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Participatory Interventions in Call Centres

Carolyn Axtell & David Holman

Background to the Chapter

Call centres present a particularly challenging environment in which to conduct participatory job redesign interventions as they have many features that can inhibit the success of participatory interventions such as little history of employee participation, bureaucratic structures and high turnover. The aims of this chapter are to show that participative job redesign interventions can be run successfully in call centres. In particular, we will draw on our experiences of running participative job redesign interventions in two call centres to describe and discuss the issues involved in their planning, running and evaluation (Holman, Axtell, Sprigg, Totterdell & Wall, 2010; Holman & Axtell, 2016). First, we will outline the nature of job design within call centres, provide a brief overview of the literature on job redesign interventions in call centres and highlight the potential difficulties of running such interventions within this context. Next, we will describe the job redesign interventions we ran and specify the key phases and considerations when undertaking them. We will also evaluate the effectiveness of these interventions and conclude with some lessons learned about the strengths and limitations of our approach.

Rationale for job design in call centres

Job design refers to the characteristics of employees' job tasks and activities (Parker & Wall, 1999). Drawing on the job demands-resources model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001), job characteristics can be categorised as job resources or job demands. Job resources are psychological, physical, social, or organisational aspects of the job that facilitate task achievement and learning, and which help to reduce the impact of job demands (Bakker & Demerouti, 2006). Job characteristics that can be classified as resources include

job control (i.e., discretion over the timing of work tasks and how to complete them), task variety, task feedback, skill utilization, social support and participation in decision-making

Job demands are job characteristics that require sustained physical and/or psychological effort. Recent work has distinguished challenge demands from hindrance demands.

Challenge demands are task requirements appraised as promoting growth and achievement (e.g., task complexity, workload) and hindrance demands are task requirements appraised as preventing task completion (e.g., emotional demands, time pressure; Lepine, Podsakoff, & Lepine, 2005). Empirical research demonstrates that: job resources are positively associated with employee outcomes such as well-being, satisfaction and performance; hindrance demands are negatively associated with these outcomes; and challenge demands are associated with higher levels of burnout and stress but also with higher job satisfaction and performance (Humphrey, Nahrgang, & Morgeson, 2007; Lepine et al., 2005; Van den Broeck, Cuyper, De Witte, & Vansteenkiste, 2010).

The design of call centre agents' jobs has been identified as problematic in a number of key areas. First, call centre jobs tend to lack key job resources such as job control, task variety and participation (Deery, Iverson, & Walsh, 2002; Holman, 2002; Holman, Batt & Holtgrewe, 2007; Sprigg, Smith & Jackson, 2003; Zapf, Isic, Bechtoldt & Blau, 2003). Second, with regard to challenge and hindrance demands, both workload and emotional demands tend to be high, while those challenge demands that might make the job more interesting, such as task complexity, tend to be low (Deery et al., 2002; Holman, 2002; Sprigg et al., 2003; Thite & Russell, 2010; Zapf et al., 2003). Third, performance monitoring in call centres is both extensive and intensive as it typically combines continuous electronic monitoring of quantitative performance (e.g., call times), frequent evaluations of call quality through overt and covert evaluation, and frequent feedback. This approach to performance monitoring can increase demands and thereby raise employee stress, particularly when used

punitively rather than developmentally, when the quality of feedback is poor and when agents have little control over their work (Bakker, Demerouti, & Schaufeli, 2003; Holman, Chissick & Totterdell, 2002). Lastly, opportunities to interact with colleagues can be limited due to low task interdependence (which has led some to characterise call centre teams as ‘administrative’ or ‘pseudo’ teams, Van den Broek, Callaghan & Thompson, 2004) yet call centre agents often report relatively high levels of co-worker support (Deery et al., 2002; Sprigg et al., 2003).

Although not all call centre agent jobs have these characteristics – studies show a degree of variation in job design across call centres – the evidence does indicate that many call centre jobs are characterised by routinized and demanding work with low levels of job control and high levels of monitoring (Holman, Frenkel, Sørensen & Wood, 2009). As such, it is not surprising that call centre agents tend to report low levels of employee well-being, particularly relative to other similar service occupations (Frenkel, Korczynski, Shire & Tam, 1999; Grebner et al., 2003; Holman, 2002; Sprigg et al., 2003, Zapf et al., 2003) and that the level of employee turnover in the call centre industry is high, with one estimate that the median turnover rate is 20% (Holman et al., 2007). Thus, the need for job redesign is strong in this context.

The case for participatory job redesign interventions in call centres

One way of addressing the problematic nature of job design in call centres is to conduct a job redesign intervention, which can be defined as a planned change initiative that aims to modify job characteristics as a means of enhancing employee outcomes (Holman & Axtell, 2016; Parker & Wall, 1999). Reviews of organisational interventions suggest that successful interventions have five phases including: preparation, i.e., developing and securing support for the intervention strategy; screening, i.e., identifying the psychosocial risks in the workplace; action planning, i.e., developing change initiatives that alter work activities as a

means of changing job characteristics and improving employee outcomes; implementation, i.e., embedding change initiatives within the organisation; and, evaluation of the effectiveness of the intervention (Israel et al., 1996; Nielsen et al., 2010). Such reviews also identify employee participation (which in this context can be defined as involvement in planning and implementing an intervention) as central to the success of job redesign interventions (Egan et al., 2007; Kompier, 2004; Hurrell, 2005; Nielsen & Randall, 2012; Nielsen, Randall, Holten & Rial González, 2010). For example, employee participation can improve the quality and contextual appropriateness of change initiatives by drawing on employees' expertise and knowledge, and can increase commitment to implementing change initiatives, as employees have a greater sense of ownership of those change initiatives (LaMontagne, Keegel, Louie, Ostry, & Landsbergis, 2007; Nielsen, Randall & Albertsen, 2007). Employee participation can also be beneficial in its own right, as it can increase the sense of job control and responsibility (Le Blanc, Hox, Taris, & Peeters, 2007; Mikkelsen & Saksvik, 1998).

