

Delegation and consultation on operational and tactical issues: Any difference in their potentialities for a healthier psychosocial work environment?

Clara Llorens-Serrano MSoc^{1,2,3}  | Sergio Salas-Nicás PhD³  |
Albert Navarro-Giné PhD^{3,4}  | Salvador Moncada Lluís PhD²

¹Sociology Department, Faculty of Sociology and Political Sciences, Autonomous University of Barcelona (UAB), Cerdanyola del Vallès, Spain

²Union Institute of Work, Environment and Health (ISTAS), Reference Centre on Work Organization and Health, Barcelona, Spain

³Research Group on Psychosocial Risks, Organization of Work and Health (POWAH), Autonomous University of Barcelona (UAB), Cerdanyola del Vallès, Spain

⁴Biostatistics Unit, Faculty of Medicine, Autonomous University of Barcelona (UAB), Cerdanyola del Vallès, Spain

Correspondence

Clara Llorens-Serrano, MSoc, Sociology Department, Faculty of Sociology and Political Sciences, Autonomous University of Barcelona, Edifici B, Cerdanyola del Vallès 08193.

Email: clorencs@istas.ccoo.es and clara.llorens@uab.cat

Funding information

Instituto de Salud Carlos III,
Grant/Award Number: PI15/00161

Abstract

Background: Despite the growing number of studies on direct participation labor-management practices, little is known about the role of their different discretionary degrees (delegation or consultation) and topics in their relationship with the psychosocial work environment by occupational groups.

Methods: Cross-sectional study on the relationship between direct participation and work-related psychosocial risks (using COPSOQ-ISTAS21 v3) on a representative sample of the salaried and wage-earning employees in Spain ($n = 1807$). Prevalence ratios were calculated using adjusted Poisson regression models, controlling for 10 other labor-management practices, sex, and age, and stratified by occupational group.

Results: The use of direct participation was either associated consistently with a healthier psychosocial work environment (mostly in manual occupations, which presented twice as many positive associations as nonmanual occupations, and of greater strength, mostly in the *control* and *social support* dimensions) or there were no significant associations (mostly among nonmanual occupations and in relation to *work pace*). More frequent and stronger associations were observed when consultation and delegation were used in combination. If used separately, consultation achieved better results among manual occupations and delegation among nonmanual occupations. Direct participation topics were not important for results in manual occupations whereas results were better on tactical (vs. operational) issues in nonmanual occupations.

Conclusions: Direct participation does not change power structure, but it may be a useful intervention at the company level to reduce work-related psychosocial exposures and associated diseases among workers in manual occupations, and consequently for decreasing occupational exposures and health inequalities.

KEYWORDS

direct participation, employees' involvement, occupational class inequalities, psychosocial work environment, work organization

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

© 2022 The Authors. *American Journal of Industrial Medicine* Published by Wiley Periodicals LLC

1 | INTRODUCTION

A considerable body of evidence has identified psychosocial risks as features of work organization that may harm workers' health and well-being.¹ Research is prolific on the relationship between psychosocial risks and cardiovascular and mental illnesses, two of the most challenging illnesses in occupational health and safety and public health in general, especially in Western societies.²⁻⁴ Using the *demand-control-social support*^{5,6} and *effort-reward imbalance* models,⁷ exposure to these risks at the workplace has been related to anxiety and depression^{8,9} and myocardial infarction or stroke,^{10,11} among many other health disorders. Furthermore, longitudinal studies and meta-analyses with large databases have been able to rule out chance associations.¹²

Additionally, scientific literature has shown major occupational class disparities on psychosocial exposures, connected with other socioeconomic and sociodemographic factors,¹³ in a segmented labor market derived from the unequal implementation of labor-management practices.¹⁴⁻¹⁶ Moreover, recent studies on trends in psychosocial working conditions in the European Union and United States have observed persistent inequalities by occupational groups. In the European Working Conditions Survey (EWCS) data from 1995 to 2015, salaried and wage-earning employees in lower-skilled occupations not only had higher levels of job strain and effort-reward imbalance on average, but they also experienced a steeper increase in job strain than employees in higher-skilled occupations in the original 15 European Union countries (EU-15) during that period. The persistent low job control for low-skilled manual jobs during the 20-year period of the survey reflected a decrease in skill discretion (skill use) and persistent low decision authority.¹⁷ Similarly, job control remained at higher levels for the management and professional groups and at low levels for service and blue-collar jobs, consistent with the findings from the 2002-2014 NIOSH Quality of Work Surveys¹⁸ for the US population.

This public health literature also points to organizational interventions at the workplace to minimize psychosocial job exposures as a step to promote workers' health.^{19,20} Along this line, the research to date suggests that various aspects of labor-management practices, such as working time arrangements, working methods, job design, employment relationship, and salary structures, are modifiable work features at the origin of workplace psychosocial exposures.²¹⁻²⁵ However, it still remains a vast area to explore.²⁶

More than 40 years of public health research supports the harmfulness of Taylorism toward physical and mental health²¹ due to division, fragmentation, and standardization of work, which in turn are associated with low control, high work pace, lack of social support, and low recognition at work. In contrast, scholars have debated the relationship between direct participation practices and working conditions, with few studies on psychosocial risks.

Direct participation practices have been defined in the literature as labor-management practices that involve some kind of decentralization in decision-making from management toward workers, either individually or in groups, entailing different degrees of

discretion or powers (i.e., consultation or delegation) and different topics or scope (i.e., operational or tactical issues), which may determine their relationship with working conditions.²⁷⁻²⁹ However, relevant comparative evidence on different forms of direct participation and working conditions is scarce, with debates being more conceptual than empirical.³⁰

According to *degrees of discretion*, that is, the extent to which managers let workers be involved in decisions, direct participation could be categorized as *delegation*, when management grants decision-making capacity to workers and as *consultation*, when management encourages workers to make their opinions known but reserves the capacity to accept or reject them.³¹ *Delegative* direct participation practices (mostly semi-autonomous workgroups but also individual self-management) underpin labor-management models, such as the humanization and democratization of work, socio-technical systems, and high involvement or learning organizations, mostly associated with a healthier working environment. Team or individual autonomy to make decisions in enlarged and enriched jobs is considered one of the key factors for exerting influence in and over work, in giving better chances for using abilities, learning, and developing on the job, in increasing the opportunities for cooperation and for being recognized as a professional.³²⁻³⁴ Some research critical of "high-performance" management warns of its negative effects, mostly referring to individual delegation among nonmanual jobs. Despite its rhetorical support for workers' personal and developmental needs,^{35,36} inside the "self-management" paradigm, while workers may enjoy considerable discretion regarding how they carry out their duties, their workload is overburdened, and their performance is under constant scrutiny, their autonomy being partial and contradictory.^{28,37,38} On the other hand, *consultative* direct participation practices have been studied as part of "lean" production, high performance, and "new public management," and they have also been associated with excessive demands in terms of effort and commitment, increased peer competitiveness, and work intensification among manual and nonmanual jobs.^{21,39-44} Nevertheless, some scholars have suggested that consultative direct participation practices are crucial for achieving positive effects on working conditions (i.e., influence, using skills and learning new ones, coworker support or management recognition) when lean production is implemented.⁴⁵⁻⁵⁰

