

# Chapter 2

## National Status of Psychosocial Factors at Work in Japan, Korea, Australia, and China

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### 2.1 Introduction

This chapter aims to briefly describe the current status of mental health at work, and mental health activities in the workplace in Japan, Korea, Australia, and China to summarize recent relevant research and good practice, and discuss future challenges in this field.

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## **2.2 Psychosocial Factors at Work in Japan: State-of-the-Art**

### ***2.2.1 The Magnitude of Work Stress Related Problems in Japan***

The Japanese Ministry of Health, Labour, and Welfare has conducted a representative survey of companies and employees in Japan every 5 years since 1982 (National Surveys of Health Status of Workers, 1982, 1987, 2002, 2007, and 2012). Sixty-one percent of employees in Japan reported strong worry, anxiety, or stress at work or in their working life in 2012, slightly increased from the proportion (58 %) in 2007 (Japan Ministry of Health, Labour, and Welfare 2013). The number of suicides among employees increased from about 6,000 per year in 1997 to about 9,000 per year in 1998 and remained stable in 2007. However, there has been a declining trend in recent years: 8,207 in 2011, and 7,421 in 2012. Among Japan's six million employees, 0.79 % were estimated to be on sick leave due to mental disorders (Shima and Kyrabayashi 2005). The estimated loss-of-labor cost from sick leave due to mental disorders was 950 billion yen (7.2 billion GBP).

In 2012, a total of 1,257 claims were submitted requesting worker compensation for work-related mental disorders, and among these, 169 were suicide-related. Thirty-eight percent of claims for mental disorders (55 % of claims for suicide) were approved for compensation in 2012. The number of claims for mental disorders increased fourfold during the last 10 years.

There is also an increasing trend of civil suits requesting compensation directly from companies by the families of suicide employees. The first case, which was resolved in 2001, claimed that the Dentsu advertising company was negligent in its care of their son's health and life; the Supreme Court decided that the claim was reasonable. The company paid 168 million yen (1.3 million GBP) to the family. There are no exact statistics on the number of this type of civil suit, called "Karo-jisatsu" (suicide from overwork); however, a dozen similar law suits have been identified since the first case. In many cases, companies have paid between 50 and 100 million yen to the family.

In Japan, workers' compensation and civil suits due to work-related mental disorders and suicide have motivated employers to take action for workplace mental health during the past 15 years. Also, increasing concerns about decreased productivity and mounting labor costs due to mental health problems have led to employers taking a greater interest in promoting mental health care activities in the workplace. Under the current economic crisis and recession, employers may tentatively withdraw from actively commissioning mental health care activities for employees. However, since the labor force will decrease to half during the next 50 years, workplace mental health will continue to need attention from employers. On the other hand, protecting mental health among those who have lost their jobs and those working under unstable employment contracts (such as contingency workers) will become a new public health challenge.

## 2.2.2 Levels of Protection

### 2.2.2.1 Legislation and Protection for Worker Mental Health in Japan

The Japanese Industrial Health and Safety Law states that employers are responsible for protecting the health and safety of employees. The government may release guidelines to help employers to achieve this goal. One such guideline is for the mental health of workers. The guideline first released in 2000, was revised and renamed in 2006 as “The Guideline for Promotion and Maintenance of Mental Health of Workers” (The new Guideline). It is not mandatory to follow the Guideline; however, a recent court decision on a “Karo-jisatu” suit used the Guideline as a standard practice in mental health care at the workplace, which now motivates large-scale companies to use the Guideline.

The Guideline requires an employer to establish a system and a plan for the mental health of workers in a particular workplace (or company), based on a discussion between the employer, employee representatives, and occupational health professionals at the safety and health committee of the workplace. The plan encourages inclusion of evaluation and improvement as part of the Plan-Do-Check-Act cycle. The system and plan should be developed to include “four types of care”, i.e., actions to be taken by each of four groups of personnel (employees, managers/supervisors, occupational health professionals, and service providers external to the workplace), according to the roles and responsibilities described in the Guideline.

The new Guideline particularly focuses on four activities which could be effective: (1) education, training, and information dissemination, (2) work environment improvement, (3) early consultation for employees, and (4) support for return-to-work of the mentally ill. These activities will be described in detail below. The new Guideline also emphasizes the importance of protecting the health information and privacy of employees in activities related to workplace mental health.

The 2006 amendments of the Industrial Health and Safety Law introduced a new requirement for the prevention of job stress-related diseases, particularly cardiovascular diseases and depressive disorders, namely the *Doctor’s Interview of Workers with Long Work Hours*. It is mandatory that every employer provide a chance to employees who work 100 or longer overtime hours, and have fatigue, to have an interview and health checkup with a physician if they request it. However, implementation is still low.

The National Survey of Health Status of Workers reported that the proportion of workplaces in Japan with any mental health care activities was 47.2 % in 2012, an increase from 33.6 % in 2007 (Japan Ministry of Health, Labour, and Welfare 2013). However, compared to a high proportion (98–99 %) of larger-scale workplaces (with 1,000 employees or more) conducting mental health activities, smaller workplaces reported lower proportions: for instance, 56 % for workplaces with 30–49 employees; 39 % for those with 10–29 employees (Japan Ministry of Health, Labour, and Welfare 2013).

### **2.2.2.2 Work Environment Improvement**

A work environment or work organisation-oriented approach to reduce job stressors and improve mental health among workers has been shown to be effective in reducing depression and sick leave among workers in Japan (Kawakami et al. 1997). The Mental Health Action Checklist (MHACL), a list of 30 action items which could be useful in improving psychosocial work environment, was developed (Yoshikawa et al. 2007) and has been extensively used in workplaces in Japan. A recent intervention study demonstrated that a worker participatory approach using the MHACL was effective in reducing job stressors and depression among white-collar workers (Kobayashi et al. 2008; Tsutsumi et al. 2009). Many good practices using this approach have been reported, including one in which the MHACL was included and used as a tool in the occupational safety and health management system (OSHMS) in the workplace of Sony Corporation.

### **2.2.2.3 Individual-Oriented Stress Management**

The National Survey of Health Status of Workers reported that 22 % of workplaces in Japan provided education and training for employees to employees and 15 % provided health advice/counseling to promote worker mental health in 2012 (Japan Ministry of Health, Labour, and Welfare 2013).

