

Editorial

Research and practice of occupational safety and health in the New Normal

The global spread of COVID-19 pandemic has created many unprecedented issues concerning the protection of safety and health of workers. Although the biological hazard has been one of the main targets of prevention in certain workplaces such as medical and nursing facilities, we are realizing that the novel virus pandemic can pose far more complicated and extensive challenges to the total area of occupational safety and health.

Unique examples of needed preventive measures may include optimized social distancing, reduction of the concentration of possibly virus-laden aerosols in air without any limit of workplace location, wearing a mask, reduction of the length of exposure time, use of telework, and mass vaccination of workers.

Because people are living and working in globally interdependent communities, other infectious disease threads like COVID-19 are expected to occur repeatedly from now on. And we will need to construct new normal ways of working based on scientific evidence. Apparently, telework or to say more specifically “working from home” may be one of the essential subjects of research.

In this special issue containing seven papers, two reviews and three original articles deal with subjects fully or, to considerable extent, partially related to telework. The other two studies also present the results concerned with the new ways of working.

Anttila and colleagues, reviewing 41 relevant articles, discuss current and future trends of working hours. By using four key dimensions of working hours, namely length, timing, tempo, and autonomy, the authors conclude that recent changes in working time, such as increase of unsocial and fragmented working hours, boundaryless work, high time pressure, de-regulation and differentiation of working hours by gender and socio-economic groups create new demands and challenges. They also state that rethinking is required to get sustainable solutions for working time that help workers to retain their well-being and health. Concerning telework, the authors comment that it is likely to become more common, but the risks of extensive telework may relate to increasingly blurred work-life boundaries and

lead to physical and emotional exhaustion.

In Nakamura’s review, which aimed to forecast the transformation of Japanese society after the COVID-19, the author concludes that common Japanese attitude of excessively pursuing zero risk may be largely replaced by more adequate risk-based approach of “as low as reasonably practicable (ALARP)” principle. Referring to telework, the author predicts that a hybrid model composed of remote work and conventional work style may be generalized and each worker’s professional ability will be more focused on.

Wütschert and colleagues report a cross-sectional questionnaire study of 293 home-based teleworkers during the pandemic to investigate the impact of perceived privacy on cognitive irritation and sleep problems. It is concluded that privacy can act as a job demand or job resource and affect cognitive irritation (the perceived lack of psychological detachment) and influence one’s likelihood to experience sleep problems. One of the originalities of this study is that the presence of a causal chain from level of perceived privacy to cognitive irritation and finally to sleep problems was hypothesized and could be shown to be significant by a single mediation analysis.

Hojo and colleagues attempted to apply the three-step method in ISO/IEC Guide 51:2014 to COVID-19 infection control in workplace. After classifying specific measures into three steps, the authors conclude that the New Normal, especially in the manufacturing industries, would be “telecommuting” and “unmanned workplaces”, and when these are not feasible, the improved flows of people and air may also be recognized as New Normal. Because locomoting human beings are both the sources and objects of contamination, they comment that the improvement will require new design of ventilation based on computational fluid dynamics.

Valenti and colleagues reviewed existing literature on new ways of organizing scientific conferences during COVID-19 pandemic and performed the SWOT analysis to identify strength, weakness, opportunities and threats as compared to conventional face-to-face conferences. It is shown as the strengths of virtual conferences that they

eliminate travel, are faster to organize, provide more value at a fraction of cost, democratize education, help foster social and gender equity in participation, provide uninterrupted access across time zones, and environment friendly. In conclusion the authors state that the most suitable format will be the hybrid format, i.e. in-presence events in compliance with appropriate preventive measures and online sessions organized into rooms and hubs for remote participants.

Jonai and colleagues summarized the history and current situation of occupational chemical management in Japan in comparison with those of European countries and the United States. The authors conclude that the compliance approach has been the characteristic way of practice in Japan in contrast to the situation of other countries where the self-regulation by enterprises has been implemented for a considerably extended period in the past. The authors estimate that the self-regulation on the bases of better hazard information and risk-based judgement systems will also get to be introduced in Japan shortly. In addition, they discuss small business issues and comment that the shift from a

compliance approach to self-regulation will remain as challenges in small-scale enterprises. Although the main theme of this paper is chemical management, considerable similarities of occupational health risks in general are supposed to make this study implicative of new normal ways of occupational health in wider situations.

Kato and colleagues report their experimental study on twelve participants to examine whether wearing surgical masks increases the risk of heat stroke during mild exercise in hot and humid environment. The task was treadmill exercise of 30 min at 6 k/h with 5% slope under the thermal condition of 35°C ambient temperature and 65% relative humidity. They did not find any influence of wearing a surgical mask on cardiac and thermal responses under these experimental conditions.

In summary the papers in this special issue provide the reader with several common aspects of the New Normal and appear to suggest the importance of the multilayered risk reduction measures which are comprehensively conducted with judicious caution.

Haruhiko SAKURAI

Honorary Editor, Industrial Health, Japan
Honorary Professor, Keio University, Japan
Advisor, The Occupational Health Promotion Foundation, Japan