

Social context for workplace health promotion: feasibility considerations in Costa Rica, Finland, Germany, Spain and Sweden

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SUMMARY

We constructed a simple, flexible procedure that facilitates the pre-assessment of feasibility of workplace health promotion (WHP) programmes. It evaluates cancer hazards, workers' need for hazard reduction, acceptability of WHP, and social context. It was tested and applied in 16 workplace communities and among 1085 employees in industry, construction, transport, services, teaching and municipal works in Costa Rica, Finland, Germany, Spain and Sweden. Social context is inseparable from WHP. It covers workers' organizations and representatives, management, safety committees, occupational health services, health and safety enforcement agencies, general health services, non-government organizations, insurance systems, academic and other institutions, regulatory stipulations pertaining WHP, and material resources. Priorities, risk definitions, attitudes, hazard profiles, motivations and assessment

methods were highly contextual. Management preferred passive interventions, helping cover expert costs, participating in planning and granting time. Trade unions, workers' representatives, safety committees and occupational health services appeared to be important operational partners. Occupational health services may however be loaded with curative and screening functions or be non-existent. We advocate participatory, multifaceted WHP based on the needs and empowerment of the workers themselves, integrating occupational and lifestyle hazards. Workforce in irregular and shift work, in agriculture, in small enterprises, in the informal sector, and immigrant, seasonal and temporary workers represent groups in need of particular strategies such as community health promotion. In a more general framework, social context itself may become a target for intervention.

Key words: feasibility; participation; social context; workplace health promotion

INTRODUCTION

Social contexts and coalitions are essential for health promotion, including workplace health promotion (WHP) (North Karelia Project Team, 1985; Bracht and Tsouros, 1990; Bjärås *et al.*, 1991; Means *et al.*, 1991; Butterfoss *et al.*, 1993; DeJoy and Southern, 1993; Jeffery *et al.*, 1993; Pucci and Haglund, 1994; Baker *et al.*, 1996; Pelletier *et al.*, 1997; Davies, 1998; Ebrahim and Davey Smith, 1998; Fisher *et al.*, 1998; Gillies, 1998; Sanderson and Svanström, 1998). WHP may address lifestyles, workplace hazards, work organization, professional competence of employees, and/or early detection of diseases. It may stretch out to improvement in quality of life, and physical, psychological and social contexts in both the workplace and beyond.

Assuming motivated interaction within worksites and contextual support from trade unions, health services and families, WHP represents a health promotion vehicle superior in efficacy to individual counselling, clinical or otherwise. Some inevitable initial disagreement or indifference about targets and forms of WHP notwithstanding (Crump *et al.*, 1996; Sorensen *et al.*, 1997; Davies, 1998; Sorensen *et al.*, 1998), WHP appears worthwhile in a number of settings. Employees, employers and occupational health service providers in some industrially developed countries display favourable attitudes toward WHP (Liira *et al.*, 2000; Fielding, 1984, Fedotov, 1998). WHP has been suggested to enhance company profits and image, and employee motivation and trust (Fielding, 1984; Kramer and Tyler, 1996; Sorensen *et al.*, 1996; Lane and Bachmann, 1998; Peterson and Dunnagan, 1998; Quality Criteria, 1999). WHP may be integrated into company policies and functions, collective agreements, and ultimately into legislation, as is the case in Finland (Agreement between the central labor market parties in Finland, 1990; Amendment of Finnish Labor Protection Act, 1997; Finnish Occupational Health Services Act, 2001).

Feasibility assessment of WHP evaluates three major components: (i) health hazards ('risk factors') in the target population (including workplace, lifestyle and other hazards); (ii) acceptability of WHP in the target population; and (iii) social context. In its widest sense, social context includes: workers' organizations, particularly union locals, safety representatives and shop stewards; corporate policies; management; regulations and practices on occupational and

other hazards; material resources and funding potential; industrial hygiene monitoring and interventions; safety committee and safety personnel; general and occupational health and social services; health and safety enforcement agencies; community health programmes; grassroot/neighbourhood organizations; insurance systems; research, training, and service institutes and agencies; individuals with expertise and leadership qualities; and workers' families.

Values, priorities, risk definitions, attitudes, behaviours, hazard profiles and motivations that determine feasibility and sustainability of WHP vary widely across spatial domains, time periods, production sectors, socio-economic categories, working communities and cultures. WHP is therefore truly 'contextual', to be adapted to a particular culture and values of the workplace community and its environment. With contextual diversity being accepted, hopes for a universal theory of the substance of WHP that would guide programme contents become shaky. This does not exclude considerations of general principles for social interventions such as equity, commitment, empowerment, social support, participation and sustainability, or broad methodological outlines for feasibility assessment and evaluation.

