HAL
open science

An intervention on psychosocial risk (PSR) in a SME.

Johann Petit, Bernard Dugué

To cite this version:

Johann Petit, Bernard Dugué. An intervention on psychosocial risk (PSR) in a SME.. Understanding Small Enterprises (USE) Conference 2013, Feb 2013, Nelson, New Zealand. pp.344-355. hal-00773400

HAL Id: hal-00773400

https://hal.science/hal-00773400v1

Submitted on 21 Jan 2014

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Non-peer reviewed paper

An intervention on psychosocial risk (PSR) in an SME

Authors
Johann Petit, PhD, teacher and researcher, Ergonomics Department, ENSC/IPB, University of Bordeaux, France, johann.petit@ensc.fr
Bernard Dugué, PhD, teacher and researcher, Ergonomics Department, ENSC/IPB, University of Bordeaux, France, bernard.dugue@ensc.fr

Abstract
The PSR problem has become a major occupational health issue in Western countries. At the request of an SME which processes fattened ducks, we developed a specific approach taking into account its economic and social environment. We assumed that the PSR could not be dealt with independently of the realities and the production constraints. The initial request, made by the person responsible for occupational health and the head of production, mentioned a deterioration in the working environment in the "stripping" department, where "foie gras" is prepared once removed from the duck. This resulted in an increase in absenteeism (more than 20%), complaints from employees over a long period, a deterioration in mutual aid between employees in the department and a general demotivation.

We proposed a participative methodology (in working groups) targeting the identification and resolution of quality and production problems, ranging from difficulties in producing foie gras of quality to being able to cope with PSR. In particular, we will discuss the method employed:

- Work analyses to identify problems with production and quality,
- Search for links between problems of production, quality and health,
- Participatory ergonomics to try out solutions and evaluate them,
- Reflection on the organization with middle and top management.

The production problems were finally resolved, thereby improving productivity and quality. Beyond these aspects, our biggest challenge was to establish a process allowing more leeway for employees to improve their daily situation, something that supervisors saw as loss of control. Our focus was employee commitment to the process and the positive results have finally proved convincing. Absenteeism has stabilized and was lower a few months after the intervention. Feedback from managers and employees has reported the efficiency of this work-centered approach.

Keywords
PSR, food-processing industry, participatory intervention, empirical research, organization.

1. Introduction

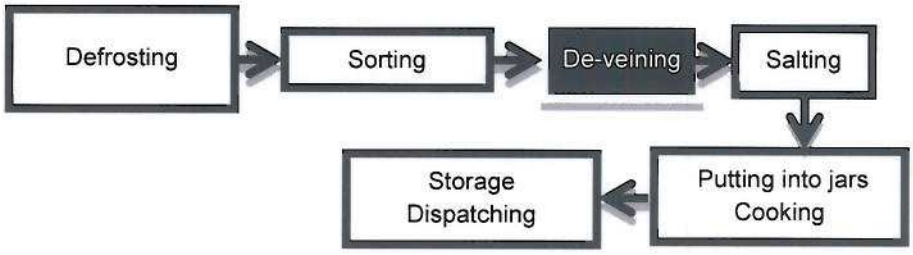
The International Labour Office estimates the cost of PSR in the industrialized countries at 3 to 4% of GDP. Small and Medium sized Enterprises (SME) are also concerned by these health problems. Sometimes, however, SMEs can find it difficult to feel concerned about these issues. PSR are often associated more with large companies and SMEs struggle to recognize it. In addition, the tools that are usually used to deal with it do not sufficiently take into account the specific features of the SME. PSR-related reflections and actions are often guided by approaches developed in the areas of epidemiology and psychology. In companies this means using questionnaires and providing support specifically for individuals judged to be "in difficulty". While such methods may have found a certain resonance in large companies, identifying the macroscopic causes of problems and setting up tertiary level prevention, it seemed to us that these methods did not help SMEs to fully grasp the issue, especially with regard to the tools that should be used.

Based on a case study in a food-processing company, we will show that it is possible to treat the problems surrounding PSR by focusing on difficulties at work and in particular on problems of quality and production. The results presented here will open up new areas for discussion on methodological aspects and on the need to understand the links between work (when it is "well done") and health.