Regarding direct participation *scope*, that is, the topics about which managers allow workers to decide themselves or to take part in decisions, direct participation may address *operational* issues (i.e., job or task-related topics, pertaining to concrete job performance) or *tactical* issues (i.e., technology, work organization, or productive system design). As far as *strategic* content (i.e., production goals, investment strategies, or restructuring), participation, if any, is mainly reserved to workers' representatives.^{27,28} Direct participation studies which considered scope typically involved delegation on operational matters and consultation on tactical issues, as reflected, for example, in the typology used by Eurofound from 2013 onwards.^{51,52} This study focuses on direct participation practices and its results suggested that all forms are associated with better working

conditions. For instance, Gallie and Zhou,⁵¹ using European level data, showed lower levels of work intensity, increased informal learning, and higher possibilities to experience management support when consultation on tactical issues, or delegation about operational issues (or both direct participation forms) were implemented in companies. Llorens et al.,⁵³ working with Spanish data, found no association with quantitative demands and more frequent and stronger positive associations with control, social support and rewards, when using delegative and consultative direct participation practices simultaneously and among manual jobs. Felstead et al.,⁵⁴ using data from the UK, found these practices associated with skill utilization and with lower required effort and work exhaustion. Moreover, Dhondt et al.,⁵⁵ using data from Denmark, Ireland, The Netherlands, Finland, Sweden, and the UK, showed high work intensity being associated with less delegation and not associated with consultation, which, in turn, was positively associated with well-being. Furthermore, these studies suggest that direct participation practices may reduce occupational class differences in working conditions.^{30,51,53,56,57}

Therefore, direct participation was mostly studied in combination with other labor-management practices as part of one labor-management model (lean, high-performance management, high involvement management, among others). Only some studies assessed direct participation practices and their relationships with working conditions comparing specific degrees of discretion (i.e., consultation, delegation, or both) while mixing the scope (i.e., operational or tactical); very few others linked direct participation practices to work-related psychosocial risks, distinguishing between occupational groups; and even fewer have used an assessment instrument validated in the field of occupational health.

The potential of different degrees of discretion and scope in direct participation practices to promote a better psychosocial work environment at the company level across different occupational groups, is still unclear.⁵⁸ Consequently, the present study aims to expand the empirical evidence about the role of specific features of direct participation practices as social determinants of psychosocial exposures and health promoting practices, which may differ among occupational groups.

2 | METHODS

2.1 | Study design and population

2.1.1 | Population-based cross-sectional study

All research procedures were approved by the Ethics Committee on Animal and Human Experimentations of the Autonomous University of Barcelona (CEEAH/3445) and by ISTAS' Research Ethics Committee. Data were obtained from the 3rd Spanish Psychosocial Risks Survey (ERP 2016),⁵⁹ administered to a representative sample of the salaried and wage-earning employees in Spain ($n = 1807$). A random sample was obtained covering the entire national territory through a

four-stage stratified design. The stratification was based on geographical area and size of municipality and stages corresponded to municipality, census tract, household, and salaried and wage-earning employee. The selection of households was made by random routing and that of individuals by random numbers. Fieldwork was carried out between October and December 2016, using a CAPI questionnaire distributed during personal interviews at the interviewees' homes. Participation was voluntary and all participants provided informed oral consent. Data were rigorously anonymized before analysis. The response rate before substitution was 70.1%. Inclusion criteria were having worked for at least 1 h in a paid job, during the week before the interview, age between 16 and 65, and residence in Spain. Fourteen individuals in CEO positions were excluded from this study. As a result, the final sample size was $n = 1793$.

2.2 | Measures

2.2.1 | Independent, adjustment, and stratification variables

Four variables were created for direct participation (see Table 1 and Supporting Information: Appendix 1), two indicators were created as independent variables: one on operational issues and the other on tactical issues, both distinguishing between different degrees of discretion (consultation, delegation, or combination of the two). This allowed for an empirical discussion not only about the relationship between work-related psychosocial risks and different degrees of discretion in using direct participation practices, but also on the relationship with the different topics addressed by them.

Ten other labor-management practices variables on working hours, employment relationship, promotion, salary, and staffing (see Table 1 and Supporting Information: Appendix 1) were considered potential confounding factors in addition to sex and age. They were chosen by a multidisciplinary panel of experts comprising sociologists, economists, lawyers, and epidemiologists and were taken from an earlier study, which used data from the Spanish Psychosocial Risks Survey carried out in 2005 to investigate the associations between these variables and the psychosocial work environment.⁶⁰

Occupational group was used as the stratification variable, measured with the 2011 National Classification of Occupations (CNO-11) at the one-digit level (nine categories) and then dichotomized into manual and nonmanual occupations.⁶¹

2.2.2 | Dependent variables

The survey included the COPSOQ-ISTAS21 v3,⁵⁹ the Spanish adaptation of the Copenhagen Psychosocial Questionnaire (COPSOQ v3), an internationally validated instrument for the assessment of work-related psychosocial risks.⁶² The COPSOQ questionnaire allows for the operationalization of the most prominent work-

TABLE 1 Study variables among study population (ERP 2016; Percentages)

	Salaried workers in manual occupations (57.4)	Salaried workers in nonmanual occupations (42.6)
Sociodemographic variables		
Sex**		
Women	56.7	44.2
Men	43.3	55.8
Age		
<30	33.6	26.8
30–45	27.6	27.8
>45	38.8	45.4
Indicators of labor management practices		
Direct participation (DP) on operative issues (way of doing one's work)**		
Delegation without consultation	8	9.3
Consultation without delegation	7.6	8.5
Delegation and consultation	38.9	52.3
No direct participation practices	45.6	30
Direct participation on tactical issues (purchase of new tools or technology)*		
Delegation without consultation	2.4	3
Consultation without delegation	8.6	10.5
Delegation and consultation	19.2	25.2
No direct participation practices	69.9	61.3
Employment contract**		
Permanent (indefinite)	64.2	77.8
Temporary (fixed term)	28.7	20.1
No contract	7.1	2.1
Seniority (company)**		
<5	57.7	37.7
5–10	17.4	19.
>10	24.8	42.4
Overtime		
Always	16.5	20
Sometimes	25	23.7
Never	58.5	56.3

TABLE 1 (Continued)

	Salaried workers in manual occupations (57.4)	Salaried workers in nonmanual occupations (42.6)
Schedule determination**		
Always	12.3	21.3
Sometimes	11.6	16.5
Never	76.1	62.2
Salary covers unexpected needs**		
Always	32.9	56.2
Sometimes	34.2	23.9
Never	32.9	19.8
Salary fairness regarding performance*		
Always	39.8	50.8
Sometimes	27.6	22.9
Never	32.6	26.3
Staffing levels*		
Enough	66.2	54.7
Shortage	33.8	45.3
Work planning		
Realistic	69.6	71.8
Unrealistic	30.4	28.2
Promotion on boss favoritism		
Yes	35	32
No	65	68
Promotion on meeting availability demands		
Yes	50.2	47.8
No	49.8	52.2
Exposure to work-related psychosocial risks		
Demands		
High work pace	31	30.1
Control		
Low influence**	45.5	23
Low possibilities for (skills) development**	45	17.2
Social support		
Low support from colleagues**	33	23
Low support from supervisor**	42.2	26.5
Rewards		
Low recognition**	42.9	27

* $p \leq 0.05$.** $p \leq 0.001$.

(Continues)

related psychosocial risk theories, including the most relevant psychosocial domains. For this study, six dimensions were selected as indicators of central components of the *demand-control-social support* (DCS) and *effort-reward* (ER) models and considered dependent variables: *work pace*, *influence*, *possibilities for development*, *social support from colleagues and supervisor* and *recognition*. Each one was measured on a scale comprising between two and four 5-point Likert-type items. For the analysis, the answers to the questions were added and standardized with scores ranging from 0 to 100. The scores were then dichotomized considering the 25% (or the closest possible) at most risk as “poor” and the rest at “good” for health in each psychosocial dimension (see Table 1 and Supporting Information).

