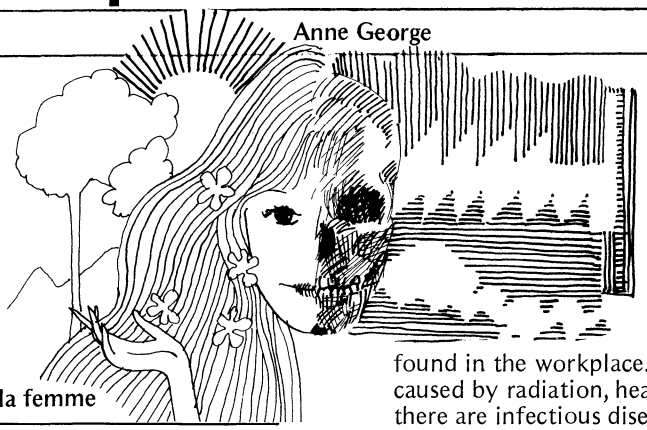
Occupational Health Hazards

Anne George



Risques professionnels chez la femme

Une analyse critique des problèmes de santé complexes pour les femmes ayant des occupations dangereuses.

A recent issue of Maclean's Magazine[2] drew attention to a mining company which refuses to employ women of childbearing potential in certain areas of production. Only women who have been sterilized will be hired. Five women already working in the specific area have been advised to change jobs within the company. This case involves the Hudson Bay Mining and Smelting Company's copper plant in Flin Flon, Manitoba and the danger is that of lead poisoning.

In 1976, General Motors battery plant in Oshawa, Ontario received widespread media coverage for a similar decision – refusing to hire, or else transferring non-sterile women because of lead hazards. INCO Ltd. in Sudbury, Ontario also restricts employment of women in designated areas because of possible effects of other chemicals to the unborn.

Undoubtedly, numerous other Canadian companies are assuming the same role – that of protector of the unborn, with the usual method being to exclude potential mothers from employment in hazardous areas.

Is this to be the plight of women workers – to be arbitrarily excluded as more medical information becomes available? In the past people have been aware of only some occupational hazards such as accidents, or lung diseases from working with asbestos and grains, or mining disasters. Now we know that there are many more potential dangers, and with additional medical information becoming available people are being compensated for a wider variety of diseases and injuries.

Only when one thinks of all the components which make up the human body can one imagine the total number of ways in which it can be damaged. Broken bones and skin problems may be relatively easy to mend, but livers, kidneys, lungs, hearts and other vital organs often have irreparable damage done to them through exposure to harmful substances.

Women will continue to increase their exposure to occupational hazards as they enter the workforce in greater numbers and in a wider variety of jobs. As women begin working in greater numbers in the industrial fields which to date have poor health records, a decline in the state of their health will result.

Before examining some of the moral issues and dilemmas facing the female worker, we should look at a few hazards which women face in their daily employment.

There are various types of health hazards. There are safety hazards which result in falls or back injuries and skin disorders which may be caused by soaps, detergents or other agents found in the workplace. Workers suffer from physical hazards caused by radiation, heat exposure, noise or vibration. And there are infectious diseases such as Hepatitis, Tuberculosis, or German Measles to which nurses, teachers and laboratory workers are susceptible. Finally, there are hazards from chemicals to be found in many factories which number in the thousands, and have varying affects on female workers.

Occupational health hazards can be put into three categories:

a) Those found in jobs in which both men and women work equally and whose hazards are similar for anyone involved.

b) Those hazards from occupations which tend to employ only one sex. For example, the textile industry workers who are predominantly female must contend with excessive noise and a variety of hazards from chemicals used in the dyeing process. Also dusts from cotton, asbestos, and other fabrics are dangerous to the lungs.

c) Specific health hazards which present a danger to one sex or the other for physiological reasons. Let us look briefly at two ways in which the reproductive system can be affected:

   A. Mutagens are substances or agents which can change the genetic material of an organism; that is, make changes in the genes or chromosomes. Up to the time of conception either the male sperm or the female ovum may be affected. If a woman is pregnant then mutations or changes can occur in the cells of the fetus.

   B. Teratogens are substances or agents which can cause harm directly to the fetus itself. A teratogen can cross the placenta without causing harm to the mother but it can cause possible miscarriage or birth defects.