However, employee participation is not without risks; it can increase the complexity of the intervention processes by involving a wider range of stakeholders who may have competing ideas and motivations, and raise costs by removing front-line employees from their jobs (Ichniowski et al, 2000). Furthermore, employee participation in job redesign interventions may be more difficult in certain contexts. For instance, when job control is low and there is little opportunity to participate, employees may lack the confidence or experience to be involved in decision-making processes, and bureaucratic organisations may make it hard for employees to implement changes to job tasks, particularly when tasks appear 'fixed' due to technological constraints such as software routines (Nielsen & Randall, 2012; Saksvik, Nytrø, Dahl-Jørgensen & Mikkelsen, 2002). In addition, in contexts with low employee well-being and high burnout, employees may find it difficult to actively engage in participative

activities, while in an organisation with high turnover, those employees involved in developing ideas may not be around to embed them within the organisation (Nielsen & Randall, 2012). Given that call centres often have many of these contextual features (e.g., low job control, little history of employee participation, bureaucratic structures, high turnover), they present a particularly challenging environment in which to conduct participatory job redesign. But as we will show, participative job redesign interventions that improve job design, employee well-being and employee performance can be run successfully in call centres.

Content of the interventions

Within this section we present our experience of running participatory job redesign interventions within two call centre settings and detail the structure and content of the interventions. The first study (Study 1) took place in a private sector, non-unionised call centre in which the main tasks involved dealing with incoming calls from customers about their insurance policies and claims, and dealing with incoming post and documents (See Holman, Axtell, Sprigg, Totterdell & Wall, 2010). The second study (Study 2) took place in a public sector, unionised call centre dealing with transport-related issues (See Holman & Axtell, 2016). The main tasks for call centre agents involved dealing with customer queries (from both private organisations and the general public), handling payments and making bookings. In both settings, although many of the calls were repetitive they still required a good understanding of underlying policies and procedures in order to deal with enquiries. There were also various administrative tasks relating to customer enquiries, such as emailing customers, writing letters, or emailing other parts of the organisation to get information.

The primary rationale for each intervention was to improve employee well-being. In Study 1, senior managers approached the research team as they were keen to improve job satisfaction (which company surveys had shown to be relatively low) and to reduce employee

turnover, as previous initiatives had had little effect on these outcomes. In Study 2, the decision to involve external expertise was initially driven by trade unions concerned about employee well-being. Senior management were, however, very supportive and were also keen to improve job quality and well-being.

The participatory job redesign interventions had four main stages i) preparation ii) screening iii) action planning, and iv) implementation, although an evaluation phase was also included at the end. Stages ii to iv were largely based on a ‘scenarios planning’ tool that was originally developed to redesign jobs during the introduction of new technology and which provides a relatively structured method for conducting job redesign interventions. The scenarios tool also stresses collaboration between researchers and the organisation, the participation of multiple stakeholders so that their expertise is incorporated (especially from front-line staff) and the introduction of job design theory to inform and empower stakeholders so they can make better decisions about redesign solutions (Axtell, Pepper, Clegg, Wall, & Gardner, 2001; Clegg et al., 1996). It is worth noting that within both studies only part of the organization underwent the full intervention and we were therefore able to employ a quasi-experimental design to compare the ‘intervention’ and ‘control’ groups within our evaluations. We now detail each stage.

Stage 1 Preparation

The preparation phase was geared towards developing and securing support for the intervention and to communicate the intervention plan to ready employees for change. Initial meetings included senior call centre managers in which the scope and nature of the intervention was discussed and a broad plan and timetable for the intervention was agreed. With regard to the scope of the study, in Study 1, all five departments (17 teams) in the call centre were initially involved in the intervention, as managers wanted all employees to benefit from it (although 2 teams later dropped out due to an outsourcing decision). In study

2, four out of the twelve teams were selected to take part. The researchers asked the managers to select teams that were representative and not just the best or most 'agreeable' teams.

The intervention plan was then communicated (by a researcher) at a meeting of all team leaders and then to all employees during formal team meetings. An important element of this initial communication was to manage expectations by stating the limitations of the intervention, particularly that it would not alter pay or (in Study 2) other employment conditions set by national collective bargaining. At these meetings, team leaders and employees were generally positive about the opportunity to try to improve aspects of the call centre agent job that they disliked or found frustrating (e.g., a lack of variety), although some expressed concerns that the intervention would increase workload.

Stages 2 & 3 Screening and Action Planning

The second and third stages of the intervention focused on screening and action planning activities with the overall aim to develop an agreed set of job redesign changes. These stages, primarily based on the scenarios planning tool, consisted of two one-day workshops followed by smaller follow-up meetings.

Workshop 1 Screening and developing alternative job design scenarios

The focus in the first workshop (which lasted for about 5 hours) was to evaluate and identify the risks of the current job scenario, to discuss alternative job scenarios, and to develop and select a new preferred job design scenario. In Study 1, separate workshops were run for each department in the call centre and involved two or three employee representatives from each team in that department. In study 2, separate workshops were run for each team and all team members participated. The level of employee participation within teams was therefore greater in Study 2. The workshops also included team leaders from each team to provide additional insights, particularly that pertaining to team and cross-team functioning.

