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Management of health and safety in the organization of worktime at the local level

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Objectives This study examined the consideration of health and safety issues in the local process of organizing worktime within the framework of regulations.

Methods The study encompassed all 7 hospitals in one region of Denmark. Twenty-three semi-structured interviews were carried out with 2 representatives from the different parties involved (management, cooperation committees, health and safety committees from each hospital, and 2 local unions). Furthermore, a questionnaire was sent to all 114 wards with day and night duty. The response rate was 84%. Data were collected on alterations in worktime schedules, responsibilities, reasons for the present design of schedules, and use of inspection reports.

Results The organization of worktime takes place in single wards without external interference and without guidelines other than the minimum standards set in regulations. At the ward level, management and employees were united in a mutual desire for flexibility, despite the fact that regulations were not always followed. No interaction was found in the management of health and safety factors between the parties concerned at different levels.

Conclusions The demands for flexibility in combination with the absence of guidelines and the missing dynamics between the parties involved imply that the handling of health and safety issues in the organization of worktime may be accidental and unsystematic. In order to consider the health and safety of night and shift workers within the framework of regulations, a clarification of responsibilities, operational levels, and cooperation is required between the parties concerned.

Key terms hospitals, participation, prevention, regulations, shift work, work environment.

The organization of worktime is a local process, in which local issues are considered in the light of existing regulations. The variety of different work schedules indicates that the process of designing work schedules has become increasingly complex (1), marked by flexibility (2) and new approaches encompassing employee involvement in the management of health and safety in most industrialized countries.

The demands for more flexibility stem from the growing requirements of companies to work schedules that respond to new concepts of economy and production, technological possibilities, and fluctuations in business activity on one hand (1, 2) and the desire of employees to have their worktime organized according to their personal and social preferences on the other.

Parallel to these demands, health and safety regulatory strategies have changed from detailed technical legislative standards towards regulations offering a framework emphasizing build-up systems, programs, and conditions conducive to health and safety and stipulating the obligations and rights of the involved parties. Attention is also given to the importance of health and safety intervention at the stage of planning and design and also to local activities (3). These framework regulations correspond to the emergence of participatory systems and joint committees as methods of protecting employee rights to interact in company matters concerning such issues as worktime conditions and schedules (4) and health and safety factors (5).

This development is reflected in the European Council directive *Concerning Certain Aspects of the Organization of Working Time* (6). The directive recognizes night work as an occupational risk factor and points out the need for regulations exemplified by certain minimum standards and health programs. At the same time it allows for deviations by means of agreements between the

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2 parties and emphasizes compliance with national labor market traditions and regulations.

Furthermore, the reduction that has occurred in weekly workhours in many countries through the last few decades has caused changes in work schedules, and examples of new systems have been reported (7).

At the local level the organization of worktime often reveals conflicting interests between the parties involved and sometimes among the employees themselves. It has been stressed that at the enterprise level it is necessary to reach compromises that offer advantages to both the employers and the employees in order to obtain practical solutions (1, 8). The way health and safety issues are taken into account within the complexity of different interests, specific local conditions, and traditions is assumed to depend on the implementation of existing regulations and on the functioning of the local parties. The application of participatory principles to the organizational work conditions of companies has been reported earlier with regard to technological change (9) and to health and safety in general (10, 11), but variations in implementation, influence, and foundation have also been accentuated.

In light of the increased complexity and the mutual desire for more flexibility, the purpose of our study was to examine how health and safety issues are taken into consideration in the organization of worktime at the local level within a system of structural regulations and participatory strategies. Special attention was given to clarifying the functions and interactions of the parties involved and the influence of the joint committees.

Material and methods

Material

The study included all 7 somatic hospitals in the region of North Jutland, with a population of around 450 000.

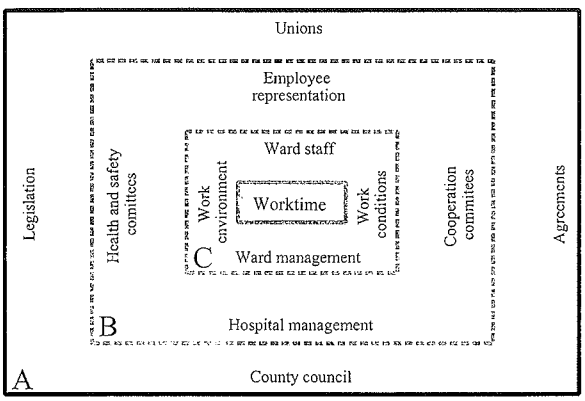

Figure 1. Operational levels of the local participants in the organization of worktime.

