Session I: Conditions of work, stress and occupational health: Present conditions and likely future trends

## Current Status of Occupational Stress and Health in Japan

Teruichi SHIMOMITSU, M.D., Ph.D.<sup>1</sup> Takashi HARATANI, Ph.D.<sup>2</sup>

<sup>1</sup> Department of Preventive Medicine and Public Health Tokyo Medical University <sup>2</sup> National Institute of Industrial Health, Japan

#### **ABSTRACT**

Although the health status of the Japanese population is generally high, those with long working hours, such as workers in the service sectors are at a greater health risk. Despite the changes in the law to limit the number of working hours to 40 hours per week, there are no limits set on overtime work hours including unpaid service overtime. With Japan being a hard working society, heavy burdens are placed on the employees such as long working hours leading to stress, fatigue, and possibly "karoshi," or sudden death as a result of overwork. Therefore, greater preventive efforts are necessary to protect the workers from these ill health consequences. With increased awareness and advocacy for those issues, several measures have been implemented to protect the workers including revisions in labor laws and the establishment of health promotion centers and programs which also supports mental health. However, these measures may not be sufficient to protect the workers from ill health. A new strategy is necessary to improve working conditions in Japan.

### Introduction

With the 21<sup>st</sup> century in the near future, the world is facing an unprecedented revolution. In all phases of people's lives, rapid changes are occurring. Especially in the industrial scene, change in industrial structure, the internet rapidly extending from post-industrial societies such as Japan, EU, and the U.S. to all over the world.

Consequently, workers have been directly influenced by such rapid changes that have ill effects on the worker's health including the increase in job-related stress. Therefore, this article examines the current status of occupational stress and health in Japan, one of the post-industrial societies. This paper focuses on the issue of long working hours in Japan and

its effects on working life and the health status of the works.

### Long working hours and worker's health

In 1960, the average number of annual networking hours, according to a survey done by the Ministry of Labor, was at its highest recorded level since World War II: 2,432 hours, including 262 hours of overtime work. Also, in 1987, due to the criticism to the issues of long working hours, ie. the occurrence of karoshi, sudden death as a result of overwork, the government revised the Labor Standards Law to gradually decrease the legal amount of working hours from 48 to 40 hours per week. The recent economic depression has allowed work hours to gradually decrease as well. As

Key words: occupational stress, long working hours, karoshi, legislation

Correspondence: Teruichi Shimomitsu, M.D., Ph.D., Director and Professor, Department of Preventive Medicine and Public Health Tokyo Medical University, 6–1–1, Shinjuku, Shinjuku-ku Tokyo 160–8402 JAPAN

a result, work hours fell to 1,900 hours in 1997. Overtime hours also gradually decreased, falling to 150 hours per year by 1997. However, compared with the number of annual working hours of manufacturing industry in Western, industrialized countries, the number of hours in Japan were still higher. The Japanese worked 300 to nearly 500 hours longer than the Germans and the French<sup>1)</sup>.

Japan seems to have problems with setting standards for an adequate number of working hours. Overtime work exists that is not reported in the statistics done by the Ministry of Labor. For example, there is work known as service overtime, which is done without pay. Many workers in middle management positions, such as supervisors, do not use timecards. Consequently, even though they may work longer than normal hours, they are not paid. There is a large discrepancy in the number of reported work hours reported by different sources (Figure 1). In a survey of annual work hours conducted by the Ministry of Labor<sup>2)</sup>, data was summed up from the company reports. On the other hand, the Management and Coordination Agency for the Office of the Prime Minister collected data reported by employees3), regardless of the conditions for unpaid service overtime. According to the Management and Coordination Agency, the recent average value for annual working hours has consistently been about 300 hours higher than that reported by the Ministry of Labor. Unpaid service overtime may be the cause of this discrepancy<sup>4)</sup>.

When we look at the ratio of workers who work more than 60 hours per week by occupation, workers in some occupations work much longer hours than others (**Figure 2**). This seems to be the case in the service, sales, transport and communication sectors. However, the ratio decreased in all sectors from 1987 to 1992<sup>2</sup>). Workers in the named sectors are primarily engaged in providing services to customers where there is a shortage of manpower, so it is difficult to control the number of employee work hours.