Senior managers were not included within these workshops, as this might have constrained discussion and ideas. However, it was made clear that senior managers had given their support to these workshops and that they would need to ‘sign off’ any proposed changes. Participants were told that they would be given support to develop the case for the proposed changes before being presented to management.

Assessing the current job scenario The workshop started by trying to develop a common understanding of the current work scenario among participants and defining problems in need of improvement. To do this, the research team first introduced the rationale behind the workshop and put it in the context of the results from a recent employee survey that was run by the researchers as part of the intervention evaluation process. Next, employees worked in small groups to describe their understanding of their job tasks and then shared this in a plenary with the rest of the team, where the main points were written on a flipchart. The research team ensured that participants also thought about and included tasks that were at the boundaries of their work. For instance, participants considered team leader tasks (so there was an understanding of the vertical spread of tasks within the team), outlined where work needed to be passed on to other departments (to understand the horizontal range of tasks in the team), and defined obstacles faced in their day to day work. When outlining vertical and horizontal handover points, key obstacles to getting the work done were often highlighted.

Once participants agreed that they had covered all the main activities within the current scenario, they were asked to rate this current work scenario against a range of job design criteria and outcomes. The researchers prepared a sheet which outlined a set of thirteen previously identified job design criteria in call centres (adapting this to suit the call centre context was an important difference with previous uses of the scenarios planning tool), and went through these to ensure that the participants understood them. The job characteristics, their descriptions and rating scales are summarised in Table 1. Each of these characteristics

was rated on a scale from 1 to 10 – with 10 representing the most positive score in job design terms. Notably we included ‘job obstacles’ and ‘cross-team/department cooperation’ because these are particularly pertinent and readily identifiable in call centres where jobs are typically very narrow but customer enquiries can be quite broad and complex. Basic principles of job design were also explained in relation to enhancing or reducing job characteristics to improve employee well-being and particular attention was given to distinguishing job demands from job resources. We also made a distinction between personal skills and the skills needed to do the task so as to distinguish between the design of the task itself and personal abilities and aspirations (which may not match). This helped to highlight training needs required for any new tasks adopted.

Next the job outcomes were explained and rated. There were three ratings for employee well-being. Two related to Warr’s circumplex model and were measures of depression-enthusiasm and anxiety-contentment (Warr, 1990). Thus participants rated the current scenario from 1 (miserable) to 10 (enthusiastic) and from 1(anxious) to 10 (calm). Another item based on the concept of burnout (Maslach, Jackson & Leiter, 1997) was rated from 1(burnt out) to 10 (vigorous). Performance was rated in terms of productivity - from 1 (low call productivity) to 10 - high call productivity (no room for improvement); and quality from 1 (low call quality) to 10 - high call quality (no room for improvement).

The scoring process generated a lot of discussion and some disagreement, although most differences were resolved. However, if there were large differences due to different tasks in different parts of the team, then these differences were recorded. The mean score for job characteristics, well-being and performance were then calculated, and the current scenario was then put to one side whilst work began on the alternative scenarios.

Developing Alternative Scenarios The next step in the workshop was to help participants to consider various job redesign solutions that might improve job characteristics and

outcomes. To that end, the researchers guided the participants towards possible alternative scenarios that emphasised particular criteria. Whilst the overall theme of the alternative scenarios was provided by the researchers, the participants came up with their own ideas of what changes would be needed to realise these alternative scenarios. At this stage we tried to encourage participants to ignore actual or potential barriers, as feasibility was considered at a later stage. This phase was meant to encourage employees to think creatively and consider new ideas.

In Study 1 we used 3 key scenarios – one aimed at improving well-being, one aimed at improving performance and one aimed at improving both. The idea behind this was to illustrate the trade-offs that might need to occur in order to satisfy both well-being and performance, but also served to highlight that there may be some work practices that would enhance both outcomes – or at least would enhance one but not harm the other component. However, one difficulty with this ‘outcomes’ focussed approach was that, despite being informed about job design theory, call centre employees needed some encouragement to think about enhancing important job characteristics like job control. So we felt that highlighting this as a central theme of an alternative scenario would be helpful in enabling the participants to consider such ideas more explicitly. Moreover, from our experience of conducting the workshops in Study 1, we also knew that many of the obstacles highlighted within call centres related to cross team collaboration and handover, where a task could not be completed by the agent because it had to be handed over to another department or team (relating to low task identity/completeness and low control).

Thus, in Study 2, we asked participants to consider changes to the job that would be required to develop two alternative scenarios, one concerned with vertical enrichment (taking on more complex tasks and tasks performed by the team leader) and another concerned with horizontal enlargement (greater variety of tasks at the same level). The first was aimed at

promoting ideas related to greater control, responsibility and skill use, and the second to encouraging ideas related to greater variety, task identity and removing obstacles to the work flow. These two ideas were then combined into an 'enlarged scenario' which included both vertical and horizontal enlargement. Examples of the ideas that were eventually implemented are shown in Table 2.

Developing the Preferred Scenario After considering the alternative scenarios, participants were asked to take the best ideas for improving the job from the different alternative scenarios, to consider any other ideas they had about improving the job, and to combine them into a 'preferred' scenario. The preferred scenario was then rated against the job design characteristics, well-being and performance outcomes and compared to the current scenario. This rating process helps employees to appreciate that some aspects of the job will change more than others, and that some aspects may not change at all or may even get slightly worse. However, in both studies, the preferred scenario was rated more highly overall than the current scenario, and the participants agreed to take this scenario forward for implementation.