For example lead taken into the body can function as teratogen and have extremely adverse effects. Most people have small amounts of lead in their bodies and this is not dangerous. But over-exposure to lead has been associated with sterility, miscarriages and stillbirths. Lead easily crosses the placenta and there is some evidence that the fetus may store more lead than the mother. Blood and hemoglobin problems have been shown to result from excessive lead levels in humans; in animal studies tumors of the kidneys, reduced motor activity, slow growth rates and learning disabilities have been reported.

Mercury is another metal often used in manufacturing. It can cross the placenta and in small samples of mice has been shown to have much higher concentration in red blood cells of the fetus than in the mother. Fetuses that have been excessively exposed to mercury have been shown to have more neurological problems than children or adults exposed to mercury. As Canadians we have all read about the undesirable affects of mercury in relation to the 'Minamatta' disease which has affected the Indians of Northern Ontario be-

cause they ate fish from mercury-polluted waters.

Occupational health hazards have been tolerated by society because industry contributes (either directly or indirectly) to the well-being and survival of us all. And industries vary considerably as to the extent and ways in which they provide steps to ensure the safety and well-being of their employees (beyond attending to the basic provincial or federal regulations).

Concerning occupational health and women, positions differ according to the industry concerned. One medical director informed me that it was his company's moral responsibility not to employ women in areas which may endanger their health or that of their offspring.

Some companies have not faced the dilemma at all. They have not had females applying for jobs in areas which are known to be harmful to them or to the fetus and they do not encourage job applications from women. Other companies merely ignore that there may be harmful effects and employ capable workers of either sex. At places such as INCO women have been excluded from certain areas until chemicals that are 'suspect' have been fully researched for teratogenic or mutagenic effects. And the research results may not be available for years so that women will not be employed.

It is important, however, to look more closely at these concerns and the case of lead is a good example. First of all, no one knows exactly what constitutes a safe level of lead concentration for humans. Workers in lead industries are regularly tested for levels of lead in their blood. Different countries have different standards, and some people say one level is safe while others are demanding 'safer' standards. Additionally, individual differences exist, so what is safe for one person may not be safe for another.

What we do know is that excessive levels of lead are dangerous for all people, especially children. Consequently, many companies involved with lead do not encourage women workers at all, or transfer women already working with lead to other jobs. Although the fetus may be adversely affected by lead and it would be unwise to risk potential lead poisoning of the fetus, there is also evidence that reproductive ability in males is damaged by excessive lead exposure. In addition, lead dust can be carried home on workers clothes so if clothes and bodies are not adequately bathed, children at home can be affected. Men, therefore, can also affect the health of future generations if they work in lead industries. Should all men of child-bearing potential also be excluded from working with lead?

Even more frightening is what we do not know. It sounds negative to describe dangerous metals or chemicals. The very fact of being able to make these descriptions is, however, positive. Occupational health hazards exist either because scientific knowledge is not advanced enough to identify the problem, or because the knowledge which has been discovered is not being utilized. Identifying something as harmful means there is a specific piece of medical knowledge available. If a substance or condition is known to be dangerous it may be banned or strictly controlled. It is the other millions of things to which we are unknowingly subjecting our bodies that are the real dangers.

Unfortunately our medical researchers cannot keep ahead of the manufacturers. It is estimated that a few hundred thousand chemicals now exist and about three thousand new ones are introduced each year. The United States has data on the toxic effects of about five to ten per cent of the total; that is, a few thousand. Of these only a couple of hundred have been documented for mutagenic or teratogenic effects.

The Future

To date, Canada has not produced much research to help identify occupational health hazards. Regarding women, the subject has been almost ignored.

In the United States, occupational health hazards to women have become a subject of some concern during the past few years. More scientific research has been conducted and the government has sponsored the writing of a number of documents regarding various hazards to female workers. In addition, in 1976 a major conference was held on women and the workplace.[3]

However, in Canada the future looks brighter. In 1975 the federal and provincial ministers of health declared occupational health to be one of the three major areas of health problems for Canadians. A consequence of their concern is the new Canadian Centre for Occupational Health and Safety (currently being organized), to be located in Hamilton. This is a joint effort of all provincial and federal governments, excluding Quebec. It is being run by a council of thirty-three people from government, unions and industry. Its aims are to promote research, provide information and advice, support the training of personnel and establish facilities for collecting and disseminating scientific information. From this Centre, we can expect both more resources and more organization in the field of occupational health.

