufeli and Taris (2014). An example item is: "Is your work emotionally demanding?"

3) Psychological Capital was measured on a six-point Likert scale ('strongly disagree' to 'strongly agree') with the 12-item short version of the PsyCap Questionnaire (PCQ) (Luthans, Avolio, Avey and Norman, 2007). While the original PCQ is aimed at managers, this study is focused on team members. For this research we thus rephrased the items and added an optimism item. We also included the New General Self-Efficacy Scale (Chen, Gully and Eden, 2001), which was reduced to five items in order to eliminate overlap. After eliminating one item of the resilience sub dimension, a satisfactory Cronbach's alpha remained for the 14 resulting PsyCap items. An example item is: "Right now, I see myself as being pretty successful at work."

4) Employee Engagement was measured with nine items on a seven-point Likert scale ('never' to 'always') of the short version of the Utrecht Work Engagement Scale (UWES) (Schaufeli and Bakker, 2003). An example item is: "My work inspires me."

Weekly Diary – For a duration of eight consecutive weeks, six of the nine employees completed a diary based on the same nine-items UWES scale we included in the survey (Schaufeli and Bakker, 2003). After each item we asked them to elaborate on the cause of their particular rating. This way we retrieved qualitative insights into the team members' weekly sources of engagement.

Site Visits – During three site visit we informally spoke to one of the team leaders and several employees of the care unit. During those visits we took pictures of their lean work practices and noted down important events that had taken place.

Interviews – During an intake interview with the male team leader, we explored what lean practices were in place and how the leader saw lean within his team. This also gave initial information about the perceived level of engagement of the team. Extensive notes were taken during this interview.

Data-analysis

Beyond common means, standard deviations, and correlations analyses with the survey data, the quantitative diary data was compared over the course of five weeks. The qualitative data resulting from the weekly diaries, site visits, and interviews were analysed through axial coding (Ketokivi and Choi, 2014); the resulting codes and quotes are used to illustrate and elaborate the survey findings.

Table 1 – Means, Standard Deviations, Reliabilities, and Correlations

Survey Variables	No. of items	A	Scale Range	M	SD	1	2	3	4
1. Engaging Leadership ^a	15	.87	0-3	2.61	.43				
2. Job Demands ^b	9	.70	0-3	1.07	.31	-.65			
a. Emotional Demands	2	.72	0-3	1.11	.42				
b. Physical Demands	2	.69	0-3	1.11	.60				
c. Task-related Problems	2	.76	0-3	.72	.51				
d. Work Overload	3	.71	0-3	1.26	.46				
3. Job Resources ^b	8	.75	0-3	1.82	.48	.67	-.18		
a. Autonomy	2	.74	0-3	2.06	.58				
b. Communication	2	.82	0-3	1.78	.83				
c. Participation in Decision Making	2	.97	0-3	1.39	.93				
d. Task Clarity	2	.93	0-3	2.06	.63				
4. Psychological Capital ^b	14	.92	1-6	4.67	.63	.41	-.69*	.11	
a. Hope	4	.88	1-6	4.72	.76				
b. Optimism	3	.83	1-6	4.93	.72				
c. Self-efficacy	5	.79	1-6	4.44	.69				
d. Resilience	2	.73	1-6	4.78	.79				
5. Employee Engagement ^b	9	.93	0-6	4.59	.98	.58	-.59	.22	.34

Notes. Correlations were significant (2 tailed) at the following levels: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

^a N = 7 team members

^b N = 9 team members (including two team leaders who at the same time also functioned as physiotherapists)

Results

All nine team members and leaders completed the survey (100% response rate). None of the independent variables correlated significantly with employee engagement. Only PsyCap was significantly negatively related to job demands ($r = -.69$; see Table 1). Table 1 shows that engaging leadership scored high ($M = 2.61$). Moreover, it appears that the physiotherapists perceive few job demands ($M = 1.07$) and mediocre job resources ($M = 1.82$). After zooming in on the various sub dimensions, work overload is scored highest in terms of job demands; autonomy and task clarity are the highest scoring job resources (both $M = 2.06$). Also PsyCap scores relatively high ($M = 4.67$); the scores on the PsyCap sub dimensions are similar. Employee engagement was scored quite high ($M = 4.59$), which means that employees experience a high level of engagement very often.