Not only are Japanese workers forced to work long hours, employees in major cities generally live in distant suburbs, thus making for a long commute. 48.2% of workers spend two or more hours commuting to and from the downtown office each day. Those spending

three or more hours commuting each day account for 12.7%. If a worker spends three hours commuting to work every day, 250 days a year, it adds up to 750 hours of commuting time each year. This is time that could have been spent relaxing. Further, because the train commute is often crowded and very unpleasant—a so-called "tsukin jigoku" or commuting hell—workers must expend extra energy to merely endure it.

# Receut changesin working environment and worker's health

Compared with the distribution of time in the work day of male workers in other developing countries, working hours, including commuting time, were higher in Japan than in other developed countries by 80 to 150 minutes. The result is a decrease in leisure time for Japanese workers. They also do not have enough time to spend with their families, to exercise, or to enjoy social activities.

Recently, a drastic reorganization of the workplace has occurred in Japan. The unique Japanese employment system, including the life-time employment system, and seniorityconstrained wage and promotion systems, are now falling apart. Thus, workers feel job insecurity. Many of the changes that are occurring in the workplace are on-going. Companies intend to remove layers of management from the organization. Workers will therefore have to work under less supervision and multiple supervisors. These re-organizations bring the workers more work and responsibility. All of the following factors bring about an increase in the number of hours worked: the infrequent number of days off, the inability to switch off, the lack of a sense of control, and a sense of a lack of support from their supervisor. These factors bring about undesirable levels of occupational stress. They also result in an intrusion on the worker's private time, family lives, vacations, and sleep time.

The Policy Planning and Research Department of the Ministry of Labor has conducted a survey on the State of an Employee's Health every 5 years since 1982. For example, in the 1992 Survey, 12,000 private firms from all over Japan were selected from all firms with 10 or more workers. Then, 16,000 employees within these firms were selected according to a specific method. For the individual study, each

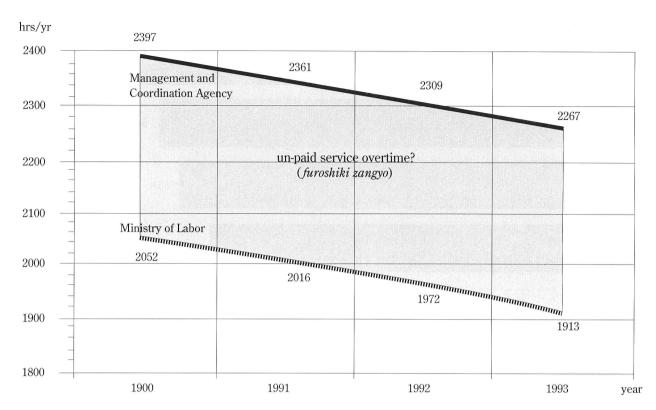


Figure 1 Comparison of Working Hours (Survey of Ministry of Labor and Management and Coordination Agency)

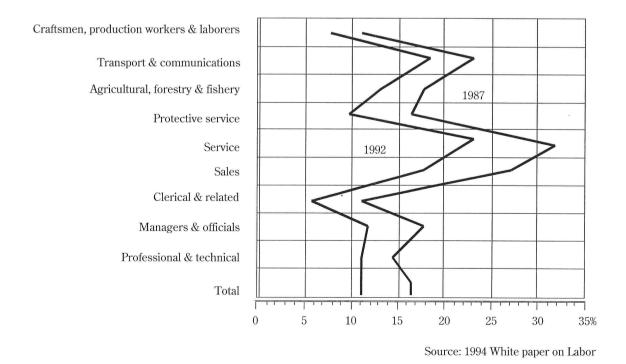


Figure 2 Ratio of Workers Classified as 60 Working Hours or more per Week by Occupation (Male)

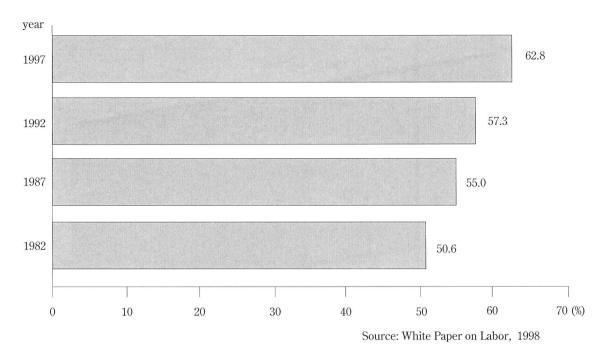


Figure 3 Ratio of All Workers Who Complain of Anxiety, Worry, or Stress in Their Working Lives from 1982 to 1997

employee was asked to answer a questionnaire by themselves. Figure 3 shows the trend of the prevalence of workers experiencing anxiety, worry, or stress regarding working life from 1982 to 1997<sup>1)</sup>. The percentage of workers who complained of anxiety, worry, and stress in their working lives gradually increased from 50.6% in 1982 to 62.8% in 1997. The percentage of those experiencing occupational stress increased as the actual number of hours worked increased. That is the higher the actual number of hours worked per day, the higher the percentage of workers who complained of stress. 74% of those who worked more than 10 hours per day at their workplace felt work-related stress.