Several studies have addressed the effectiveness of different types of individual-oriented stress management, mostly on psychological, but sometimes on physiological, outcome variables. Effectiveness has been reported for relaxation techniques, cognitive-behavioral stress management programs, and communication training with a small group discussion or workshop.

A recent trend includes the use of information technology (such as web-based training) in individual-oriented stress management programs. Controlled trials have revealed that web-based training stress management programs are effective in improving psychological resources (self-efficacy) and job satisfaction (Shimazu et al. 2005, 2006).

Many large companies have developed or introduced “stress check” services, some of which are web-based, to provide a chance for their employees to monitor their own stress profile (i.e., levels of job stressors and stress reactions), then expecting employees to cope better with stress. The effectiveness of this approach has not been scientifically evaluated.

### **2.2.2.4 Education/Training of Managers and Supervisors**

Education/training of managers and supervisors, providing them knowledge, skills, and support for their pursuit of better worker mental health, are considered an essential part of mental health care activities at the workplace.

One quasi-experimental study (Tsutsumi et al. 2005) and three randomized controlled trials (Kawakami et al. 2005, 2006; Takao et al. 2006), showed positive effects of providing education/training for managers and supervisors on job stressors, supervisor support, and psychological distress of subordinate workers. Two studies used a 3–4 h class including a lecture and workshop; two used web-based training. A meta-analysis of these studies showed that education/training of managers and supervisors had significant but moderate effects on decreased psychological distress and improved job control among subordinate workers. No significant effect on on-the-job performance or sick leave days was detected.

### **2.2.2.5 Early Identification of Risks and Workers with Mental Health Problems**

Identifying workers with mental health problems earlier and referring them to appropriate professionals/facilities are conducted primarily in large-scale companies. This type of program includes education/training of managers and supervisors and provision of information on services within/outside a workplace from which workers could seek help for their mental health problems. A key factor is a promise to keep the privacy of workers who visit the consultation service. This is quite a popular approach in Japan. While it has never been proved to be effective in a scientific manner, many anecdotal reports support this approach.

It is reported that there are about 100 Employee Assistance Program (EAP) providers in Japan, with a wide variety of services and quality. One study reported decreased levels of depression and suicide ideation in a company which introduced an EAP program compared with a company without an EAP program (Nakao et al. 2007).

Good practice was reported from a large-scale multi-site company: the company provided education/training for all managers and supervisors on knowledge and skills related to mental health, training of on-site occupational health staff on identification and referral of workers with mental health problems, and selection of high quality medical care facilities for referral of employees. In this company, the suicide rate dramatically decreased.

Some reported that the screening of depressive disorders at workplace using a standardized scale was effective, but none reported the effectiveness of screened workers compared with non-screened workers.

### **2.2.2.6 Cost Effectiveness of a Comprehensive Mental Health Program at Workplace**

Only a few reports have described the cost effectiveness of a comprehensive workplace mental health program. Nagata et al. (in preparation) compared the cost of labor lost due to sick leave among 5,965 employees in six companies before and after implementation of such a program. Costs due to sick leave decreased at follow-up compared to baseline in five companies, yielding a gain

of 4,000 yen per employees on average. However, in one company, there was a huge increase in sick leave at follow-up. After subtracting the program cost, two companies still had a gain (8,800 yen per employee on average); in four other companies, the program cost exceeded recovered labor costs.

A recent study analyzed the cost-effectiveness of three types of primary prevention programs for workplace mental health (Yoshimura et al. 2013). For a participatory work environment improvement program, the cost was estimated at 7,660 yen per employee, and the benefit was 15,200–22,800 yen per employee. For an individual-oriented stress management program, the cost was 9,708 yen per employee, and the benefit was 15,200–22,920 yen per employee. For supervisor education programs, the costs and benefits were respectively 5,209 and 4,400–6,600 yen per employee, in one study 2,949, and in the other study, zero yen per employee. The study suggests that the participatory work environment improvement program and the individual-oriented stress management program show better cost-benefits.

### **2.2.3 Future Challenges**

Future challenges may include:

1. To develop national strategies and approaches to facilitate more actions for mental health at work in small- and medium-sized workplaces.
2. To develop a powerful intervention for the primary prevention of mental disorders, such as depressive disorders, focusing on organisational factors (such as organisational justice), as well.
3. To assess the mental health needs of, and provide mental health services to, those with unstable employment (such as contingent workers) and those who have lost their jobs.
4. To develop an approach to emerging mental health problems at work, such as atypical depressive disorders.
5. To develop a training course in mental health at work for professionals in higher education academies such as universities.

## **2.3 Psychosocial Factors at Work in Korea: State-of-the-Art**

### **2.3.1 The Magnitude of Work Stress Related Problems in Korea**

The Korea Occupational Safety and Health Agency (KOSHA), a government-affiliated organisation, conducted Korean Working Conditions Surveys (KWCS)

in 2006, 2010 and 2011. In 2006 and 2010, 10,000 workers each were targeted for home interviews, while, in 2011, 50,000 targeted workers were interviewed. The content and method of the KWCS were similar to those of Working Conditions Survey of the European Union. The results of the KOSHA surveys are considered representative of working conditions throughout Korea (Park and Lee 2009; Kim et al. 2013).

According to the first KWCS in 2006, 17.9 % of respondents, including 18.7 % of males and 16.8 % of females, reported that their work had influenced their health during the previous 12 months (Park and Lee 2009; Park 2007). The survey also found that 3.4 % of respondents complained of depression, including 3.0 % of males and 3.9 % of females (Park and Lee 2009; Park 2007). Work-related depression or anxiety was reported by 1.2 % of respondents to the 2010 KWCS, including 1.0 % of males and 1.7 % of females (Hyundai Research Institute 2010) and by 1.1 % of respondents to the 2011 KWCS, including 0.9 % of males and 1.3 % of females (Hyundai Research Institute 2011).

