

Organisation of labour, quality of work, and relational coordination in Care Living Labs

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Abstract

A growing interest can be noticed in living labs as a method to test and develop innovations in health and social care. This paper argues that, apart from the care clients, also care professionals deserve attention when care living labs are designed. The Care Living Labs program in Flanders (Belgium) is used as a case to show that innovations in a living lab context can profoundly influence the work of the care professionals. After a brief theoretical description of the concepts 'organisation of labour', 'quality of work' and 'relational coordination', the paper explains how these concepts are applied in the Flemish Care Living Labs. The paper concludes that care professionals can best be involved from the start as a separate target group in future care living labs.

Keywords

Organisation of labour, quality of work, relational coordination, care, living labs

Introduction

With the aging of the population, the number of older adults in Europe increases, leading to a growing number of people in need of some form of chronic care (European Commission & Economic Policy Committee, 2014). This demographic trend can also be seen in Flanders (Belgium) (Paulus, Van Den Heede, & Mertens, 2012). In order to tackle this disequilibrium, innovations in the older adult care are becoming increasingly important. Recently new methodologies that help stimulate innovation have made their appearance. One of those methodologies is the living labs approach (Mulvenna et al., 2010). The living labs grew from the idea that innovations should be tested in real life situations by the actual end users. In the field of older adult care, the older adults are the end users. Because of the growing need for chronic care for older people, in 2012, an extensive, three-year, 'living labs' based program has been initiated in Flanders to stimulate innovation in the domain of older adult care. The program goes under the name 'Care Living Labs' (in Dutch: "De Vlaamse Zorgproeftuinen"). A scientific consortium is entrusted with the scientific support of the program. The program is funded by the Flemish Agency for Innovation by Science and Technology (IWT), and kicked off in September 2013. It comprises 23 projects, grouped in six regional platforms. The projects are very diverse, with topics including technology, housing, informal care networks, mobility, care and cure integration, and care management. 'Enhancing the quality of life of older adults' being the purpose of this initiative, older adults were defined as the target group. As can be seen from the list of topics above, innovations in care involve more than testing technologies or user interfaces. Even when technology finds a place in care Living Labs, it is always as part of a broader social innovation. Not only older adults, but also other stakeholders are involved in such a social innovation. The innovations may directly or indirectly influence daily practices of caregivers and care professionals. This paper argues that, apart from the care clients and the informal caregivers, also care

professionals should be involved as a target group in a care living lab. A care professional is defined as someone who acquired a care-related certificate and is legally authorized to offer care or advise about care, in exchange for a remuneration (FOD Sociale Zekerheid, 2014).

The paper has four parts. First, the relevance of care professional-related issues in the Care Living Labs in Flanders is described. Second, an overview is given of the three concepts that are used to analyse these issues: 'organisation of labour', 'quality of work', and 'relational coordination'. Third, the application of these concepts in living lab-related activities are presented. The paper ends with some concluding remark

The Care Living Labs in Flanders

As explained in the previous Section, in the Flemish Care Living Labs, six platforms were established who conduct all together 23 projects. Although the care professionals were not explicitly declared as a target group, it was implicitly mentioned that they are part of the end users, by stating that 'testers in the own working environment' should be involved. Based on the original platform and project plans a plan evaluation study was made (Leys et al., 2015). The study describes the goals, target groups, collaborations, organisation of labour, technology and the scope of the platforms and the projects. It was striking that none of the platforms expressed the aim to work around themes as 'organisation of labour' and 'quality of work'. The concept of 'organisation of labour' indicates the way in which a set of tasks, needed to create a product or service, is divided into different work packages (Van Hootegem, 2000). 'Quality of work' refers here to the stress and health risks resulting from one's job and is seen as the result of the combination between the amount of workload and the ability to handle challenges the job imposes on the worker (Van Hootegem, 2000). Only one project plan explicitly mentioned these aspects. It needs to be said that when the Flemish government in 2012 launched the call to establish care living labs in Flanders, it was not stated that platform and project proposals needed to pay attention to the organisation of labour or to the quality of work of the care professionals. The scientific consortium however introduced this dimension, because the plan evaluation study revealed that aspects of organisation of labour and the related quality of work could be crucially important for the projects within the six platforms. An example is that various project plans strive to apply technological tools to increase cross-organisational coordination, encompassing a possible risk for increased bureaucratization. Another example is that the introduction of care managers could draw attention away from the underlying problem, being the fragmentation of the organisation of labour. A third example is that various projects are focused on care integration at the micro-level of care professionals and informal caregivers, which could affect tasks and roles of both groups.

