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We depend upon assistance from you and other readers to pursue these developments. We are seeking contributions, such as short articles describing new projects and research developments, announcements of upcoming scientific meetings, details of conference proceedings and news about members, research and practice. Offers to put forward a personal view on a topical issue in Viewpoint will be received especially positively. Please send your contributions, suggestions or feedback to Philip Bohle (p.bohle@unsw.edu.au).

So now it is time to put your feet up and enjoy a quiet read!

The Editors

Editorial

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The Editors
ICOH, as you probably know, is recognised by the United Nations as a non governmental organisation and currently has approximately 2000 members in 93 countries. It has about 40 Scientific Committees and Networks, dealing with all aspects of occupational safety and health. Our “Shiftwork” Committee is one of the oldest and most active. In Helsinki, I summarised our past activities - with special reference to our biennial symposia and several other conferences and workshops - as well as the present situation, with particular reference to the establishment of the “Working Time Society”. I proposed to the ICOH Board to modify the name of our Scientific Committee into “Shiftwork and Working Time” as the term “Shiftwork” appears somewhat limited nowadays. The new name is more appropriate and includes the many different forms of Working Time organisation with which the Committee members are currently concerned.

The ICOH Board recognised the importance of our Committee and greatly appreciated our ongoing activities and initiatives. The ICOH Board invited the members of the WTS who are not members of ICOH to join ICOH as well, in particular those who are directly involved in work organisation and occupational health. There are reduced fees for retired scientists, people less than 36 years of age and people from developing countries. Individual members also enjoy a substantial reduction in the registration fees for the triennial International Congresses and some other ICOH-sponsored conferences in addition to 20-30% reductions on subscriptions to many international scientific journals (e.g. Applied Ergonomics, Archives des Maladies Professionelles, Scandinavian Journal of Work, Environment and Health), a 50% reduction in the price of all ILO publications (including the Encyclopaedia on Occupational Health and CIS abstracts), and a 40% reduction on all WHO information products. Further information is available on the ICOH website: http://www.icoh.org.sg

XVIIth International Symposium on Shiftwork and Working Time.

The Organising Committee, chaired by Ben Jansen, is finalising arrangements for the Symposium. As you can see in the second announcement, the name of the Symposium was slightly modified to the “XVIIth International Symposium on Shiftwork and Working Time” to recognise our historical traditions and the recent development of the Working Time Society.

I do hope you all plan to attend and are preparing your contributions to this Symposium. As usual, it sounds very stimulating and interesting. Due to the increasing attendance in recent years, and the growing number of topics to address, the Organising Committee intends to make an innovative change to the conference program: the introduction of parallel sessions on some topics. As you know, our previous symposia were arranged in plenary sessions. The intention was to keep all participants together to stimulate discussion and take advantage of the interaction between different disciplines and cultural backgrounds. While this structure undoubtedly offered advantages it also had inconveniences, in particular the limited time available for presentation and discussion, which sometimes limited the exchange of knowledge. Parallel sessions will make it possible to extend the time allotted to topics that attract more interest or deserve deeper analysis. It is an experiment but I am sure that the organisers will find the most suitable compromise to ensure all our expectations are met.

Scientific activities associated with ICOH 2006

As for the previous ICOH Conferences (the latest was held in Iguassu Falls in February 2003) our “Shiftwork” Scientific Committee is going to organise one or two mini-symposia (with selected reviews by leading experts) and some oral and poster sessions. These mini-symposia and sessions are usually attended by a large number of scientists and practitioners (occupational health physicians and nurses, ergonomists, work psychologists, company managers), who look forward to being updated about preventive and compensative interventions and discussing their own experiences on issues related to working hours, a quite crucial issue in work organisation and medical surveillance. Its will be an excellent opportunity to share our experience and knowledge with people who will transfer it into their daily practice.

During the latest ICOH mid-term meeting an agreement was reached with two other Scientific Committees (“Ageing” and “Health Care Workers”) to organise a joint Meeting in conjunction with ICOH 2006. The preliminary proposal is to hold a satellite meeting of one to two days in Italy (probably Venice) just before the ICOH Conference. It will allow scientists and practitioners to discuss these three major topics in an integrated way and develop guidelines for shift work among ageing health care workers.


Two proposals to host the 2007 Symposium are currently under examination:

1. The first comes from our Canadian colleagues, Diane Boivin (Chair), Madeleine Bourdouxhe, Estelle Morin and Francine O. James, who propose to hold the Symposium near Montreal, Quebec, on 12-17 September, 2007, and suggest the title “Work hours: Evolution and perspectives for changing societies”.