2.3 | Statistical analysis

Sampling weights were calculated to account for the probability of a worker being selected according to the sampling design, and to comply with the sex and occupational group distribution of the Spanish salaried and wage-earning employees, taken from the survey of the active population (EPA) for the last quarter of 2015.

Robust Poisson regression models were fitted to estimate adjusted prevalence ratios (PR) with their respective 95% confidence intervals (95% CIs), to establish possible associations between different direct participation practices and work-related psychosocial

risks, stratifying by occupational group. All analyses were conducted considering the sample design by using the “svy” command of the STATA statistical package, version 12.0.

3 | RESULTS

Direct participation practices were associated with a better psychosocial work environment, after adjusting for other labor-management practices, sex, and age, and after stratifying the population by occupational group. Significant associations, always positive, were more frequent and stronger among manual occupations compared to nonmanual ones (23 vs. 11 out of 36 observations).

Regarding direct participation practices characteristics, in both occupational groups, when *consultation* and *delegation* were used in combination, the associations with psychosocial work environment were always positive, more frequent (16 out of 24 observations) and stronger (Tables 2 and 3). When they were used separately, a different picture emerged: among manual occupations (Table 2), associations with a better psychosocial work environment were stronger and more frequent when using *consultation* (9 vs. 4 out of 12 observations), while in nonmanual occupations (Table 3), they were stronger and more frequent when *delegation* was used (4 vs. 1 out of 12).

Among workers in manual occupations (Table 2), the frequency of associations with work-related psychosocial risks were similar for

TABLE 2 Prevalence ratios (PR) between psychosocial work factors and direct participation practices. Salaried workers in MANUAL occupations.

	Direct Participation on operative issues									Direct Participation on tactical issues									
	Consultation without delegation			Delegation without consultation			Delegation and consultation			Consultation without delegation			Delegation without consultation			Delegation and consultation			
	PR	95% CI		PR	95% CI		PR	95% CI		PR	95% CI		PR	95% CI		PR	95% CI		
Demands																			
Work pace	0.74	0.46	1.19	1.33	0.92	1.90	1.05	0.77	1.42	0.71	0.45	1.10	1.13	0.67	1.92	0.96	0.66	1.38	
Control																			
Influence	1.15	1	1.37	1.14	1	1.40	1.32**	1.17	1.48	1.19*	1.05	1.39	1.19	1	1.45	1.21**	1.09	1.31	
Possibilities for development	1.41**	1.16	1.73	1.14	1	1.45	1.51**	1.30	1.74	1.28**	1.18	1.55	1.40*	1.12	1.76	1.35**	1.13	1.46	
Social support																			
Colleagues' support	1.33**	1.17	1.59	1.24	0.99	1.55	1.36**	1.13	1.48	1.38*	1.04	1.84	1.09	0.90	1.31	1.26**	1.11	1.43	
Supervisors' support	1.29**	1.18	1.52	0.99	0.80	1.22	1.34**	1.14	1.55	1.23*	1.07	1.42	1.14	0.92	1.44	1.24**	1.11	1.38	
Rewards																			
Recognition	1.11	0.91	1.34	0.93	0.76	1.13	1.22*	1.08	1.39	1.12	1	1.28	1.03	0.84	1.28	1.18*	1.05	1.33	

Note: Salaried workers in manual occupations. Reference category for independent variables was *no implementation of direct participation* and for dependent variables *poor for health*. Black PRs indicate no association; bold $p \leq 0.05$; bold * $p \leq 0.01$; bold ** $p \leq 0.001$. All PRs were adjusted by 10 other labor management practices (working time, employment relationship, promotion, salary, and staffing), sex, and age.

Abbreviation: CI, confidence interval.

TABLE 3 Prevalence ratios (PR) between psychosocial work factors and direct participation practices. Salaried workers in NON-MANUAL occupations.

	Direct participation on operative issues									Direct participation on tactical issues									
	Consultation without delegation			Delegation without consultation			Delegation and consultation			Consultation without delegation			Delegation without consultation			Delegation and consultation			
	PR	95% CI		PR	95% CI		PR	95% CI		PR	95% CI		PR	95% CI		PR	95% CI		
Demands																			
Work pace	1.06	0.60	1.87	0.93	0.61	1.42	1.02	0.67	1.55	1.13	0.75	1.70	1.42	0.58	3.52	1.19	0.76	1.87	
Control																			
Influence	1.07	0.82	1.39	1.27*	1.09	1.51	1.28*	1.10	1.46	1	0.82	1.22	1.15*	1.05	1.25	1.27**	1.12	1.43	
Possibilities for development	0.86	0.66	1.12	1.09	0.96	1.24	1.08*	1.02	1.14	1.09	0.95	1.26	1.16	1.02	1.31	1.16**	1.07	1.27	
Social support																			
Colleagues' support	0.88	0.64	1.20	0.87	0.64	1.19	1.05	0.85	1.29	1.15	0.92	1.44	0.64	0.30	1.33	0.97	0.64	1.45	
Supervisors' support	1	0.75	1.33	0.88	0.67	1.14	0.95	0.81	1.12	0.92	0.73	1.15	1.07	0.79	1.46	1.17	0.96	1.44	
Rewards																			
Recognition	1.08	0.88	1.33	1.06	0.87	1.31	1.20	1.03	1.39	1.17	1.03	1.34	1.30	1	1.69	1.25**	1.09	1.42	

Note: Salaried workers in nonmanual occupations. Reference category for independent variables was *no implementation of direct participation* and for dependent variables *poor for health*. Black PRs indicate no association; bold $p \leq 0.05$; bold * $p \leq 0.01$; bold ** $p \leq 0.001$. All PRs were adjusted by 10 other labor management practices (working time, employment relationship, promotion, salary, and staffing), sex, and age.

Abbreviation: CI, confidence interval.

tactical and operational issues (12 vs. 11 out of 18 observations), although they were stronger for operational issues. In contrast, associations were more frequent (7 vs. 4 out of 18 observations) and stronger in the case of tactical issues among workers in nonmanual occupations (Table 3).

Regarding psychosocial risk factors, no associations were observed between work pace and direct participation practices in either occupational group.

About the remaining psychosocial factors, among manual occupations (Table 2), control, social support, and rewards dimensions were positively associated to the use of direct participation practices (23 out of 30). Associations were stronger and more numerous with influence and possibilities for development (12 out of 12) followed by support from colleagues and support from superiors (8 out of 12), resulting from the application of consultation and delegation combined or consultation alone and in relation to operative issues. The strongest association was with possibilities for development (PR 1.51 and 1.41 $p < 0.001$), followed by support from colleagues (PR 1.36 $p < 0.001$).

Among nonmanual occupations (Table 3), the picture was substantially different since most of the tested associations were not significant (19 out of 30). However, influence, recognition, and possibilities for development were associated with the application of direct participation practices, either combined or when using delegation alone, and being more numerous and strongest regarding tactical issues. Social support dimensions were not associated with

direct participation practices. Recognition was the only dimension associated with consultation but regarding tactical issues only. The two strongest associations recorded were with influence (PR 1.27 $p < 0.001$), recognition (PR 1.25 $p < 0.001$) resulting from the combined application of consultation and delegation on tactical issues. Recognition was the only factor with more associations among workers in nonmanual occupations than in manual ones (4 vs. 3 out of 6).