A recent review (Janer *et al.*, 2002) reports 'modest but positive effect of health promotion trials at worksites' aimed at cancer prevention. The efficacy may be enhanced by full exploitation of the available social support. This communication addresses pre-evaluation of the social context of WHP in selected working communities, with a wide sectorial representation in Europe and Central America, reporting on a feasibility study of WHP that addressed cancer prevention. We drafted, tested and constructed a simple method of pre-assessment of hazards, acceptability and social context in a number of real-life settings.

METHODS

The data derive from a feasibility study implemented in 16 workplace communities in Finland, Sweden, Germany, Spain and Costa Rica (Partanen *et al.*, 2002). The study pre-assessed the feasibility of participant, worker-based interventions on tobacco smoking, alcohol drinking, unbalanced diet, insufficient physical activity, obesity, workplace carcinogens, and deficiencies in early detection of breast and cervical cancers.

All sources of data were exploited. A data form summarized the data on hazards, acceptability and social context. Social context was assessed using semistructured interviews with key individuals in management, occupational health services, general health care, social services, safety committees, trade unions, insurance companies, and service, research and training institutes.

The worksites and worker groups were selected with a view to obtaining sectorial representation: industry, construction, transport, communication, services, teaching and municipalities (Table 1). The selection was gender sensitive and allowed for approximate inter-country comparisons for road pavers, restaurant personnel, auxiliary nurses and municipal employees. Statistical representativeness was not an issue. To allow for pre-testing of the method in different communities, wide scope and purposeful targeting overrode considerations of statistical representation.

After collecting and analysing the data, debriefing was conducted at each site. These events were attended by the investigators, employees and their representatives, and usually also representatives of safety committees, management, and occupational health services. In Spain, result summaries were sent to the worksites in a poster format.

The pre-feasibility phase did not specify intervention procedures but provided indications of the ways interventions might be implemented.

RESULTS

A total of 1085 employees filled in the employee questionnaire. The response rate was >90% in all worksites.

Table 2 summarizes lifestyle data. P_O is the proportion of respondents who reported an arbitrarily defined 'objective' risk (behavioural hazard), such as proportion of current smokers, or proportion with a body mass index (BMI) of >20. P_S is the proportion with 'subjective' risk, i.e. the proportion of respondents who answered 'yes' to a standardized question with 'no'/'yes'/'don't know' alternatives, concerning the need to change a specific habit, e.g. to cut down on smoking or to slim. P_{AIO} is the proportion accepting a worksite programme among those with objective risk. Programme acceptance was defined by a 'yes' response to the question 'Would you consider participating in an anti-smoking programme arranged at workplace?'. P_{AIS} is the proportion of programme acceptors among those with subjective risk.

Table 1: Test targets (total workforce or sample thereof)

Branch	Finland	Germany	Spain	Sweden	Costa Rica
Industry	Wood product facility (129)		Metal product facility (30)		
Construction	Road paving company (27)				
Communication		Telecommunication enterprise (359)			
Transport				Beverage delivery operators (40)	
Services	Auxiliary nurses (hospital) (91)		Auxiliary nurse (25) Nurses (hospital) (25) Hotel (30)	Hotel and restaurant (31)	Auxiliary nurses (88) Nurses (47) Nurses' assistants (hospital) (33)
Teaching			University employees (30)		
Municipalities			Municipal employees (27)	Municipal employees (73)	

Numbers of respondents to Employee Questionnaire in parentheses, with response rate always >90%. All data were collected from questionnaires distributed to respondents, who filled them in individually, either during a group session or during a 1-week period at times and places suitable for them.

Table 2: Summary of feasibility assessments of WHP on lifestyles, as evaluated from the responses to the Employee Questionnaire

Hazard	P _O	P _S	P _{AIS}	P _{AIO}
Smoking				
Unweighted mean	0.41	0.34	0.57	0.57
Range	0.11–0.67	0.12–0.60	0.33–1.0	0.11–1.0
Alcohol				
Unweighted mean	0.10	0.07	0.61	0.31
Range	0.00–0.41	0.01–0.15	0.00–1.0	0.00–1.0
Unbalanced diet				
Unweighted mean	0.45	0.43	0.79	0.73
Range	0.21–0.76	0.20–0.57	0.42–1.0	0.16–1.0
Overweight				
Unweighted mean	0.44	0.56	0.70	0.65
Range	0.32–0.67	0.33–0.73	0.47–1.0	0.25–1.0
Physical inactivity				
Unweighted mean	0.46	0.75	0.67	0.77
Range	0.32–0.72	0.70–0.91	0.45–0.95	0.50–1.0

P_O, proportion with 'objective' risk [respondents with the following characteristics: (i) current smokers; (ii) consume at least 20 drinks per week; (iii) consume a reasonable quantity of fresh fruit or vegetables, or products high in fibre content, less than twice a week; (iv) BMI >25; (v) no regular physical activity]. P_S, proportion with 'subjective' risk (proportion of subjects who reported need to change habit). P_{AIS}, proportion accepting the programme among those with subjective risk. P_{AIO}, proportion accepting the programme among those with objective risk.