2. The second submission comes from Central Queensland University, Rockhampton, Australia, by Lee Di Milia (Chair), Philip Bohle, Shantha Rajaratnam and Rebecca Loudoun; the venue is Yeppoon, Queensland, and the proposed date is late August 2007. The suggested title is “Ageing and working hours: Creating safe working environments”.

Both proposals are very attractive and well organised; the Board will finalise its evaluation in a few weeks and the final decision will be announced in Hoofddorp. We are very grateful to our colleagues for their generous offers to organise our main event, and we would now appreciate receiving proposals for hosting the XIXth Symposium in 2009.

(Continued on page 4)
VIEWPOINT

Should the Working Time Society Recommend Working Time Exposure Limits?

Donald I. Tepas  
Department of Psychology  
University of Connecticut  
Storrs, CT 06269 -1020 USA  
E-mail: tepas@uconnvm.uconn.edu

With regard to chemical or physical "agent" exposure, industrial hygienists have (for a long time) recommended "limits" on how long or how much an individual should be exposed to a given agent. These limits are sometimes set and recommended by a body of independent and knowledgeable individuals, empowered by a professional organization. In other cases, these limits are concrete laws or regulations set by a government. Noise exposure provides a good example of the form that these limits may take.

Several noise limits are often parts of a set of limits for this agent. Various recommending expert groups define these limits. The limits set by an expert group for noise may include any or all of the following limits: A limit in the maximum peak pressure for a single noise impulse during a given shift. A limit on the maximum pressure permitted for continuous exposure during an eight-hour workday. And, a method for limiting continuous noise exposure when workers are employed on extended work times. Together, these limits can be used as workware tools to guide and/or limit worker exposure to noise.

Working hours research strongly suggests that it would be helpful to recommend limits on working time. In the United States, for example, there are no national government limits on the length of the workday (with the exception of the transportation industry) or annual hours. Obviously, some recommended limits on the length of work would be helpful. Similarly, the short-term (acute, and primarily performance) impact of night work differs from the long-term (chronic, and primarily health) impact of night shift work. Recommended limits, which address these variable dynamics, would be especially helpful given the absence of law or regulation. The Working Time Society (WTS) might empower these recommendations.

Following the model suggested by the industrial hygiene approach, one might conceptualize a given work schedule system (or any group of similar schedules) as an "agent" workers are exposed to. One would then formulate, by professional consensus, an array of exposure recommendations/standards for a given work schedule agent. Permanent night shift work provides an example of a work shift agent for which WTS might recommend an array of exposure limit standards. For permanent night shift workers, at least three recommended limits seem warranted: (1) A limit on how many hours (long) a single shift should be. (2) A limit on how many consecutive night shifts should be deployed. (3) A limit on the number of night shifts worked annually.

Exposure limit standards such as these would presumably aid in the design of working time schedules. More importantly, perhaps, they would also aid managers and workers in making real time decisions when unanticipated changes require prompt short-term changes in how a worker is deployed.

Standards, empowered by independent professional organizations, are recommendations not law. As such, they have some special advantages when compared to government regulation. First, exposure-limiting experts can promptly make recommendations. They can also be quickly changed when needed, and may be (hopefully) reasonable free from national, political or economic bias. Working time scientists can make independent recommendations based on expert consensus designed from and linked to a firm base of empirical research. They can provide informed guidelines for use by non-experts as decision aids for workware use when government regulation is missing, dated, or negligent. If sold and distributed (via hard copy, CD or disc), for a fee by the sponsoring professional organization, current standards, methods and references have proven to be a regular source of income for the organization. The WTS might want to try this.

Perhaps we have spent too much time searching for the perfect schedule, an ideal impact assessment measure or a magical shiftwork coping technology. As the independent professional organization dedicated to the study of working time variables, should the WTS now begin to focus more on forming consensus on formal working time exposure limit recommendations? Working time experts often disagree on what working time arrangement is the best for a given job. Consultants are frequently tempted to promise or claim to deliver the ideal work schedule. Perhaps the reality is that we will all find it easier to agree if we focus on setting working time exposure limits! Is it time to tell the world that the search for the perfect schedule is over, and shiftwork has some serious health and safety problems that will not easily go away? Is the WTS ready to focus on developing consensus working time exposure limits for work schedule agents?