4 | DISCUSSION

When comparing the situation of workers to whom direct participation practices were applied with that of workers among whom these practices were not used, our results corroborate those of previous research indicating that direct participation practices are associated with better psychosocial working conditions.^{30,32-34,45-51,53-57} The use of direct participation practices was either associated consistently with a healthier psychosocial work environment (mostly among manual occupations, who presented twice as many positive associations as nonmanual ones, and of greater strength) or it was null (mostly among nonmanual occupations or in relation to work pace). Therefore, according to our results, direct participation practices have a potential of reducing work-related psychosocial exposures and their uneven distribution, and consequently, for decreasing work-related diseases and health inequalities.²⁰

Regarding degrees of discretion, for both manual and nonmanual occupations, more frequent and intense improvements of psychosocial work environment were observed when *consultation* and *delegation* were used in combination, as expected.⁵¹ When consultation and delegation were used separately, consultation led to a healthier work environment among manual occupations, which we had not hypothesized. In contrast, delegation had better results than consultation among nonmanual occupations, as expected. Regarding topics, direct participation on *tactical* issues had better outcomes than on operational issues among nonmanual occupations, as expected. However, among manual occupations, both *operational* and *tactical* issues had similar good results, an unexpected finding.^{32,63} So, for both workers in manual and nonmanual occupations, higher discretionary degrees of participation were important for the psychosocial work environment, meanwhile topics were only important among nonmanual occupations.

4.1 | Demands

No relationship was observed between direct participation practices and *work pace*, neither among workers in manual occupations nor among those in nonmanual occupations. Though consistent with previous studies,^{53,55,64} this result was unexpected since a substantial part of the literature links direct participation to work intensification.^{38,40,65–68} However, in most cases, direct participation practices have been studied in the context of *lean* or *high-performance management* models and therefore, in conjunction with other management practices that are associated with work intensification, such as performance-related payment,⁶⁹ just-in-time, waste and nonadded value activities reduction or standardized work^{45,70–72} and understaffing,⁶⁵ which could compromise positive results of direct participation practices.^{48,73} Moreover, unlike previous research on direct participation, our results were adjusted for other known causes of work intensification, such as poor planning,³⁷ time availability demands⁷⁴ or staffing level constraints.^{75,76} Such controls may account for the differences between our results and the negative ones observed in previous studies. In other words, our research adds evidence to the literature suggesting that the main causes of the work intensification may be wider resource pressures and other related labor-management practices that contextualize direct participation implementation, rather than the direct participation practices themselves.^{33,53,75–78}

4.2 | Control

Among workers in manual occupations, the implementation of direct participation practices, regardless of the degree of discretion or topic, was more frequently and strongly associated with *possibilities of development* and *influence*, meaning greater possibilities for applying and developing skills and knowledge and, to a lesser extent, for

influencing decision-making processes, triggering the human capacity of thinking creatively.

Arguably, tasks in manual jobs are mainly designed to be simple and standardized, with very low possibilities to bring into play skills and knowledge. Consequently, for workers in these occupations, being consulted or deciding about operational or tactical issues (i.e., how to do their job, or which new tools and new technology should be purchased, etc.) could change this situation, enabling their knowledge and skills to be applied and challenged,^{45,54} and in doing so, enhancing their dignity at work.⁷⁹ Moreover, delegation and consultation may facilitate informal learning,⁵¹ delegation through developing own job tasks³³ and consultation through knowledge sharing,⁵⁶ allowing learning from coworkers and from line-management,⁸⁰ thus, acquiring new skills and knowledge.^{66,81}

When used separately, consultation had stronger associations with *control* than delegation among manual occupations. In other words, consultation emerged as being more professionally stimulating than delegation, which theoretically was an unexpected result.⁶³ As for operational topics, since the tasks involved are relatively simpler, autonomy stemming from delegation can be trivial,⁸⁰ therefore, being consulted on how to improve the way tasks are performed might be more stimulating than delegation on how to do them. Moreover, consultation could result in more professional development since it may occur in group structures more often than delegation.⁸² Group structures could make sharing experiences and reflecting with peers easier.⁸⁰ Additionally, consultation may imply a need to make inputs by management, resulting in a sort of vertical decentralization of information that otherwise workers would not know.⁸³ All in all, consultation may extend knowledge flows, enabling the use and learning of skills and knowledge in a more protean and substantive way than delegation for certain occupations.

Among nonmanual occupations, more favorable results for delegation (both alone and in combination with consultation) than for consultation are observed. Similarly, better results for tactical topics than for operational ones were observed, as theoretically expected for the dimensions of *control* and *recognition*. Delegation on tactical issues poses more challenges—that is, thinking creatively, acquiring new information, learning new tasks, having more decision latitude—and implies greater respect for workers' work-related knowledge.^{32,34} Even so, the associations between direct participation practices and control dimensions were less strong and less frequent among nonmanual occupations than in manual ones. Despite the increasing tendency toward routinization,⁸⁴ nonmanual jobs still have a richer content than many manual jobs and may therefore have less room for improvement with the implementation of direct participation practices.^{52,56}

4.3 | Recognition

For workers in manual jobs, only combined use of consultation and delegation showed relatively strong associations with recognition, irrespective of the topic. So, only when these participatory processes

mean management actively seeking and listening to proposals from rank-and-file workers on operational and tactical issues plus allowing them to decide, are indicators of management's recognition and respect. Probably, their joint use shows a truer management commitment to workers as experts and management respect for manual workers' work-related knowledge.^{45,85}

4.4 | Social support

Among workers in manual jobs no associations were found between social support and delegation used alone, meanwhile consultation either alone or in combination with delegation presented favorable associations with support. Thus, our research suggests that support from colleagues and supervisors for doing one's work is promoted by consultation among workers in manual jobs. It could be that consultation is applied more frequently in group format than delegation, making it easier to help each other. That may be the case since, for example, 2015 EWCS' results⁸² revealed that only 10% of the salaried and wage-earning employees worked in teams with autonomy. Regarding coworkers' social support, it could be argued that consultation gives opportunities to speak up and listen to others' problems⁸⁵ and to solve problematic situations, making the work easier.^{46,86} Correspondingly, these practices may create not only a group structure but a collective process that promotes collaboration, not only during the consultation but also in everyday work. This could be especially important in jobs in which the individual is the basic unit of design, as it is more frequent among manual occupations. The positive associations with supervisors' support could be related to the need of redefinition of line-managers' tasks in consultation structures, where they are asked to be facilitators and to collaborate with rank-and-file workers. These new tasks related to functional support may be carried out by line managers outside the consultation structures, also in everyday operations.⁵¹ The stronger associations with support when consultation is used to tackle operational issues might be related to their greater connection to everyday work than tactical issues.

In contrast, the lack of association with social support dimensions among nonmanual occupations suggests that they do not need the leverage of direct participation practices to create structures to work in a collaborative manner. The 2015 EWCS results⁸² showed that workers in nonmanual occupations are more likely to work in teams.

Yet, these results were unexpected since some previous research reported inverse associations between direct participation formulas and social support,^{39,40} which again may be due to the influence of other labor-management practices that are applied and studied in conjunction with direct participation practices, which, in turn, were controlled in our study. These practices may include performance-related payment⁶⁹ and understaffing,⁸⁷ both associated with work intensification and compromising time needed to support peers.^{88,89}

4.5 | Limitations and strengths

The cross-sectional nature of this study limits the inferences about the causal direction of the associations, which must be more rigorously tested through longitudinal research or experimental designs. Moreover, developing a qualitative part of this study using focus groups or interviews to workers in manual occupations would be pertinent to understand better how direct participation practices may lead to healthier working conditions.