The hospitals varied from the regional hospital operating 24-hour services in 53 wards to the smallest hospital with 3 wards. All the hospitals had implemented participatory structures since 1980 according to the regulations of both cooperation committees [the first agreement on cooperation for the public sector was accepted in 1973 (latest, 12)] and the health and safety committees [stipulated in legislation since 1978 (latest, 13)]. The data were collected from October 1994 to February 1995.

Model

In Denmark the regulations concerning the work environment consist of a mixture of collective agreements and a legislative framework for health and safety (14). The parties involved in the agreements manage legal regulations to ensure compliance with the agreements, and, to ensure their implementation and participation, a formal system of joint committees has been introduced both by agreements (cooperation committees) and by legislation (health and safety committees). In this system work conditions, including worktime issues, are negotiated at both the central and the local level. The cooperation committees attend to cooperation and participation concerning the terms for personnel policies and organizational work conditions, including worktime and the daily operation of hospitals (12). According to the legislation the health and safety committees attend to cooperation and employee participation in the same way as the cooperation committees, but they only deal with implementing legislative provisions, monitoring health and safety, and initiating preventive activities (13). The management of a company, or a hospital, is still formally responsible for ensuring that the prescribed tasks of the health and safety committees are carried out. The employee representatives serving on the cooperation committee have to be elected from the shop stewards, who also represent the local unions at the hospital, whereas the health and safety representatives only represent the employees who elect them, and who work in a specific part of the hospital. They need not be unionized and are not considered union representatives.

In Denmark, the county councils determine the economic conditions and the service level of the hospitals in a region, but the management of a single hospital is responsible for the daily function of the hospital, the internal distribution of resources, and the handling of the local collective negotiations on work conditions. The management of a ward is responsible for the daily functioning of that ward. The ward management independently decides the extent of direct participation and involvement in work organization and work conditions in relation to the existing regulations and hospital policies on cooperation and health and safety.

The interaction between the different parties involved in the local process of organizing worktime is illustrated

by figure 1. The figure shows the participants and conditions split up into the following three organizational structural levels: (i) the external conditions for single hospitals (A), (ii) the hospital level (B), and (iii) the ward level (C). At each level a dynamic relationship exists that influences the factors and dynamics of the other levels (marked by the dotted lines). This study only examined the 2nd and 3rd levels, as they are the only levels directly involved in the organization of worktime.

Methods

Interview. For all 7 hospitals in the region the participants were the parties involved at the hospital level except for one deviation from the model. As the employee representatives were part of both the cooperation committees and the health and safety committees, they were replaced by the 2 local unions for nurses and nurses aides representing employees involved in the 24-hour service of the wards (membership rate around 90%). Twenty-three interviews were carried out with 2 representatives of each of the parties involved [ie, management, cooperation committee (the chairman was always the top manager of the hospital and the deputy chairman was always an employee representative), health and safety committee (the chairman was always from management and as no deputy chairman exists in the health and safety committees, the employee representative was the employee with the highest seniority) and the employees' 2 local unions (the chairman and another member of the union board)]. The interviews were semistructured and dealt with 3 dimensions of worktime and health and safety: (i) function, responsibility, and authority (as perceived by the party in question) and the dynamics between the involved parties; (ii) the use of an inspection report available for labor inspections, in which deviations from regulations should be reported according to existing legislation; and (iii) the involved parties' conceptions of future regulations.

Each interview was carried out by 2 researchers and it lasted around 1.5 hours. The results were compiled for the 2 participants and sent to each of them for comments and acceptance. The possible corrections were added, and the interview records were returned for final approval.

Questionnaire. Data from a questionnaire to all 114 wards with 24-hour service at the 7 hospitals of the region were used to obtain information from the 3rd level (C) shown in figure 1. The questionnaire was mailed to the ward management and consisted of factual information on experiences with alterations in work schedules, responsibility for the organization of worktime, reasons for the design, changes in the planned schedules, and the use of inspection reports. Proportions were calculated. The response rate was 84%.

Results

Interviews

We analyzed the interviews to identify common features within a group and both common and different features between the groups. Only few divergences were found within the groups. Thus the data are presented for each group as a whole according to their experiences with the main themes.