Korea is one of the few countries in the world to classify cerebrovascular and cardiovascular diseases (CVDs) as an occupational disease. When CVDs were first classified as work-related in 1982 at the exemplary rule of the Ministry of Labor, only accidental CVDs, such as intracranial hemorrhage and sudden cardiac death which are clearly work-related, were recognized as occupational diseases, and only a few such patients were compensated annually. In December 1994, the criteria for work-related CVDs (WR-CVDs) were revised as the enforcement ordinances of Industrial Accident Compensation Insurance Act, a higher level of regulation. These criteria were subsequently modified several times, with the Ministry of Labor formulating an article that cerebrovascular hemorrhagic attacks should be considered an occupational disease, if the hemorrhagic attacks occur at workplaces. For example, cerebrovascular hemorrhage attacks, such as intracerebral and subarachnoid hemorrhages, were regarded as WR-CVDs automatically if they occurred at work.

Since then, the number of WR-CVDs has increased dramatically, from 252 cases in 1996 to 1,214 in 1999, reaching a peak of 2,358 in 2003. The number of WR-CVDs decreased to 1,493 in 2007 and to 579 in 2012 when the criteria for WR-CVDs were amended to delete the article that cerebrovascular hemorrhagic attacks should be considered an occupational disease if the hemorrhagic attacks occurred in the workplace. The latter criterion had been often misunderstood, increasing the proportion of CVD attacks regarded as work-related (Park et al. 1999).

Recently, the Korean government has recognized that post-traumatic stress disorder due to any work-related event that can lead to mental trauma is an occupational mental disease.

### ***2.3.2 Psychosocial Risks in Korean Workplaces***

The KWCS 2010 survey found that 31.3 % of respondents, answered “Yes” to the question, “Do you have stress at work?”, including 32.6 % of males and 29.4 % of

females, In 2011, 26.1 % of respondents answered “Yes” to this question, including 26.5 % of males and 24.5 % of females. The 2006, 2010, and 2011 KWCS reported that 44.4 %, 25.4 %, and 27.1 % of respondents, respectively, hide emotionally hurt feelings while at work.

The 1,010 KWCS found that 3.7 % of respondents, including 4.1 % of males and 3.2 % of females, reported being verbally abused during the month before the survey. The overall percentage increased to 4.4 % in 2011, including 4.8 % of males and 3.8 % of females. The 2010 KWCS reported that 0.3 % of respondents, 0.4 % of males and 0.2 % of females, answered “Yes” to the question, “Were you physically abused during the past month?” This percentage increased to 0.6 % in the 2011 survey, including 0.7 % of males and 0.5 % of females.

The 2006, 2010, and 2011 KWCS found that 19.4 %, 47.0 % and 45.8 % of the respondents, respectively, said that they were supported by their co-workers and 20.7 %, 48.8 %, and 49.8 %, respectively, were supported by their bosses.

### **2.3.3 Levels of Protection**

#### **2.3.3.1 Regulations and Guidelines on Work-Related Stress**

In its December 2002 amendment to the Occupational Safety and Health Act, the Ministry of Labor stipulated that employers should prevent employee health problems due to physical fatigue and mental stress (Article 5). Immediately afterward, the ministry completely revised the regulations on occupational health standards (Ordinance of the Ministry of Labor No. 195) and, in July 2003, established a new rule [Countermeasures on health problems due to work-related stress] in Article 259.

This rule, however, focused more on preventing WR-CVDs rather than preventing work-related stress by managing work-related factors. In July 2011, when the rules on occupational safety and occupational health standards were combined and revised, this rule became Article 669 of the new Regulations.

Article 669 [Countermeasures to deal with health problems caused by work-related stress]

An employer shall take any of the following countermeasures to prevent health problems due to work-related stress pursuant to Item 1, Article 5 of the Act when any of his/her employees is involved with work that causes physical fatigue and mental stress, such as shift work including night work and working long hours, driving a taxi or bus, or monitoring work in the control room:

- (a) assessing possible stress factors such as work environment, content of the work, and working hours, and planning and implementing countermeasures such as reducing working hours and rotating tasks;

(continued)



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- (b) reflecting the employees' opinion when formulating working plans based on work load and work schedule;
- (c) improving working conditions by allocating work hours and break times properly;
- (d) doing his/her best to secure the welfare of employees related to work activities;
- (e) placing employees in positions based on the results of medical check-ups and counseling, and providing enough explanation to the employee concerned about factors associated with work-related stress, the possibility of health problems and countermeasures; and
- (f) implementing health promotion programs to encourage employees to quit smoking and manage hypertension after assessing their CVD risks.

The first KOSHA Guide dealing with prevention of work-related stress was 'Guidelines on the Occupational Stressor Scale for Korean Workers (KOSS) (2006)'. This guideline, which describes KOSS and how to use it, was developed by the Korean Society of Occupational Stress and was supported by KOSHA. The KOSS was developed due to increased demand for tools that can be used to assess stressors unique to Korean workers, in addition to the widely used tools, such as JCQ and ERI, developed in Western countries.

In 2008, KOSHA developed health management guidelines for shift workers. In addition, during 2011–2012, KOSHA developed stress management guidelines for various high stress working groups, including taxi and bus drivers, building cleaners, food service workers, sales-women, call center operators, nurses, nursing home workers, emotional laborers, PTSD patients, workers with depression, workers working long hours, construction workers, bank tellers, hotel employees, cabin crews, train engineers, and caddies.

### **2.3.3.2 Organisations Involved in Stress Prevention Activities: MOEL, KOSHA and Private Organisations**

In Korea, the Industrial Accident Prevention and Compensation Bureau of the Ministry of Employment and Labor (MOEL), and KOSHA, a government affiliated organisation that includes a research institute (OSHRI) and a training institute (OSHTI), are in charge of protecting and promoting workers' health. Private organisations are also involved, including the Korea Industrial Health Association and the Korean Association of Occupational Health Nurses, both of which have nationwide service networks.

The Industrial Accident Prevention and Compensation Bureau of MOEL is responsible for enacting, amending, and enforcing acts and policies related to

the prevention of work-related stress. In contrast, the Occupational Health Department of KOSHA is responsible for developing support programs and prevention manuals and provides technical and financial assistance to workplaces based on the prevention policies of MOEL. OSHRI of KOSHA conducts research on preventing work-related stress, and OSHTI of KOSHA trains health managers and line supervisors at workplaces.

