



Book review

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by [Rantanen J](#), reviewer, [Lehtinen S](#), reviewer

Affiliation: Finnish Institute of Occupational Health, FI-00250 Helsinki, Finland. suvi.lehtinen@ttl.fi

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OSH for Development. By Kaj Elgstrand, Nils F Petersson, editors. London: Springer; 2009. 798 pp. ISBN 978-91-633-4798-6. Price: 40 (can be ordered from kajelg@kth.se or ocka@kth.se; mailing costs are 20 within Europe, 25 outside of Europe)

Published by the Royal Institute of Technology in Stockholm, Sweden, this 798-page textbook has been written by Kaj Elgstrand and Nils Pettersson, together with 44 other – mainly Nordic – senior occupational health and safety experts, who for two decades have provided occupational health and safety training in various parts of the developing world. It is an extensive wealth of knowledge, packaged in a practically applicable form.

Content

OSH for Development is comprehensive textbook, covering an unusually wide scope. It begins with the history of occupational safety and health (OSH) and its envisaged future, including a new OSH paradigm, and moves on to the prevention of traditional hazards and psychosocial factors, followed by the development of work organizations, the sustainability of enterprises, and good workplace models. In the concluding chapters, the focus is on globalization's impact on OSH. Throughout the book, an emphasis is placed not only on the description but also the prevention of occupational hazards, risks, and adverse working conditions.

Most of the chapters contain several useful guides and checklists, which can be directly used in occupational health practices. This book is an extremely valuable resource for OSH actors at the workplace. Some chapters contain both a description of risk factors and the consequent health outcomes. Several subchapters deal only with risk factors followed by a separate subchapter on related diseases or injuries, but because they are well interlinked, this does not disturb the reader.

As the book is based on extensive training experience, the knowledge presented has been tested, not only for its scientific content but also for feasibility in auditoriums, and is – to a certain extent – crystallized, raising its information value. The readership of such an extensive book may be difficult to identify, but there is no doubt that the contents are highly multidisciplinary and will open any reader's eyes to the whole scope of OSH. Without a doubt, the book will be a valuable asset for educators in several types of training programs and events.

Chapter 1 introduces the basic concepts of OSH in a user-friendly way, which is important as it is through these concepts that the reader will understand the content.

Chapter 2 provides an overview of the history of OSH in a compact but deep analysis of the field's evolution. It once again confirms the postulates that: (i) the history of humankind is very much the history of work; and (ii) work life has been in the forefront of societal development throughout all eras. The most important message to the reader is: The old industry-related safety and health paradigm, based on well-organized enforcement systems and developed industrial relations, has decayed; a new sociotechnical paradigm is needed, but will be extremely challenging to implement in today's world of fragmenting structures, weakening social cohesion, and solidarity. A new paradigm is essential for the future of OSH.

Chapter 3 covers the basic physiology of manual work; energy metabolism and nutrition; and musculo-skeletal disorders, workplace design, and ergonomics. The text is based on classical textbooks and scientific references of work physiology and ergonomics, making the data reliable. The fact that data are largely based on textbook or other published material means that some recent interesting research findings have been left out, but this has little impact on the chapters as a whole; the key observations are well-established and widely accepted conclusions on the current state of the art.

Chapter 4 describes the concept of risk and presents (i) risk control strategies, (ii) accidents and their prevention, (iii) noise, and (iv) both arm–hand and whole-body vibration. It introduces generic risk prevention strategies, their tools, and the roles of various actors, including insurance. The subchapter on accidents gives an overview of the evolution of accident theories, emphasizes work and the work environment as the source of accident risks, and describes safety management approaches including major hazards, without forgetting the behavioral aspects of workers, supervisors, and managers. Safety policy and culture are briefly mentioned as important guiding principles for accident prevention. The subchapters on noise, vibrations, radiations and electrical and fire safety are compact and very practice-oriented, providing good insight into the hazards concerned and the prevention thereof.

Chapter 5 on chemicals is an example of the slightly inconsistent character of the chapters. It starts logically with chemical risk assessment, goes through the most common groups of chemicals, pesticides, solvents and gases, dusts and metals, but then jumps to skin disorders and epidemiological methods.

Chapter 6 on the prevention of biological hazards covers the main sources of biological risks and hazardous biological agents, and industries and jobs in which they occur, including the special hazards facing healthcare

workers. Numerous guidelines for prevention and control are given, including the prevention of needle-stick injuries, the immunization of healthcare workers against hepatitis B, and the post-exposure prophylaxis of HIV exposure. Occupational exposure to malaria, tuberculosis, and several bacterial and viral agents are also covered.

Psychological risks at work and their management are discussed in *Chapter 7*. The main background paradigm is the Karasek demand–control model emphasizing the work environment and organization as sources of risks. Consequently the prevention strategies introduced focus on the improvement of work organization that is set out in *Chapter 8* and describes the strategies for enterprise survival, new principles of work organization, learning at work and managerial leadership development, change management, and team work. The authors used extensive background literature as the source of evidence for this much-debated topic.

The special and often overlooked topics (such as child labor; gender issues; and women and migrant workers and their OSH problems/needs and the management thereof) are extensively discussed in *Chapter 9*. Guidance for managing these challenges relies on the policies and instruments of international organizations, namely the International Labour Organization (ILO), the United Nations Children’s Fund (UNICEF) and the International Organization for Migration (IOM). This chapter is particularly important in view of its focus on target groups that fall outside of the “core workforce”.