In contrast to these survey findings, employee engagement was rated much lower in the weekly diaries filled out by six of the same nine survey respondents (see Figure 1 for the outcomes on a weekly basis). Except for week 1, all other weekly mean scores on engagement were lower than 4.00. From Figure 1 it can also be noticed that there does exist some variability among different respondents in their individual assessment of employee engagement; i.e., some respondents generally rated their own engagement high, whereas others consistently scored themselves as less engaged.

With the same weekly diaries we also retrieved the respondent's perceived sources of their level of engagement (see Table 2). Interestingly, the respondents listed more than twice as much job resources than demands. The various job demands and resources were categorized following the sub dimensions listed by Schaufeli and Taris (2014). Contrary to our expectations, lean work practices *nor* the role of the team leaders were mentioned as a source for engagement. Instead, respondents spontaneously listed job resources that link to task variety, social support among co-workers, patient-based feedback on their performance, and autonomy. We also clustered responses in a "others" category. One respondents also saw being "busy" and working in "flow" as a *resource* instead of as a high workload-related job demand. Other factors were not work-related, for instance respondents mentioning "Spring", "learning about cultural differences", or "being able to help people (non-medical)". With regard to job demands, respondents predominantly noted administrative, workload-related examples. One of the team leaders noted: *"I also see lean work practices as helpful for myself: it enables me to manage my time more efficiently so that I can spend more time on things I like to do [instead of administrative tasks]"*. Also, one of the respondents noted, during one of our site visits: *"Our Monday team meetings made me less enthusiastic, but coaching the intern on Friday gave new spirit"*. Respondents also noted negative spillover effects from family life to the workplace. This constitutes not only mental but also physical spillover effects: one of the respondents was in the process of selling her house at the time of the study, whereas another suffered from stress due to personal problems. Finally, one respondent also complained about patients who just consulted her because they "just" wanted to get a simple massage, without having any serious injuries. It is likely that this 'job demand' springs from her professional attitude and eagerness to use her skills to take up challenging tasks. This coincides with the fact that "interesting and challenging work", "busy and flow" ,and "useful work" were listed as resources.

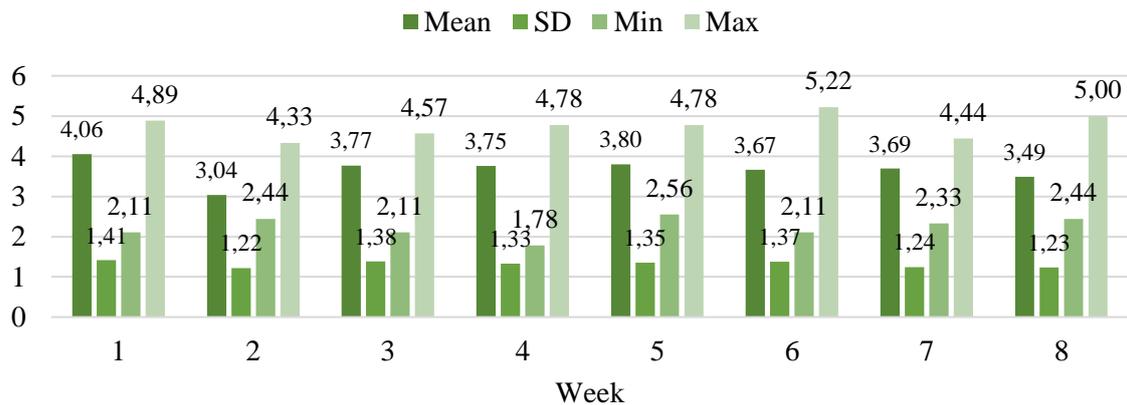


Figure 1 – Descriptive Statistics of Employee’s Weekly Engagement Ratings, during Eight Consecutive Weeks (N = 6; on a scale ranging from ‘never’ to ‘always’)

