An international comparison of women’s occupational health issues in the Philippines, Thailand, Malaysia, Canada, Hong Kong and Singapore: the CIDA-SEAGEP Study

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Background An international comparison study of women’s occupational health issues was carried out in 2000 for the Philippines, Thailand, Malaysia, Canada, Hong Kong and Singapore. The study was funded by the Canadian International Development Agency’s Southeast Asia Gender Equity Program.

Aim The objective was to compare the issues, risk factors, social determinants, and challenges in women’s occupational health, according to the status of economic development as defined by the World Bank.

Method Data were collected through 27 key informant interviews of high-ranking government officials and senior researchers, self-administered questionnaires on country or regional statistics and 16 courtesy calls.

Results Results indicated that women’s occupational health problems common in these countries or regions included women’s long hours of work (double workday), shift work and a caring role for family and friends. Problems reported in developing countries but not developed countries included poor access to training and protective equipment, and insufficient legislation to protect women’s rights. Problems reported in developed countries but not in developing countries included obesity, smoking and not including women in health research.

Conclusion This paper provides insights into the changing environment in the workplace, such as increasing participation of women in the paid workforce and changes in gender differences due to the changing country economy, for improving women’s occupational health.

Key words Developed countries; developing countries; occupational health; women’s health issues; workplace.

Introduction There is a global trend of more women entering the workforce. Many Western countries have more than half of women aged ≥15 years work with pay outside the home [1]. In developing countries, the proportion of women working is also increasing. As a result of more women participating in the workforce, there is an associated increase in the proportion of women’s occupational injury and disease claims in workers’ compensation systems [2]. With changes of women’s roles in the workplace, and a global burden of already 100 million occupational injuries, 11 million occupational diseases and 800 000 worked-related deaths annually [3], there is an urgent need to identify new emerging occupational health issues for women [4–7].

This paper presents a subset of findings of a study on women’s health funded by the Canadian International Development Agency’s Southeast Asia Gender Equity Program (CIDA-SEAGEP). The objective of the overall study was to compare the issues, risk factors, social determinants, and challenges relating to women’s health in several countries at varying stages of economic development in Southeast Asia, and Canada [8]. This paper describes the subset of findings relevant to women’s occupational health issues.

Methods The detailed method of the study is described elsewhere [8]. In brief, the international comparison study was...
based on key informant interviews, self-administered questionnaires and courtesy calls in the Philippines, Thailand, Malaysia, Canada, Hong Kong and Singapore in 2000. These countries or regions were selected for the study because of their developing (the Philippines, Thailand and Malaysia) and developed (Canada, Hong Kong and Singapore) status in economy, and because CIDA-SEAGEP had a particular interest in Southeast Asia. Developing and developed status was defined according to the criteria of the World Bank. Developing countries had in 1999 a per capita gross national product (GNP) of US$9265 or less, while developed countries had US$9266 or more [9].

Key informants were identified from suggestions from the ministries of health and labour, universities and local women's health organizations, and through the author's professional contacts, for four categories: (i) senior ministry of health officials, (ii) senior ministry of labour officials, (iii) university deans or professors and (iv) local experts. Attempts were made to select for each country at least one key informant from each of the four categories. Because high-ranking officials and researchers were involved, the interviews were arranged through CIDA-SEAGEP headquarters in Singapore and the Canadian embassy in Thailand.

During the interview, key informants were asked to give, narratively, three reasons for the importance, and three important examples of specific initiatives (programmes), diseases (health conditions), risk factors (biological and physical), social determinants (social and economic) and challenges (difficulties) of women's health issues in their country or region. The key informants were then asked the same questions a second time, with a check-list, to ensure completeness and consistency.

After the interview, a self-administered questionnaire was given to the key informants, for their staff to provide national statistics and other relevant information from local sources. This was requested to be mailed back to the investigator ~1 month after the interview.

Courtesy calls were made to high-ranking officials in various government departments, international agencies, research communities and advocacy groups to collect additional data and episodes concerning women's health. Extensive notes were taken but no questionnaire was used, due to logistics and cultural reasons. For example, some government officials were so high ranking that according to local practice, they cannot be interviewed, especially by using a questionnaire and a pencil. Instead, it was a friendly meeting with the official and a group of aides.

