

Running Head: CRITICAL ANALYSIS OF AN EPIDEMIOLOGY STUDY

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Critical Analysis Of An Epidemiology Study

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Regarding the link between cardiovascular risk and work, epidemiological studies Whitehall, conducted in the United Kingdom, remain essential. The first Whitehall study, implemented in 1960, was designed to assess the risk of cardiovascular disease with an initial clinical examination and monitoring of deaths listed in the registers. The name of Whitehall was given because it involved 18,000 male civil servants whose offices were focused on Whitehall Street in central London. One of its major achievements was the highlight of a social gradient in health. It has shown that the risk of death from heart disease was 2.2 times higher in the lowest in the professional hierarchy from the highest group. It also revealed that traditional risk factors - smoking, physical inactivity, cholesterol, diabetes, hypertension - do not explain all the differences in cardiovascular mortality observed between the professional groups.

It is the intention of studying the social and occupational differences in health among men and women, a new survey, called Whitehall II was launched in 1985 by Professor Sir Michael Marmot, always with British officials. Whitehall II would include the extent to which organisational and psychosocial factors at work and outside of work contributed to the social differences in mortality and morbidity. This led to examine the effects of certain characteristics of the work environment, such as mental burden constraints, the degree of control, decision-making autonomy, opportunities to use skills and social support and higher colleagues.

The first phase of the study (1985-1988) included a clinical examination, to collect data on risk factors for cardiovascular and metabolic risk for chronic diseases, and a self-administered questionnaire on demographics, behaviours and health, working conditions, social support and life events. Subsequent phases alternated between the questionnaire only (1989-1990, 1995-

1996, 2001 and 2006) and the questionnaire accompanied by a clinical examination (1991-1993, 1997-1999 and 2002-2004).

With monitoring over twenty-five years, Whitehall II is a pioneering study in the field of social epidemiology. Beyond the social gradient already mentioned, it has particularly shown that chronic job stress increases cardiovascular risk by modifying some cardio-metabolic parameters and health-promoting behaviours. This stress is associated with an imbalance between the demands of work, on the one hand and the degree of control over the work, on the other hand. Indeed, it is the combination of high demand and low control that is harmful to cardiovascular health. In contrast, the study highlights a sense of organisational justice or reduces cardiovascular risk work. People feel like this when they feel that their supervisor considers their views, sharing of information about decision-making and treats individuals fairly. Finally, more recent studies suggest an increased cardiovascular risk in people who regularly work long hours.

Stress is an occupational cause of CVD. According to the European survey on the labour force, men are more likely than women to report that work-related heart disease and similar disorders are their most serious problem of health: 5.4% of men against 2.1% of women (Dupré, 2002). Despite the fact that women complain, too, heart problems related to work, and the importance of coronary heart disease as a cause of death in both sexes, it is worrying that many studies on the relationship between heart disease and occupation exclude women, or include only male-dominated professions.

NIOSH has summarised some of the existing work on the relationship between coronary heart disease and occupation. We know for example that some professionals toxic, especially carbon disulphide, nitro-glycerine and carbon monoxide, have an effect on the heart. Smoking

and extremes of heat and cold are also risk factors. Many studies highlight a link between exposure to occupational stressors and heart disease. It also seems that there is a link between noise and hypertension. Similarly, shift work disrupts circadian rhythms has been associated with heart disease. The inadequacy and excess activity, particularly heavy lifting, are also risk factors. Women can obviously also be exposed to risk factors for heart disease in the workplace. The results of some epidemiological studies indicate that recent large scale psychosocial risks at work, especially those resulting from a lack of control, are linked to an increased risk of mortality from cardiovascular disease in both men and women, even after adjusting for variables such as age, cholesterol, obesity and socioeconomic status (Alterman et al, 1994).

In some studies, the authors examined the psychosocial risk factors involved in coronary heart disease and the sensitivity differences by gender and suggested that women were perhaps more sensitive (Hallman and others, 2001). The combination of high stress, low control and low reward is particularly harmful, and many women have a routine activity of this type. It is also known as shift work affects hormone levels, and the data indicate that on average, subject to shift work nurses smoke more and are more likely to suffer from overweight than others. These factors contribute to health problems, including coronary heart disease. In addition, women who take hormone replacement therapy after the onset of menopause and menopausal women prematurely after a hysterectomy are at increased risk of breast cancer and chronic heart or cardiovascular disease. This risk may increase further due to the nature of the work (Westerholm, 1998).