The study lacks contextual data, even at the company level (size, sector, unionized workers' representation, and so on). However, the aim of the research was not to explore the determinants of direct participation implementation or its patterns (for which these variables are fundamental), but its associations with work-related psychosocial risks. According to segmentation theory,^{16,90} the factors relevant to working conditions are on the "demand" side; it is the labor-management practices that determine them at the company level, and this is the reason why our controls were other labor-management practices which could be associated with the psychosocial work environment.^{13,21} Still, the role of workers' representatives could be significant. Evidence from the field of occupational health showed where there is unionized representation of workers, with collective power and a proactive approach, preventive action is more frequent and has better results,⁹¹⁻⁹⁵ also in relation to direct participation practices' implementation.^{96,97} However, our analysis does not address representative participation, which, in the European Union, is based on workers' rights, recognized through legislation and collective bargaining.⁹⁸ A focus on representative participation together with direct participation practices would allow a discussion about ways of challenging the distribution of power, on questioning the management prerogative, on strategic issues, and about democracy in the workplace,⁹⁹ but it would require a different analytical framework and additional data, that of industrial relations. From the segmentation theory perspective, labor-management practices are conditioned as well by their social, institutional, and economic context, and, in turn, are key factors in shaping these contexts.¹⁴ Finally, due to the same limitations we cannot rule out the possibility that both, a healthier psychosocial work environment and direct participation practices result from a common cause, such as psychosocial safety climate,¹⁰⁰ which is also shaped by the economic, political, legislative, and labor relations context. However, a significant amount of covariates were adjusted in the models thus a number of cofounders were controlled. The fact that these issues were not analyzed at the macro, meso, and micro levels is another limitation of this study. More research is needed that includes these levels, using different methods to evaluate the role they play in the association between work-related psychosocial risks and direct participation practices.^{39,58,101,102}

The data used come from a representative sample of employed workers in Spain. While the results corroborate prior research on direct participation practices in other geographical settings with quite different socioeconomic and institutional contexts, such as EU-27-Norway and UK, Greece, Sweden, the UK, or New

Zealand,^{33,46,51,55,56,64} the labor-management practices and the work-related psychosocial environment in Spain have characteristics and idiosyncrasies of their own,^{51,103,104} which may limit the generalization of these results to other countries.

This study has also some important strengths. It is one of the few existing studies on the impact of specific features of direct participation on the psychosocial work environment measured by a validated instrument, stratifying its results by occupational group, and based on a representative sample of the employed working population. Moreover, the analyses comparing different degrees of direct participation (consultation, delegation, or both), regarding the same topics (operational or tactical), allowed us to create new knowledge about what accounts for healthier working conditions when using direct participation practices, for each occupational group. In addition, analyses include a wide range of indicators of other labor-management practices (working time, employment relationship, promotion, salary, and staffing) as controls to isolate the effects of direct participation practices from other labor-management practices, giving pertinent and interesting findings to question negative outcomes attributed previously to direct participation practices. Last, it shows findings according to occupational groups to visualize differences derived from inequalities both in the implementation of labor-management practices and in psychosocial risk exposures.

As a result, this study has expanded the evidence on the relationship between direct participation practices and working conditions and it gives some clues for their healthier implementation at company level, particularly among workers in manual jobs.

5 | CONCLUSION REMARKS

Comparing the situation of workers to whom direct participation practices are applied with that of workers among whom these practices are not used, this empirical contribution showed that direct participation practices have the potential to reduce exposure to psychosocial risks among workers especially in manual occupations, achieving healthier working conditions, and improving job quality.

According to our results, direct participation practices may expand manual workers' opportunities for applying their skills and knowledge and thus increasing their work-related dignity and their learning of new abilities. They provide more chances for supportive contact with coworkers and supervisors, increase possibilities of attaining influence over their work, and, to a lesser extent, increase recognition from management without increasing work intensification. Moreover, better outcomes are to be achieved when consultation and delegation are used in combination, but even when consultation is used alone and confined to immediate job issues, such as operational topics, this form of work organization, based on allowing rank-and-file workers to have a say in their day-to-day activities, has favorable results.

The best results for using direct participation practices among workers in manual jobs are found in the psychosocial risk dimensions

of control and social support. On the one hand, low levels of control and support have been reported to contribute significantly to the development of illnesses of great importance in Western countries, such as coronary heart disease¹ and mortality,¹⁰⁵ depression^{8,106} and death by suicide.¹⁰⁷ On the other hand, there are major and persistent inequalities in control and support between workers in manual and nonmanual occupations.^{17,18}

Moreover, following our evidence, and as other investigators have argued,^{33,48,54,71,75-78} it could be hypothesized that other related labor-management practices together with wider resource pressures that frame direct participation practices may be the cause of health-impairing results (work intensification or competitiveness among workers) found in some previous research, rather than the direct participation practices themselves. More research is needed to draw conclusions on this.

Direct participation does not change the basic power structure⁸⁵ but it may be an effective means to reduce unhealthy working conditions and occupational inequalities at the company level.²⁰ Following Findlay et al.,^{75,101} while acknowledging financial, institutional, and technological pressures which condition the implementation of these labor-management practices, it is for the management, who holds the executive power in the workplace (and for labor who can condition it),^{93,96,97} to decide whether to use direct participation practices to achieve a healthier psychosocial work environment and better job quality.

AUTHOR CONTRIBUTIONS

Clara Llorens-Serrano and Salvador Moncada Lluís participated in the design of the work. All authors participated in the acquisition of data. Clara Llorens-Serrano, Sergio Salas-Nicás, and Albert Navarro-Giné participated in the analysis of data. Clara Llorens-Serrano participated in the interpretation of data and drafting the work. All authors revised it, finally approved the version to be published and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

ACKNOWLEDGMENTS

This study was funded by Instituto de Salud Carlos III, Fondo de Investigación Sanitaria, Spanish Ministry of Economy, Industry and Competitiveness; Grant number: PI15/00161.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

DISCLOSURE BY AJIM EDITOR OF RECORD

Paul A. Landsbergis declares that he has no conflicts of interest in the review and publication decision regarding this article.

ETHICS APPROVAL AND INFORMED CONSENT

All research procedures were approved by the Ethics Committee on Animal and Human Experimentations of the Autonomous University of Barcelona (CEEAH/3445) and by ISTAS' Research Ethics

Committee. Participation of salaried population was voluntary, and all participants provided informed oral consent. Data were rigorously anonymized before analysis.