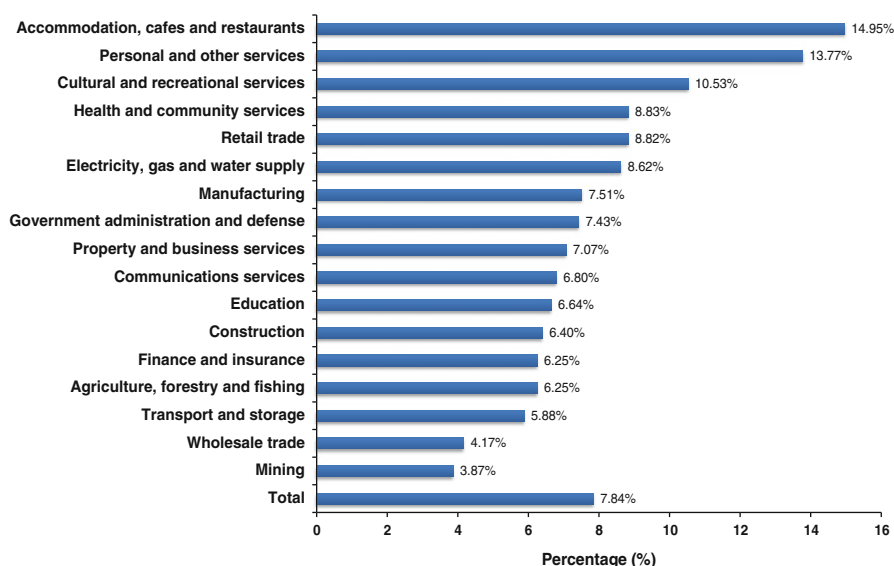
In addition, private organisations such as the Korea Industrial Health Association and the Korean Association of Occupational Health Nurses run training sessions for health managers and line supervisors on work-related stress prevention in the workplace.

## **2.4 Psychosocial Factors at Work in Australia: State-of-the-Art**

### ***2.4.1 The Magnitude of Work Stress Related Problems in Australia***

The most recent evidence in Australia regarding the mental health status of workers derives from the Australian Workplace Barometer (AWB) national surveillance project. Levels of depression in Australian employees ( $N = 3,597$ ) between 2009 to 2011 were determined via data derived from computer-assisted telephone interviews (CATI) in six Australian states and territories (New South Wales, Western Australia, South Australia, Tasmania, Northern Territory, and Australian Capital Territory; see Dollard et al. 2012). AWB data show that 7.8 % of Australian workers are depressed (moderately severe or severe categories of the Patient Health Questionnaire (PHQ-9), which is based on the diagnostic criteria of the DSM-IV-TR; American Psychiatric Association 2000; Spitzer et al. 1999). This figure is similar to previous estimates of clinical depression in 7 % of the Australian workforce (Whiteford et al. 2005). The industry of greatest concern is the Accommodation, Cafés and Restaurants industry with the highest percentage of workers in the AWB data experiencing symptoms of clinical depression (see Fig. 2.1).

Using the AWB data, the burden of poor psychological health (psychological distress, emotional exhaustion, depression) on workplace productivity, because of time lost to due to sickness absence and presenteeism, is estimated to cost Australian employers \$32.2 billion per annum (McTernan et al. 2014). In this model, depression alone is estimated to cost \$8 billion or 0.5 % of GDP. Considering only the most prominent workplace causes of depression (i.e., job strain and bullying), nearly 9 % of the variance in depression can be attributed to these risks; this translates to AUD \$693 million of preventable lost productivity costs per annum due to job strain and bullying via depression (McTernan et al. 2013). A prominent finding in the AWB project is that workers with only *mild* symptoms



**Fig. 2.1** The percentage of Australian workers, excluding self-employed, with symptoms of depression within seventeen industries with sample sizes ranging from 48 to 728

of depression take twice as many sick days as those who show no symptoms of depression at all (McTernan et al. 2013).

On average there are 10,000 mental stress workers' compensation claims accepted per annum at a cost of AUD \$200 million per annum. Compared to other kinds of compensation claims, such as those from physical injury, stress claims have the highest average costs (AUD \$10,300 per claim) (Australian Safety and Compensation Council (ASCC) 2006).

### 2.4.2 Psychosocial Risks in Australian Workplaces

Among Australian workers, 19 % of men, and 28 % of women report being in high strain (combining high demands and low control) jobs. Women are 1.5 times more likely to be in high strain jobs compared to males. Many females in the same occupation as males experience higher levels of work pressure. Women report less job control at work compared with men (Owen et al. 2013).

Australian workplaces are characterized by a culture of long working hours. Australia is placed fifth highest among OECD countries for average working hours (42.6 h per week; Organisation for Economic Co-operation and Development 2011). The Australian *Fair Work Act 2009* sets national standards for work hours in Australia and provides that employees work a maximum of 38 h per work unless a request by employers to work longer hours is reasonable (Dollard et al. 2012).

Long work hours in Australia are linked to increased levels of emotional exhaustion, lowered opportunity for recovery, and high levels of work-family conflict (Richards and Dollard 2014).

Bullying is another prominent psychosocial risk factor in Australian workplaces (see Chap. 9, this book). Australia ranks sixth internationally for bullying levels against 31 European countries, according to comparisons between AWB data and data obtained from the 5th European Working Conditions Survey 2010 (see Bailey and Dollard 2014).

### **2.4.3 Levels of Protection**

#### **2.4.3.1 Legislation and Protection for Worker Mental Health in Australia**

Australia, like the UK, Ireland, and the US, is a neo-liberal economy. As such organisations focus on profits and productivity, with less universal concern for worker welfare compared with social democratic countries like Sweden and Denmark (Dollard and Neser 2013). Over the past 20 years, in response to increasing global competition, Australian workplaces have become characterized by work intensification and work pressure, greater conflict between work and home, and increased job insecurity. Labor markets have become more flexible, and, although this benefits employers in terms of productivity, the implications for workers are varied (Dixon et al. 2013). Skilled workers have greater control and flexibility over work time, but the new employment policies have generated precarious work, poor pay, lack of predictable work times, and few social benefits for others (Pocock 2003; Dixon et al. 2013).