Workshop 2 Action Planning

The aim of the second workshop (which lasted for about 5 hours) was to develop and refine the ideas for improving job design that were suggested in the previous workshop and to agree on a set of job redesign initiatives that would achieve the new preferred job design scenario. In Study 1, the second workshop took place one week after the first, so representatives could obtain feedback from the rest of their team on the suggested job design changes. In study 2, because the whole team were present, the second workshop was conducted the next day.

Selecting ideas The initial focus of the second workshop was to remind participants about the preferred scenario and the ideas they had suggested to achieve it. A number of ideas were proposed ranging from minor procedural changes to large-scale reorganisation of team

structures and practices. The benefits, costs and feasibility of introducing each change were then considered in detail. For example, participants were asked to estimate the amount of time saved by doing a particular procedure previously conducted by other employees (e.g., updating customer details) and the implications for call quality/productivity, costs and employee well-being. Occasionally, there were diverging views about the potential benefits of a proposed change and also the exact form the change would take. In such instances participants had to justify their ideas for or against a particular proposal. Key benefits of this discussion were to improve the feasibility and practicality of ideas, to help create a consensus for the worth of each change initiative, and to develop an underlying rationale for the change itself which was particularly useful for employees when, at a later point, they were required to articulate the benefit of a change initiative to managers and others in the organisation. Not all ideas were accepted. Some changes were rejected at this stage as unfeasible or because the benefits did not sufficiently outweigh the costs, while for other suggestions it was agreed that further investigation was needed before being accepted or rejected. When deciding on which ideas to adopt, the researchers encouraged participants to include some 'quick wins' (e.g., easily implemented tasks) amongst the chosen changes so as to maintain momentum and motivation.

Planning for implementation In the next stage of second workshop, researchers asked for volunteers to act as the champion for a specific change initiative. The researchers made sure that tasks were distributed across team members (usually they were paired up). A timescale was set (about 2 weeks) for each idea champion to investigate the idea further (e.g., to get more accurate figures, or speak to other departments) and to summarise each into a short one-page report to be compiled by the researchers into a fuller explanatory document that would be presented to management. Participants were asked to outline the benefits and costs

associated with taking forward the particular changes initiatives. The second workshop ended at this point, and participants went away to complete their investigations and reports.

The final part of the action planning phase was a meeting with management a few weeks later to present the ideas to management and get permission to go ahead with implementing the ideas. The researchers facilitated the meeting with management, but representatives from the teams presented the ideas themselves. At this point a few ideas were rejected by managers as they were not perceived to be feasible, particularly in Study 1 where a number of suggested change initiatives were aimed at reversing the effects of an outsourcing initiative, even though managers stated clearly that outsourcing would not be reversed. The meeting ended with a final agreement and consensus on which ideas would be implemented.

Stage 4 Implementation

Over the following months the teams were given responsibility to implement the agreed changes which ranged from increasing clarity of performance criteria to being involved in the development of a new computer system. Two representatives per team agreed to monitor progress on the changes and to meet with the researchers for three implementation meetings (one per month over three months). If the teams were having trouble with particular changes then the researchers would raise questions and negotiate further with management to try and make progress on implementation. By the end of the three months, all changes were implemented (for examples see Table 2), although the involvement in a new computer system development was ongoing (the new system was not live yet but the participation was agreed and had started).

Evaluation and participant experiences

We now present evidence for the success of the job redesign interventions based on quantitative analyses of data drawn from surveys used in both studies. In particular, we show

that changes in job characteristics are the mechanism through which the job redesign interventions influence employee outcomes.

Evidence for successful intervention effects In study 1 (N = 119) we based our evaluation on five job characteristics and one employee outcome that were measured in surveys administered one month before the job redesign intervention began and one month after the end of the implementation phase. The job characteristics included four job resources (i.e., job control, participation, skill utilization, feedback) and one job hindrance demand (i.e., task obstacles such as a lack of information, interruptions from colleagues, and computer system problems). The outcome variable was a measure of employee well-being that assessed the extent of pleasant affect (e.g. enthusiasm, contentment) and the absence of unpleasant affect (e.g. anxiety, miserable) at work (Warr, 1990). To examine the direct effects of the intervention, we conducted moderation analyses that tested the effect of the intervention (modelled using an interaction term that is the product of dummy variables representing time of measurement and group membership) on job characteristics and well-being. The results showed that the intervention resulted in significant improvements in the intervention group with regard to job resources (i.e., job control, participation, skill utilization, feedback) and employee well-being but that it did not significantly lower hindrance demands, i.e., task obstacles (See Tables 3 and 4). We then ran a series of mediation analyses which showed that the effect of the job redesign intervention on employee well-being occurred through the changes in job resources (results not shown). Further analysis to examine potential validity threats ruled out the possibility that the results were affected by initial sample non-equivalence (i.e., that differences between the two groups explain each group's reaction to the changes), attrition effects (i.e., that participant attrition caused changes in mean scores) and halo-effects (i.e., that employees in the intervention group experiencing change in one job characteristic are more inclined to report change in other job characteristics).

In Study 2 (N = 62) data were also collected in surveys administered one month before the intervention began and one month after the end of the implementation phase. We focused our analysis on two job characteristics (i.e., job control and feedback) and three employee outcomes that were chosen to capture changes in affect (i.e., employee well-being), attitudes (a measure of psychological contract fulfilment) and behaviour (i.e., task performance). All measures were based on self-reports except the measure of task performance that was rated by the employee's supervisor. Similar methods of analysis to those mentioned above were employed to assess the direct and mediated effects of the intervention (see Table 3 for changes in mean scores). The findings showed that the intervention had a beneficial impact on the intervention group with regard to both job characteristics (i.e., job control, feedback) and all three outcomes (i.e., employee well-being, psychological contract fulfilment, task performance). Notably, the intervention appeared to arrest declines in job characteristics, well-being and psychological contract fulfilment that were experienced by employees in the control group, and to improve task performance in the intervention group. Furthermore, the effects of the job redesign intervention on employee outcomes were mediated by the changes in job characteristics¹. For example, the intervention induced changes in job control led to changes in employee well-being, psychological contract fulfilment and task performance. Analysis also ruled out validity threats such as attrition effects and Hawthorne effects.