Significant differences were observed between occupational groups in the risk of cardiovascular disease. Nevertheless, the authors of a Danish study concluded that many of these diseases could be reduced by 16% among men and 22% among women by eliminating the risk

factors in the work environment. Among the principal risks include job strain, which reached 6% of men and 14% of women and shift work, which affects 7% of both sexes (Kristensen and Others, 1998). Epidemiological studies on risk factors at work and mortality from cardiovascular disease is rarely interested in women. This is partly explained by the fact that, in women, these diseases appear ten to twenty years later than men, in practice, this means that most of them have already retired when they fall patients and the relationship with their profession is never studied. Compared to men, mortality from cardiovascular disease is much lower in women under 50-55 years active. Even in studies who are interested in women, it is impossible to draw conclusions, because the total number of deaths before retirement is too low, and there are few published studies on mortality from cardiovascular disease women on large cohorts. This low mortality rate was explained by the protection afforded to women by female hormones - estrogen and progesterone. However, this protection disappears after menopause (Alterman and others, 1994).

There is a clear need to conduct further research on occupational risks of coronary heart disease, taking into account the differences between the sexes.

Prevention of stress and stress-related illnesses

The report of the European Agency entitled Research on stress at work (Cox et al, 2000) concluded, on the basis of available scientific data, that work stress can be treated like other health and safety by adapting the stress management at work cycle approach control already used for the assessment and management of physical risks. A second report by the Agency, based on the analysis of examples of interventions in the workplace and tools to prevent work-related stress have the key success factors of prevention of stress at work, namely:

- An intervention based on a proper risk analysis;

- Thorough planning and a phased approach - including the definition of clear objectives and precise selection of target groups;
- A combination of measures focused on workers and labour, giving priority to collective and organisational interventions to address the risk at source;
- Context-specific solutions, practical experience of employees constituting a vital resource for the identification of problems and defining solutions;
- The use of experienced practitioners in the case of external experts and evidence-based interventions;
- Social dialogue, partnership and commitment of workers;
- A long time and management support prevention.

It is very important to begin to examine the tasks and activities actually performed by women and men as well as the conditions and specific circumstances of their work in order to take into account all the factors that could contribute to job stress. Working conditions and the experience of men and women are not identical: they are exposed differently to the same stressors and are also affected by different stressors at workstations or in similar jobs. It is therefore essential to ensure that women participate effectively in the process. It is important to understand the role of gender in the preparation of programs for the prevention of stress because, in the same workplace, segregation of duties that men and women are stressed for different reasons. Until now, in many cases, interventions that do not take into account the gender dimension has not been successful (e.g. Östlin, 2002). The risk assessment must take account of stressors such as sexual harassment, discrimination and family responsibilities, as well as other,

more frequently encountered in female-dominated jobs. This could include consideration of individual control tasks and unplanned outages.

Many employers recognize the need to take measures to prevent stress at work. There are examples of good practice in stress prevention in sectors dominated by women in three Agency reports jobs. These cases show, for example, it is possible to improve the emotionally demanding work of health workers and teachers, to give workers more freedom posted on their schedules and increase autonomy, participation and control the activities of nursing assistants and workers in call centres. Interventions to improve balance work and private life, including for people who have children or dependent relatives, are discussed in the section on this topic.

Coping behaviours ("coping")

Priority in occupational stress, is primarily to eliminate the sources of stress. However, coping is an integral part of the stress process. It represents an attempt to manage the requirements and can be considered as a strategy for solving problems. Styles and strategies adopted must match the situation. However, this is probably the most misunderstood research on occupational stress, and the need to gather more information on coping is widely recognised (Cox et al, 2000).

Houtman and Van den Heuvel (2001) examined international studies on the biological and social differences between the sexes in terms of fitness, personality, attitudes, and different aspects of coping. In particular, they studied the gender differences in the ability to cope with work stress. These studies have focused mainly on the relationship between this difference and the effects on health. These authors have identified only a few studies on the moderating effects of mediators or indicators of coping capacity in the risk-accordingly.

In a study of occupational stress among managers of both sexes, Davidson and others (1995) found that women adopted more often positive coping strategies than men: they had so often use social support and strategies focused on tasks. As given the changing demographics of the workforce, we began to examine the coping capacity of older workers, especially when it comes to dealing with such changes resulting from the introduction of new technologies or new working methods. This debate is about all aspects of the work, not just stress. The authors of a review of the literature in this area has been a tendency to consider older workers as a homogeneous group, little attention being paid to possible differences between the sexes. However, older workers often take such care of a parent or a disabled partner. This analysis concludes that such research and policies pay little attention to older workers (over 45 years).