Organisation of labour, quality of work, and relational coordination

To capture the concepts 'organisation of labour' and 'quality of work', a socio-technical approach (De Sitter, 1994) is used. The notion of 'relational coordination' is coming from the work of Jody Hoffer Gittel (2002).

Organisation of labour

The concept of 'organisation of labour' refers to the way in which a set of tasks, needed to create a product or service, is divided into different work packages (Van Hootegem, 2000; Van Hootegem et al., 2008). Essentially there exist two ways of dividing labour. A functional organisation of labour stands for an organisation that is focused on the different operations needed to complete a product or service. These different operations are identified and isolated in specialized units. This extensive division asks for a lot of additional coordinating tasks, which are usually assigned to a separate unit, located higher in the organisational hierarchy. On the other hand, when organising labour in 'streams', the focus is on types of products or clients, and work is organised in parallel streams. Relatively independent teams are formed around the different types of orders. The way in which these tasks are divided, influences the amount of job control. When labour is organised in 'streams', job control can be higher than when work is organised in a functional way. With a functional organisation of labour, each unit is dependent on the work of the units in which the specialized tasks earlier in the production process happen. Therefore a high level of alignment is needed. To be able to overlook all the different alignment tasks that are needed, coordination will be centralized on a higher level, which results in less job control in individual jobs and units. Organising labour in 'streams' allows for a more decentralized approach because there is less need for alignment. This reduced need for alignment makes it possible to assign more job control to individual jobs, teams and units. (Van Hootegem et al., 2008).

Within the context of the Flemish Care Living Labs, the organisation of labour actually concerns the organisation of care processes. These are the processes that need to coordinate between interoperating care professionals and organisational units (Lenz & Reichert, 2007). A care client rarely has to deal with only one care unit. Because of the functional way in which traditional care organisations in Flanders often are organised, they usually run through a chain of activities located in different units (Kuipers, 1992). Activities of these different units need to be planned, prepared, executed and supported. The more alignment is needed between these different tasks, the higher the chances that malfunctions emerge. This can result in errors and long waiting times for the care clients (Lenz & Reichert, 2006). Rethinking the organisation of the care process in terms of care client flows may radically diminish malfunctions that arise from alignment problems (Kuipers, 1992).

Quality of work

The interpretation of 'quality of work' comes from the Job Demand / Control (JD/C) model of Karasek (1979). This model has been validated by over 30 years of scientific research. The model describes how functional characteristics of a job can influence stress and health risks. The model seeks to predict stress and health risks based on the features of the job within the organisation (and not based on other factors, such as personal characteristics of the person who performs the job). The tasks which are connected to a specific job have regulatory requirements: when malfunctions and deviations appear and when unexpected events happen, decisions have to be made to deal with these. The decision-making power of the worker determines whether the worker is able to face these demands.

In the JD/C model, two dimensions regarding the characteristics of jobs are defined (figure 1): on one side there are the job demands or the workload, on the other side there is the level of job control, or, in other words, the decision-making power one has over his/her job. The JD/C model indicates that psychological strain is not so much the result of the workload, but the result of the joined effect of workload and the level of decision-making power a worker has to handle the demands that result from this workload. Four different types of jobs arise from the combination of these two dimensions. The jobs in which both job demands and job control is low are called 'passive' jobs. In 'low strain' jobs, the job demands are low, but the job control is high. Probably the worst case is the 'high strain' job, in which the job demands are high, but job control is low, which makes coping with challenges difficult. In 'active' jobs a good equilibrium is found between high job demands and high job control. Employees with an active job have the ability to regulate their own work. They can autonomously develop working strategies and improve and change these when the tasks demand so. Karasek (1979) concludes that a demanding job as such is not necessarily stressful, as long as the worker has enough decision-making power to cope with challenges related to the job.