Hospital management

The representatives of hospital management reported that their function was to wait to act; it was indirect and supervisory in relation to ward management. They did not interfere if there was unity between the employees and management at the ward level. They recognized that they, as management representatives, had certain formal control with respect to the observation of regulations. If employees were satisfied, deviations from the regulations were not recorded. According to hospital management adherence to regulations and the organization of worktime via decentralization belonged to the role of ward management since ward management was close to the staff and must enter into discussions with the staff, including discussions of health and safety. Special preferences concerning, for example, design and consecutive night shifts were determined at the ward level. The representatives of hospital management reported that the cooperation committees were usually informed of any changes in conditions related to worktime, such as new local agreements or the function of wards, whereas the health and safety committees were not involved. It was unanimously stated that the cooperation committees and health and safety committees did not have any authority in these matters. No cooperation between the parties was mentioned. The wards were reported to be the central level of employee involvement. The hospital management had no knowledge of health and safety problems stemming from the organization of worktime. Hospital management did not find any need for inspection reports. There was doubt about whether the reports were used and whether they were available. It was a common wish between ward management and employees not to report deviations in inspection reports. According to hospital management, regulations have to be flexible and should be overseen by the involved groups as much as possible. Agreements were therefore found to be the most appropriate tool, as they more strongly imply the necessity for flexibility and offer better opportunities to comply with employee wishes. Legislation might be necessary to prevent abuse, but legislation also has to be flexible enough to be utilized at individual hospitals.

Cooperation committees

The cooperation committees did not consider the organization and design of work schedules to fall in their sphere of influence. They felt that they may have a function if problems arise, but not until negotiations between the local parties have been tried. They understood that it was their function to wait to act because worktime conditions are determined by collective agreements and the organization of work schedules takes place at the ward level. According to the cooperation committees the organization of worktime and the handling of health and safety have been handed over to ward management. The cooperation committees argued that combining considerations of the treatment of patients and staff could only take place at the ward level. Health and safety issues in the organization of worktime were considered to be subjects for the health and safety committees. The cooperation committees did not report that they had any independent authority over worktime matters. The cooperation committees did not experience any dynamics between the parties. According to the cooperation committees the inspection reports were generally not used because there were no consequences for not filling out the reports. A mutual interest in being able to deviate from regulations was experienced between management and employees. The cooperation committees found that the most appropriate regulations for worktime and health and safety were set by agreement because then possibilities for adhering to the regulations were the greatest and there were better opportunities to take local problems into account. Legislation with minimum standards was considered to be necessary to prevent abuse.

Health and safety committees

The health and safety committees believed their function was to act when matters were raised externally. No such situation had ever arisen for any of the health and safety committees. These committees expressed a greater variation and uncertainty about their function in relation to organizational work conditions in general and worktime in particular than the other committees. The health and safety committees considered ward management to be responsible for and have the authority over worktime arrangements. They believed that ward management was fairly unconstrained in organizing worktime with respect to regulations. With respect to the responsibility and authority for health and safety issues in the organization of worktime, the opinions of the health and safety committees were dominated by uncertainty and variation. Some committees stated that the questions on worktime were subject to rulings by the cooperation committees, while others stated that health and safety matters, as indirect effects, could be subjects for the health and safety committees to consider. The health and safety committees reported no interaction between the parties. Furthermore the health and safety committees experienced ambiguous interfaces with management and the cooperation committees. They found that they had to collaborate with the cooperation committees as regards organizational work conditions. The health and safety committees stated that the inspection reports were not available or not used. They suggested that the reports were not used because of the common preference for flexibility between management and employees. In general the health and safety committees found a need for greater clarification of the regulations. The health and safety committees differed in their emphasis on agreements and legislation, but a common theme was the need for flexibility. A majority believed that agreements would offer the best opportunities for flexibility, while others preferred a frame of legislation complemented by local agreements.

Local unions

Both unions understood their activities to be determined by negotiations between the parties and the activities and preferences of the union members. The utilization of central agreements took place at the local level between shop stewards and hospital management. The role of the local unions was to provide information and supervise the shop stewards, but the unions were not directly involved. According to the unions, shop stewards do not think of health and safety when they enter agreements. The unions also referred to the fact that the health and safety representatives are not representatives of the unions at hospitals and therefore contact and guidance are limited. Sometimes union members presented health and safety problems related to worktime, but they did not want these problems to be brought up formally. It was the impression of the unions that the members tried to solve these problems by moving to another ward or sector. It was suggested that the responsibility for work schedules belonged formally to hospital management but that ward management had a special responsibility via decentralization. The unions considered the cooperation committees and health and safety committees to have the responsibility for linking worktime with health and safety. They also expressed the view that the health and safety representatives regarded worktime to be subject to agreement and managed by shop stewards, who, on the other hand, regarded health and safety issues to be dependent on legislation and therefore managed by health and safety representatives. The unions did not interact at the hospital level. Ward management was considered to be responsible for inspection reports. The unions viewed a broad frame of legislation filled out by local agreements as being the best regulation principle. Furthermore, it was stated that, if legislation was supposed to have some meaning, infringements should lead to consequences.

