

Negotiating participation: Understanding the “how” in an ergonomic change team

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Abstract

In participatory ergonomic (PE) interventions, “how” effective participation by workplace parties can be achieved remains unclear. We conducted a case study of the dynamics of an ergonomic change team (ECT) process in a medium-sized (175 employees) automotive foam manufacturing plant. We present analyses of observer field notes and post-intervention interviews from which key elements on the dynamics of the “how” emerged: (1) impacts of facilitators’ involvement and interests; (2) tensions in delimiting the scope of ECT activities; issues around (3) managing meetings and (4) realizing labour and management participation; and (5) workplace ECT members’ difficulties in juggling other job commitments and facing production pressures. We highlight the ongoing negotiated nature of responses to these challenges by labour, management and ergonomic facilitator members of the ECT. We argue for greater examination of the social dynamics of PE processes to identify additional ways of fostering participation in ergonomic project implementation.

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1. Introduction

Work-related musculoskeletal disorders (WMSD) are an important cause of disability in industrialized countries. Categories of documented risk factors for the development of WMSD include biomechanical e.g., Bernard (1997), psychophysical, and psychosocial e.g., Kerr et al. (2001). Participatory ergonomics (PE) has

been suggested as an effective intervention strategy to simultaneously address each of these risk factor categories, while at the same time efficiently using expert ergonomic resources, maximizing the contribution of workplace parties, and embedding ergonomics within organizational processes.

Wilson and Haines (1997) define PE as “the involvement of people in planning and controlling a significant amount of their own work activities, with sufficient knowledge and power to influence both process and outcomes to achieve desirable goals”. By tapping workers’ intimate knowledge of work details and processes, PE may enhance changes to reduce mechanical exposures. Direct involvement in workplace

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decisions has the potential to increase worker self-confidence, competence, and independence (Mambrey et al., 1987). PE thus speaks to both physical and social aspects of work organization (Hendrick, 1995).

As Haims and Carayon (1998) indicate, “the question ‘why participation’ is readily answered, while the question ‘how are effective participatory programs achieved’” is further from being understood. Wilson and Haines (1997) cite not only positive case studies, but also examples of misapplication of PE, limitations when cynicism pervades the process, and situations where problems are generated by PE within organizations. In concerted attempts to avoid such pitfalls and promote successful PE processes, they and others have proposed various principles, pre-requisites or success factors (Nagamachi, 1995; Kourinka and Patry, 1995; Jensen, 1997; Haims and Carayon, 1998; de Looze et al., 2001).

Examinations of PE processes have used both quantitative and qualitative approaches in several ways. They have (1) documented key factors related to implementation, (2) focussed on further understanding the “how” of PE processes, and (3) reflected back across a set of case studies. The first tend to rely on informal investigator experiences, documents, and quantitative survey tools, e.g., participant questionnaires (Moore and Garg, 1996; Bohr et al., 1997) to describe intervention processes. The second turn to more formal qualitative techniques such as the use of participant observations (recorded in a diary), feedback evaluation forms, and interviews with ergonomic coordinators (EC) (e.g., see Haims and Carayon, 1998) and Table 1. Other qualitative analyses have used field notes to examine the importance of plant “participatory culture” (St. Vincent et al., 2000) or questionnaires and in-depth interviews to

Table 1
Key elements in the ergonomic change team process from this study compared to those suggested by others

| Domains (adapted from Wilson and Haines, 1997) | Pre-requisites (Nagamachi, 1995) | Requirements (Wilson and Haines, 1997) | Principles (Haims and Carayon, 1998) | Factors (de Looze et al., 2001) | Key elements (this study) |
|--|---|---|--|--|---|
| Climate, support and resources | Get active participation of stakeholders Obtain an organizational commitment (by the company and labour force) to the participatory approach | Establish a climate of participation Provide support and resources | Provide necessary resources Secure time and effort commitments | Achieve as direct worker participation as possible | Obstacles to realizing participation both among non-ECT plant workers and within the ECT Challenges posed by workplace ECT members need to juggle their ECT and job commitments and face the pressures of production |
| Facilitation and set up | | Select a good facilitator Set up the PE process carefully | Have a flexible, dynamic outside expert Provide both structure and flexibility | Install working or steering groups at the start of the intervention | Facilitators' focus on ergonomics Ongoing discussions on scope Challenges in managing meetings |
| Processes and methods | Use sufficient ergonomic methods and tools Use both micro- (focussing on decreasing work load) and macro- (organizational redesign based on human-oriented restructuring) ergonomic perspectives | Employ participative methods | Adhere to established training principles Incorporate behavioural cybernetic principles, and organizational design and management factors into the implementation process | Use a systematic step-wise intervention process with such elements as problem identification, solution development and testing, and final implementation Conduct a broad analysis of the occupational tasks and potential health problems Conduct intensive analysis of the potential side effects of proposed solutions | Facilitators' focus on use of evidence-based approaches including use of broad Blueprint, one-minute surveys, and a biomechanical modeling software program Differential uptake of the above and some tensions in achieving participation with their use |

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