Increasingly psychosocial hazards are being recognised within the Australian work health and safety national legislation and policy framework, and by enterprises and worker representative groups (e.g., unions), as factors that need to be eliminated and managed (Johnstone et al. 2011). Workers in Australian workplaces are protected against risk factors at work by general duty of care provisions in work health and safety laws that have been in place for several decades. However, as far as psychosocial risks go, much less attention is given by workforce health and safety (WHS) legislation and workplace inspectors to work stress and psychosocial hazards compared with physical injury and physical hazards (Australian Government Productivity Commission 2010).

A new Model Work Health Safety (WHS) Act is being enacted across Australian states and territories (except Victoria and Western Australia), to harmonise work health and safety law nationally. Within the Act the definition of ‘health’ means physical and psychological health. A primary focus of the Act is to ensure that workplaces are free from psychosocial and physical hazards, safe systems of work are provided, and worker health and work conditions are monitored (Safe Work Australia 2011a).

The model WHS Act (Division 2, 19, Safe Work Australia 2011a), states that a person conducting a business has the primary duty of care to ensure, so far as is reasonably practicable, that the health and safety of workers and other persons are not exposed to health and safety risks arising from the business. This duty includes a requirement to ensure, so far as is reasonably practicable:

- (a) the provision and maintenance of a work environment without risks to health and safety; and
- (b) the provision and maintenance of safe plant and structures; and
- (c) the provision and maintenance of safe systems of work; and
- (d) the safe use, handling and storage of plant, structures and substances; and
- (e) the provision of adequate facilities for the welfare at work of workers
- (f) the provision of any information, training, instruction or supervision
- (g) the health of workers and the conditions at the workplace are monitored for the purpose of preventing illness or injury of workers (Safe Work Australia 2011a).

Importantly the WHS Act allows for consultation with workers and for worker representation through health and safety representatives and committees (Safe Work Australia 2011b). The WHS Act is supported by WHS regulations, national compliance and enforcement policy, codes of practice, guidance materials, and fact sheets (Safe Work Australia 2011b). A code of practice may be approved under the WHS act, and is a practical guide to enable those with a duty of care in the area to achieve compliance with their legal duties (Safe Work Australia 2011b). Courts may rely on the codes as ‘evidence of what is known’ to determine what is reasonably practical in legal terms (Dollard et al. 2014). The WHS Act and regulations require persons who have a duty of care to ensure health and safety, to ‘manage risks’ by eliminating health and safety risks. There is a relevant code of practice “How to manage work health and safety risks” that gives specific examples of psychosocial hazards (i.e., stress, bullying violence, and work related-fatigue) (Safe Work Australia 2011c) and another specific code recently downgraded to a softer guideline “Preventing and responding to bullying” (Dollard et al. 2014).

In Australia bullying and harassment are examples of psychosocial risk, and claims may be pursued under civil laws and damages claimed against an employer. Within one Australian state, Victoria, specific bullying legislation was introduced in 2011 under the Crimes Act 1958, with serious bullies now facing jail terms of up to 10 years. This followed a high profile case where Brody Panlock, a young café worker, was relentlessly bullied by other workers. In other Australian states bullying may be in breach of criminal legislation or anti-discrimination acts. A new course of action for workers from 2014, is to apply to the Fair Work Commission for a ‘stop-bullying order’.

Employers and workers in Australia are more commonly afforded protections through a statutory workers compensation system employees are injured at work or suffer from an illness arising from work. Jurisdictions provide employers with workplace injury insurance, so that if they are entitled to monetary (e.g., wage replacement) and other compensation such as health care expenditure. Psychological injuries or mental disorders arising from stress in the workplace are compensable and are commonly referred to as work stress claims. Over the 10 year period from 2000/01 to 2009/10, there was a 13 % increase in the number of serious mental stress claims, whereas most other kinds of serious claims reduced (Safe Work Australia 2013).

Stress claims gain attention because they are the most expensive form of workers' compensation claim. This is largely due to the lengthy period of time lost for stress claims. The highest median payment per mental stress claim was \$20,800 in 2009/10, more than twice the median of AUD \$8,200 for all serious claims.

Despite the WHS legislative and compensation framework to manage work-related stress, there are a number of complications that retard systematic efforts to reduce the problem at its source. A great deal of stigma still surrounds mental health, and this inhibits communication pathways within organisations that might lead to early support for an employee (Dollard et al. 1999). Further, a lack of understanding about psychosocial risk factors has led to failure to develop risk assessment tools and systematically assess the risk associated with psychosocial factors, but this is now increasing.

Over the past two decades in Australia, there has been a significant drop in trade union membership from around 40 to 18 % (Australian Bureau of Statistics 2011; Peter Hall-Jones 2007). Union density is a reflection of employee representative political power in the market and relates to the consequent level of active employment policies and social protection for workers (Dollard and Neser 2013) (see also Chap. 1). Recent research of 31 EU countries shows a positive correlation at the national level between union density and organisational implementation of policies for stress, bullying and violence; in turn, policy implementation (i.e. psychosocial safety climate) is positively related to worker health and GDP at a national level (Dollard and Neser 2013). Preliminary analysis suggests that Australian workplaces have quite high levels of psychosocial safety climate on average. So although unions and legislative frameworks play a role, it is plausible that neo-liberal influences may drive organisational attention to reduce psychosocial factors, via the motivation to reduce costs associated with poor work conditions (e.g., compensation, civil litigation, reduced productivity).

#### **2.4.3.2 Work Environment Improvement**

A review of Australian work stress interventions in the decade prior to 2003 revealed only six published studies and all but one focused on the individual (Caulfield et al. 2004). A decade later there is still only a handful of published

intervention studies, but there is an increasing emphasis on organisation- and system-level factors. Most of these studies have been publicly funded and conducted in the public sector.

Dollard and Gordon (2014) evaluated the effects of a participatory risk management intervention in an Australian public sector organisation. In this quasi-experimental cohort study, five intervention workgroups attended capacity building workshops and developed and implemented action plans to reduce work and organisational stress risk factors and stress outcomes; 17 workgroups served as controls. During a 6-month intervention implementation stage, actions were implemented in the intervention workgroups. Using pre- and post-intervention measures, Group  $\times$  Time interaction effects were significant. Relative to the control group the intervention group showed significant improvements for job design, training and development, job quality, positive performance management and morale, and marginal effects for quality. Organisational sickness absence duration data also changed, consistent with an intervention effect. A socially coordinated process, top management commitment and support, local management support, and action plan implementation, along with adequate workgroup preparation were important for positive change.