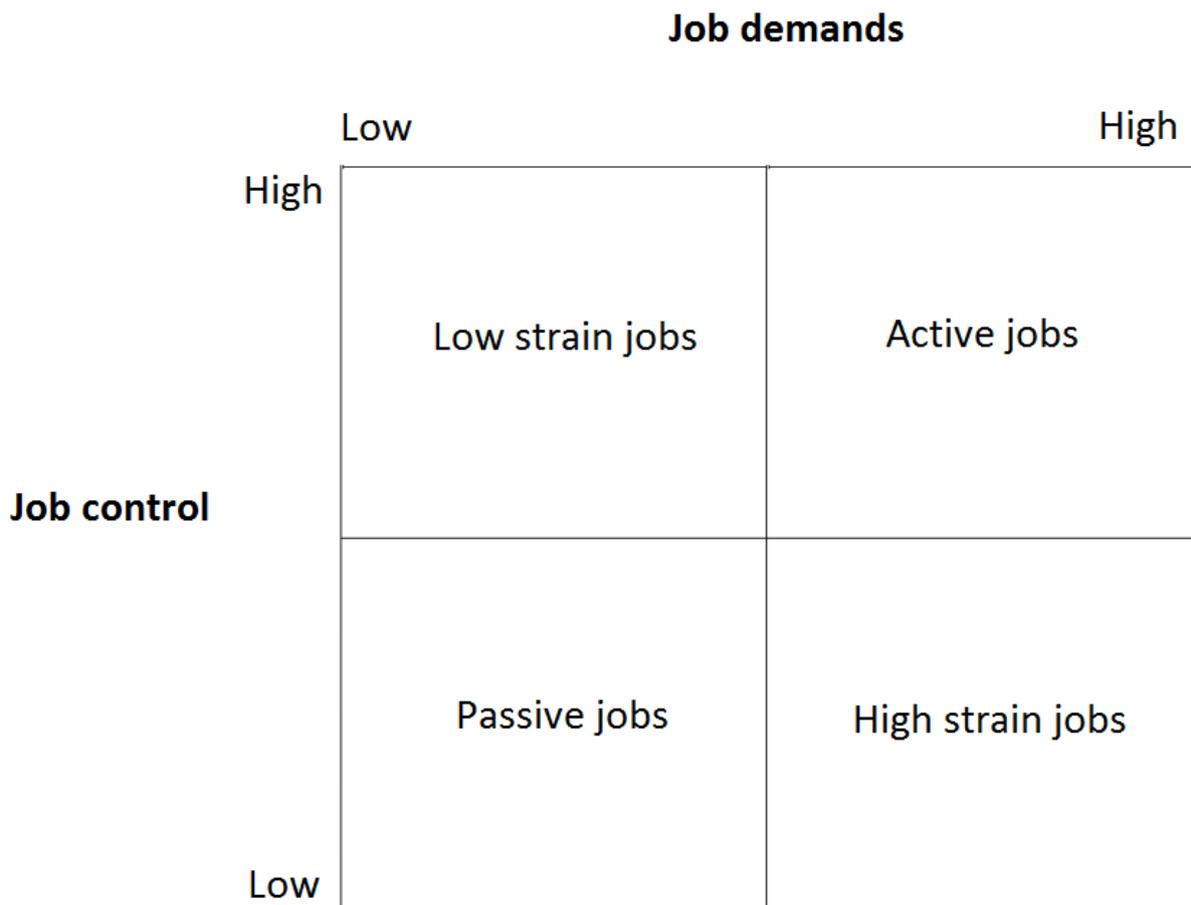


Figure 1: The JD/C model (Karasek, 1979)

The JD/C model has been validated across the years in many different studies. The negative impact of high strain jobs on health and wellbeing has been described in many papers. Next to a poor general health (Karasek, 1990;

Söderfelt et al. 1997) it can lead to mental strain (Karasek, 1979), emotional exhaustion, physical complaints and job dissatisfaction (De Jonge et al., 2000), burn-out and rebellious behaviour (Bakker et al. 2001), increased blood pressure and cortisol levels (Fox et al. 1993; Everson et al. 1997; Schaubroeck & Merrit, 1997), and an increased risk at cardio-vascular diseases (Johnson & Hall, 1988).

Relational coordination

Care processes usually require a lot of cooperation and coordination between different units and between people working in different disciplines. Organisational rules define how this alignment officially happens. Research by Gittel (2002) demonstrates that the performance of a care organisation is not only mediated by the way the care process is formally structured, but also by more spontaneous forms of coordination. For these spontaneous forms of coordination the term 'relational coordination' was coined. In relational coordination much importance is attached to the role of relationships. Shared goals, shared knowledge and mutual respect are considered to be the key factors for effectively coordinating a care process. Gittel states that when workers have shared goals, they might be motivated to move beyond the sub goals attached to their own tasks, which would make them act in order to contribute to the overall care process. Shared knowledge could enable the care professionals to see how their own tasks fit with the tasks of colleagues and could therefore give them an understanding of the overall work process. Having respect for the work of others would have as a consequence that workers will value the contribution of other actors in the care process and it might make them consider the impact of their own actions on others. This could lead them to act with respect to the overall care process. She suggests that when these characteristics of a relationship are present frequent, it could stimulate an in time, accurate and problem solving way of communicating. This type of communication in turn, would decrease obstacles to coordination and thus enable employees to more effectively manage their task interdependencies. As a result more effective and qualitative performances could be expected (Gittel, 2002).