2. Material and methods

This is a company of 120 employees, which processes fattened ducks that have been killed and drawn elsewhere. It produces mainly preserved goods such as confits and pâtés, with the majority of its production being cooked and semi-cooked foie gras (literally fat liver). In this paper, we look at the production of foie gras. Before production, the raw livers are stored in freezers. They are thawed then unpacked, according to demand. They are then ready to be prepared for cooking. This preparation consists of sorting them (those that are very damaged will end up in derivative products such as duck mousse), removing the veins and the nerves, and leaving them for 24h in salt solution: these three tasks (sorting, de-veining and salting) take place in the same factory workshop. Next, the foie gras is cut up, put into jars manually and cooked in autoclaves. Depending on the flow of orders, the jars are stored at the factory before being dispatched.

Figure1: Process of production of foie gras



One of the key parts of this process is the de-veining. To a large extent this determines the final quality of the product. When foie gras is eaten, there are two criteria in which the

customer is particularly interested: appearance and taste. If a liver has not been properly de-veined this will have consequences for these two criteria.

A request for an intervention in this company was made via the head of production and the person in charge of "Occupational health". They explained that there was a general deterioration in interpersonal relations in their company and particularly in the de-veining area. This had given rise to an increase in absenteeism (28% when they made their request), frequent disputes between employees and managers or between employees themselves. The terms they used ("difficult relations", "bad atmosphere", "stress", "psychosocial risks") referred back to PSR-based issues which had gone on for about two years. The department heads obviously wanted some help in improving this atmosphere, which they saw as negative. However, from our first contact with these department heads, we realized that in addition to the problems that had already been mentioned, there were also difficulties in relation to production: loss of productivity and increase in the number of quality-related problems. We therefore pointed our study in this direction, starting from the hypothesis that the increase in absenteeism and the worsening of the atmosphere in the department were the result of the difficulties the employees were experiencing in producing top quality work.

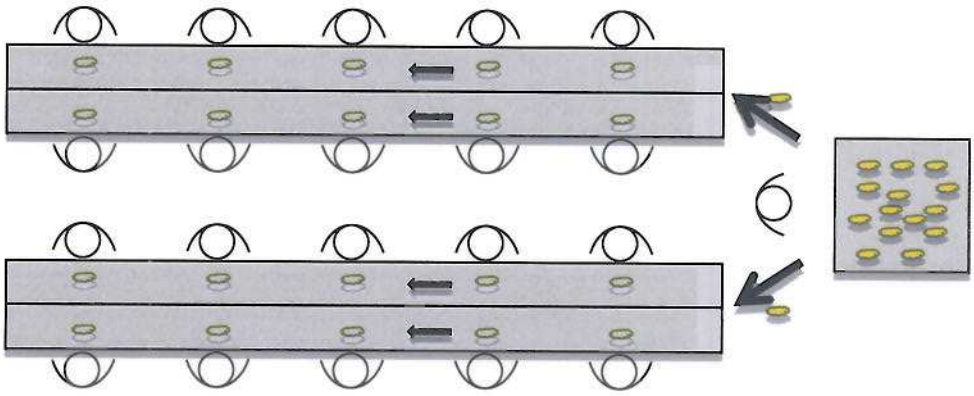
In terms of methodology, we worked in stages:

- Analysis of the work in order to produce a diagnosis,
- Working groups to look for solutions to the problems diagnosed,
- Pilot committee to decide on the solutions to be adopted.

We carried out five half-days of observations and 17 interviews, and chaired four working group meetings and three pilot committee meetings, each lasting half a day. Lastly, we spent four days monitoring how the solutions were being implemented.

The de-veining workshop includes 36 people - 33 female operators and 3 line supervisors. This is an activity that requires a great deal of precision in the actions that are performed. Fingers must be slim and agile. This is why only women carry out this task. There are four lines (all set facing one another), with five operators on each line and one to do the sorting.

Figure 2: Process of de-veining



The veins and the nerves are removed using a knife. On the production line, the first female. operator opens the liver, the next three remove the veins and nerves and the last one puts the liver back together. These very precise movements are carried out at a very fast pace (one liver every five seconds) and with the focus being very much on quality. The operators work standing up, in a room with no natural light and at a temperature of 4°C, maintained by air ducts placed above the production lines. They work alternate morning and afternoon 8-hour shifts during the season only (mainly from September to December with part-timers also being brought in). As this request was based on a problem of "atmosphere" and strained "interpersonal relations", we first observed that working conditions and environmental conditions were difficult, and the task was a very demanding one.