A study of 247 Australian university personnel (Pignata and Winefield 2013) found in a post measures study (no control) that awareness of stress-reduction interventions was related to higher, job satisfaction, affective organisational commitment, perceived procedural justice, and trust in senior management.

A study by Griffin et al. (2000) in a public hospital using a before and after repeated employee opinion survey, found that there were significant improvements among 550 staff (no control) in a range of organisational (leadership, goal congruence, increased participation in decision making, increased recognition and appraisal) and work design (reduced excessive workload) factors, along with increased individual morale, but not individual distress, over 12 months. Changes correlated with expert ratings of initiatives. Initiatives included a coordinated approach involving team based and organisational level interventions.

Dollard and Karasek (2010) used a before and after repeated measures design with intervention ( $n = 9$ ) and control ( $n = 9$ ) groups (non-randomisation) in public sector education workers (2004/05). Participants at Time 1 were: intervention ( $n = 116$ ); control ( $n = 172$ ); and at Time 2 were: intervention ( $n = 83$ ) and control ( $n = 129$ ). Instead of focusing on increasing or decreasing levels of psychosocial risk they found that the intervention effects worked by moderating the job characteristics—stress outcome relationship. The intervention did not increase levels of job control, but facilitated its utilization.

Researchers have also begun to investigate the context of the intervention. Dollard (2012) found that organisational climate affected the implementation of an organisational intervention. Two public sector departments participated: 18 intervention groups ( $N = 181$ ) attended training and development workshops (stage 1, first 8 weeks) and implemented action plans (stage 2, next 10 months). High levels of initial psychosocial safety climate (PSC) gave rise to better intervention implementation (more group attendance at workshops, more change due to the actions implemented, greater extent of action implementation, higher extent of

being listened to, and improved trust). Further, organisational PSC best predicted reduced psychological distress and emotional exhaustion, increased engagement and job satisfaction, reduced intention to leave and sickness absence (obtained from department records) above other intervention metrics. Continuous building of the intervention context particularly PSC, e.g. via participation and consultation with key groups (i.e. unions, OHS), will improve subsequent intervention quality and progress, not to mention stress outcomes.

Another study evaluated the impact of a system level/organisational intervention in hospital nurses (Richard et al. 2012). The intervention included the development and implementation of a nursing workload tool to assess nurse workloads, roster audits, increased numbers of nursing personnel to address shortfall, increased access to clinical supervision and support for graduates, increased access to professional development including postgraduate and short courses, and a recruitment campaign for new graduates and continuing employees. The evaluation used a pre- and post-intervention design (no control) and 484 nurses from the two Northern Territory hospitals. Psychological distress and emotional exhaustion significantly reduced and job satisfaction significantly improved across both hospitals; turnover reduced in Hospital 2. System capacity (adaptability, communication) improved, job demands reduced, and an increase in resources (supervisor and coworker support, and job control) was reported particularly in one hospital.

These studies show that changes can be made at the organisational and job design level that parallel improvements in stress outcomes.

#### 2.4.3.3 Individual-Oriented Stress Management

Employee Assistance Programs are offered in many large Australian organisations, and provide confidential short term counseling and external referral if necessary, as well as internal consultancy (e.g., training, conflict resolution).

Mental health first aid training is nationally recognized and is a 2-day training program that assists employees how to identify and support other workers developing mental health problems (see <http://monash.edu/counselling/mental-health-first-aid.html>). The national initiative, *beyondblue*, aims to reduce the impact of anxiety and depression. Available to all Australians, it seeks to empower people with knowledge about these conditions and supports them to seek help. Importantly, it provides information to workers about the role of workplaces in managing mental health (see <http://www.beyondblue.org.au/>).

Additional resources are *headspace* for younger workers, and AtEase-mental health for veterans' mental health (see <http://www.headspace.org.au/>).

#### 2.4.3.4 Early Identification of Risks and Workers with Mental Health Problems

The People at Work Project, <http://www.peopleatworkproject.com.au/>, is a psycho-social risk assessment process. It measures how different workplace



characteristics influence worker health and well-being, focusing particularly on risks to psychological health and proposes management commitment, worker participation, and organisational communication and consultation regarding the intervention.

The Australian Workplace Barometer (AWB) is a national surveillance project that identifies psychosocial risk from numerous perspectives, for example, state, industry, occupation, gender (see Chap. 20). It is an early identification system, and is population based, and can therefore yield national benchmarks. The AWB tool can also be used at the enterprise level to assess psychosocial risk, and in the implementation and evaluation of interventions, using similar principles to the People at Work Project.

#### **2.4.3.5 Future Challenges**

Future challenges in Australia may include:

- Ongoing national surveillance initiatives like the Australian Workplace Barometer
- Development of national standards for example of Psychosocial Safety Climate at a national level (see also Chap. 20)
- Development of guidance materials for bullying prevention and intervention
- Adequate return to work for psychologically injured workers
- Mechanisms to resist insecure employment
- Mechanisms to restore a social policy agenda within Australian enterprises and WHS framework
- Restoring collective approaches (i.e., union respect and visibility)

## **2.5 Psychosocial Factors at Work in China: State-of-the-Art**

### ***2.5.1 The Magnitude of Work-Related Stress in China***

With reform and open policy taking effect, the Chinese economy has experienced a boom. A series of social and employee relationship policies changed. Enterprises gained more power for employment policy and management. But most workers feel that their job demands have increased and their rewards are not in tune with the demands. With economic globalization, more and more migrant workers have moved from the rural areas to the city, and the labor market has become tougher, with less opportunity for young workers and professionals to participate. Chinese workers and professionals have suffered from much job stress and other psychosocial factors. But there has been less interest from the public for psychosocial risks compared with physical risks at work.

**Table 2.1** Number of work stress article from VIP core journal database

Years	Number of articles from core scholarly journals
1989–1995	9
1996–2000	23
2001–2005	168
2006–2010	340
2011–2013	138

There are three reasons given for this lack of emphasis on prevention for psychosocial risks. The first one is that such risks are considered “soft”, lacking scientific measurement and evidence on exposure and consequences. The second one claims that there is still much to do to control physical occupational hazards that there is a lack of energy to spend on psychosocial factors. The third reason is that psychosocial risk is still not included as an occupational hazard in legal frameworks regarding occupational disease. And finally psychosocial risks from outside of work are thought to contribute to the ill-health and mental health of workers.