In addition, many provinces, including Alberta, Ontario (not yet finalized), New Brunswick, Manitoba, Saskatchewan and Newfoundland have revised legislation dealing with occupational health during the past three years. Generally, two trends are noticeable: more concentration and organization of the powers in one department (usually Labour), and powers to the worker so that it is possible to refuse to work in unsafe areas without penalty. To date, however, in all the provincial changes women have not been specifically mentioned. But perhaps this is not unwise because setting up specific 'protection tactics' for women could become an open ticket to exclude them from many forms of employment.

It is interesting to note that with the setting up of the Canadian Centre for Occupational Health and Safety, most of the thirty-three council members appointed to date are men. Presumably they have been appointed because they hold executive positions in their own organizations. However, women from across Canada must continue to stay aware of the work of the Centre to ensure that women will be equally represented in the research, training and educational tasks of the Centre. Women represent two-fifths of the paid workforce and deserve recognition in the occupational health field.

The prevention of industrial injuries and diseases is possible only if we have adequate scientific knowledge and employ the combined forces of legislation, education and social responsibility to work for the benefit of those in the workforce. There is no doubt that changes are needed, but women must consider all of the alternatives before making desicions, and we must do so before someone else makes these decisions for us.

The economic, legal, educational, political and social forces concerning occupational health hazards to women are interrelated. Change one component and others must alter. If women are permitted to make their own choices concerning the hazards to which they subject themselves (and their fetuses), then these choices must at least be educated ones. And there is a double bind in all this. If persistent demands are made upon the legal system and compensation boards to recompense people for damage done to them before birth (through

negligence), then employers will be reluctant in hiring women for fear of legal action. As well as this, pressure upon employers to provide completely safe working conditions may result in fewer jobs being made available to women. The factors are interrelated – pushing any of the forces one way will cause reactions elsewhere. As women it is necessary that we work out our priorities.

Governments, unions, industry and individuals must all contribute if we are to gain a better and a safer workplace for women. To understand some of the complex issues involved we need to consider some of these questions:

1. Why does most research concentrate on males, when two-fifths of the workforce is female?
2. Does the mother have full responsibility for the health of the fetus? Can the mother release a company or government from liability on behalf of her future offspring?
3. If a woman becomes pregnant and is working among substances which may be hazardous to a fetus, should she be transferred on full pay to a job for which she is not trained? Should the company be financially liable for her temporary unsuitability to do the job for which she was hired?
4. Is health the responsibility of an individual or of the society? Should legislation protect workers against hazards, or is it enough to educate people adequately and permit them to choose whether or not they wish to subject themselves to those hazards?
5. If an industry feels morally obligated not to hire fertile women to work with a chemical which has known teratogenic effects, how does this conflict with laws against sexual discrimination?

Notes

1 This is condensed from a full research report of the same name written October 1976 by Anne George for the Advisory Council on the Status of Women. It is available from ACSW, 63 Sparks Street, Ottawa K1P 5R5.

2 Maclean's Magazine, April 2, 1979, pp. 16-17.

3 E. Bingham (editor), *Proceedings. Conference on Women and the Workplace,* June 17-19, 1976, Society for Occupational and Environmental Health, Washington, 1977.

References

Bingham E. (editor). *Proceedings: Conference on Women and the Workplace. June 17-19, 1976.* Society for Occupational and Environmental Health. Washington, 1977.

George, A. *Occupational Health Hazards to Women – A Synoptic View.* Advisory Council on the Status of Women. Ottawa, October 1976.

Maclean's Magazine, April 2, 1979, p. 16-17.

Stellman, J.M. *Women's Work, Women's Health.* New York: Pantheon Books, 1977.

CHAIRS

All styles for all tastes–
take your pick,
feel the fabric,
test the fit,
    sleek and polished teak,
    padded, bulging velour,
    elegant highwinged ladies,
    dark, demanding horsehairs,
    carved hard rock maple
    sporting cheery colonial prints,
found in the library, at a tavern,
around the dining table,
by the bandstand or on the front porch,
    crayon coloured plastics
    spouting shiny chrome legs,
    limbless corduroy bean bags,
    nameless wooden straightbacks
    and priceless Queen Anne's,
something to sit on, stand on,
to pile yesterday's newspapers on,
or objects to collect, to exhibit,
or companions to enjoy,
to love, to cherish,
    needle point cushions,
    wicker woven fine designs,
    look-like leather vinyl
    and real, genuine suede,
in a dentist's waiting room,
for a release from gravity's pull,
for a base support when lonely,
more than a stool, less than a sofa,
his and hers: loveseats.

Bernice Lever