ORCID

Clara Llorens-Serrano  <http://orcid.org/0000-0001-9957-3156>

Sergio Salas-Nicás  <http://orcid.org/0000-0001-8671-9662>

Albert Navarro-Giné  <http://orcid.org/0000-0001-7153-4673>

REFERENCES

- Niedhammer I, Bertrais S, Witt K. Psychosocial work exposures and health outcomes: a meta-review of 72 literature reviews with meta-analysis. *Scand J Work Environ Health*. 2021;47(7):489-508. doi:10.5271/sjweh.3968
- European Commission. *EU Strategic Framework on Health and Safety at Work 2021-2027*. *Occupational Safety and Health in a Changing World of Work*. COM(2021) 323. 2021.
- ETUC, BussinesEurope, CEEP, SMEUnited. *European Social Dialogue. Work Programme 2019-2021*. 2019
- ILO. *Workplace Stress: A Collective Challenge*. 2016.
- Karasek RA. Job demands, job decision latitude, and mental strain: implications for job redesign. *Adm Sci Q*. 1979;24(2):285-308. doi:10.2307/2392498
- Johnson J, Hall EM. Job strain, work place social support, and cardiovascular disease: a cross-sectional study of a random sample of the Swedish working population. *Am J Public Health*. 1988;78(10):1336-1342. doi:10.2105/AJPH.78.10.1336
- Siegrist J. Adverse health effects of high-effort/low-reward conditions. *J Occup Health Psychol*. 1996;1(1):27-41. doi:10.1037/1076-8998.1.1.27
- Harvey SB, Modini M, Joyce S, et al. Can work make you mentally ill? A systematic meta-review of work-related risk factors for common mental health problems. *Occup Environ Med*. 2017;74(4):301-310. doi:10.1136/oemed-2016-104015
- Theorell T, Hammarström A, Aronsson G, et al. A systematic review including meta-analysis of work environment and depressive symptoms. *BMC Public Health*. 2015;15:738. doi:10.1186/s12889-015-1954-4
- Theorell T, Jood K, Järholm LS, et al. A systematic review of studies in the contributions of the work environment to ischaemic heart disease development. *Eur J Public Health*. 2016;26(3):470-477. doi:10.1093/eurpub/ckw025
- Kivimäki M, Kawachi I. Work stress as a risk factor for cardiovascular disease. *Curr Cardiol Rep*. 2015;17(9):74. doi:10.1007/s11886-015-0630-8
- Kivimäki M, Ferrie JE, Kawachi I. Workplace stressors. In: Kivimäki M, Batty GD, Steptoe A, Kawachi I, eds. *The Routledge international handbook of psychosocial epidemiology*. Routledge; 2019:85-113. doi:10.4324/9781315673097-4
- Landsbergis PA, Grzywacz JG, LaMontagne AD. Work organization, job insecurity, and occupational health disparities. *Am J Ind Med*. 2014;57(5):495-515. doi:10.1002/AJIM.22126
- Rubery J. Developing segmentation theory: a thirty year perspective. *Économies et Sociétés*. 2007;28(6):941-964.
- Green F, Mostafa T, Parent-Thirion A, et al. Is job quality becoming more unequal? *Ind Labor Relations Rev*. 2013;66(4):753-784. doi:10.1177/001979391306600402
- Rubery J, Piasna A. *Labour Market Segmentation and the EU Reform Agenda: Developing Alternatives to the Mainstream*. ETUI, The European Trade Union Institute; 2016.
- Rigó M, Dragano N, Wahrendorf M, Siegrist J, Lunau T. Work stress on rise? Comparative analysis of trends in work stressors using the European working conditions survey. *Int Arch Occup Environ Health*. 2021;94(3):459-474. doi:10.1007/S00420-020-01593-8
- Myers S, Govindarajulu U, Joseph M, Landsbergis P. Changes in work characteristics over 12 years: findings from the 2002-2014 US National NIOSH Quality of Work Life Surveys. *Am J Ind Med*. 2019;62(6):511-522. doi:10.1002/ajim.22971
- Donkin A, Marmot M. Targeting psychosocial factors to reduce health inequalities. In: Kivimäki M, Batty GD, Steptoe A, Kawachi I, eds. *The Routledge international handbook of psychosocial epidemiology*. Routledge; 2017:382-391. doi:10.4324/9781315673097-18
- Marmot M, Wilkinson R. *Social Determinants of Health*. Oxford Scholarship Online; 2009. doi:10.1093/acprof:oso/9780198565895.001.0001
- Schnall PL, Dobson M, Landsbergis P. Globalization, work, and cardiovascular disease. *Int J Heal Serv*. 2016;46(4):656-692. doi:10.1177/0020731416664687
- Montano D, Hoven H, Siegrist J. Effects of organisational-level interventions at work on employees' health: a systematic review. *BMC Public Health*. 2014;14(1):135. doi:10.1186/1471-2458-14-135
- MacDonald LA, Härenstam A, Warren ND, Punnett L. Incorporating work organisation into occupational health research: an invitation for dialogue. *Occup Environ Med*. 2008;65(1):1-3. doi:10.1136/oem.2007.033860
- LaMontagne AD, Keegel T, Louie AM, Ostry AS, Landsbergis P. A systematic review of the job-stress intervention evaluation literature, 1990-2005. *Int J Occup Environ Health*. 2007;13(3):268-280. doi:10.1179/OEH.2007.13.3.268
- Kompier MA, Kristensen T. Organizational work stress interventions in a theoretical, methodological and practical context. In: Dunham J, ed. *Stress in the workplace: past, present and future*. Whurr Publishers; 2001:164-190.
- Rugulies R. What is a psychosocial work environment? *Scand J Work Environ Heal*. 2019;45(1):1-6. doi:10.5271/sjweh.3792
- De Spiegelaere S, Hoffmann A, Jagodziński R, Lafuente Hernández S, Rasnača Z, Vitols S. Democracy at work. In: Jepsen M, ed. *Benchmarking working Europe 2019*. ETUI; 2019:67-89.
- Busck O, Knudsen H, Lind J. The transformation of employee participation: consequences for the work environment. *Econ Ind Democr*. 2010;31(3):285-305. doi:10.1177/0143831X09351212.
- Wilkinson A, Gollan PJ, Marchington M, Lewin D. Conceptualizing Employee Participation in Organizations. In: Wilkinson A, Gollan PJ, Marchington M, Lewin D, eds. *The Oxford handbook of participation in organizations*. Oxford University Press; 2010:1-23. doi:10.1093/oxfordhb/9780199207268.003.0001
- Gallie D. Direct participation and the quality of work. *Hum Relations*. 2013;66(4):453-473. doi:10.1177/0018726712473035
- Sisson K. *Direct Participation and the Modernisation of Work Organisation*. Eurofound ed. Office for Official Publications of the European Communities; 2000.
- Hampson I, Sandberg A. *The Swedish Contribution to Job Quality*. Vol 39. 2017.
- Boxall P, Macky K. High-involvement work processes, work intensification and employee well-being. *Work Employ Soc*. 2014;28(6):963-984. doi:10.1177/0950017013512714
- Hasle P, Sørensen OH. Employees as individually and collectively acting subjects-key contributions from nordic working life research. *Nord J Work Life Stud*. 2013;3(3):9-29. doi:10.19154/njwls.v3i3.3009
- Michel A. Participation and self-entrapment a 12-year ethnography of wall street participation practices' diffusion and evolving consequences. *Sociol Q*. 2014;55(3):514-536. doi:10.1111/tsq.12064