After carrying out analyses in the field, we started on group work. We held four working group meetings composed of six operators, one line supervisor and one ergonomist. First, we presented our diagnosis on their activities and on what we considered to be the problems. The aim was to validate our diagnosis with the operators themselves, and to expand it. Next, we prioritized the problems and asked the operators to think about possible solutions by trying to evaluate the consequences in terms of working conditions and efficiency (quality and productivity). Between meetings we organized a pilot committee meeting (management, staff representatives, occupational health doctor and ergonomists) and presented the work in progress. The pilot committee then took a decision on which solutions should be implemented and the resources were made available to do this. Solutions were put in place gradually as we wanted to test them out in order to evaluate them. This process therefore took one year to complete.

3. Results

This intervention produced several types of results, which we will discuss in more detail next:

- Results concerning working conditions,
- Results enabling us to define different ways of regulating work on the factory floor,
- Changes in representations of the way cases of PSR were viewed and dealt with, especially by the management team.

First, the group work mainly covered resolving the problems that we had highlighted during observations and those that the employees had mentioned during the interviews. The expression that came up most frequently was "a loss of any meaning in their job" and "suffering", especially in relation to finding it impossible to reject products judged to be of poor quality. Indeed, some months before we arrived, operators were told not to reject livers because of their appearance. Of course it was this limitation put on their activity that was the main cause of their suffering. The deep-seated reason why these operators were driven towards this activity, which they could not in fact carry out, was related to the quality of their work. Their own vision of quality, or at least a common and important aspect of their vision of quality, was to place the customer at the heart of their activities, via the product. Suppressing this vision of quality was tantamount to destroying the way they were able to express their professional competence. They felt that, vis-à-vis their colleagues and the customers, their professionalism, shaped by an image of work well done, was being challenged. This was extremely distressing for the workers.

In the group meetings, the goal of quality marked all the discussions. Before the veins are removed, a foie gras liver must satisfy certain criteria:

- Good overall texture, checked by feeling with the fingers;
- It must be light in color;
- It must weigh between 400 and 600g.

Next, it must no longer contain any veins or nerves, yet it must not be too cut up and crushed. The operators' work is guided mainly by their aim to respect these quality criteria. To this end, the group set out to alter what was preventing them from carrying out quality work. The following table summarizes the main problems covered and the actions that were subsequently carried out to deal with them.

Often, the livers arrived partially frozen. This made it much more difficult to perform the necessary actions and the livers suffered more damage by the end of the process. At our request, management agreed to organize the thawing process better over time, by starting earlier, and checking how the thawing process was proceeding before sending the livers to be de-veined, even if this meant resuming the thawing process.

Each operator developed her own specific actions, not always using the same knife in order to cut more precisely. It was essential to maintain the knives properly (cleaning and sharpening) so that they were in good working order and operators could work quickly, without damaging the liver. To deal with this, the knives were personalized and a board was specially designed to hang them on, and this was placed at the factory floor entrance.

As the livers are not always the same kind (ducks and geese), some may be harder than others, and some knives cut better than others, the operators sometimes have to move down the line while keeping the liver in their hands for the necessary time. They then move back up the line to return to their position. Shortly before our intervention, the line supervisors had forbidden this practice to prevent the women from being too close to one another and

"chatting amongst themselves". This practice, which was essential to maintain quality, was reinstated once management had understood its importance for production efficiency and quality.

Previously, the processing of goose livers was concentrated over a period of two consecutive days of the week. These livers are denser in consistency and they are much more difficult to process. On the third day, the operators were exhausted, their shoulders ached, which often led to absences for sick leave. It has now been agreed to spread these livers across the whole week.

Finally, the line itself was modified by installing standing-seats, foot rests and rests for the lower abdomen. Although this may be a change that is often applied and simple to do, it represented a "minor cultural revolution" on a factory floor where sitting down to work was synonymous with resting.

Next, we worked more specifically on improving regulatory processes. A line supervisor was present at each working group meeting who could therefore state that the difficulties the employees were experiencing had their basis in the work and their desire to do a good job. As more meetings were held, the topic of managing interpersonal disputes gradually gave way to trying to find solutions collectively to day-to-day production problems. This had a secondary effect as the line supervisors realized how little leeway they had for resolving them.