The average objective 'at risk' figures (P_O) reached >40% for physical inactivity, unbalanced diet, obesity and smoking, but only 10% for alcohol use. The subjective 'at risk' (P_S) figure was 75% for physical inactivity at the high extreme, and 7% for alcohol use at the low extreme. Among those with either subjective or objective risk, the majority (P_{AIO} and P_{AIS} range 57–79%) was willing to consider WHP for risk reduction, with the exception of subjects with objective risk from alcohol use (31%).

Management interviews identified various adopted strategies. Smoking policies were implemented throughout: entirely non-smoking worksites; non-smoking site sectors; bonuses for smokers who quit and remained smoke-free; and prohibition of smoking when servicing customers. Explicit alcohol policies were reported in Spain for the hotel establishment: no consumption while serving patrons. The remaining companies implemented no-alcohol policies at worksites, and/or individual counselling arrangements for problem drinkers or volunteers. Dietary policies were implemented at seven sites: counselling; diet groups; courses arranged or leaflets distributed on healthy diets; and healthy-diet canteen programmes, one elaborated by a professional nutritionist. Weight control policies were implemented at six sites. In four, voluntary individual programmes with or without medical attention were available. One had weight control groups

and one delivered leaflets during annual occupational health service visits. Physical activity was being promoted at four sites. The programmes tended to be sporadic or of counselling type. The Finnish paving company offered facilities but said they were seldom used by pavers. Four sites had initiated and discontinued physical activity programmes. A high dropout rate was mentioned as a reason.

Workplace cancer hazards were most prominent in the Finnish woodworking facility, the Spanish metal facility, and among Finnish road pavers. In the wood facility, a wood dust reduction programme was ongoing and had reduced exposure levels. Further reduction was expected. The Spanish metal factory reported having 'removed' detected carcinogens. An asphalt fume abatement programme was being implemented at Finnish paving sites. Hospitals reported cancer hazards as being 'controlled', except in Costa Rica. Abatement of environmental tobacco smoke coincided with anti-smoking programmes, but remained an obvious problem in the Swedish bars and restaurants. Tight tobacco smoking legislation is encountered in countries such as Finland and Costa Rica, prohibiting tobacco smoking in all public premises and in tobacco-free zones of restaurants.

Management was most in favour of anti-smoking programmes: 13 out of 16 answered 'definitely yes' or 'will consider' (Table 3), followed

Table 3: Management attitude towards planning of specific programmes

Branch	Worksite/group	Smoking	Alcohol	Diet	Overweight	Physical activity	Solar	Workplace cancer hazards
Industry	Wood/Finland	Will consider	Undecided	Undecided	Undecided	Will consider	Undecided	Definitely yes
	Metal/Spain	Will consider	No	Will consider	Will consider	Definitely yes	No	No
Construction	Road pavers/Finland	Undecided	No	Undecided	Undecided	Will consider	Undecided	Will consider
	Beverage delivery/Sweden	Will consider	Will consider	Will consider	Undecided	Undecided	Undecided	Undecided
Communication	Telecommunication/Germany	Definitely yes	May consider	Definitely yes	Definitely yes	Definitely yes	May consider	Definitely yes
	Auxiliary nurses/Finland	May consider	Undecided	No ^a	No ^a	No ^a	Definitely yes	No
Services	Nurses/Spain	Will consider	May consider	May consider	No	May consider	No	Will consider
	Auxiliary nurses/Spain	Will consider	May consider	May consider	No	May consider	No	Will consider
	Nurses/Costa Rica	Definitely yes	No	Will consider	No	No	No	No
	Auxiliary nurses/Costa Rica	Definitely yes	No	Will consider	No	No	No	No
	Nurses' assistants/Costa Rica	Definitely yes	No	Will consider	No	No	No	No
	Hotel and restaurants/Sweden ^b							
Teaching	Hotel/Spain	Will consider	May consider	May consider	May consider	May consider	May consider	May consider
	University/Spain	Definitely yes	Definitely yes	Definitely yes	Undecided	Definitely yes	Undecided	Definitely yes
Municipal	Sweden	Definitely yes	No ^a	Definitely yes	Definitely yes	Will consider	No	Definitely yes
	Spain	Definitely yes	Will consider	Definitely yes	Definitely yes	Definitely yes	No	Undecided

^a'No' because of existing programmes.^bTo be negotiated.

by diet (eight out of 16), physical activity (eight out of 16) and workplace cancer hazards (six out of 16).

Management tended to prefer passive interventions (13 out of 16), helping cover expert costs (11 out of 16), participating in planning (11 out of 16) and granting time to employees (nine out of 16) (Table 4). Management was less willing to grant overall monetary support (three out of 16), equipment (four out of 16) or premises (five out of 16).

The most favourable, potentially operative partners were trade unions, workers' representatives and occupational health services (Table 5). The expertise available included health care providers (general practitioners, occupational health practitioners, cardiologists, and general and occupational health nurses) in all groups except beverage deliverers and hotel/restaurant workers in Sweden. Nutrition therapists or a nutritionist was available for four target groups; a physiotherapist for two; a psychologist for two; a safety officer for one; and an institute of occupational health for one.