36. Mazmanian M, Orlikowski WJ, Yates JA. The autonomy paradox: the implications of mobile email devices for knowledge professionals. *Organ Sci.* 2013;24(5):1337-1357. doi:10.1287/orsc.1120.0806
37. Valdés G, Barley SR. Be careful what you wish for: the learning imperative in postindustrial work. *Work Occup.* 2016;43(4):466-501. doi:10.1177/0730888416655187
38. Pérez-Zapata O, Serrano Pascual A, Alvarez-Hernández G, Castaño Collado C. Knowledge work intensification and self-management: the autonomy paradox. *Work Organ Labour Glob.* 2016;10(2):27-49. doi:10.13169/workorglaboglob.10.2.0027
39. Jensen JM, Patel PC, Messersmith JG. High-performance work systems and job control: consequences for anxiety, role overload, and turnover intentions. *J Manage.* 2013;39(6):1699-1724. doi:10.1177/0149206311419663
40. Carter B, Danford A, Howcroft D, Richardson H, Smith A, Taylor P. "Stressed out of my box": employee experience of lean working and occupational ill-health in clerical work in the UK public sector. *Work Employ Soc.* 2013;27(5):747-767. doi:10.1177/0950017012469064
41. Bambra C, Egan M, Thomas S, Petticrew M, Whitehead M. The psychosocial and health effects of workplace reorganisation. 2. A systematic review of task restructuring interventions. *J Epidemiol Community Health.* 2007;61(12):1028-1037. doi:10.1136/jech.2006.054999
42. Lahera Sánchez A. ¿Hacia una producción enriquecida? Trabajo en grupo y recualificación en empresas de ingeniería mecánica. *AIBR Rev Antropol Iberoam.* 2006;01(03):428-464. doi:10.11156/aibr.010306
43. Lahera Sánchez A. La participación de los trabajadores en la calidad total: nuevos dispositivos disciplinarios de organización del trabajo. *Rev Esp Invest Sociol.* 2004;106:63. doi:10.2307/40184585
44. Landsbergis PA, Adler PS, Babson S, et al. Lean production and worker health: a discussion. *New Solut.* 1999;8(4):499-523. doi:10.2190/8DFT-3N8B-8TCF-M3U1
45. Huo ML, Boxall P. Are all aspects of lean production bad for workers? An analysis of how problem-solving demands affect employee well-being. *Hum Resour Manag J.* 2018;28(4):569-584. doi:10.1111/1748-8583.12204
46. Håkansson M, Dellve L, Waldenström M, Holden RJ. Sustained lean transformation of working conditions: a Swedish longitudinal case study. *Hum Factors Ergon Manuf.* 2017;27(6):268-279. doi:10.1002/hfm.20710
47. Lantz A, Hansen N, Antoni C. Participative work design in lean production: a strategy for dissolving the paradox between standardized work and team proactivity by stimulating team learning? *J Work Learn.* 2015;27(1):19-33. doi:10.1108/JWL-03-2014-0026
48. Hasle P. Lean production—an evaluation of the possibilities for an employee supportive lean practice. *Hum Factors Ergon Manuf.* 2014;24(1):40-53. doi:10.1002/hfm.20350
49. Ulhassan W, von Thiele Schwarz U, Thor J, Westerlund H. Interactions between lean management and the psychosocial work environment in a hospital setting—a multi-method study. *BMC Health Serv Res.* 2014;14:480. doi:10.1186/1472-6963-14-480
50. Westgaard RH, Winkel J. Occupational musculoskeletal and mental health: significance of rationalization and opportunities to create sustainable production systems—a systematic review. *Appl Ergon.* 2011;42(2):261-296. doi:10.1016/j.apergo.2010.07.002
51. Gallie D, Zhou Y. Employee Involvement, Work Engagement and Skill Development. Eurofound; 2020.
52. Gallie D, Zhou Y. *Work Organisation and Employee Involvement in Europe.* Eurofound; 2013. doi:10.2806/35945
53. Llorens C, Navarro A, Salas S, Utzet M, Moncada S. For better or for worse? Psychosocial work environment and direct participation practices. *Saf Sci.* 2019;116:78-85. doi:10.1016/j.ssci.2019.02.028
54. Felstead A, Gallie D, Green F, Henseke G. The determinants of skills use and work pressure: a longitudinal analysis. *Econ Ind Democr.* 2019;40(3):730-754. doi:10.1177/0143831X16656412
55. Dhondt S, Pot FD, Kraan KO. The importance of organizational level decision latitude for well-being and organizational commitment. *Team Perform Manag.* 2014;20:307-327. doi:10.1108/TPM-03-2014-0025
56. Inanc H, Zhou Y, Gallie D, Felstead A, Green F. Direct participation and employee learning at work. *Work Occup.* 2015;42(4):447-475. doi:10.1177/0730888415580650
57. Piasna A, Smith M, Rose J, Rubery J, Burchell B, Rafferty A. Participatory HRM practices and job quality of vulnerable workers. *Int J Hum Resour Manag.* 2013;24(22):4094-4115. doi:10.1080/09585192.2013.845423
58. Boxall P, Winterton J. Which conditions foster high-involvement work processes? A synthesis of the literature and agenda for research. *Econ Ind Democr.* 2018;39(1):27-47. doi:10.1177/0143831X15599584
59. Moncada i Lluís S, Llorens Serrano C, Salas Nicás S, Morfiña Soler D, Navarro Giné A. La tercera versión de COPSOQ-Istas21. Un instrumento internacional actualizado para la prevención de riesgos psicosociales en el trabajo. *Rev Esp Salud Publica.* 2021;95:e1-16.
60. Llorens C, Alós R, Cano E, et al. Psychosocial risk exposures and labour management practices. An exploratory approach. *Scand J Public Health.* 2010;38(3 Suppl):125-136.
61. Domingo-Salvany A, Bacigalupe A, Carrasco JM, Espelt A, Ferrando J, Borrell C. Propuestas de clase social neoweberiana y neomarxista a partir de la Clasificación Nacional de Ocupaciones 2011. *Gac Sanit.* 2013;27(3):263-272. doi:10.1016/j.gaceta.2012.12.009
62. Burr H, Berthelsen H, Moncada S, et al. The third version of the Copenhagen Psychosocial Questionnaire. *Saf Health Work.* 2019;10(4):482-503. doi:10.1016/j.shaw.2019.10.002
63. Markey R, Harris C, Lind J, Busck O, Knudsen H. Employee participation on work environment in food processing industry in Denmark & New Zealand. *Indian J Ind Relat.* 2010;45(4):622-634.
64. Kloutsiniotis PV, Katou AA, Mihail DM. Examining the "dark-side" of high performance work systems in the Greek manufacturing sector. *Empl Relations.* 2021;43(5):1104-1129. doi:10.1108/ER-04-2020-0170
65. Hung DY, Harrison MI, Truong Q, Du X. Experiences of primary care physicians and staff following lean workflow redesign. *BMC Health Serv Res.* 2018;18(1):274. doi:10.1186/s12913-018-3062-5
66. Enehaug H. Ten successful years: a longitudinal case study of autonomy, control and learning. *Nord J Work Life Stud.* 2017;7(1):67-89. doi:10.18291/njwls.v7iS2.96693
67. Brännmark M, Holden RJ. Packages of participation: swedish employees' experience of Lean depends on how they are involved. *IIE Trans Occup Ergon Hum factors.* 2013;1(2):93-108. doi:10.1080/21577323.2012.729001
68. Wood S, van Veldhoven M, Croon M, de Menezes LM. Enriched job design, high involvement management and organizational performance: the mediating roles of job satisfaction and well-being. *Hum Relations.* 2012;65(4):419-445. doi:10.1177/0018726711432476
69. Böckerman P, Bryson A, Ilmakunnas P. Does high involvement management lead to higher pay? *J R Stat Soc Ser A.* 2013;176(4):861-885. doi:10.1111/J.1467-985X.2012.01075.X
70. Neirotti P. Work intensification and employee involvement in lean production: new light on a classic dilemma. *Int J Hum Resour Manag.* 2020;31(15):1958-1983. doi:10.1080/09585192.2018.1424016