Overall, a key finding from both intervention studies is that changes in job characteristics, particularly job resources, are one mechanism through which participative job redesign interventions can be used to improve employee well-being, attitudes and performance. This is important as it shows that the positive effects of the participative job redesign interventions on employee outcomes are not simply due to involvement in participative decision-making or other intervention-induced effects, e.g., a Hawthorne effect. Rather the effects of the

¹ The only exception was that feedback did not mediate the effect of the intervention on task performance.

interventions occurred because the interventions altered job characteristics. These studies therefore show that job redesign initiatives that rely on employee participation can be successfully deployed in organisational contexts that may not at first sight seem amenable to such approaches.

Whilst we did not conduct interviews with participants to examine their reactions to the intervention process, we were able to see how even some of the initially sceptical team members became engaged within this process. From our observations in the workshops, an important outcome of employees' involvement in this process was greater ownership of the change initiatives, although a limitation of our data precludes us from stating the extent of these ownership perceptions and their subsequent impact on the implementation process. However, outcomes from a follow up meeting several years later for Study 2 suggest that those involved directly in the intervention had most ownership, which did not necessarily transfer to other teams or newcomers.

Lessons Learned

In this section we reflect on some of the lessons learned and reasons why these job redesign interventions might have been successful. As noted, reviews suggest that successful organisational interventions have five phases (preparation, screening, action planning, implementation and evaluation) and that employee participation is central to each phase and, as such, to the success of the intervention as a whole (Israel et al., 1996; Nielsen et al., 2010). In line with this, the preparation phase in both studies focused on developing and securing employee and managerial support for the intervention strategy. A key outcome of this was to secure managerial permission for call centre agents to have time 'off the phones' and to allow their participation in intervention activities during work time. We also invested much time and effort informing employees about the intervention in small team briefings prior to the start of the intervention. In Study 1, for example, seventeen separate team briefings were

attended by researchers. Attendance at these team meetings also proved useful in managing expectations about the limits of the intervention, particularly that it would not affect or cover pay. One recommended element of the preparation phase that did not occur was the establishment of a steering group to oversee and monitor progress. Rather, in Study 1, the research team had responsibility for monitoring overall progress and two members per team were tasked with monitoring implementation progress. In study 2, monitoring intervention progress was the responsibility of a team leader. Delegating this activity to a team leader was probably more effective because being on site and having more influence meant that the team leader was better placed to ensure that employees conducted intervention activities outside the workshops, such as researching the practicality of change initiatives and implementing change initiatives.

In the screening phase, the identification of psychosocial risks is often informed by or derived from the results of a quantitative survey (Eklof, Hagberg, Toomingas & Tornqvist, 2004). However, in our interventions, although survey results were discussed, the assessment of psychosocial risks was primarily achieved by using the scenarios planning tool to get employees to discuss the positive and negative characteristics of their job, rate their job according to various job characteristics, and achieve group consensus on the main psychosocial risks of their job. From observations during the workshop and discussions with employees, it appeared that a key benefit of this participative approach to risk identification was to increase employees' understanding of the specific psychosocial risks of their job, increase their knowledge of job design principles, and to further raise awareness on why these job characteristics should be changed. However, it was not clear how participation in the screening phase shaped employee motives and actions in subsequent intervention process; although such insights could have been gained through the use of more focused qualitative interviews.

Success in the action planning phases appeared to be a result of extensive employee participation in the action planning workshops, and in related activities outside of the workshops during work time. Within the workshops, employees were asked to suggest and develop workable changes that would improve job characteristics and to articulate why this change would have a beneficial effect for employees and the organization. We observed that key advantages of this participative action planning process were to improve the practicality of change initiatives by drawing on employees' collective knowledge of work processes, and to help employees develop clear rationales for each initiative that were important when selling the idea to other teams and managers. Developing a clear rationale for each initiative also provided a means of fairly and justifiably rejecting employee suggestions that were not practical, outside the scope of the intervention, or which may result in negative consequences for employee well-being. Another possible reason for the success of the interventions was that, by the end of the action planning phase a consensus was reached between managers, employees and researchers on which ideas would be implemented, thereby publically committing all parties to ensuring their eventual implementation.

The implementation phase involved embedding change initiatives within the organisation and was underpinned by employee participation. In many organisational interventions, middle managers are given responsibility for implementing change initiatives, with their commitment to implementing change being crucial to intervention success (Kompier, Aust, van den Berg & Siegrist, 2000; Laing et al., 2007). In our studies, responsibility for implementing change initiatives was allocated to team members, often those who had suggested the specific changes. Although it is not possible to state whether this different method of allocating responsibility is more or less effective, it was clear that successful implementation did depend on employee participation and team leader commitment to the change process and also on senior managers' communicating their support. Indeed, in study

1, managers' rejection of change initiatives to reverse the effects of an outsourcing initiative resulted in those teams which had suggested these changes becoming disengaged from the intervention process and unwilling to implement other changes. In these teams, the job redesign initiative did not lead to an improvement in job characteristics or well-being (although it is interesting to note that management did eventually reverse the outsourcing but not within our study period).