Table 1: Summary of topics and actions

Topics	Areas of action
Product	Check temperature of livers before they reach the line Livers that are not completely thawed must wait
Work tools	Personalized knives: 2 per operator Creation of a knife-holder with named spaces
Position of operators on production line	Rules allow workers to move up or down the line
Organization of production	Different organization of goose liver processing (every day)
Stations on production line	Purchase of standing-seats Installation of bars to rest feet and lower-abdomen

Management realized the importance of regulatory processes to ensure that production ran smoothly and to safeguard health. We therefore worked with them on this topic. They confided in us that directives from the group to which the company belonged had forced them to "toughen up" production recommendations for productivity reasons. Our intervention convinced them that it was important to have defined regulatory areas. The management of this SME then negotiated with the group to be allowed, as an experiment, to relax organizational procedures. Weekly meetings were set up for each workshop with operators and line supervisors present, to report on any problems and provide solutions. Within given guidelines, line supervisors were now allowed to make formal decisions. Monthly meetings were put in place with workshop supervisors and the management team to look at any problems that had not been dealt with by the line supervisors. With the same end in view, management organized a training session for the workshop and line supervisors. The aim was to train them in management and in particular to improve their ability to take into account the difficulties associated with the workplace. These sessions were based on their own practices, especially any difficulties they had encountered, and the result was that the management team pledged to give some thought to delegating decision-making power.

Eighteen months after our intervention, we had the opportunity to return to the company to observe the state of operations. The effects of the intervention were perceived very positively by employees and management. The meetings that had been set up were still ongoing, though were held less frequently, and the training session had been very helpful for the line and workshop supervisors. During this time, employees from each workshop had attended meetings and had shown an interest in speaking about their work and being effective in seeking solutions. They said they were once again achieving a certain level of quality, which was confirmed by the figures. Lastly, management said they had had doubts at first about our intervention, thinking that this was not the way to deal with their PSR problems. The results had totally convinced them, however, that the areas for discussion that had been set

up were the solution, both in the medium and the long term, even if this procedure was not able to manage all interpersonal disputes indirectly.

4. Discussion

4.1 Horizontal and vertical regulations

The process of de-veining livers for foie gras requires operators to be constantly managing a range of variabilities. To do this, they must be able, on a daily basis, to modify and adjust their way of working in order to achieve quality and productivity targets. They need to have sufficient leeway to govern their actions and not be prevented from carrying out part of their activity. If it were simply a matter of identifying the person who was preventing the work from being carried out, then this exercise would be a very straightforward one. However, the line supervisors are in a very similar situation to that of the operators. They too have very little room for maneuver to regulate the way the workshop functions. As supervisors, their role is in fact limited to checking whether targets are being met and acting to ensure that they are. Their middle management role, as an intermediary who "hears" the feedback from their subordinates, analyzes it and suggests changes in working conditions so as to improve the situation, is reduced to zero. It is no longer even considered necessary that this work should be carried out by middle managers. Lastly, this mode of operation generates organizational failures. The line supervisors were in such a state of denial, very probably for their own protection, that they had completely blocked out any chance of "hearing" feedback from the shop floor. The organization was therefore preventing itself from improving operating conditions and did not have a vision of quality that recognized the position of the client, thus reducing its capacity for resilience (Hollnagel et al., 2006; Petit & Dugué, 2010), a paradox for a company that placed the client's expectations at the heart of their operation. It was therefore essential to improve this ability to regulate.

We organized the working groups so that discussions focused on aspects of work that had been observed and validated and where it was possible to find solutions that could be put in place. This method is not feasible if participants do not have at least a minimal guarantee that possible solutions will be implemented. In this way, participation in the working groups was an excellent way of developing the ability to define and structure the regulatory process:

- by transforming problems perceived as "individual" into organizational problems,
- by improving the work situation,
- by developing and recognizing technical abilities (Béguin, 2007),
- by building or strengthening links with colleagues (Caroly, 2010),
- by recognizing skills relevant to organizational work and hence outside the scope of traditional career development models and criteria (Castilla & Bernard, 2010).

In this way, we used the working groups to demonstrate that regulation at the lowest relevant level (Petit et al., 2011) is, both for individuals and groups, a resource for developing their power of action, in that they find possibilities for dealing with day-to-day problems which make sense for them but which until that point had not been recognized as such. We