71. Koukoulaki T. The impact of lean production on musculoskeletal and psychosocial risks: an examination of sociotechnical trends over 20 years. *Appl Ergon*. 2014;45(2 Part A):198-212. doi:10.1016/j.apergo.2013.07.018
72. Hasle P, Bojesen A, Jensen PL, Bramming P. Lean and the working environment: a review of the literature. *Int J Oper Prod Manag*. 2012;32(7):829-849. doi:10.1108/01443571211250103
73. Schneider A, Wehler M, Weigl M. Effects of work conditions on provider mental well-being and quality of care: a mixed-methods intervention study in the emergency department. *BMC Emerg Med*. 2019;19(1):1. doi:10.1186/s12873-018-0218-x
74. Höge T, Hornung S. Perceived flexibility requirements: exploring mediating mechanisms in positive and negative effects on worker well-being. *Econ Ind Democr*. 2015;36(3):407-430. doi:10.1177/0143831X13511274
75. Findlay P, Lindsay C, McQuarrie J, Bennie M, Corcoran ED, Van Der Meer R. Employer choice and job quality: workplace innovation, work redesign, and employee perceptions of job quality in a complex health-care setting. *Work Occup*. 2017;44(1):113-136. doi:10.1177/0730888416678038
76. Lindsay C, Commander J, Findlay P, Bennie M, Corcoran ED, Van Der Meer R. Lean', new technologies and employment in public health services: employees' experiences in the National Health Service. *Int J Hum Resour Manag*. 2014;25(21):2941-2956. doi:10.1080/09585192.2014.948900
77. von Thiele Schwarz U, Nielsen KM, Stenfors-Hayes T, Hasson H. Using kaizen to improve employee well-being: results from two organizational intervention studies. *Hum Relations*. 2017;70(8):966-993. doi:10.1177/0018726716677071
78. Dellve L, Williamsson A, Strömberg M, Holden RJ, Eriksson A. Lean implementation at different levels in Swedish hospitals: the importance for working conditions and stress. *Int J Hum Factors Ergon*. 2015;3(3/4):235-253. doi:10.1504/ijhfe.2015.073001
79. Deery S, Kolar D, Walsh J. Can dirty work be satisfying? A mixed method study of workers doing dirty jobs. *Work Employ Soc*. 2019;33(4):631-647. doi:10.1177/0950017018817307
80. Lantz A, Hansen N, Antoni C. Participative work design in lean production A strategy for dissolving the paradox between standardized work and team proactivity by stimulating team learning? *J Work Learn*. 2015;27(1):19-33. doi:10.1108/JWL-03-2014-0026
81. Håkansson M, Holden RJ, Eriksson A, Dellve L. Managerial practices that support lean and socially sustainable working conditions. *Nord J Work Life Stud*. 2017;7(3):63-84. doi:10.18291/njwls.v7i3.97091
82. Eurofound. *Sixth European Working Conditions Survey—Overview Report (2017 Update)*. 2017. doi:10.2806/422172
83. De Spiegelaere S, Van Gyes G. Employee-Driven Innovation and Industrial Relations. In: Hoyrup S, Bonnafous-Boucher M, Hasse C, Lotz M, Moller K, eds. *Employee-driven innovation*. Palgrave Macmillan; 2012:230-245. doi:10.1057/9781137014764_12
84. Eurofound. *What Do Europeans Do at Work? A Task-Based Analysis: European Jobs Monitor 2016*. Publications Office of the European Union; 2016. doi:10.2806/229525
85. Vänje A, Brännmark M. Walking around the pyramids: managers' shop-floor activities in Lean-inspired organizations. *Econ Ind Democr*. 2017;38(3):495-512. doi:10.1177/0143831X15580351
86. Nielsen K, Randall R. The importance of employee participation and perceptions of changes in procedures in a teamworking intervention. *Work Stress*. 2012;26(2):91-111. doi:10.1080/02678373.2012.682721
87. Cramer E, Hunter B. Relationships between working conditions and emotional wellbeing in midwives. *Women and Birth*. 2019;32(6):521-532. doi:10.1016/j.wombi.2018.11.010
88. Maben J, Bridges J. Covid-19: supporting nurses' psychological and mental health. *J Clin Nurs*. 2020;29(15-16):2742-2750. doi:10.1111/jocn.15307
89. Bridges J, May C, Fuller A, et al. Optimising impact and sustainability: a qualitative process evaluation of a complex intervention targeted at compassionate care. *BMJ Qual Saf*. 2017;26(12):970-977. doi:10.1136/BMJQS-2017-006702
90. Eurofound. *Labour Market Segmentation: Piloting New Empirical and Policy Analyses*. 2019. doi:10.2806/751649
91. Walters D, Wadsworth E. *Worker Participation in the Management of Occupational Safety and Health: Qualitative Evidence from ESENER-2*. EU-OSHA; 2017. doi:10.2802/93677
92. Ollé-Espuga L, Vergara-Duarte M, Belvis F, Menéndez-Fuster M, Jódar P, Benach J. What is the impact on occupational health and safety when workers know they have safety representatives? *Saf Sci*. 2015;74:55-58. doi:10.1016/j.ssci.2014.11.022
93. Hall A, Oudyk J, King A, Naqvi S, Lewchuk W. Identifying knowledge activism in worker health and safety representation: a cluster analysis. *Am J Ind Med*. 2016;59(1):42-56. doi:10.1002/ajim.22520
94. Janetzke H, Ertel M. Psychosocial risk management in more and less favourable workplace conditions. *Int J Work Heal Manag*. 2017;10(4):300-317. doi:10.1108/IJWHM-09-2016-0063
95. Payá Castiblanque R, Pizzi A. Presencia sindical y gestión de riesgos laborales de origen psicosocial. Un análisis del caso español. *Rev Int Organ*. 2020;24(24):325-366. doi:10.17345/rio24.325-366
96. Pohler DM, Luchak AA. Balancing efficiency, equity, and voice: the impact of unions and high-involvement work practices on work outcomes. *Ind Labor Relations Rev*. 2014;67(4):1063-1094. doi:10.1177/0019793914546295
97. Knudsen H, Busck O, Lind J. Work environment quality: the role of workplace participation and democracy. *Work Employ Soc*. 2011;25(3):379-396. doi:10.1177/0950017011407966
98. Hyman J, Mason B. *Managing Employee Involvement and Participation*. SAGE Publications Ltd; 1995.
99. Pateman C. *Participation and Democratic Theory*. Cambridge University Press; 1970.
100. Dollard MF, Opie T, Lenthall S, et al. Psychosocial safety climate as an antecedent of work characteristics and psychological strain: a multilevel model. *Work Stress*. 2012;26(4):385-404. doi:10.1080/02678373.2012.734154
101. Findlay P, Warhurst C, Keep E, Lloyd C. Opportunity knocks? The possibilities and levers for improving job quality. *Work Occup*. 2017;44(1):3-22. doi:10.1177/0730888416689813
102. Peccei R, Van De Voorde K. Human resource management—well-being—performance research revisited: past, present, and future. *Hum Resour Manag J*. 2019;29(4):539-563. doi:10.1111/1748-8583.12254
103. Banyuls Llopis J, Recio Andreu A. Gestión empresarial y dinámica laboral en España. *Ekón Rev vasca Econ*. 2015;87:182-205.
104. Utzet M, Navarro A, Llorens C, Moncada S. Intensification and isolation: psychosocial work environment changes in Spain 2005–10. *Occup Med (Chic Ill)*. 2015;65(5):405-412. doi:10.1093/occmed/kqv062
105. Taouk Y, Spittal MJ, Lamontagne AD, Milner AJ. Psychosocial work stressors and risk of all-cause and coronary heart disease mortality: a systematic review and meta-analysis. *Scand J Work Environ Heal*. 2020;46(1):19-31. doi:10.5271/sjweh.3854
106. Too LS, Leach L, Butterworth P. Is the association between poor job control and common mental disorder explained by general perceptions of control? Findings from an Australian longitudinal cohort. *Scand J Work Environ Heal*. 2020;46(3):311-320. doi:10.5271/sjweh.3869

107. Milner A, Witt K, LaMontagne AD, Niedhammer I. Psychosocial job stressors and suicidality: a meta-analysis and systematic review. *Occup Environ Med.* 2018;75(4):245-253. doi:10.1136/oemed-2017-104531

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

How to cite this article: Llorens-Serrano C, Salas-Nicás S, Navarro-Giné A, Lluís SM. Delegation and consultation on operational and tactical issues: any difference in their potentialities for a healthier psychosocial work environment? *Am J Ind Med.* 2022;65:800-812. doi:10.1002/ajim.23414