

Editorial

Interactive Research into Proactive Risk Control and its Facilitation

This issue of “Industrial Health” marks the start of the 50th volume, building on the remarkable developments published on the many pages since it began in 1963. The journal has served as an interacting focal point for scientific research in the fields of occupational safety and health. Through the pages of this journal, we can clearly see the role of collaborative scientific research in enhancing occupational safety and health practice in diverse work situations.

In the fields of occupational safety and health, collaborative research generally focuses on two directions that have been and are being pursued as aims of scientific research. One direction is to develop proactive risk assessment and control for protecting and promoting safety and health of workers in varied workplaces. Another equally important direction is to extend effective teamwork services for protecting and promoting safety and health of workers to all workplaces. The two directions seem essential in addressing changing safety and health needs in increasingly diversifying work settings in globalizing economy^{1,2}. This is clearly visible in good practices reported from various regions^{3,4}. The new developments reported in this journal evidence the importance of the close link between research and practice in these two main directions.

Responding to Emerging Needs

A special attention is drawn to the interactions the reported research developments have with the varying and emerging needs of occupational safety and health that reflect the technological and socio-economic changes in the world of work. It is well known that research in our fields deal constantly with both traditional and emerging risks at work, and that the means and procedures for risk assessment and control evolve so as to address these risks in a comprehensive way and to fill gaps seen among different workplaces^{5,6}. The two directions mentioned should be further pursued as direct responses to the changing, emerging needs in our fields.

In addressing the urgent needs we are facing in our fields today, three recent advances seen in 2011 are noteworthy. Firstly, the midterm research strategy in occupational safety and health compiled in 2010 and reported in

early 2011 by the Occupational Safety and Health Priority Research Promotion Council designates, as priority areas of research, (a) safety and health needs of workers in diverse employment situations in industrial society, (b) primary prevention of emerging risks and (c) effective work-related risk management systems⁷. These priority areas of research are consistent with those listed in similar national or regional research strategies in the fields of occupational safety and health⁸. Secondly, in applying these strategies, the teamwork functions in occupational safety and health practice are crucial in responding to emergency situations, as seen in the relief and recovery processes immediately following the Great East Japan Earthquake and Tsunami on 11 March 2011. The occupational safety and health teams formed for protecting workers at the nuclear plants damaged and at disaster areas collaborated intensively to respond to the multifactorial, changing needs of the workers. In managing varied radiation, heat, respiratory and overwork risks, the teams have collaborated flexibly to provide reliable services in difficult conditions⁹. Vital lessons are learned from these emergency response teams. Thirdly, in April 2011, the recommendations of the Science Council of Japan highlighted the compelling needs for research and practice concerning safety and health at work in relation to diverse employment and working situations^{8,10}. These needs are presented for collaborative research into needs-oriented preventive strategies and relevant measures in non-regular employment, overworked jobs, mental health schemes and multifaceted risk management. Collaboration for reorienting the framework of occupational safety and health programmes towards effective primary prevention and equity-based approaches is emphasized.

These most recent developments demonstrate the urgency of collaborative research into comprehensive and proactive risk management addressing emerging needs and into competent occupational safety and health services that can facilitate effective preventive practices. In meeting these challenges, we need to concentrate on the priority areas of research and promote collaborative schemes for needs-oriented research⁴. National and International research institutions and networks as well as international

organizations can cooperate in meeting the challenges for collaborative research.

Flexible Procedures for Proactive Risk Assessment and Control

As a priority area for collaborative research, the process of proactive risk assessment and control deserves special attention. Inter-country projects reported at the recent scientific conferences in occupational safety and health are mostly concerned with action-oriented procedures of work-related risks identification, assessment and control. A clear focus is placed on practical procedures reflecting the nature of emerging risks and addressing these risks in a comprehensive manner¹⁰⁻¹². The practical ways to apply effective risk assessment and control steps are underlined.

This focus is relevant to the trend to develop concrete, easy-to-apply procedures for assessing and controlling a broad range of work-related risks, including qualitative, semi-quantitative and other simple procedures^{13, 14}. These flexible procedures are essential in planning and implementing necessary risk assessment and control measures in the local context of the workplace and risks. The resource limitations in varying work situations should be taken into account in exploring locally effective procedures. For example, comprehensive procedures for addressing physical, chemical, biological and ergonomics-related risks are being developed particularly for small-scale workplaces. By monitoring particularly hazardous operations, various attempts are explored for the identification of necessary control measures in different local situations.