At the same time, some scholars have paid increasing attention to psychosocial risk among workers. Research about work organisation and psychosocial factors has developed from 1989 (Xiao et al. 1989). Job stress is seen as the primary risk factor of all psychosocial factors that workers are exposed to. Occupational stress as a focus of scholarship first emerged in a Chinese occupational health and disease journal in 1989 as a review paper. From then, occupational stress has become a hot point for study by occupational health professionals. Occupational stress, or job stress, has been given increasing attention since the late 1990s. The number of papers published in core Chinese scholarly journals shows this situation according to the result from digest for work stress with three Chinese characteristics using the most frequently used Chinese full-text scientific journal database VIP (en.cqvip.com) from 1989 to August 2013 (see Table 2.1). Occupational stress has become a new important occupational hazard for white-collar workers, particularly in service industries which have become the largest of all occupational groups in many cities. Job stress or strain is a concern of many international companies or factories.

Many different occupational surveys have been developed in China. Workers from the traditional manufacturing industries to new service industries all experience high levels of job stress. Middle- and high-school teachers, and health care workers, are frequent groups for survey risk assessment. At the same time, the results of surveys show that workers from service industries often have high levels of job stress. Police and train drivers rank at the highest level for high strain jobs (high demands and low control) as described in the job demand-control model.

The main reason for high job stress is likely from the rapid economic development during the past 20 years. Job demands have increased continually, and the competition for employment is stiff, with more and more young workers coming to the labor market. The chance of the worker being selected for a better position has decreased. Moreover, some positions have been reduced or replaced by robots or

machines, and some are filled by cheaper migrant workers. Migrant workers are often more exposed to high levels of job stress and they need more social support to relieve their work strain and reduce monotonous tasks. For example, a large number of workers, mostly migrant workers, from electrical factories complete their job tasks day and night, repeating the same action over, again and again, especially in south-eastern China, for example, Guangdong, or Fujian province.

The health effects of job stress have been studied, including job satisfaction, depression, well-being, and health-related productivity loss (presenteeism and absenteeism). Moreover, some biomarkers have been introduced to evaluate job stress effects, such as cortisol, IL-2, IL-6, C reactive protein, and heart rate variability. But most of the research is still at an experimental stage and there is a lack of commonly agreed-upon sensitive biomarkers to identify high job stress.

Job burnout among workers is also of concern in China. Job burnout as a psychological condition has been considered by psychological professionals and management science. Job burnout has become an important focus in occupational health efforts to protect workers' mental health. Chinese translations of the 22-item Maslach Burnout Inventory (MBI) and 16-item Maslach Burnout Inventory General Survey (MBI-GS) have been introduced and used for population surveys. The results show that job burnout is high in occupational populations. About 60–70 % of workers suffer from job burnout, with burnout score of 1.5 as the cut-off point, and burnout scores ranging from 0 to 6 (Dai 2008). And some studies show that high effort-reward imbalance plays an important role for job burnout (Dai 2008; Dai et al. 2008).

Depression has been studied as an outcome of work conditions in stress surveys. Depression is assessed with the 20-item Center for Epidemiological Survey Depression Scale (CES-D) translated in Chinese. The results show that about 30–40 % workers suffer from depressed affect according to the CES-D criterion for depression of a score of 16 or over. Job stress related to working conditions can explain about 30 % of the total variance for depressive affect (Dai et al. 2010).

### ***2.5.2 Psychosocial Risks in Chinese Workplaces***

As mentioned, occupational stress has been assessed since the 1990s, and this is largely via surveys. The Occupational Stress Inventory Revised (OSI-R) survey has been introduced mainly in western China (Li et al. 2001). It has become the most popular survey tool although, with 140 items, it is time-consuming to complete. OSI-R is free from patent protection and this is why it has become so popular though this tool is only used in several countries in the world. The Job Demand-Control model and Effort-reward Imbalance model and their associated measurement tools (e.g., Job Content Questionnaire-JCQ) were only introduced in 2004 even though they are dominant theories in job stress globally, partly because the tools were protected by patent. Following are some data collected in Shanghai during 2005 with the JCQ and ERI questionnaires. All dimensions of the two

**Table 2.2** Seven occupations work stress factors by JCQ and ERI in Shanghai, 2005

Occupation	Job demand	Control	Social support	D/C
School teacher	6.79 ± 1.54	5.86 ± 1.19	6.63 ± 1.64	1.14 ± 0.23
Factory worker	6.39 ± 1.51	5.04 ± 1.59	6.81 ± 1.69	1.23 ± 0.38
Manager R&D	6.41 ± 1.52	6.26 ± 1.42	7.16 ± 1.76	1.05 ± 0.22
Company clerk	6.02 ± 1.76	5.11 ± 1.94	6.76 ± 2.15	1.19 ± 0.40
Traffic police	7.18 ± 1.68	4.85 ± 1.75	6.13 ± 2.22	1.38 ± 0.39
health care worker	6.38 ± 1.50	4.82 ± 1.55	6.26 ± 1.87	1.26 ± 0.33
Estate service	4.93 ± 1.43	5.23 ± 1.72	7.47 ± 1.89	1.01 ± 0.26
	<b>Effort (E)</b>	<b>Reward (R)</b>	<b>Over-commitment</b>	<b>E/R</b>
School teacher	4.02 ± 2.07	7.06 ± 1.59	4.98 ± 1.93	0.74 ± 0.38
Factory worker	3.94 ± 1.89	6.90 ± 1.55	4.42 ± 1.82	0.73 ± 0.35
Manager R&D	2.72 ± 1.70	7.67 ± 1.24	3.96 ± 1.97	0.53 ± 0.25
Company clerk	3.07 ± 1.89	7.27 ± 1.35	4.04 ± 1.83	0.62 ± 0.49
Traffic police	4.26 ± 2.32	6.85 ± 2.44	4.90 ± 2.07	0.91 ± 0.83
Health care worker	3.45 ± 2.09	7.50 ± 2.10	4.12 ± 1.69	0.70 ± 0.62
Estate service	2.87 ± 1.89	6.94 ± 1.72	3.67 ± 1.86	0.67 ± 0.68

models, such as job demand, control and effort, reward and so on, were changed into standard scales ranging from zero to ten for ease of understanding (Dai et al. 2007). The ratios of demand-control and effort-reward are shown in Table 2.2.