Do you agree with this opinion? Would you like to present an alternative viewpoint? Either way, please offer your response in the next issue of S.I.N. It is advisable to contact the editors (p.bohle@unsw.edu.au) before preparing a submission, as space may not allow publication of all responses. We can accept submissions for the next issue until May 13 (yes, Friday the 13th!).
Several self-report instruments are available for assessing individual differences in circadian rhythms. While rhythms can be described in terms of phase, amplitude and stability, the overwhelming majority of research has focussed on phase or ‘morningness’ measures. The Circadian Type Questionnaire (CTQ), developed by Simon Folkard and colleagues, is the only measure that aimed to quantify rhythm amplitude and stability.

The original study concluded that ‘vigorous’ (high amplitude) and ‘flexible’ (low stability) types showed better adjustment on several physiological and psychological indicators. The Circadian Type Questionnaire (CTQ), developed by Simon Folkard and colleagues, is the only measure that aimed to quantify rhythm amplitude and stability.

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The efficacy of the revised CTI was later examined in an industrial sample that comprised shiftworkers (n=120) and day workers (n=127) (Di Milia et al. 2005). Cronbach alphas were acceptable (0.73, 0.79) and the model structure was confirmed using SEM in both samples. Chi-square was significant, the incremental fit indices were mostly in order (≥0.90) and the RMSEA was 0.05. The vigorous group reported markedly higher alertness during the early morning and afternoon (see Figure 1). Significant differences were found for each time point except 18:00 and 20:00. Significant differences in alertness between flexible and rigid types were also obtained (see Figure 2). Flexible types were more alert from 16:00 to 22:00.

**RESEARCH UPDATE**

**The Circadian Type Inventory: Recent developments**

Lee Di Milia

Head, School of Management

Central Queensland University

Rockhampton QLD 4702, Australia

E-mail: hosmgmtbuslaw@cqu.edu.au

Several self-report instruments are available for assessing individual differences in circadian rhythms. While rhythms can be described in terms of phase, amplitude and stability, the overwhelming majority of research has focussed on phase or ‘morningness’ measures. The Circadian Type Questionnaire (CTQ), developed by Simon Folkard and colleagues, is the only measure that aimed to quantify rhythm amplitude and stability.

The original study concluded that ‘vigorous’ (high amplitude) and ‘flexible’ (low stability) types showed better adjustment on several physiological and psychological indicators. In a longitudinal study, the CTQ was the best predictor of general health and psychosomatic-digestive complaints (Kaliterna et al., 1995). Unfortunately, independent studies were unable to replicate the CTQ’s three-factor structure and Smith et al.’s (1989) influential review concluded it had poor measurement properties. However, a careful reading of Smith et al. (1989) reveals their criticisms were limited to technical rather than conceptual issues.

The Circadian Type Inventory (CTI) was developed to address these measurement issues. Using a large sample, Barton et al. (1995) reported the two factors explained 26% of the variance and had Cronbach alphas of 0.73 and 0.79. Wider use of structural equation modelling (SEM) has provided a catalyst for a re-examination of scale properties. Using SEM, Di Milia et al. (2004) failed to replicate the CTI’s factor structure and developed a revised model. They used principal components analysis to produce a two-factor, 11-item model. These factors explained 48% of total variance and had acceptable Cronbach alphas. The model was supported by a confirmatory factor analysis in a separate student sample. In both samples, the 11-item model was a marked improvement over the 18-item model on several incremental fit indices (>0.90). Test-retest reliability was good (0.72 and 0.75).

The efficacy of the revised CTI was later examined in an industrial sample that comprised shiftworkers (n=120) and day workers (n=127) (Di Milia et al. 2005). Cronbach alphas were acceptable (0.73, 0.79) and the model structure was confirmed using SEM in both samples. Chi-square was significant, the incremental fit indices were mostly in order (≥0.90) and the RMSEA was 0.05. The vigorous group reported markedly higher alertness during the early morning and afternoon (see Figure 1). Significant differences were found for each time point except 18:00 and 20:00. Significant differences in alertness between flexible and rigid types were also obtained (see Figure 2). Flexible types were more alert from 16:00 to 22:00.

**Donation from Japan/ Establishment of the Treasury**

Last December, the Organizing Committee (K. Kogi, K. Mori, T. Sasaki and colleagues) of the 15th International Symposium on Night and Shiftwork (Hayama, September 2001) remitted Yen 1,250,000 (approx. $US11900) to the Shiftwork International Newsletter. The remittance was made in appreciation of the cooperation and support of the WTS in organizing the Hayama Symposium and in recognition of the importance of SIN.