Table 2 – Job Resources and Job Demands, based on a Diary Study among Employees

Job Resources	Job Demands
<i>Task Variety</i>	<i>Work Overload</i>
“Working at another practice”	“Administrative load”
“Interesting cases and new things”	“Too many patients”
“Interesting and challenging work”	“Too full agenda”
“Coaching an intern”	“Not being able to meet all expectations of colleagues due to workload”
<i>Social Support Co-workers</i>	<i>Negative Spillover from Family to Work</i>
“Good contacts with colleagues and cosiness”	“Privately-related stress”
“Positive feedback and compliments from colleagues”	“Too much to do in my private time”
“Contact with other disciplines”	
<i>Patient-based Performance Feedback</i>	<i>Other</i>
“Good and nice conversations with patients”	“Physical condition (sick, headache, stress, tired, injury)”
“Good influence on and results with patients”	“Too much puzzling”
“Positive feedback and compliments from patients”	“‘Massage’ instead of physiotherapy patients”
“Recognition of quality”	
“Breakthrough achieved in treatment”	
“Patients that progress in their treatment”	
<i>Autonomy</i>	
“Proud on being independent”	
<i>Other</i>	
“Busy and flow”	
“Useful work”	
“There is much more to learn”	
“Learned much about cultural differences”	
“It runs good”	
“Control and concentration”	
“Working with people”	
“Being able to help people (non-medical)”	
“Good business prospects”	
“Spring”	

Notes. N = 6. Examples between quote signs have been translated from the original Dutch diary notes.

Discussion

The triangulated data from both the survey and weekly diaries indicate that job resources score higher than job demands; these outcomes explain, as expected, the relatively high survey-based score on employee engagement. With both instruments, employee's autonomy came out as a key source of engagement. This can be explained by the highly-skilled and the individual nature of their profession. Figure 2 visualizes the proposed research model.

While the key assumption behind our research was that engaged leaders further stimulate individual employee's level of engagement, our exploratory study did not (yet) show such an upshot. In retrospect, the fact that in this case the respondents were highly-educated medical professionals with a low level of task interdependence may have played a larger role than expected. The team leaders' roles in such work settings may be quite limited if compared to jobs with a higher task interdependence. In addition, both team leaders were also practicing physiotherapists and one even managed another practice. Finally, due to the generally high work load in healthcare, there might be simply too few situations during which the team leaders could have positively influenced the engagement of their employees in relation also to lean work practices. Hence:

Proposition 1. In professional healthcare settings, the proposed positive moderation effect of engaged leadership on the relation between lean work practices and job demands, job resources, and PsyCap, is lower in comparison to other sectors.

What constitutes then the role of leaders in these highly professional medical workplaces? Informed by our case and in part also based on Schaufeli (2015), we assume that leaders in those settings that are typically characterised by scarce resources, must not lopsidedly focus on managing the right amount of job resources or employees' already high PsyCap. Instead, we presume their most important contribution to employee engagement may lie in eliminating wasteful job demands, including especially (administrative) work overload. Generally, healthcare professionals already have a high personal motivation to help as much patients as possible (and make sure the waiting list does not grow too long). Administrative tasks may be perceived by healthcare professionals as not very inspiring or supportive in these personal goals. Lean work practices are then tremendously helpful in creating such efficient and less demanding workplaces without much administration ("patient down-time"). A welcome side-effect of lean work practices may also be that employees receive even more patient-based performance feedback: one of the job resources that came out of this study. Such feedback increases self-efficacy (Luthans, Norman, Avolio and Avey, 2008): giving and receiving compliments is a way to increase self-esteem and appreciate the present.

Proposition 2. In professional healthcare settings, engaged leaders must focus predominantly on diminishing the amount of job demands instead of trying to stimulate job resources or PsyCap; lean work practices are an effective way through which leaders can achieve such a state.

As shown in this study, employee's feeling of engagement showed to be variable over time. Employee engagement can indeed be seen as a *state* and is best captured via multiple measurements during a certain time frame (Schaufeli and Taris, 2014); for instance via the weekly diaries used in this study. Based on our exploratory data, we assume that higher employee engagement will also energize employees to more actively and enthusiastically participate in lean work practices. For instance, if job demands are managed well by leaders, employees may feel more room to take the initiative in implementing their ideas for improvement, as well as take active part in the daily or weekly performance monitoring team meetings. This may result in a positive, reciprocal spiral of increased employee engagement (see Figure 2). Therefore our proposition:

Proposition 3. If employees feel more engaged, they are likely to feel more psychologically capable and are, at the same time, also more likely to actively and enthusiastically participate in lean work practices, thereby further enhancing the balance between job demands, resources, and PsyCap.