Most workers in Shanghai often suffer from more job strain compared with other countries or areas. Over 70 % of workers showed job strain based on the Job Content Questionnaire with the job demand-control ratio over 1.0 as cut-off point. And about 20–30 % workers reported they felt effort-reward imbalance for their work (Dai 2008).

### 2.5.3 Levels of Protection

Although the Chinese Occupational Disease Prevention and Control Act was issued in 2001 and was recently revised to take effect in 2012, psychosocial factors at work are still not covered by the Act. Most occupational hazards, such as toxic chemicals, dust, physical environment, and biological factors, are specified as needing to be controlled and reduced to less than a limit dose or level. At the same time, both the public and occupational health experts have appealed for more attention to be paid to psychosocial factors at work and more control of work stress to protect employees' mental health.

Several small-scale job stress intervention projects are being developed but their scope is often limited. Most projects for job stress intervention focus on individual coping skills and are less concerned with changes to management policy and building a supportive environment. It is a challenge to control and reduce the prevalence of job stress among workers.

With recent social developments, job stress has become a major complaint for service industry workers. It appears that both government and enterprise stakeholders will need to be consulted regarding how to resolve work stress. Some international companies have begun to develop special projects to control job stress in China factories. These projects may provide a role model in job stress control. Moreover, some core scales for job stress self-assessment will be developed to capture the situation of Chinese workers. Work environment legislation and monitoring of job stress will hopefully come to fruition over time with pressure from scholars and the media. So we believe the dire situation for high job stress in China may ease in the future.

## 2.6 Summary and Conclusion

This chapter examined several Asia Pacific countries, Japan, Korea Australia, and China in terms of the status of psychosocial factors and how they are addressed at a national level. Table 2.3 provides a summary of features in each country that characterize how psychosocial factors are managed at the national and enterprise level. The chapter considered national legislation, frameworks, and prevalence of psychological disorders at work. As noted, while work stress and workplace psychosocial risk are considered a serious and growing risk, there are distinct differences in national responses and the extent of national WHS legislation, workers compensation, and risk assessment approaches between countries. A feature of Japan, and Korea (and Taiwan) is that they are the only countries in the world that compensate for CVD due to overwork (Cheng et al. 2012). Reports suggest some parallels in the national circumstances of Japan and Australia; workers in both countries report long working hours, both countries recognize psychosocial risk, and the need for monitoring in national legislation, and both have workers' compensation protection for "work stress". Moreover in both countries civil court claims can be made in the case of long work hours and fatigue in Japan, and bullying and harassment in Australia. Korea has WHS legislation that covers psychosocial risk. However, in Korea, traditionally the focus has been on managing psychosocial risks to prevent CVD, and more recently post-traumatic stress, rather than work related stress. This focus is reflected in workers' compensation data claims where there are official statistics for CVDs due to long work hours but not for mental health problems. Major recent reforms in China have led to increased work-related stress for employees. As in other industrial economies, service industries have become prominent in many large Chinese cities, and work stress is a new important hazard in those industries. Despite the growth of Chinese scholarly literature and research on work stress, the resulting insights have not yet translated into national policy. Psychosocial factors are not recognized or covered in Chinese WHS legislation.

**Table 2.3** Comparison of Japan, Korea, Australia and China: national and organisational approaches to work stress prevention and management

	Worker				
	WHS/OHS <sup>a</sup> legislation covers psychosocial risk	WHS/OHS legislation covers psychological health	Workers compensation for work related mental health problems	compensation for work related physical health problems due to psychosocial risk	National surveillance for mental health of workers
Japan	Yes, described as “working environment” as general duty clause of the Industrial Health and Safety Law <sup>b</sup>	Yes, as general duty clause of the Industrial Health and Safety Law -the clause 66.8 Article 66-8 specifically mentions mental and physical condition of workers.	Yes, since 1999. In 2012, 1,257 claims and 475 compensated due to mental health problems incl. 169 claims and 93 compen- sated due to suicide	Yes, since 2002. In 2012, 842 claims and 338 compen- sated due to CVD	The Survey on State of Employees’ Health (every 5 years since 1982)
Korea	Yes, - as general duty clause of OSH Act - the Rules on OSH and Health Standards	Yes, as general duty clause of OSH Act - the Rules on Occupational Safety and Health Standards	Yes, but no official statistics	Yes, 579 CVDs due to overwork (long working hours) in 2012	Korean Working Conditions Survey 2006, 2010, 2011
					Yes, in 23 regional offices of Employment Support Cen- ter, Ministry of Employment and Labor

Australia	Yes, indirectly in duty of care clause of the WHS legislation—any risk is mentioned	Yes WHS legislation	Yes, 10,300 <sup>c</sup> claims for mental disorders accepted on average per year due to psychosocial risks <sup>d</sup> (3 % of all accepted workers' compensation claims)	Yes, 285 claims for physical injuries/diseases <sup>e</sup> as a result of mental stress on average per year (1 % of all accepted claims)	Australian Workplace Barometer 2009, 2010, 2011 (limited states)	Usually in medium to large organisations only
China	No, still focus on traditional occupational hazards	No, still focus on traditional occupational disease	No, still not include in the compensation diseases list	No, still not include by the regulation for worker injury insurance	No, start to consult to develop survey; a series of projects developed locally	Partly, requirement by the mental health act in 2013  Partly, usually in large organisation & international company only

<sup>a</sup>WHS, Work, health and safety; OHS, Occupational health and safety

<sup>b</sup>[http://www.jniosh.go.jp/icpro/jicosh-old/japanese/country/japan/laws/01\\_occ/07a.html](http://www.jniosh.go.jp/icpro/jicosh-old/japanese/country/japan/laws/01_occ/07a.html)

<sup>c</sup>Data from SafeWork Australia 22 Jan 2014 (includes Comcare data)

<sup>d</sup>10 year average

<sup>e</sup>Includes diseases of the circulatory, digestive, musculoskeletal, nervous, respiratory systems

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