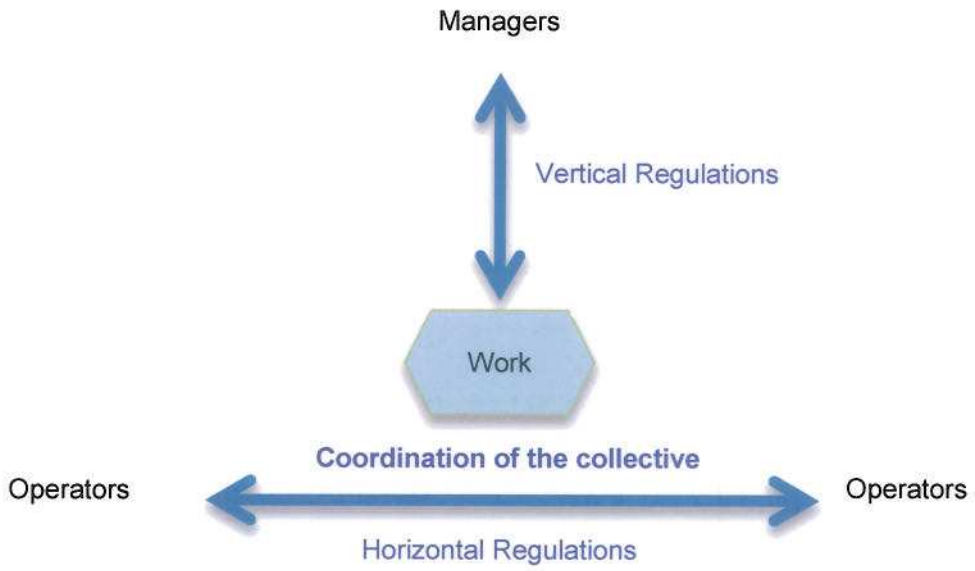
eventually persuaded management to agree that it was essential to allow the system to be regulated as we had done and that to do this, the organization had to change.

We were finally able to set in motion two types of regulation:

- Horizontal regulations which applied between operators, who were able to discuss professional practices and create a common set of guidelines to achieve work well done. This work was done in groups, so that rules governing how to do the work were coordinated across the workforce.
- Vertical regulations which involved sending problems up the levels of the hierarchy, as far as top management if necessary. In the case of the intervention described here, this had the effect of showing how little space was allowed to the line and workshop supervisors for taking decisions.

Lastly, in order to be effective, these two types of regulations have to be based on real aspects of the work concerned.

Figure 3: Horizontal and vertical regulations



4.2 Participation

It often happens that when the suggestion is made to put working groups in place, one comes up against reticence or refusals on the part of management or employees. For management, working groups may be seen as a waste of time and an opportunity for employees to make complaints. For employees, working groups may bring to mind negative experiences of participation where their suggestions were not given consideration and where options had already been decided on by management beforehand. Looking beyond these points, in our opinion there are 3 essential conditions to ensure that participation works well:

- Have some guarantees of implementation, by decision at local level, even though at the beginning these may be minimal,
- Consider participation in an experimental process,
- Form working groups fairly early in the intervention.

4.3 Taking time

When organized in this way, the intervention takes on an educational aspect (Dugué et al., 2010). It becomes an opportunity to learn about one's own work, the work of others, new ways of working, decision circuits and where they are applied, and it is also a time to pass on one's own ideas to colleagues. In addition, the ergonomists need this time to gain the confidence of the group members and management. Participants wait to see whether the ergonomists will really be able to "bring about change", even though officially the managers have allowed them this leeway. As for management, they want results. So whether we are acquiring confidence or results, one way of achieving these is time. Thus, if insufficient time is allowed for an intervention on PSR, and hence on the organization itself, this would undermine both confidence and results.

4.4 Involving middle management

This work on questioning the allocation of power impacts directly on the problems that middle managers encounter in practice. One of the causes of the absence of regulations and discussion about work is the middle managers' inability to formulate regulations (Reynaud, 2003). Thus it is essential that they are associated with this procedure. The line supervisors have to be able to participate in the working groups as "relevant decision-makers", given the work that is done in these groups. The other middle managers (workshop and production supervisors) must be able to consider the processes and the results produced by the groups in relation to the difficulties they themselves encounter in their work. They are the ones who will carry any challenges to the decision process to senior management and implement any new proposals. Up to this point, analysis of the work of middle management focused on the nature of orders as elements to define the work of their subordinates. It would now be interesting to go further in our understanding of their work by looking at the distribution of powers and decision-making circuits.

4.5 Decision-making circuits and areas as the "subject" of the intervention

This brings us to a discussion of the subject of this intervention on PSR. In our opinion, this is where the heart of the problem lies. Building temporary spaces for regulation is not sufficient. The decision-making circuits and areas must themselves be modified. What working people need most is still the necessary room for maneuver so that they can constantly adjust their work to match a wide range of variabilities. The structure of the organization can be stabilized in such a way that there are improvements in the situations being dealt with. However, once the intervention is over, the work will continue to require attention. By acting on decision-making circuits and areas, this will enable employees and managers to keep some degree of control over regulating work. Guided by the concept of organizational subsidiarity (Petit et al., 2011), ergonomic intervention is able to propose a decisional architecture where decisions are taken at the lowest appropriate level.