Internal funds were the most frequent potential source of financial support (Table 6).

DISCUSSION

The performance of the pre-assessment method has been evaluated elsewhere (Partanen *et al.*, 2002). The procedure was designed for and tested among 1085 employees and their social context in 16 working communities in Europe and Central America. A broad range of jobs, sectors and countries adds to the applicability of the instrument. It is amenable to customizing but is not worth applying in situations where feasibility is clearly totally feasible or unfeasible. Particular attention is necessary when dealing with working communities beyond traditional industrial or office settings. Small workplaces may join in a pre-assessment of feasibility, with a view to a joint programme. As a matter of content validity, the method focuses on interlinkage between the key actors, the workers, and their entire social context, and draws the data directly from the workers and the social context. Management will be interested in expenses. Expenses are likely to remain rather undefined in the feasibility phase, and need to be defined and negotiated subsequently. Acceptability was reasonably high for improvement of diet, weight reduction and

physical activity, satisfactory for anti-smoking programmes, and low for alcohol reduction programmes. Workplace exposures were a concern in a number of working communities, and management was in most cases willing to reduce exposures. Although we initially dealt with cancer, WHP should rather not target a particular disease since sustainable modifications to key lifestyles and workplace health hazards will change the incidence of a number of major diseases.

The needs and goals of WHP appear different from different standpoints (management, employees, other partners) (Guba and Lincoln, 1989; Pawson and Tilley, 1997). Important elements of a successful programme vary depending on the situation, and include: material, human and social resources (time, money, competence, networks); tailoring, encouraging examples; an enthusiastic and involved coordinator; fluent cooperation in social networks; trust between WHP partners; favourable attitudes; commitment; active participation; and evaluation and enhancement of the programmes (Kawachi and Berkman, 2000; Peltomäki and Husman, 2002). From the contextual viewpoint, factors that may be associated with feasibility and sustainability can be classified into: (i) demographic characteristics of the target population; (ii) workplace and work settings; and (iii) the extraneous context.

Demographic characteristics

With respect to demographic characteristics of target populations, variable needs, motivations, and forms of WHP are expected for the young and the elderly, for men and women, for the subcapacitated, and for ethnic minorities such as immigrants (Restrepo, 2001). Our test results suggest that men may be less likely to participate in WHP than women, and young workers less than middle-aged subjects, but our data did not address this matter expressly, and age and gender comparisons may be confounded. The immigrants in the restaurant sector in Sweden presented a language problem: a joint programme between several small family restaurants would require multilingual communication.

Work settings

Work settings vary widely. Attitudes appear favourable toward WHP activities among employees, management and occupational health

Table 4: Management attitude towards specific workplace health promotion activities

Branch	Worksite/group	Passive interventions ^a	Granting time	Granting premises	Granting equipment	Granting money	Helping cover expert costs	Participates in programme plan	
Industry	Wood/Finland ^b	Will consider	May consider	May consider	No	No	May consider	May consider	
	Metal/Spain	Definitely yes	Undecided	Definitely yes	Definitely yes	Undecided	Undecided	Undecided	
	Road pavers/Finland	May consider	Will consider	Will consider	Definitely yes	Definitely yes	Will consider	Will consider	
	Beverage delivery/Sweden	Definitely yes	May consider	Definitely yes	Definitely yes	Will consider	Will consider	Will consider	
	Telecommunication/Germany	Definitely yes	Will consider	Will consider	Definitely yes	Definitely yes	Definitely yes	No	
	Auxiliary nurses/Finland	Definitely yes	Will consider	May consider	Undecided	No	Will consider	Will consider	
	Nurses/Spain	Definitely yes	Will consider	May consider	Undecided	No	Will consider	Will consider	
	Auxiliary nurses/Spain	Definitely yes	Will consider	May consider	Undecided	No	Will consider	Will consider	
	Nurses/Costa Rica	Definitely yes	Will consider	May consider	No	No	Will consider	Definitely yes	
	Auxiliary nurses/Costa Rica	Definitely yes	Will consider	May consider	No	No	Will consider	Definitely yes	
Services	Nurses' assistants/Costa Rica	Definitely yes	Will consider	May consider	No	No	Will consider	Definitely yes	
	Hotel and Restaurants/Sweden ^c	-	-	-	-	-	-	-	
	Hotel/Spain	Definitely yes	Will consider	Undecided	Undecided	No	May consider	Will consider	
	University/Spain	Definitely yes	Definitely yes	Undecided	Definitely yes	No	Will consider	Definitely yes	
	Sweden	Definitely yes	Definitely yes	Definitely yes	Definitely yes	Definitely yes	Definitely yes	Definitely yes	
	Spain	Definitely yes	May consider	May consider	May consider	No	Will consider	Definitely yes	
	Teaching Municipal								

^aDistribution of written materials, etc.