Conclusion

Our experience within these two studies suggests that it is possible in call centres to conduct successful participative job redesign interventions that enhance job design, employee well-being and performance despite the challenges of running a participative intervention in this context, e.g., low job control, participation. But our studies also demonstrate that the limitations of the context can be overcome to a certain extent through support from senior management and trade unions, as well as extensive employee participation in all phases, especially during the screening, action planning and implementation phases of an intervention. However, the type and content of the participation is also important, in particular, the development of rationales for change (informed by job design theory and evidence from the organisation itself), the process of achieving consensus and ownership of the changes within the workshops, and the sense of procedural fairness that the participative process engenders. Whilst the participative process differed slightly across the two studies (e.g., use of representatives, the emphasis of the alternative scenarios and the responsibilities for implementation), the core components remained the same. The practicalities of running such interventions in different organisations mean that processes may differ slightly depending on what is suitable for and can be negotiated within these different contexts. Moreover, as our experience as facilitators grew, we tried new ideas (such as the focus of the

alternative scenarios). Nevertheless, even with these differences, both interventions demonstrated significant success.

Yet the challenges of the call centre environment did limit the intervention despite employees' active participation. Many suggestions were limited in scope and there were rarely radical suggestions (the one radical suggestion to reverse the outsourcing was rejected). Participants were also worried and rather cautious about whether changes would increase workload and affect their ability to meet current performance monitoring targets. Indeed, this was such a concern that the researchers had to negotiate with management that during the implementation phase employees would not be penalised for missing targets due to their involvement in the intervention process or when trying out new activities as a result of the agreed changes. Thus, a bedding-in period was agreed to reassure participants that their 'performance figures' would not be evaluated negatively. Participants were told about this agreement during the scenarios workshops. But performance monitoring was so engrained in their outlook, that it was challenging to get them to overcome this concern and this may have affected the nature of the changes suggested.

Bureaucracy and technology also limited the scale of the changes, as some could not be achieved without changes to IT systems or changes in other parts of the call centre that were not always willing to make the proposed changes. But some changes to IT systems and inter-team boundaries were achieved. Another issue with any job design change is the knock-on impact to pay and regrading. This limited the extent of changes, as any radical change may have resulted in regrading or changes in pay levels.

Some study limitations that limit the conclusions also exist. For instance, we did not explicitly evaluate manager or trade union responses (except in terms of gaining their support and approval for the changes) and the evaluation was relatively short term (only one month after changes were fully implemented) such that we did not examine the long-term effects of

the interventions. However, a follow-up meeting several years later for study 2 suggests a possible downside to these participative interventions. Whilst the outcomes were very positive for those who were directly involved in the intervention, and led to enhanced skills and promotion for several team members, there is a challenge in terms of maintaining the same enthusiasm and ownership as new members join the team or as ideas are rolled out to other teams. This also relates to the limited scope of the interventions, as we were unable to change the wider context, but rather changed a small part of it. A key challenge for future research and practice is therefore how to extend the reach of these interventions to the organisation as a whole so that the effects can be maintained and the key principles and learning can be passed on to future changes within the organisation.

References

- Axtell, C., Pepper, K., Clegg, C., Wall, T., & Gardner, P. (2001). Designing and evaluating new ways of working: The application of some sociotechnical tools. *Human Factors and Ergonomics in Manufacturing*, 11, 1–18. DOI: 10.1002/1520-6564(200124)11:1<1::AID-HFM1>3.0.CO;2-6
- Bakker, A. & Demerouti, E., (2006) The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22 (3), 309-238.
- Bakker, A., Demerouti, E., & Schaufeli, W. (2003). Dual processes at work in a call centre: An application of the job demands–resources model. *European Journal of Work and Organizational Psychology*, 12, 393-417.
- Clegg, C., Coleman, P., Hornby, P., Maclaren, R., Robson, J., Carey, N., Symon, G. (1996). Tools to incorporate some psychological and organizational issues during the development of computer-based systems, *Ergonomics*, 39, 482-511, DOI: 10.1080/00140139608964476

Axtell, C. & Holman, D. (in press) Participatory Interventions in Call Centres. In Nielsen, K. & Noblet, A. (2018). Designing, implementing and evaluating organizational interventions. Routledge

Deery, S., Iverson, R., & Walsh, J. (2002). Work relationships in telephone call centres: Understanding emotional exhaustion and employee withdrawal. *Journal of Management Studies*, 39, 471-496.

Demerouti, E., Bakker, A.B., Nachreiner, F., & Schaufeli, W.B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86, 499-512.

Egan, M., Bambra, C., Thomas, S., Petticrew, M., Whitehead, M., & Thomson, H. (2007). The psychosocial and health effects of workplace reorganisation. 1. A systematic review of organisational-level interventions that aim to increase employee control. *Journal of Epidemiology & Community Health*, 61, 945-954.

Eklof, M., Hagberg, M., Toomingas, A., & Tornqvist, E.W. (2004). Feedback of workplace data to individual workers, work groups and supervisors as a way to stimulate working environment activity: A cluster randomized controlled study. *International Archives of Occupational and Environmental Health*, 77, 505-514.

Frenkel, S., Korczynski, M., Shire, K. & Tam, M. (1999). *On the Front-line: Organization of Work in the Information Economy*. Ithaca, NY: Cornell University Press.

Grebner, S., Semmer, N. K., Faso, L. L., Gut, S., Kalin, W. & Elfering, A. (2003). Working conditions, well-being, and job-related attitudes among call centre agents. *European Journal of Work and Organisational Psychology*, 12, 341-365.

Holman, D. (2002). Employee well-being in call centres. *Human Resource Management Journal*, 12, 35-50.