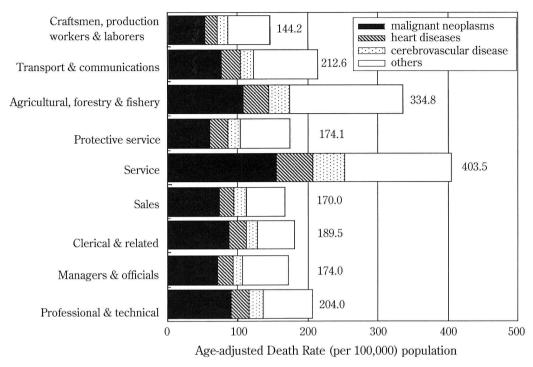
Another recent report, based on 1998 data, from the Ministry of Health and Welfare states the number of those who died from suicide has dramatically increased to 25.3/100,000 persons from 18.8/100,000 persons in 1997. It is especially high among men in their 50's and has grown by more than 50% among this group in just one year. It is speculated that the severe economic situation and physical and mental overload are the main reasons for the high suicide rate.

Is there any difference in ill health of workers

among occupations? The Ministry of Health and Welfare conducts vital statistics surveys every five years. **Figure 4** shows the age-adjusted death rate of all causes among men aged 20 to 64 yrs in 1995 classified by occupation<sup>5)</sup>. The death rate of the workers in the service sector was the highest, with the value of 403.5/100,000. We can see the same tendency in the death rates of malignant neoplasms, heart diseases, and cerebrovascular diseases in the service sector in **Figure 4**. This sector has the highest rate of employees who worked more than 60 hours a week (**Figure 2**).

### The problem of karoshi

Under such conditions, karoshi (sudden death as a result of overwork), has been receiving much attention<sup>6~8)</sup>. The family and colleagues of victims have been engaged in court battles to have the phenomenon officially recognized and covered by workmen's compensation. In June 1988, the National Defense Counsel for Victims of Karoshi set up the Karoshi Hotline to provide consultation services to surviving families who experienced financial hardships after an income earner of the family had died. Subsequently, the Karoshi Hotline was received more than 4,000 calls for help in a nine year time period. The issue of



Source: Special Report of Vital Statistics in 1995 Occupational and Industrial Aspects

Figure 4 Age-adjusted Death Rate of All Causes Classified by Occupation (Males 20 to 64 years old)

Karoshi has also drawn the attention of other countries suffering from trade friction with Japan, and the issue has become known throughout the world via TV, newspapers and magazines. For example, in 1988, Chicago Tribune reported the case of Mr. Hiraoka. This middle manager of a company died of sudden cardiac death after having worked more than 72 hours a week for 28 years.

The number of inquiries to the Karoshi Hotline has been decreasing since 1990. However, there are still more than 100 cases per year. The inquiries were generally related to the possibility of obtaining workmen's accident compensation. However, companies were usually uncooperative. Even labor unions were sometimes uncooperative, as most generally company-based. The standards for workmen's compensation are strictive as well. Consequently, it is difficult to prove a strong relation between the diseases and the work, resulting in very low rate of success in receiving compensation. In 1982, Dr. Uehata studied this phenomenon in the context of social medicine and first named it, Karoshi<sup>6)</sup>. Dr.

Uehata defined Karoshi as "sudden death from ischemic heart disease or cerebrovascular disease due mainly to physiologically damaging work conditions, resulting in accumulated physical fatigue, leading to overfatigue which then accelerates hypertension or arteriosclerosis." Regarding classification by disease, 37% were due to cerebrovascular events, while 26.8% were cardiovascular events. Among victim's diseases, acute heart failure ranked first, followed by subarachnoidal hemorrhage. Among 142 cases inquiring about workmen's compensation, the most possible triggering factor for the disease, as answered by the victim's family, was related to long working hours; 54.9%. Other factors included heavy norm, irregular work, time urgency, job trouble, and so on.