There is a real potential for developing the required proactive procedures for risk assessment and control through the evolution of participatory action-oriented training in improving existing workplace conditions^{1, 14}. The training process incorporates realistic proactive procedures, and research into such participatory procedures is advancing, in a visible manner, the flexible, needs-based procedures for risk assessment and control. Flexible application of these procedures has real impact in diverse work situations.

It should be noted that an increasing emphasis is placed on the close link between general working conditions and psychosocial risks at work. Psychosocial risk management procedures are being developed within occupational safety and health management systems practically in all forms of work^{15, 16}. This aspect will be a core theme in scientific research in safety and health at work, particularly for applying multifaceted preventive measures dealing with various workplaces. It is also noteworthy that a new trend in addressing multifaceted risks at the workplace is to take a

comprehensive good-practice approach with visible effects on risk reduction^{17, 18}. Collection and analysis of locally achieved good practices will continue to be important in developing proactive risk management procedures.

Extending Effective and Basic Services to All Workplaces

Another priority area for collaborative research is to explore the ways and means of extending effective and basic services for protecting and promoting safety and health of all workers. This requires extensive studies on the effective types of occupational safety and health services and on the means of facilitating the active participation of employers and workers in undertaking risk-reducing measures with the support of these services.

There is a universally urgent need to develop and apply Basic Occupational Health Services (BOHS) in this connection. Awareness is growing that for a majority of workers in small-scale sectors, agriculture and informal economy, it is necessary to investigate the basic levels of occupational health services practicable under resource constraints together with the sound support of safety activities at the workplace¹⁹. Practical procedures for locally applicable, basic types of preventive measures need to be developed and disseminated. This is the case particularly in developing economies and workers in underserved workplaces, such as those in informal sectors and migrant workers. There is a promising scope for advancing training schemes utilizing participatory steps for risk control as part of BOHS activities.

The relation between generally effective occupational health services and BOHS should be further clarified to know the pragmatic support for safety and health at all workplaces. Locally feasible procedures for risk identification, monitoring and control are equally essential. Action-oriented research about how to support the locally adjusted preventive measures including simple and low-cost improvements should be promoted²⁰⁻²³.

Linking the development of these practical service procedures with locally achieved good practices particularly in the underserved sectors is also important^{4, 24, 25}. These good practices represent the feasible types of preventive measures having real impact. Databases for such good practices and the design and dissemination of effective guidance and training toolkits based on the good practices should be explored. Since the stepwise progress of workplace improvements is essential, the means of exchanging positive experiences need to be developed also through the collaborative research.

Interactive Networking of Action-oriented Approaches

The experiences in facilitating effective preventive measures in different work settings indicate the urgency of collaboration through regional and international networking. Research into effective networking arrangements can elucidate not only the effective types of support for preventive activities but also the means of spreading action-oriented procedures for locally adjusted risk management^{5, 15, 26}.

Of particular interest will be to study the networking of practical approaches based on local good practices and locally adjusted training programmes^{14, 27}. Examples include developments in industry-specific or localized networking of occupational safety and health activities and action-oriented training programmes. Studies on sustained exchanges of positive achievements in group safety and health programmes or participatory training projects will illustrate the meaningful ways of facilitating the effective support services. Recent studies show that the collaboration of network partners is effective when they focus on action-oriented approaches building on local good practices and relatively simple procedures translated into multiple feasible improvements. Research on dynamic networking should be promoted.

It is encouraging that regional and inter-country networks are developing, involving many trained trainers, for facilitating risk-reducing improvements in the local context. Strategic research on the key roles played by networking projects will be widely beneficial in various work settings. Support for occupational safety and health services needs to be promoted particularly through website facilities for online accessible training materials²⁸. By means of localized, readily applicable toolkits, effective types of support can be widely facilitated to reach numerous workplaces.

International collaboration in the form of joint development of action-oriented approaches and toolkits can further promote commonly useful support measures for building on local good practices. This should be explored with a clear focus on locally adapted risk assessment and control procedures and participatory schemes. In promoting collaborative research, it is recommended to make full use of interactive regional and international networking incorporating these features. In furthering effective preventive research and practice, a particular emphasis needs to be placed on the ethical principles of occupational safety and health professionals as specified internationally. Sustained international collaboration is essential relying on positive

experiences in action-oriented research addressing safety and health at diversifying work situations. This journal and other media for research and practice, including website facilities, will continue to expedite this collaboration.

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