^bEntire programme under negotiation and started as a pilot intervention.

^cNo information available.

Table 5: Partner attitudes towards workplace health promotion programmes

Branch	Work/group	Occupational health services	Public health care	Social services	Safety committee	Trade union or local	Shop steward/safety representative	Health promotion authorities	Research/training/service institute	Others
Industry	Wood/Finland	Positive	Positive	-	Positive	Positive	Positive	Positive	Positive	Sports club positive
Construction	Metal/Spain	Positive	-	-	Positive	Positive	Positive	-	-	Union ready to expand to Nordic countries
	Road pavers/Finland	Positive	-	-	-	Positive	Positive	Positive	Positive	-
Transport	Beverage delivery/Sweden	Positive	-	-	Positive	Positive	Positive	Positive	Positive	-
Communication	Telecommunication/Germany	Positive	-	Positive	Positive	-	Positive	Undecided	-	-
Services	Auxiliary nurses/Finland	Positive	-	-	Positive	Positive	Positive	Positive	-	Trade union recreational organization, sport club
	Nurses/Spain	Positive	-	-	Positive	Positive	Positive	-	-	-
Teaching	Auxiliary nurses/Spain	Positive	-	-	Positive	Positive	Positive	-	-	-
	Nurses/Costa Rica	Positive	-	-	-	No union	No union	-	-	-
Municipal	Auxiliary nurses/Costa Rica	Positive	-	-	-	No union	No union	-	-	-
	Nurses' assistants/Costa Rica	Positive	-	-	-	No union	No union	-	-	-
Municipal	Hotel and Restaurants/Sweden	Positive	-	-	-	-	Negative	-	Positive	National union ready to expand to Nordic countries
	Hotel/Spain	Positive	-	-	Positive	Positive	Positive	-	-	-
Municipal	University/Spain	Positive	-	-	Positive	Positive	Positive	-	-	-
	Sweden	Undecided	-	-	Positive	Positive	Positive	Positive	Positive	-
Municipal	Spain	Positive	-	-	-	-	-	-	-	-

Table 6: Funding for workplace health promotion programmes

Branch	Worksite/group	Funding prospects
Industry	Wood/Finland	Ministry of Social Affairs and Health (P)
	Metal/Spain	Undefined
Construction	Road pavers/Finland	Undefined
Transport	Beverage delivery/ Sweden	Internal funds (P)
Communication	Telecommunication/Germany	Internal funds (P)
Services	Auxiliary nurses/Finland	Internal funds (P); State reimbursement of OHS (C); trade unions recreation fund (C); Finnish Labour Protection Fund (P); European Commission (P)
	Nurses/Spain	Undefined
	Auxiliary nurses/Spain	Undefined
	Nurses/Costa Rica	Internal funds (P)
	Auxiliary nurses/Costa Rica	Internal funds (P)
	Nurses' assistants/Costa Rica	Internal funds (P)
	Hotel and restaurants/Sweden	Undefined
	Hotel/Spain	Undefined
Teaching	University/Spain	Undefined
Municipal	Sweden	Internal funds (P)
	Spain	Undefined

C, confirmed; P, to be probed.

service personnel in Finland (Peltomäki *et al.*, 2000) and in Sweden. WHP programmes have been on the increase in the 1990s in Finland (Liira *et al.*, 2000) and in Sweden, but remain rare for example in Latin America (Restrepo, 2001).

From our data, road pavers lacked motivation toward WHP, which probably derives from seasonal contracts, changing paving sites and changing teams. Seasonal, temporary, irregular, mobile, migrant and shift work represent arrangements that reduce feasibility and sustainability of WHP programmes to the point where feasibility of WHP becomes questionable and community health promotion emerges as an alternative. Similarly, health promotion in agricultural populations will take different forms than in traditional industry. Strategies need to be developed to surmount obstacles for WHP in small enterprises and in the informal sector. Small industries employ about one half of the workforce in manufacturing and related industries in developing countries (Reverente, 1991). Occupational hazards tend, for various reasons, to concentrate on small industries (Loewenson, 1994). The informal sector, as represented by workers in small (even personal) unregistered or unregulated enterprises not covered by contracts or insurance, such as family enterprises, street vendors, migrant and seasonal agricultural labour, the maquila workforce and sex providers, is huge and vulnerable, especially in developing countries. It represents

an obvious social priority for health promotion, with particular needs and difficulties for health promotion arrangements (Loewenson, 2000; Malagá *et al.*, 2001; Wesseling *et al.*, 2002).