We grant special merit to *Chapter 10* on the informal sector and small enterprises; a much discussed but little researched area, which is a growing sector of employment in both industrialized and developing countries. The informal sector presents a worldwide challenge for the organization of occupational health services. The gaps between OSH needs and the provision of regulations, enforcement, support and services are certainly at their widest in these sectors. The available ILO and other tools for action-oriented projects, such as Work Improvements in Small Enterprises (WISE) are introduced, but system-wide solutions still remain to be developed.

Management and participation cultures for OSH activities are well introduced, and the importance of participatory principles in all OSH activities is emphasized by the use of the ILO OSH management guidelines as the background source of information. Interesting examples of preventive interventions are presented. The special subchapter on occupational health services reports on the extremely low coverage of such services in the world, and calls for more emphasis on prevention. Solutions are drawn from the ILO Convention No. 161 on Occupational Health Services, the World Health Organization (WHO)/ILO/International Commission on Occupational Health (ICOH), and from practical guidance on basic occupational health services.

Taking a systems approach to OSH requires policies, strategies, programs, regulations, enforcement, and the education and training of all actors, including governmental officers, employers, workers, and experts in the OSH field. *Chapter 11* covers these issues, emphasizing the role of social partners in all phases of OSH development, from policies and strategies to practical implementation. Special attention is given to the training of all the above-mentioned actors.

The authors skillfully describe the globalization of work life in *Chapter 12* by using the evidence available from several sources, particularly international organizations and national examples. The impacts of structural change and the challenges to OSH are also well explained, and the strategies for global governance through the policies and actions of both socially- and economically-oriented international organizations [eg, ILO, WHO, World Trade Organization (WTO) and UN Environment Programme (UNEP)] are analyzed. The WHO Global Strategy on Occupational Health for All is particularly extensively discussed. New calculations on the burden of work-related diseases and injuries are presented.

The book closes with *Chapter 13* on actions for change, with two key subchapters, one on strategy for change and the other describing project guidelines. These are both extremely important reading for anyone carrying out project-type OSH activities with funding from external sources. We rarely see these kinds of chapters, but they are very useful for the practical implementation and utilization of all the knowledge presented in the book. The authors’ extensive experience and professional lessons learnt add special value to the book, making its theory applicable to real work life.

Format

Following are some observations on the book’s format:

- Despite being a time-consuming endeavor, the authors deemed it appropriate to compile and publish the training materials taught in various courses. The result shows this to have been a worthwhile exercise.
- The compactness of the somewhat uneven chapters suffers slightly from the "collection nature" of the texts, which may be related to the use of lecture material as a starting point for the book. The same can be said of figures and tables, which have not been specially edited for this book, but likely taken from lecture handouts.
- The chapters are relatively extensive and some of them contain summary tables or respective concluding items. Intended to serve mainly as a textbook for OSH studies, the book would have benefited from the inclusion of each chapter’s key points, crystallizing the content into a few key sentences.

- It is understandable that a 798-page textbook, written over several years, has some parts that are not fully up-to-date. For example, the Convention on the Promotional Framework on Occupational Safety and Health No 187, endorsed by the ILO in 2006 could have been described in detail. Similarly, the WHO 2007 Global Plan of Action on Workers' Health would have been worth mentioning.
- In practical work life, the importance of psychological and psychosocial factors at work is often ignored. In the chapters on the psychosocial aspects of work, important research findings on somatic health consequences [cardiovascular morbidity, sleep disorders, (1, 2)] of psychologically adverse working conditions and non-physiological work time schedules (3, 4) could also have been briefly mentioned to demonstrate their impact on physical health. In the new OSH paradigm, the recently introduced concept of social determinants of health (5) would fit in well with the analysis made on fragmented work life.
- The combined effects of various physical, chemical, biological, psychological, and psychosocial factors are discussed in several parts of the book. A special chapter on these interactions and combined effects and their consideration in risk assessment and prevention would have further clarified the content of the book. It is, however, understandable that the book's scope must be limited to a certain extent.
- As the textbook is intended for practitioners, prioritization of various practical actions would have been of value (ie, what are the most urgent and important actions). This is guidance, which is sorely needed, particularly in developing countries, which are nowadays exposed to numerous external stimuli that are not always based on the priority needs of the country, its workers, and workplaces.

Usability

From a user's point of view, we raise the following:

- At the end of each chapter or subchapter, there is a list of further reading which in most cases is briefly introduced and annotated. This is a good addition and valuable for those who want additional information on the topic.
- The high number of graphs and photographs improves the readability of the book and increases the information value of the chapters.
- As this is a book which will be extensively used by trainers and students for long periods, a hard-cover edition would have been more suitable.
- The readers and users of this thick book would

probably appreciate a multiple index at the end, which would help busy users find details quickly.

- A CD version would be beneficial particularly for travelling educators.

Concluding remarks

In summary, the intended readership of *OSH for Development* is wide, covering the full spectrum of OSH professions and actors in both industrialized and developing countries. The balance of the content between the various topics is excellent: history, future perspectives, main risk factors and outcomes, key target groups, OSH systems and the planning of activities at all levels (workplace, national and global), and finally the generation of change, including project guidelines. Despite being written by as many as 46 authors, the editorial process has succeeded reasonably well in standardizing the structure and content of the chapters, giving the book a concise structure as a whole.

In our view, the book is very useful for both OSH trainers and trainees, in developing countries in particular, but also in the industrialized world.

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Jorma Rantanen
Professor Emeritus
Chairman of Senate
University of Jyväskylä
Jyväskylä, Finland
jorma.h.rantanen@gmail.com

Suvi Lehtinen
Chief of International Affairs
Finnish Institute of
Occupational Health
Helsinki, Finland
suvi.lehtinen@ttl.fi