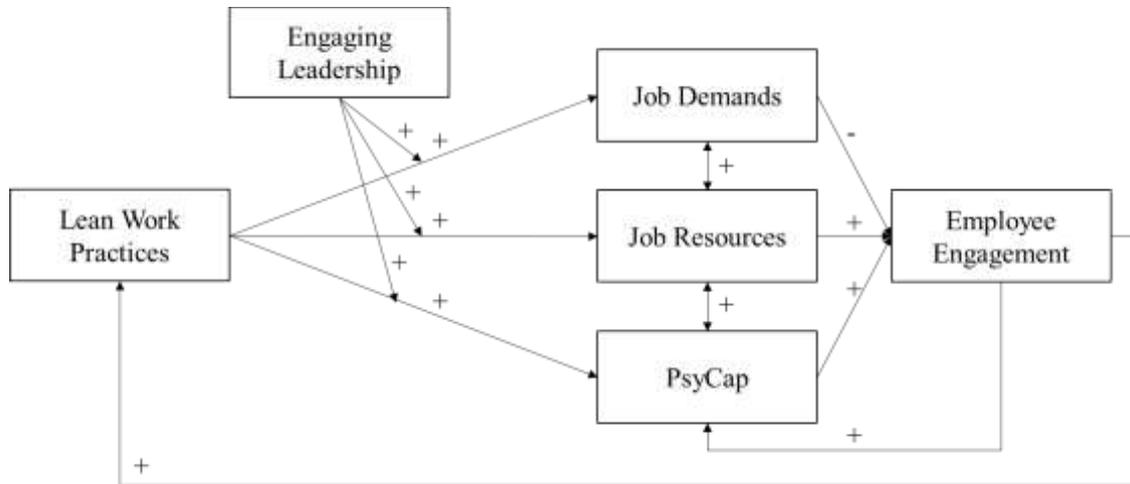


Figure 2 – Proposed Research Model

Limitations

The rich findings from our first round of data collection give ground to larger-scale longitudinal studies of engaging leaders and employees' engagement as sources for sustained lean work practices. Such a follow-up study must overcome the limitations of this study's small exploratory sample ($N = 9$) and include ideally also a null-measurement before the team started their lean implementation. Larger-scale studies can engage in exploratory and confirmatory factor analyses as well as linear regression analyses with the survey scales that have been used in this study. The survey results must therefore be interpreted with caution and the correlations among the variables in the current study may be deflated.

Note that the two managers in our sample spent most of their time as health care professional themselves: They still saw clients on a daily basis. The fact that they were also engaged in the primary process as well as their absence during two-fifth (male) and one-fifth (female) of every work week, might have reduced their availability to and impact on their employees. Future research must control for/take into account the average time spent per week on managerial or supervision tasks by formal team leaders.

Another point is that the weekly diary may also function as an intervention, which could have contaminated employees' awareness of their sources for engagement. Keeping a diary may also induce new ideas for continuous process improvement; it might stimulate one's "job crafting" which can be defined as the process by which employees change elements of their jobs and relationships with others to redefine the meaning of their work and the social environment at work (Tims and Bakker, 2010). At the same time, we also noticed some response exhaustion over time: some respondents left lines open where we asked them to elaborate on their employee engagement score.

Finally, while our study measured individual-level employee engagement, Lean Management practices are likely to inspire also team-level engagement. Considering also the individual nature of engagement, new studies may come up with new ways of measuring such generalized, team-level engagement.

Conclusion

Lean programs are successful and sustainable as long as they are aimed at both ‘hard’ processes and systems and ‘soft’ culture and behaviour (Bortolotti, Boscari and Danese, 2015). If managed well, lean is linked to employee engagement. More insight into effective ‘lean leadership’ (Liker and Convis, 2012; Poksinska, Swartling and Drotz, 2013; Van Dun and Wilderom, 2016) is especially important in healthcare, because healthcare professionals are often psychologically strained in those days of higher demands and work pressure. JD-R and PsyCap theory can explain how lean leaders contribute to developing more engaged, and thus more ‘inspired’, professionals at work. At the same time, this exploratory study uncovers that the unique features of professional healthcare settings may contaminate the expected effects of engaged, lean leaders on their workers. Larger-scale studies must further investigate this matter; scholars, teachers, and consultants must be careful not to simply copy (popularized) lean leadership lessons across sectors.

The results from the second survey round as well as longitudinal data of two other units (consisting of a total of 35 healthcare professionals) will be reported during our EurOMA presentation.

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