Blue-collar workers (Glasgow *et al.*, 1993; Hope, 1999) and persons in risk-related jobs (Berkman and Kawachi, 2000) may be less likely to participate in WHP. The greatest gains, however, have been reported among blue-collar workers (Hope, 1999). For them, reduction of 'involuntary' hazards such as workplace carcinogens may be a priority over lifestyle matters in WHP, especially if management is involved in the programmes (Sorensen *et al.*, 1998). In a broader context, job demands may be perceived as excessive or unfit also in white-collar strata, resulting in comparable attitudes. In addition, characteristics of work and lifestyles are often interdependent. For example, smoking may represent a low-cost stress reducer among populations under conditions of economic and environmental stress. Effective anti-smoking strategies would therefore call for redefinitions of management strategies or larger-scale social policies, with a view of adopting measures that would relieve these strains rather than restrict them to changing the resulting behaviour (Sorensen *et al.*, 1999). These and other considerations (DeJoy and Southern, 1993) justify the integration of behavioural and environmental interventions.

The advantages offered by workplace community may be overshadowed by labour-management distrust, depending on the prevailing circumstances in the particular setting at the worksite (Sorensen *et al.*, 1997; Sorensen *et al.*, 1998). Distrust, labour conflicts and strikes may interfere (Sorensen *et al.*, 1997; Janer *et al.*, 2002). Active participation of the workers in the planning and execution of WHP programmes would tend to counteract paternalism that easily clashes with the autonomy of the individual or worker collective.

A general propitious attitude toward WHP of management has been reported in some industrially developed countries (Davies, 1998), but it may favour men in upper-level positions (Crump *et al.*, 1996). WHP has occasionally been accepted as worthwhile and profitable, and motivations to support WHP programmes have been reported to be high among employees, employers and occupational health service providers in Finland (Liira *et al.*, 2000; Peltomäki *et al.*, 2000). It is recognized in some industrially developed countries that employers have responsibilities toward the health and safety of the employees (Fielding, 1984; Fedotov, 1998), and that investments in employee health would reduce absenteeism, reduce accident and disability rates, increase productivity, reduce health insurance costs, reduce workers' compensation, enhance job satisfaction and improve company image (Fielding, 1984; Peterson and Dunnagan, 1998; Quality Criteria, 1999). It has been reported (Sorensen *et al.*, 1996) that when workers were aware of reductions in occupational hazards, they expressed higher motivation to participate in smoking control and nutritional activities. Employee-employer trust may enhance the attainment of intended results in WHP [compare to (Kramer and Tyler, 1996; Lane and Bachmann, 1998)]. WHP may be considered to be integrated into company policies and functions. The situation is likely to be totally different in the third world (Loewenson, 2000; Wesseling *et al.*, 2002).

With respect to companies and management, attitudes will vary. Employers in Europe and Northern America frequently offer activities related to WHP. In the United States and Canada, life and health insurers have invested considerably in health promotion, including WHP, in recent decades (Fielding, 1984). In our target companies, management was particularly interested in anti-smoking and diet programmes, and the promotion of physical activity. Workplace hazards were also of interest to them. They

tended to prefer passive interventions, helping cover expert costs, participating in planning and granting time. Coverage of expenses was an issue of later consideration.

'Extrinsic' context

With respect to 'extrinsic' context, all operational partners, political supporters and funding organizations need to be identified, along with expectations for long-term commitment (LeFebvre, 1992). Prevention is in some countries included in the agenda of the occupational health services, for example in Finland (Peltomäki and Husman, 2002). The main problem with this potentially strong partner is its functional profile and its low coverage or non-existence in most countries. Even where the service covers a high share of the working population, curative or screening functions may prevail, leaving scant space for prevention or promotion. In our study, occupational health services, where available, were willing to participate in the interventions. Monetary arrangements remained to be settled.

With respect to trade unions, health matters tend to remain secondary to wage and work time issues in the agendas of unions in many countries and circumstances, but when the status of these 'primary' matters allow, health issues become prominent (Johansson and Partanen, 2002). Trade unions may be suspicious of health promotion programmes, especially those concentrating on lifestyles as they may be viewed as a means of distracting the attention from workplace health hazards (Sorensen *et al.*, 1997) and blaming the victim. With our approach, which integrated workplace hazards and lifestyles and was based on workers' choices, unions invariably favoured WHP.

Other partners with interest in participation included safety committees, health promotion authorities, and research, training and service institutes. An organization entitled European Network Workplace Health Promotion (<http://www.itm.etat.lu/eu-whp>) was also identified. The network enhances exchange of experiences and develops WHP practices, with issues of alcohol, nutrition, mental and physical health, and medication on its agenda.

To summarize, social context is inseparable from WHP. WHP is contextual and embedded in various micro- and macro-cultures. Priorities, risk definitions, attitudes, hazard profiles, motivations and assessment methods will vary. Management

support is essential. Support from trade unions is expected if WHP is based on workers' needs and motivations. Occupational health services may be in favour, except when they are loaded with curative or screening functions, or are simply non-existent. We advocate participatory WHP that is based on the needs of the workers and integrates occupational and lifestyle hazards. For seasonal, temporary, irregular, mobile and migrant workers as well as for farmers and agricultural workers in small- and medium-sized farms and for the informal sector, especially in the developing countries, community health promotion may be preferable to WHP. In a more general framework, the social context itself may become a target for intervention for the promotion of workers' health.