Care Living Lab activities

Although the initial platform and project plans do not mention organisation of labour, quality of work, and relational coordination, they do describe the need for cross-organisational coordination and integration of care between care professionals and informal caregivers. Also the installation of new functions such as 'case managers' was indicated. These actions can affect the tasks and roles for the care professionals. Thus, the scientific consortium took steps to engage the platforms and projects to work on the concepts of 'organisation of labour', 'quality of work', and 'relational coordination'.

In a first step, the platforms were asked to add the care professionals involved in their projects to their user panels. Surveys were developed to assess the quality of work and relational coordination in different groups of care professionals involved in the projects. Quality of work was conceptualized through the dimensions job demands and job control. Relational coordination concerns both the characteristics of the relationships (shared goals, shared knowledge and mutual respect) and characteristics of communication (frequency, accuracy, constructiveness and in time). These surveys are send out to the care professionals in the user panels. The results

of the surveys should give a general indication of the situation regarding quality of work and relational coordination in the projects, and provide concrete starting points to tackle issues concerning these themes.

In a second step workshops will be organised per platform in which the projects can dive deeper into these matters. During the workshop the concepts 'organisation of labour', 'quality of work', and 'relational coordination' are first briefly introduced, after which people from the different projects will apply the concepts to the care processes in which their innovations take place. With support from researchers from the scientific consortium, they will investigate whether their innovations influences the organisation of labour and the quality of work of the care professionals that are involved in their projects. The results from the survey that was mentioned above will serve as a starting point. After identifying specific issues, the projects can look into possible structural interventions, with support from the scientific consortium.

With the information retrieved from the surveys and the workshops, the scientific consortium can draw lessons concerning the use of living labs methodology in the care domain. The collected information should allow to answer the question to what extent it would be useful to involve care professionals and in which way this can best be done. Finally the information can help to understand in which way an optimized organisation of labour could be a breeding ground for care innovations.

Conclusion

Innovations in older adult care involve more than testing technologies or user interfaces. These innovations always take place in a broader social context. Therefore, when using a living lab approach to test and develop innovations in older adult care, also the care professionals are an important end-user group. The case of the Flemish Care Living Lab program shows that this end-user group is not always given a lot of attention in care living lab activities. This paper gives an overview of three concepts that can be used to analyse care professional related issues. These concepts are 'organisation of labour', 'quality of work' and 'relational coordination'. Also does the paper present how these concepts can be applied in living lab related activities.

The current research in Flanders suggests that organisation of labour, quality of work and relational coordination can play an important role in care living labs. For that reason, care professionals should best be involved as a separate target group in future care living labs.

Acknowledgements

This research is part of KIO, an interuniversity consortium studying innovations in elderly care in Flanders. The consortium consists of Mark Leys & Lien Pots (OPIH-VUB), Ellen Gorus & Charlotte Brys (GERO-VUB), Ezra Dessers, Geert Van Hootegem & Leen De Kort (CESO-KUL), Marc Jegers & Lukas Versteede (iCher), Patricia De Vriendt (GERO-VUB, Arteveldehogeschool) & Juul Lemey (Arteveldehogeschool), Bart Jansen (ETRO-VUB), Bart Mistiaen & Bart Grimonprez (HOWEST). The consortium is financed by the Flemish Agency for Innovation by Science and Technology (IWT).

Reference list

Bakker, A.B., Demerouti, E. & Euwema, M.C. (2005). Job resources buffer the impact of job demands on burnout. *Journal of Occupational Health Psychology*, 10(2), 170 –180.

Dhondt, S., Pot, F. & Oeij, P. (2012). Social innovation of work and employment. In: H.W. Franz, J. Hochgerner & J. Howaldt (Eds.), *Challenge social innovation. potentials for business, social entrepreneurship, welfare and civil society* (pp. 261-274). Berlin, Germany: Springer Verlag.

de Jonge, J., Bosma, H., Peter, R. & Siegrist, J. (2000). Job strain, effort-reward imbalance and employee well-being: a large-scale cross-sectional study. *Social science & medicine*, 50(9), 1317-1327.