Questionnaire

The data from the questionnaires were transformed to the same themes used for the interviews, with the exception that both the information and operational role of the persons responding differed. In the description only the main trends are presented.

Wards. Worktime arrangements were discussed and altered frequently in the wards. Eighty percent stated changes during the last 5 years, half of the wards having had 2 changes or more. The causes for the alterations were primarily related to the function of the wards, and they were only linked to health and safety in 6 cases. Reasons for the present design ranged from functional considerations (63%) to patient care (20%), staff (14%), health and safety (1%) and other reasons (2%). In this case, health and safety issues were related to situations beyond the minimum standards in regulations. Responsibility and authority were nearly unanimously accepted by the representatives of ward management as belonging to their sphere. Only 5% mentioned superior management, and 7% expressed the opinion that the responsibility was shared with the staff. At the same time the staff was involved in all changes except 5, either because the employees had proposed the changes or had been consulted. Eighty-eight percent of the representatives of the ward management found that they had possibilities to alter worktime arrangements if they wanted to do so. Initiatives to alter the design of the shift systems had come from other organizational levels only in 4 cases. Representatives of ward management were asked if deviations from regulation standards or infringements were recorded in the inspection reports, and 76% stated that they were not. Future regulations were not a part of the questionnaire.

Discussion

At hospitals no policies or guidelines that go beyond the minimum standards in regulations have been drawn up that consider health and safety issues in the organization of worktime. After the decentralization of hospital structures ward management has had the authority to draw up work schedules and the responsibility to consider health and safety aspects. At the same time the responsibility of ward management embraces the obligation to design work schedules that maintain the function of the ward and consider the preferences of the employees, also under circumstances of altered resources and tasks. The frequent discussions about worktime arrangements and changes in shift schedules illustrate the increasing complexity of factors involved in the local process of organizing worktime and in the changeability of these factors (1). In the absence of a general hospital policy, a system of self-administration has been developed at the ward level in which ward management and the staff are united in a mutual desire for flexibility as the preferred method of organizing worktime. In general, this goal is maintained although it may imply deviations and infringements of regulations, which to a wide extent are not reported, despite legislative requirements for such reports.

The interviews demonstrated that, at the level represented in figure 1 as B, the parties involved display no activities, and thus no interaction takes places at this level concerning the handling of health and safety issues related to worktime. The parties concerned experience their function as an intermediary body waiting to act, and this stance is mutually legitimated by the fact that responsibility has been delegated to the wards and no health and safety problems due to shift work have been raised. The joint committees do not handle the health and safety aspects of worktime. The absence of activity on the part of the health and safety committees is estimated to be linked to the ambiguousness of their function, because worktime is considered to be regulated by negotiations and agreements between the concerned parties. The local unions, on the other hand, are characterized by hesitant attitudes because they believe that they must act in accordance with the prevailing attitudes of their members.

The absence of activity at the hospital level (level B, figure 1) implies that the self-administration of the wards is the dominating regulatory principle in the organization of worktime, whereas legislation as a result of the lack of activity is estimated to have the smallest influence. The existing relationship between influence, regulations, and the involved parties in the design of worktime arrangements is shown in figure 2. The dynamics illustrated in this figure have been found to have different implications for health and safety. Self-administration implies that health and safety issues become

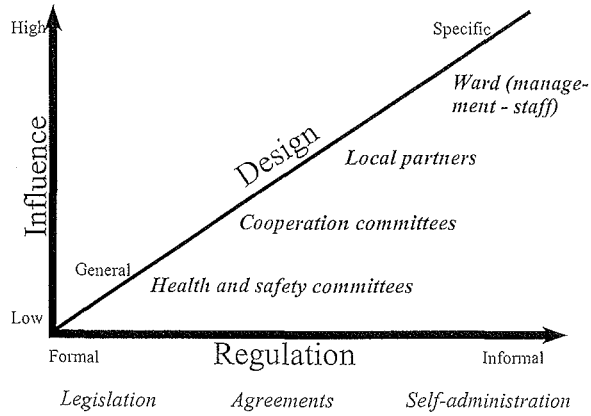

Figure 2. Dynamics between influence, regulations, and the local participants in the organization of worktime arrangements in hospitals within the existing regulatory framework.