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REFERENCES

- Agreement between the central labor market parties in Finland 1990.
- Amendment of Finnish Labor Protection Act, 9th article, 3rd moment 1132/1997.
- Baker, E., Israel, B. A. and Schurman, S. (1996). The integrated model: Implications for worksite health promotion and occupational health and safety practice. *Health Education Quarterly*, **23**, 175–190.
- Berkman, L. F. and Kawachi, I. (2000). A historical framework for social epidemiology. In Berkman, L. F. and Kawachi, I. (eds) *Social Epidemiology*. Oxford University Press, New York, pp. 3–12.
- Björås, G., Haglund, B. J. A. and Rifkin, S. B. (1991) A new approach to community participation assessment. *Health Promotion International*, **6**, 199–206.
- Bracht, N. and Tsouros, A. (1990) Principles and strategies of effective community participation. *Health Promotion International*, **5**, 199–208.
- Breucker, G. (ed.) (1999) Quality Criteria of Workplace Health Promotion *Healthy Employees in Healthy Organisations. Good Practice in Workplace Health Promotion (WHP) in Europe*. BKK Bundesverband, Essen.
- Butterfoss, F. D., Goodman, R. M. and Wandersman, A. (1993) Community coalitions for prevention and health promotion. *Health Education Research*, **8**, 315–330.
- Crump, C. E., Earp, J. A. L., Kozma, C. M. and Hertz-Picciotto, I. (1996) Effect of organization-level variables on differential employee participation in 10 Federal worksite health promotion programmes. *Health Education Quarterly*, **23**, 204–222.
- Davies, R. (1998). Reflections on the role of business in health promotion and the challenge of partnership. *Health Promotion International*, **13**, 183–185.
- DeJoy, D. M. and Southern, D. J. (1993) An integrative perspective on worksite health promotion. *Journal of Occupational Medicine*, **35**, 1221–1230.
- Ebrahim, S. and Davey Smith, G. (1998) Health promotion for coronary heart disease: past, present and future. *European Heart Journal*, **19**, 1751–1757.
- Fedotov, I. A. (1998) Health promotion in the workplace. *World Health Forum*, **19**, 390–396.
- Fielding, J. E. (1984) Health promotion and disease prevention at the worksite. *Annual Review of Public Health*, **5**, 237–265.
- Finnish Occupational Health Services Act 1383/2001.
- Fisher, E. B., Auslander, W. F., Munro, J. F., Arfken, C. L., Brownson, R. C. and Owens, N. W. (1998) Neighbors for a smoke free North Side: Evaluation of a community organization approach to promoting smoking cessation among African Americans. *American Journal of Public Health*, **88**, 1658–1663.
- Gillies, P. (1998) Effectiveness of alliances and partnership for health promotion. *Health Promotion International*, **13**, 99–210.
- Glasgow, R. E., McCaul, K. D. and Fisher, K. J. (1993) Participation in work site health promotion: A critique of the literature and recommendations for future practice. *Health Education Quarterly*, **20**, 391–408.
- Guba, E. and Lincoln, Y. (1989) *Fourth Generation Evaluation*. Sage, London.
- Hope, A., Kelleher, C. and O'Connor, M. (1999) The relative effects of workplace health promotion programme across gender and social class. *American Journal of Health Promotion*, **13**, 315–318.
- Janer, G., Sala, M. and Kogevinas, M. (2002) Health promotion trials at worksites and risk factors for cancer. *Scandinavian Journal of Work and Environmental Health*, **28**, 141–157.
- Jeffery, R. W., Forster, J. L., French, S. A., Kelder, S. H., Lando, H. A., McGovern, P. G. et al. (1993) The Healthy Worker Project: a work site intervention for weight control and smoking cessation. *American Journal of Public Health*, **83**, 395–401.
- Johansson, M. and Partanen, T. (2002) Role of trade unions in workplace health promotion. *International Journal of Health Services*, **32**, 179–193.
- Kawachi, I. and Berkman, L. (2000) Social cohesion, social capital, and health. In Berkman, L. F. and Kawachi, I.