De Sitter, L.U. (1994). *Synergetisch produceren. Human resource mobilisation in de productie: een inleiding in de structuurbouw*. Assen, The Netherlands: Van Gorcum. [in Dutch]

European Commission (DG ECFIN) & Economic Policy Committee (AWG). (2014). The 2015 Ageing Report: Underlying Assumptions and Projection Methodologies. *European Economy*, 8.

Everson, S.A., Lynch, J.W., Chesney, M.A., Kaplan, G.A., Goldberg, D.E., Shade, S.B., Cohen, R.D., Salonen, R., Salonen, J.T. (1997). Interaction of workplace demands and cardiovascular reactivity in progression of carotid atherosclerosis: population based study. *British Medical Journal*, 314, 553-558.

Federale overheidsdienst (FOD) sociale zekerheid. (2014). Wet betreffende de erkenning van de mantelzorg die een persoon met een grote zorgbehoefte bijstaat. Publicatie: 2014-06-06. [in Dutch]

Fox, M. L., Dwyer, D. J. & Ganster, D. C. (1993). Effects of stressful job demands and control on physiological and attitudinal outcomes in a hospital setting. *Academy of Management Journal*, 36(2), 289-318.

Gittell, J.H. (2002). Coordinating mechanisms in care provider groups: relational coordination as a mediator and input uncertainty as a moderator of performance effects. *Management Science*, 48(11), 1408-1426.

Johnson, J.V. & Hall, E.M. (1988). Job strain, work place social support, and cardiovascular disease: a cross-sectional study of a random sample of the Swedish working population. *American Journal for Public Health*, 78, 1336-1342.

Karasek, R. A. (1979). Job demands, job decision latitude, and mental strain: implications for job redesign. *Administrative Science Quarterly*, 24 (2), 285-308.

Karasek, R.A. (1990). Lower health risk with increased job control among white collar workers. *Journal of Organisational Behavior*, 11(3), 171-185.

Kuipers, H. (1992). Sociotechniek in de gezondheidszorg. *Paper gebaseerd op een lezing gehouden tijdens het symposium Sturing van zorgprocessen*. [in Dutch]

Lam, A. (2004). Organisational innovation. In: Fagerberg, J., Mowery, D. & Nelson, R.R. (Eds.), *Handbook of innovation*. Oxford, United Kingdom: Oxford University Press.

Lenz, R., Reichert, M. (2007). IT support for healthcare processes – premises, challenges, perspectives. *Data & Knowledge Engineering*, 61, 39-58.

Leys et al. (2015). *Zorg Proeftuinen Vlaanderen. Een inhoudelijke vergelijking van de platformen en projecten bij de start*. Brussel, Belgium: Kennisplatform Innovatie Ouderenzorg. [in Dutch]

Mulvena, D.M., Bergvall-Kareborn, B. Galbraith, J.W. Martin, S. (2010). Living labs are innovation catalysts. In Howlett, R.J. (Ed.), *Innovation through knowledge transfer* (pp. 253-264). Berlin, Germany: Springer-Verlag.

Paulus, D., Heede, K. & Mertens, R. (2012). Position paper: Organisatie van zorg voor chronische zieken in België. *KCE Reports*. Tilburg, The Netherlands: Federaal Kenniscentrum voor de Gezondheidszorg. [in Dutch]

Schaubroeck, J. & Merrit, D.E. (1997). Divergent effects of job control on coping with work stressors: the key role of self-efficacy. *Academy of Management Journal*, 40, 738-754.

Söderfeldt, B., Söderfeldt, M., Jones, K., Ocampo, P., Mountaner, C., Ohlson, C.G., & Warg, L.E. (1997). Does organisation matter? A multilevel analysis of the demand-control model applied to human services. *Social Science and Medicine*, 44, 527-534.

Van Hootegem, G. (2000). *De draaglijke traagheid van het Management. Tendensen in productie- en personeelsbeleid*. Leuven, Belgium: Acco. [in Dutch]

Van Hootegem, G., Van Amelsfoort, P., Van Beek, G. & Huys, R. (2008). *Anders organiseren en beter werken: Handboek sociale innovatie en verandermanagement*. Leuven/Voorburg, Belgium: Acco. [in Dutch]

Biographies



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