Information obtained from the interview, questionnaire and courtesy calls was carefully assessed to provide a summary opinion for each country or region. Basically, an answer for the country or region was considered positive (indicated by bullets in the tables) if the key informants were consistent in their narrative and check-list responses, and if more than 50% of the key informants gave a positive answer.

Results

The response rate for the study was 100%. A total of 27 key informants were interviewed (the Philippines 3, Thailand 5, Malaysia 3, Canada 9, Hong Kong 3, and Singapore 4), 52% of whom were women. Their background was as follows: Ministry of Health 9, Ministry of Labour 5, university 8, research institute and non-government organization 5. In addition, 16 courtesy calls were made (the Philippines 0, Thailand 8, Malaysia 0, Canada 3, Hong Kong 3 and Singapore 2), 50% of whom were women.

Table 1 shows the diseases (health conditions) thought to be important in affecting women's occupational health. Sprain and strain (musculoskeletal disorders) and occupational skin disease were considered by respondents in all six countries or regions to be important for women workers. Respondents in countries with a developing economy also considered a number of occupational health conditions to be important for women workers, such as pneumoconiosis, lead poisoning, noise-induced hearing loss, vibration diseases, fracture, contusion and crushing and burn. These, however, were not considered important by respondents from developed countries. Canada considered mental health to be an important women's occupational health issue. No country or region considered the effect of electrical currents to be important.

Table 2 shows the important risk factors (biological and physical). Long hours of work, including the double workday phenomenon (i.e. women workers have to carry out family responsibilities after work thereby extending their work hours [10,11]), psychological stress, shift work and occupational exposure were considered to be important issues. In countries with a developing economy, poor access to training and poor access to protective equipment were considered an important problem for women. Canada and Malaysia considered obesity to be a problem. Canada also considered smoking a problem for women at work.

Table 3 shows the important social determinants (social and economic). On the top of the list were women's caring role for family and friends, and domestic problems. Also considered important social factors were horizontal and vertical occupational segregation. Horizontal occupational segregation refers to the fact that certain more desirable occupations are designated by the society as more appropriate for men than women [6,12]. Vertical occupational segregation refers to the designation of certain posts with greater responsibility and decision-making power for men. Poverty, poor housing, insufficient legislation to protect women workers and poor access to
occupational health programmes were mentioned by respondents in countries with developing economies.

Table 4 shows important challenges (difficulties) thought to be affecting women’s occupational health. Mobilizing partners and monitoring women’s occupational health status were generally considered to be the top challenges. Countries with developing economies considered informing, education and empowering of women workers and communication through the media to be challenges.

Table 5 shows selected country statistics from questionnaires mailed back by key informants and from further literature searches (World Bank databases). The six countries or regions were ordered in terms of their
economic status based on per capita GNP in 1999. There was no apparent gradient in terms of female participation in the workforce according to economic status of the country or region—basically all countries or regions had women representing close to half of the workforce. Workers’ compensation statistics indicate that besides sprains and strains, and occupational skin disease (which were readily pointed out by respondents in the study, see Table 1), a number of other conditions (which were not thought to be important by respondents in developed countries, see Table 1) were in fact major causes of occupational injuries or diseases in developed countries—such as contusion and bruises, fractures, burn, effects of electric currents, noise-induced hearing loss, silicosis, lead poisoning and effects of vibration.

**Discussion**

Conventional studies investigate occupational health problems through observation of workers, such as in prospective or retrospective cohort studies [27]. This study used a novel approach to investigate occupational health problems, through observation of occupational health authorities. It has made several methodological advancements. First, senior occupational health practitioners and
researchers deal with frontline occupational health issues on a daily basis, and are knowledgeable on the issues. Second, what they have in mind is important to know because it drives government and research policies and programmes. Third, a novel two-step data collection approach (an interview and a follow-up national health statistics questionnaire) was developed to identify knowledge and decision gaps by comparing what the authorities have in mind with the real situation. Fourth, the novel two-part interview (open-ended questions and the same questions in a check-list format) was used to verify completeness and consistency in the answers to the open-ended questions. Fifth, local courtesy calls were used to collect information from very high-ranking officials.