5. Conclusion

There are usually two possible points of entry when proposing an action affecting the organization. The first concerns support during organizational change. In this instance, the decision-makers have more or less expressed their willingness to question and modify the organization as it is and, as a rule, a transformation process is then implemented. The second point of entry, and the one most often used, concerns requests that report a problem. Since there is now increasing awareness of PSR due to media coverage, this has encouraged this kind of request. One of the predominant representations that applicants have of PSR is to consider that the endpoint is to provide support for the most "fragile" individuals (Clot, 2009), even though we know full well that interventions of the "stress management" type, on absenteeism for example, are ineffective (Van Rhenen et al., 2007). In this second type of intervention, the action on the organization is not simply a matter of course for the applicants. A considerable amount of work is needed, both on the part of the ergonomists and individuals from the company, to make sure that it is understood that the origins of the problem do not lie only in the fragility of some individuals. In any event, a procedure that aims to act on PSR and hence on the organization cannot be put in place without the involvement of those who are undergoing it and have to make it work. In other words, the individuals and groups who provide structure for the organization, whether or not these methods are official and recognized, must be stakeholders in discussions surrounding the organization.

To conclude, one of the strengths of SMEs is that they retain an ability to react and adapt rapidly to any internal or external complications, which may be linked with the economy, legislation, production, people or social matters. This is sometimes more difficult for a large company where the operational structure can give rise to inertia when changes have to be made. In the case we describe, we can see that for PSR, the situation may be different.
The senior and middle management of this SME perceived a problem with interpersonal relations as it manifested itself as such and had consequences which they judged to be significant. However, few links had been forged between the operators and their own work and the consequences of the disputes had been equated with the causes. The main causes of this problem, however, were to be found in the work, especially in what was preventing this work from being carried out (Clot,), and in what constitutes the strength of an SME, i.e. its ability to regulate when there is such variability in conditions. Finally, giving the workshop back its ability to regulate and thus produce work of quality is a major focus for interventions on PSR in an SME.

6. References

Béguin P., 2007. Innovation et cadre sociocognitif des interactions concepteurs-opérateurs. Le travail Humain, 70, 4, 369-390.

Caroly, S., 2010. L'activité collective et la réélaboration des règles: des enjeux pour la santé au travail. Thèse d'habilitation à diriger des recherches. Université de Bordeaux.

Castilla, E.J., & Benard, S., 2010. The Paradox of Meritocracy in Organizations. Administrative Science Quarterly, 55, 543–576.

Clot, Y., 2008. Travail et pouvoir d'agir. PUF, Paris.

Clot, Y., 2009. Vers un nouvel hygiénisme? In: Thébaud-Mony A., Robartel N., (Eds.), Stress et risques psychosociaux au travail. Problèmes politiques et sociaux, pp. 104-109. La documentation française, 965.

Dugué, B., Petit, J., Daniellou, F., 2010. L'intervention ergonomique comme acte pédagogique, Pistes, http://www.pistes.uqam.ca/

Hasle, P., & Møller, N., 2007. From Conflict to Shared Development: Social Capital in a Tayloristic Environment. Economic and Industrial Democracy, 28, 3: 401-429.

Hollnagel, E., Woods, D., & Leveson N., 2006. Resilience Engineering: Concepts and Precepts. Ashgate Publishing Ltd, Aldershot, UK.

Petit, J., Dugué, B., 2010. Une organisation « subsidiariste » pour prévenir des RPS. Actes du 45ème congrès Société d'Ergonomie de Langue Française (Self). Septembre, Liège, Belgique.

Petit J., Dugué B., Daniellou F., 2011. L'intervention ergonomique sur les risques psychosociaux dans les organisations: enjeux théoriques et méthodologiques. Travail Humain, 74, 391-409.

Reynaud, J-D., 2003. Régulation de contrôle, régulation autonome, régulation conjointe. In: de Terssac G. (Eds.), La théorie de la régulation sociale de Jean-Daniel Reynaud, pp. 103-113. Éditions La Découverte, Paris.

Van Rhenen W., Blonk R.W.B., Schaufeli W.B., van Dijk F.J.H., 2007. Can sickness absence be reduced by stress reduction programs: on the effectiveness of two approaches, International Archives of Occupational and Environmental health, 80, 6, 505-515.