Holman, D. & Axtell, C. (2016) Can job redesign interventions influence a broad range of employee outcomes by changing multiple job characteristics? A quasi-experimental study. *Journal of Occupational Health Psychology* 21(3), Jul 2016, 284-295

- Axtell, C. & Holman, D. (in press) Participatory Interventions in Call Centres. In Nielsen, K. & Noblet, A. (2018). *Designing, implementing and evaluating organizational interventions*. Routledge
- Holman, D., Axtell, C., Sprigg, C., Totterdell, P., & Wall, T. (2010) The mediating role of job characteristics in job redesign interventions: A serendipitous quasi-experiment. *Journal of Organizational Behaviour*, 30, 1-21.
- Holman, D., Batt, R., & Holtgrewe, U. (2007). *The Global Call Center Report. International Perspectives on management and Employment*. Cornell University, ILR School. Ithaca, NY.
- Holman, D., Chissick, C. & Totterdell, P. (2002). The effects of performance monitoring on emotional labour on well-being in call centres. *Motivation and Emotion*, 26, 57–81.
- Holman, D., Frenkel, S., Sørensen, O., & Wood, S. (2009). Work design variation and outcome in call centres: Strategic choice and institutional explanations. *Industrial and Labor Relations Review*, 62, 510-532
- Humphrey, S. E., Nahrgang, J. D., & Morgeson, F. P. (2007). Integrating motivational, social, and contextual work design features: A meta-analytic summary and theoretical extension of the work design literature. *Journal of Applied Psychology*, 92, 1332–1356.
- Hurrell, J. (2005). Organizational stress interventions. In Barling, J., Kelloway, E.K. and Frone, M.R. (eds.) *Handbook of work stress*. Thousand Oaks, CA: Sage. 623–645
- Ichniowski, C. Kochan, T.A., Levine, D.I., Olson, C., and Strauss, G. (2000) 'What Works at Work: Overview and Assessment', in Ichniowski, C. Kochan, T.A., Levine, D.I., Olson, C., and Strauss, G. (eds.) *The American Workplace: Skills, Compensation, and Employee Involvement*, Cambridge University Press. 1-37.
- Israel, B. A., Baker, E. A., Goldenhar, L. M., Heaney, C. A., & Schurman, S. J. (1996). Occupational stress, safety, and health: Conceptual framework and principles for effective prevention interventions. *Journal of Occupational Health Psychology*, 1, 261–286.

Axtell, C. & Holman, D. (in press) Participatory Interventions in Call Centres. In Nielsen, K. & Noblet, A. (2018). Designing, implementing and evaluating organizational interventions. Routledge

Kompier, M., Aust, B., van den Berg, A., & Siegrist, J. (2000). Stress prevention in bus drivers: Evaluation of 13 natural experiments. *Journal of Occupational Health Psychology, 5*, 11-31.

Laing, A.C., Cole, D.C., Theberge, N., Wells, R.P., Kerr, M.S., & Frazer, M.B. (2007). Effectiveness of a participatory ergonomics intervention in improving communication and psychosocial exposures. *Ergonomics, 50*, 1092-1109.

LaMontagne, A.D., Keegel, T., Louie, A.M., Ostry, A., & Landsbergis, P.A. (2007). A systematic review of the job-stress intervention evaluation literature, 1990-2005. *International Journal of Occupational and Environmental Medicine, 13*, 268-280.

Le Blanc, P.M., Hox, J.J., Taris, T.W., & Peeters, M.C.W. (2007). Take care! The evaluation of a team-based burnout intervention program for oncology care providers. *Journal of Applied Psychology, 92*, 213-227.

Lepine, J. A., Podsakoff, N. P., & Lepine, M. A. (2005). A meta-analytic test of the challenge stressor-hindrance stressor framework: An explanation for inconsistent relationships among stressors and performance. *Academy of Management Journal, 48*, 764-775.

Maslach, C., Jackson, S. E., & Leiter, M. P. (1997). Maslach Burnout Inventory. *Evaluating Stress: A Book of Resources, 3*. pp191-218.

Mikkelsen, A., & Saksvik, P.Ø. (1998). Learning from parallel organizational development efforts in two public sector settings. *Review of Public Personnel Administration, 2*, 5-22.

Nielsen, K., & Randall, R. (2012). The importance of employee participation and perceptions of changes in procedures in a teamworking intervention. *Work & Stress, 26*, 91-111.

Nielsen, K., Randall, R., & Albertsen, K. (2007). Participants' appraisals of process issues and the effects of stress management interventions. *Journal of Organizational Behavior, 28*, 793-810.

Axtell, C. & Holman, D. (in press) Participatory Interventions in Call Centres. In Nielsen, K. & Noblet, A. (2018). Designing, implementing and evaluating organizational interventions. Routledge

Nielsen, K., Randall, R., Holten, A. L., & González, E. R. (2010). Conducting organizational-level occupational health interventions: What works? *Work & Stress*, 24, 234-259.

Parker, S., & Wall, T. D. (1999). *Job and work design*. London: Sage.

Saksvik, P.Ø., Nytrø, K., Dahl-Jørgensen, C., & Mikkelsen, A. (2002). A process evaluation of individual and organizational occupational stress and health interventions. *Work & Stress*, 16, 37-57.

Sprigg, C. A., Smith, P. R. & Jackson, P. R. (2003). *Psychosocial Risk Factors in Call Centres: An Evaluation of Work Design and Well-being*. HSE Research Report (RR 169). Sudbury, UK: HSE Books.

Thite, M., & Russell, B. (2010). The next available agent: Work organisation in Indian call centres. *New Technology, Work and Employment*, 25, 2-18.