ward-specific in terms of how they are managed in combination with other demands on the organization of worktime. Consequently, the management of health and safety has the potential to become unsystematic and sporadic as other issues are dealt with. No steps have been taken to meet the legislative provisions for health and safety or to implement conditions facilitating the function and influence of health and safety committees over worktime. In other words activities like monitoring and prevention, such as designing better shift systems (15), have not been initiated to enhance health and safety beyond minimum standards. The application of legislative framework emphasizing participatory strategies requires increased clarification of the functions of the health and safety committees at the local level to ensure preventive measures against the well-known effects of shift work (16, 17). Greater support from the other parties and their cooperation are necessary as well, especially at a time when the existing worktime systems are under change and new systems are necessary (18). Other approaches, such as further education of health and safety personnel and the development of new operational tools, will also be important when a legislative framework has been introduced.

The parties concerned argue about the lack of health and safety policies on worktime and about the fact that no health and safety problems have been raised, and that they are nonexistent, but, contrary to these arguments, is the fact that unions report on inquiries about worktime and health problems from single members. However, at the same time, their members do not want them to report their cases or raise them as a formal issue, as such a step may be contrary to the preferences of the other employees and management of the ward. Furthermore, there is no tradition for making such reports. This attitude will increase the risk of situations in which the handling of health and safety issues is left to employees themselves.

Employee participation takes place as direct participation at the ward level. It depends on the attitudes of the ward management and not on regulatory standards. The possibilities for representative participatory strategies based on regulations are not being utilized as they should according to their standards with regard to health and safety in the organization of worktime.

A fundamental question for a study of this kind is the extent to which the results can be generalized at both the national and international level. The hospital sector was chosen for study because of its long tradition of 24-hour service and because, as a public sector, it has common features that can be generalized to a national level. Furthermore, hospitals in Denmark are ruled by regional authorities, and the regions have the same hospital structure, consisting of a larger regional hospital and several smaller hospitals. No differences were found between the large and small hospitals. The methods of regulating worktime vary in the European Union according to the priority given to legislation, agreements, or a mixture of both. Thus Denmark has only few standards, and, in accordance with the general requirements for flexibility, it has had a legislative framework for health and safety based on participatory strategies through local action and measures. Therefore, it can be assumed that the results can be generalized to a national level and also to countries with similar regulatory systems for enterprises that have decentralized the authority for designing worktime arrangements at the ward or departmental level. The results cannot be directly generalized to industrial companies, where worktime arrangements are typically set at a central level within the company by agreements between management and shop stewards. On the other hand, the study demonstrates that problems may arise with regard to health and safety issues, even when established participatory strategies exist, if the organization of worktime is traditionally based on agreements and the management of health and safety issues has a legislative framework. Denmark can also be seen as representing the Scandinavian model for health and safety regulation in that it reflects regulations and participatory strategies to which the European directive on worktime also corresponds.

A study that uses interviews as a measure to collect data will always include the risk of interviewer bias. This possibility was taken into account in our study by having 2 researchers carry out the interviews and by compiling the interviews and returning them for acceptance. Another source of bias might have been the fact that representatives of management and the employees were interviewed at the same time, and therefore interpersonal relations might have influenced the outcome. However the interviews of the representatives belonging to the same group tended to be very similar in nature, and thus interpersonal relations probably did not play any important role.

Concluding remarks

A legislative framework for health and safety factors has been introduced to stimulate local cooperation and to ensure that local conditions will not be bypassed in fields with great variation and complexity. Such regulations offer diverse opportunities for organizing worktime, some of which will not necessarily encompass health and safety issues, despite their participatory strategies. In this study the existing legislative framework for handling health and safety issues increased the probability of worktime arrangements being handled through a system of self-administration that subordinates health and safety issues to the demands of flexibility, and health and safety then being treated accidentally and unsystematically.

Furthermore, the risk of the employees themselves having to handle their own health and safety problems increases.

The foregoing statements apply to comprehensive regulation systems, such as that of Denmark, with its well-developed participatory strategies and broad legislative framework that has to be complemented by the involvement of the labor market parties. Managing health and safety within a legislative framework that also allows for flexibility requires new concepts for health and safety policies at the company level. In order to consider the health and safety factors in worktime arrangements, special attention must be given to clarification of the responsibilities, operational levels, and cooperation between the local parties involved, particularly the joint committees.

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