On behalf of the Board and the whole WTS, we wish to thank Kazutaka Kogi and his colleagues once more for their generosity. This money is the first brick on which we can build a new treasury to improve and support the initiatives our Society may wish to undertake.

Besides the sum of money, we deeply appreciate the gesture of our Japanese colleagues for its symbolic meaning. I hope this example will be followed in the future; that is, generous co-operation and support between members in pursuit of the aims of our Society.

Soon, with the agreement of the Finance and Election Committee, our Secretary, Sonia Hornberger, will start the procedures for establishing the “Treasury” and for the nomination and election of a new Treasurer to the position that is vacant at present.

See you soon in Hoofddorp!

Giovanni Costa
These results suggest that rhythm amplitude and stability may play a role in adjustment to shiftwork. As Smith et al. suggested, adjustment may depend on “a weighted combination” (p. 738) of rhythm parameters. More studies are required to examine the effectiveness of the revised CTI in predicting adjustment to shiftwork.

References


17th INTERNATIONAL SYMPOSIUM ON SHIFTWORK AND WORKING TIME
18-22 September 2005 - Hoofddorp, The Netherlands

Second Announcement

Scope of the Symposium

Working hour schemes are pre-eminently the points where interests meet. At an individual level, this is reflected in the tension between physical recovery time and social spare time. At the level of organization, working hours are related to business operating costs and flexibility, as well as to matters like employee satisfaction and disability. At the level of society, working hour schemes have effects on the gross national product, the availability of services, the citizens' freedom of choice and the quality of life. There are no recipes for achieving a good balance between the various interests, although this balance is crucial with regard to working hour schemes. Achieving the balance, therefore, requires knowledge and experience on this impressive theme. For this reason, the 17th International Symposium on Shiftwork and Working Time will focus on 'Balancing interests'.

Organization

The International Symposium on Shiftwork and Working Time is a biannual event. This symposium has a tradition of more than 30 years in providing up-to-date information on night and shiftwork, as well as new trends in working time organization. The Symposium is organized for and by members of the Working Time Society, under the auspices of the Scientific Committee of the International Commission on Occupational Health. The 17th International Symposium on Shiftwork and Working Time will be organized by ATOS, The Netherlands.

Target Audience

The symposium is aimed at researchers and experts in the field of shiftwork, working time and related issues. It will be an interdisciplinary meeting which is open to basic and applied studies that address shiftwork and working time from the biological, medical, behavioural, ergonomic, social and economic points of view.

Program

The program will include plenary lectures and introductions, oral and poster presentations and discussions. Lectures, papers and posters will be categorized into the following 17 topics:

- design schedules/ergonomics
- circadian rhythmicity
- sleep/wake behaviour
- social patterns/use of time
- guidelines/coping/support
- age and life course
- work/life balance
- health and well being
- performance/accidents
- flexibilization/individualization
- productivity/economics
- legal (de)regulation
- culture/developing countries
- innovative management
- implementation strategies
- computer aided scheduling
- methodology/standardization

The full program will be in English. The website provides more information (www.shiftwork2005.atos.nl).

Abstract Submission

Researchers and experts in the field of shiftwork and working time are invited to submit an abstract for presentation. Instructions for preparing abstracts are given on the website. Abstracts need to be submitted before 1 March 2005. The notification of acceptance of abstracts is scheduled for 1 May 2005. The oral and poster sessions will be selected from accepted abstracts.

Registration

To register for symposium attendance, please fill in the registration form on the website. Registration submitted up to 1 May 2005 enables a discount on the fee. The final deadline for registration is 18 August 2005.

The symposium package for participants includes:

- Scientific program
- Social activities
- Accommodation from Sunday to Thursday (4 nights)
- Food and beverages
In December 2004, a special issue on equity, diversity and working hours appeared in Revista de Saúde Pública, published by the Faculdade de Saúde Pública at the Universidade de São Paulo. It presents a selection of papers from the XVIth International Symposium on Night and Shift Work, Santos, Brazil, November 17-23, 2003. It can be accessed electronically at the journal homepage (http://www.scielo.br/scielo.php?pid=0034-8910&script=sci_serial). The publication details are as follows:


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Revista de Saúde Pública

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Name: Shiftwork International Newsletter/Tsuyoshi Kawakami
Account No: 100109

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