Van den Broeck, A., De Cuyper, N., De Witte, H., & Vansteenkiste, M. (2010). Not all job demands are equal: Differentiating job hindrances and job challenges in the Job Demands-Resources model. *European Journal of Work and Organizational Psychology*, 19, 735-759.

Van den Broek, D., Callaghan, G., & Thompson, P. (2004). Teams without teamwork? Explaining the call centre paradox. *Economic and Industrial Democracy*, 25, 197-218.

Warr, P. (1990) The measurement of well-being and other aspects of mental health. *Journal of Occupational and Organizational Psychology*, 63, 193-210.

Zapf, D., Isic, A., Bechtoldt, M., & Blau, P. (2003). What is typical for call centre jobs? Job characteristics, and service interactions in different call centres. *European journal of work and organizational psychology*, 12, 311-340.

Table 1: Job Characteristics used in Scenario Rating

Job Characteristic	Description	Rating
Job control (timing)	The freedom you have in your job to control the pace of work, or when you do particular pieces of work, or when you take breaks	1= no control, 10= complete control
Job control (methods)	The freedom you have to control how you do your work and what methods you use, and how you speak to customers	1= no control, 10= complete control
Variety	The degree to which your job involves doing different tasks throughout the day	1= tasks repeated over and over; 10 = high variety of tasks
Task completeness (we used this term instead of task identity)	The extent to which you complete all parts of a tasks from beginning to end, rather than just small parts of a complete task	1 = only complete small subsections of a task, 10 = complete whole task from beginning to end
Task conflict	The extent to which there are competing demands (i.e., quality vs quantity, or different people expecting opposing things from you)	10=task conflicts never occur, 1=task conflicts are a permanent feature of work – (NB. Reverse scored Demand)
Feedback	The frequency, quality (e.g., usefulness) and timeliness of the feedback that you get on your call productivity and call quality	1 = little feedback, low quality; 10 = High level of feedback, high quality.
Participation	The extent to which you can influence decisions about how your team and department is run	1 = no influence, 10 = high level of influence
Group Responsibility	The extent to which the group is responsible for the team tasks	1 = group is not responsible for team’s tasks, 10 = group is highly responsible for team’s tasks
Skill Utilization	Whether your skills are used in the job	1 = skills underutilized, 10 = skills fully utilized
Skill Needs	Whether you feel you need a lot of skills to do the job	1 = do not need many skills, 10 = need many skills
Job Obstacles	The things that prevent you from doing a good job. It could be a lack of information, the inability to complete a task, lack of access to a computer system, interruptions, technology not working properly, systems that are poorly designed	10 = no obstacles and 1 = High number/severity of obstacles. (NB- Reverse Scored Demand)
Cross team/departmental cooperation	The effectiveness of cooperation with other teams and departments	1 = very ineffective cooperation to 10 = highly effective cooperation
Physical Working Conditions	The extent to which the physical working conditions (e.g., light, noise, heat, equipment set up) affect the job tasks	1 = physical conditions have large negative effect on the task, to 10 = physical conditions have a positive effect on the task

Table 2. Examples of Job Redesign Initiatives

Job Redesign Initiative	Potential Impact
Increasing supervisor performance feedback to four times a month	Feedback quality
Increasing clarity of performance criteria	Feedback quality
Participation in the design of a new computer system	Participation, removing task obstacles
Increasing range of tasks and availability of information, e.g., updating customer information on IT system, access to more customer information, dealing with complaint emails,	Job control, variety, removing task obstacles, skill utilization
Performing supervisory tasks, e.g., running team briefings, collecting performance data, setting schedules and breaks, managing and recoding working time	Job control, participation, variety, skill utilization
Procedural changes to tasks	Removing tasks obstacles
Training on new tasks	Skill utilization
Cross departmental visits to develop greater mutual understanding	Skill utilization, removing task obstacles

Table 3. Mean scores of Study 1 and 2 variables for intervention and control groups

	Study 1		Study 2	
	Intervention	Control	Intervention	Control
Employee Outcomes				
Well-Being 1	3.23	3.35	3.15	3.42
Well-Being 2	3.41	3.31	3.17	3.16
Performance 1			3.70	4.00
Performance 2			4.36	4.13
Psychological Contract Fulfilment 1			2.71	2.83
Psychological Contract Fulfilment 2			2.84	2.71
Job Characteristics¹				
Job Control 1	3.24	3.45	1.59	1.68
Job Control 2	3.51	3.50	1.85	1.55
Participation 1	2.34	2.30		
Participation 2	2.54	2.13		
Skill Utilization 1	4.76	5.09		
Skill Utilization 2	4.96	4.83		
Feedback 1	4.60	4.98	3.62	4.08
Feedback 2	5.34	4.78	3.67	3.71
Task obstacles 1	2.66	2.69		
Task obstacles 2	2.58	2.57		

Note. 1. The mean scores of the job characteristics are not directly comparable as slightly different measures were used.

Table 4. Effect of Intervention on Job Design and Employee Well-Being: Study 1

	Job Control	Participation	Skill Utilization	Feedback	Task obstacles	Well- Being
	β	β	β	β	β	β
Intercept	3.43**	2.37**	4.85**	4.95**	2.71**	3.35**
Time of Measurement	.31**	.26*	.25**	.62**	-.15*	.17*
Experimental Group	.29**	.15	.17	.21	.15	.15
Interaction Term	.31**	.51**	.52**	.78**	.00	.24*
Pseudo ΔR^2	3%	4%	7%	3%	0%	2%

Note: * $p < .05$; ** $p < .01$; controls age, gender and tenure not shown.

A significant positive relationship for the interaction terms indicates an intervention effect in the experimental group.