Limitations of the study include the semi-qualitative nature and the small sample size. As a result, no statistical tests could be carried out. The study was basically an opinion survey of a largely convenience sample. Despite these limitations, a number of emerging women’s occupational health issues were identified as follows.

The occupational health authorities in general were concerned about women’s occupational health problems, and considered this an important issue in public health. They were knowledgeable and correct about the major occupational health problems, e.g. sprains and strains, and occupational skin disease. But when checked against national workers’ compensation statistics, some of the less obvious but also major problems, e.g. fractures,
burns and noise-induced hearing loss, were found to have been overlooked by some. This indicates the need for constant communication of contextualized information from surveillance and research to policy makers.

Major women’s occupational health problems reported in this study include women’s long hours of work, psychological stress, shift work, occupational exposure, a caring role for family and friends, domestic problems and horizontal and vertical occupational segregations. Major challenges to improve women’s occupational health include mobilizing partners and monitoring women’s occupational health status.

Major women’s occupational health problems reported by developing countries, but not by developed countries, include poor access to training, poor access to protective equipment, poverty, poor housing, insufficient legislation to protect women’s rights, poor access to occupational health programmes, difficulty in employment and vulnerability to unemployment for women. Major women’s occupational health problems reported by developed countries, but not by developing countries, include obesity, smoking and not including women in health research.

There is a large body of literature that supports the findings of this study. These include reported health effects on women workers of exposures to organic solvents [28,29], heavy metals (lead, mercury) [30], noise [31] and shift work [31,32]. There are identified female reproductive hazards in the workplace [33–35], chronic diseases such as lung cancer among women workers [36] and sprains and strains among women workers [4,37]. In addition, there are other ‘invisible issues’ [38]. Examples are gender equity issues [39], depressive symptoms [5], poverty among women workers [39,40], vertical and horizontal occupational segregation [6,12] and urbanization and mental health among women in developing countries [41].

Women’s double workday (also known as double workload, double burden, dual role) has long been recognized as an occupational health issue [10,11], especially in developing countries [42,43]. Traditionally, women have a primary responsibility for caring for the family (children and elderly family members) [44]. When they join the paid labour force, they continue their domestic duties along with employment outside the home. Despite women’s higher rates of participation in paid work, there is little evidence of a shift in household labour towards men [39]. It has been reported that the work stress of women is much higher than that of men [45–47].

Women are associated with a low socio-economic status, e.g. low education, low occupational status and low income (horizontal occupational segregation [6,12]). They are also under-represented as policy makers and decision makers in many sectors of the society (vertical occupational segregation [6,12]). For example, in Hong Kong, females outnumbered males in clerk roles, but are a minority of managers and professionals [48].

Another major problem in women’s occupational health is that women are not in general included in occupational health research, and in studies to design machine and instruments. There are biological differences between women and men [1,30,35]. Women have more body fat than men, so toxic substances, e.g. pesticides, are more likely to be stored in the fatty tissue in women workers and produce harm [49]. Equipment and machinery are usually designed based on the male body as the standard and may not fit women. In fact, protective clothing is at times not available in women’s sizes [50].

The occupational health system must be responsive to sex differences (biological differences in anatomy and physiology) and gender differences (differential effects due to the socially determined roles, attitudes, relative power and influence) of workers in order to improve women’s occupational health [51]. The increasing participation of women in the paid workforce outside the home, sex differences between women and men and changes in gender differences due to the changing country economy are all important issues to consider in restructuring the occupational health system. This study provides some insights into this changing environment for improving women’s occupational health. It is expected from this study that obesity (due to lack of physical activity and improper nutrition), smoking (associated with psychological stress) and lone parenthood (single mothers due to work outside home, late marriage and high divorce rates) could be new occupational health problems to affect women in developing countries.

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Conflicts of interest

None declared.

References