# Countermeasures for the prevention of worker's ill-health

By looking at all this information, we can conclude that there have been many problems in worker's health and working conditions in Japan. How can we protect the workers from such ill-occurrences? Recently, a few strategies have been proposed.

First: To reduce long working hours, the government revised the Labor Standards Law in 1994. This law stipulates 40 hours a week as the legal limit for working hours.

Second: The Ministry of Labor has instituted the "Total Health Promotion Plan (THP)", at work sites for improving the physical and mental health of the employees. The goal of this plan is not only for early detection and protection from non-communicable diseases but also to enforce the development of healthier workplaces. Each company has an 'occupational physician'. These doctors conduct a medical examination, a lifestyle evaluation, and exercise test. Based on these results they give an exercise prescription and lifestyle consultation. And in some cases, also mental health care and nutritional guidance are provided. The Ministry provides financial assistance to the company to reduce expense.

Third: The smaller firms in Japan tended not to have the same services as compared with the health care systems in larger firms due to a lack of man-power and a lack of finances. For example, the law stipulates that small firms with less than 50 employees are not required to engage a full-time, or part-time occupational physician. However, the government has established prefectural Industrial Health Promotion Centers and Local Industrial Health Centers in all parts of Japan to support heath care including mental health care, in small firms. These Centers have been in existence since 1993.

Fourth: The government enacted the Industrial Safety and Health Law in 1972 to assure the safety and health of workers in the workplace. A 1992 amendment included a commitment to facilitate the promotion of the "comfortable" working environment. Here, "comfortable" means not only in the physical sense but also psychological and social. It promotes an atmosphere in which every employee can achieve their job without feeling much stress.

Fifth: With the revision of the Industrial Safety and Health Law in 1996, contracted occupational physicians now possess the duty to act as direct advisors to employers on working conditions and worker health in order to prevent occupational illnesses like karoshi and

to promote health. Conversely, the employers have to consider the recommendations of the occupational physicians.

Finally, in 1998, the Ministry of Labor established the 9th Occupational Injuries and Diseases Prevention Program, which includes strategies for managing increasing mental stress. Detailed strategies regarding measures for managing mental stress are listed in this plan and are as follows; 1) promotion of interdisciplinary research and investigation to prevent stress related ill-health among all workers, especially white collar workers, 2) to maintain a high standard of training for managers and supervisors, 3) to provide information to workers to control or manage their own work-related stress, 4) implementation of stressrelated consultation systems, and 5) promotion of stress management at the workplace.

However, these strategies are not sufficient to protect workers from ill-health, as there are a few occupational groups with an extraordinary high risk of ill-health as mentioned previously. The Labor Standards Law also does not stipulate a maximum for overtime hours. The law states that this is to be determined on an individual basis through labor-management negotiations. Therefore, in some firms where the power of workers is very low, the management can force overtime work upon employees. Such wrong working conditions should be improved.

#### References

- 1) The Ministry of Labor: White Paper on Labor [Rodosho: Rodo Hakusho], 1998
- 2) The Ministry of Labor: White Paper on Labor [Rodosho: Rodo Hakusho], 1994
- 3) The Statistics Bureau, The Management and Coordination Agency for the Office of the Prime Minister: Annals of the Survey for the Labor Force (Somucho Tokeikyoku: Rodoryoku Chosa Nenpo), 1994
- 4) Institute of Economics, The Economic Planning Agency: The Economic Analysis (*Keizaikikakucho Keizaikenkyujo: Keizai Bunseki*), Vol 133, 1994
- 5) Statistics and Information Department, Minister's Secretariat, The Ministry of Health & Welfare: Special Report of Vital Statistics in 1995: Occupational and Industrial Aspects [Koseisho Daijinkanbo Tokeijyohobu: Jinkodotai Shokugyo Sangyobetu Tokei], 1999
- 6) Hosokawa M., Tajiri S., Uehata T.: Karoshi, Rodokeizqaisha, 1982

- 7) Uehata T., Karoshi due to occupational stress [Shokugyosei sutoresu niyoru karoshi]. In: Hosokawa T.[ed]. New Theories of Labor Sciences [Shinrodokagakuron], Rodokeizaisha 1988
- 8) Shimomitsu T. and Levi L.: Recent Working Life Changes in Japan. European Journal of Public Health 2:76~86, 1992