- (eds) *Social Epidemiology*. Oxford University Press, New York, pp. 174–190.
- Kramer, R. and Tyler, T. (eds) (1996) *Trust in Organizations*. Sage, London.
- Lane, C. and Bachmann, R. (eds) (1998) *Trust Within and Between Organizations. Conceptual Issues and Empirical Applications*. Oxford University Press, New York.
- LeFebvre, R. G. (1992) Sustainability of health promotion programmes. *Health Promotion International*, **7**, 239–240.
- Liira, J., Peltomäki, P., Leino, T., Räsänen, K., Bergström, M. and Huuskonen, M. (2000) Maintaining working ability in Finland. In Breucker, G. (ed.) *Toward Better Health at Work. Successful European Strategies*. BKK Bundesverband, Essen, pp. 97–121.
- Loewenson, R. (1994) Small-scale industries. In Pearce, N., Matos, E., Vainio, H., Boffetta, P. and Koegevinas, M. (eds) *Occupational Cancer in Developing Countries*. Lyon, International Agency for Research on Cancer and IARC Scientific Publications, book no. 129, pp. 97–102.
- Loewenson, R. (2000) Occupational hazards in the informal sector—a global perspective. In Isaksson, H. (ed.) *Health Effects of the New Labour Market*. Kluwer Academic/Plenum Publishers, New York, pp. 329–342.
- Malagá, H., Arango, J. I. and Montiel Padredes, H. (2001) Focalización y priorización en la práctica de la promoción de la salud. In Restrepo, H. E. and Malagá, H. (eds) *Promoción de la Salud: Cómo Construir Vida Saludable*. Editorial Medica Panamericana, Santafé de Bogotá, pp. 157–177.
- Means, R., Harrison, L., Jeffers, S. and Smith, R. (1991) Co-ordination, collaboration and health promotion: lessons and issues from an alcohol education programme. *Health Promotion International*, **6**, 31–40.
- North Karelia Project Team (1985) The community-based strategy to prevent coronary heart disease: conclusion from the ten years of the North Karelia project. *Annual Review of Public Health*, **6**, 147–193.
- Partanen, T., Johansson, M., Ahrens, W., Sala, M., Wesseling, C., Boffetta, P. et al. (2002) Assessment of feasibility of workplace health promotion. *Preventive Medicine*, **35**, 232–240.
- Pawson, R. and Tilley, N. (1997) *Realistic Evaluation*. Sage, London.
- Pelletier, J., Moisan, J., Roussel, R. and Gilbert, M. (1997) Heart health promotion: A community development experiment in a rural area of Quebec, Canada. *Health Promotion International*, **12**, 291–298.
- Peltomäki, P. and Husman, K. (2002) Networking between occupational health services, client enterprises and other experts: the difficulties, the supporting factors and the benefits. *International Journal of Occupational Medicine and Environmental Health*, **15**, 139–145.
- Peltomäki, P., Räsänen, K. and Husman, K. (2000) Main tasks and significance of occupational health services in the maintenance of work ability. In Rantanen, J., Lehtinen, S., Lamberg, M., Roto, P. and Työläjärvi, R. (eds) *Occupational Health for Europeans*. Proceedings of the International Symposium, 3–5 November 1999, Helsinki, Finland. People and Work Research Reports 38. Finnish Institute of Occupational Health, Helsinki, pp. 122–128.
- Peterson, M. and Dunnagan, T. (1998) Analysis of a worksite health promotion programme's impact on job satisfaction. *Journal of Occupational and Environmental Medicine*, **40**, 973–979.
- Pucci, L. G. and Haglund, B. (1994) 'Naturally Smoke Free': a support programme for facilitating worksite smoking control policy implementation in Sweden. *Health Promotion International*, **9**, 177–187.
- Restrepo, H. (2001) Conceptos sobre salud urbana. In Restrepo, H. E. and Malagá, H. (eds) *Promoción de la Salud: Cómo Construir Vida Saludable*. Editorial Medica Panamericana, Santafé de Bogotá, pp. 218–231.
- Reverente, B. R. (1991) Occupational health services for small-scale industries. In Jeyaratnam, J. (ed.) *Occupational Health in Developing Countries*. Oxford University Press, Oxford, pp. 62–88.
- Sanderson, C. and Svanström, L. (1998) Contributions of social medicine and systems analysis to formulating objectives for a community-based cancer prevention programme. *Scandinavian Journal of Social Medicine*, **16**, 35–40.
- Sorensen, G., Stoddard, A., Ockene, J. K., Hunt, M. K. and Youngstrom, R. (1996) Worker participation in an integrated health promotion/health protection programme: Results from the WellWorks project. *Health Education Quarterly*, **23**, 191–203.
- Sorensen, G., Youngstrom, R., Maclachlan, C., Gibson, S. J., Emmons, K., Johnston, D. et al. (1997) Labor positions on worksite tobacco control policies: A review of arbitration cases. *Journal of Public Health Policy*, **18**, 433–452.
- Sorensen, G., Stoddard, A., Hunt, M. K., Hebert, J. R., Ockene, J. K., Avrunin, J. S. et al. (1998) The effects of a health promotion-health protection intervention on behavior change: the WellWorks study. *American Journal of Public Health*, **88**, 1685–1690.
- Sorensen, G., Stoddard, A., Peterson, K., Cohen, N., Hunt, M. K., Stein, E. et al. (1999) Increasing fruit and vegetable consumption through worksites and families in the Treatwell 5-a-Day study. *American Journal of Public Health*, **89**, 54–60.
- Wesseling, C., Aragón, A., Morgano, H., Elgstand, K., Hogstedt, C. and Partanen, T. (2002) Occupational health in Central America. *International Journal of Occupational Environmental Health*, **8**, 125–136.