Why women do not they suffer more stress at work?

Because many known causes of stress characterised predominantly female jobs and given the additional constraints that domestic work subjecting women, one might wonder why they do not suffer more stress. Their more effective and more frequent use of social support and coping mechanisms focus more on the tasks have been mentioned above. The data also indicate that Lasanté physical and mental health of working women, whether they have children, is better than the inactive. Women whose health is the best are working women, married with children. In other words, even if the labour market increases the stress, it also provides social contacts and other benefits that do not exist at home.

Example Of An Intervention On The Coping In A British Administration

A stress management programme was implemented in a British administrative service employing 25,000 employees. This organisation had gone through a period of reorganisation, resulting in a decrease in job satisfaction and increased stress levels. In their intervention, Whatmore and others (1999) have sought to improve the individual coping employees. In all, 270 employees (including 157 women) participated in the study. The authors studied three areas: education and awareness, physical exercise and cognitive restructuring. The improvements seen in people who participated in exercise programs and awareness persisted after three months and for exercise programs after six months. Cognitive restructuring did not, however, equally good results. The interventions had no effect on organisational variables, that is to say, job satisfaction and personal commitment. Self-reported absenteeism decreased in the group who participated in the exercises, but increased in others. The authors concluded that management interventions targeted at individuals stress sometimes produce good results, but for them to be sustainable, we need to identify and reduce the factors of organisational stress.

Let us discuss each of the employment issues and their epidemiologies briefly. Nowadays, it has become a difficult task for the employers to monitor and maintain the sickness absence in both small and large firms. There are large numbers of epidemiologies that deals with this problem. Some of the employers find this epidemiologies to be the most crucial one. Let's take into consideration some of the finest of these and how they are put into practical work. The role of occupational health specialists concerning sickness monitoring is the most important one. Studies have it that there are limited studies on the favourable impact of occupational health on efficiency and performance of the workers, but there is a recognised marked reduction in the absenteeism of the workers (McCunney, 2001). There are various aspects in which the worker

may go for sick leave. It may be due to job pressure, due to unhygienic job environment, due to robust policies of the company, due to childcare problem or maybe the worker does have genuine illness. Occupational health providers look into all of these prospects and design various epidemiologies to cope up with the sickness absenteeism. Occupational health providers go for counselling with both the employer and the employee so that the problem can be sorted out accordingly. Occupational health providers arrange back to work interview with the employer so that the real insight of the problem of the worker can be known. If interview is not possible, in that case an appraisal must be arranged. At the same time, occupational health providers make the worker realize the drawback of sickness absence so that the employer is informed about the sickness beforehand in order to maintain the absent report. Occupational health providers arrange an informal meeting of the employer and the employee so that all the concerns of the worker can be addressed personally. Occupational health providers also do look into possibility for part time opportunity if the worker is not able to make up regularly at the office depending on the case rather than suspending or terminating the employment contract as this is against the employment law. Occupational health providers do focus to change the work environment into friendly one with flexible timings, late check-in and early check-out for the workers, recreational activities, membership for the gym and swimming pool. Employers are also advised to arrange for bonuses in order to avoid much sick leaves. Finally, Occupational health providers also do look into all possibilities whether the worker is being harassed or not and to take disciplinary actions against it and initiate supportive programme for all those who do have chronic illness.

Occupational Health is actively involved in combating against discrimination.

Discrimination whether direct or indirect is the most common issue every new and existing employee faces and this leads to sense job insecurity. Occupational health providers provide

intense support to the workers against any form of harassment, gender difference, religion, language, ethnic group, cultural difference, race and victimisation by imparting the employment laws upon the employers safeguarding the legal rights of the workers and paving the way for more opportunities.

Key findings from overall study is that much of the working populations irrespective of gender difference are facing large number of occupational illness and risks especially occupational cardiovascular diseases causes of much of which are unknown and are attributed to individual characteristics and unevenly distribution of the population. Men and women, ethnic minority groups and disabled workers are all facing much work related health hazards along with meagre wages and more time dedication. Another important finding is that there is a sense of job insecurity and resistance among the civil servants in United Kingdom since global recession. All these findings have direct influence on the overall productivity of the organisation and efficiency of the workers. Most of the epidemiological approaches used are not as positive as it should be so there is a supreme need to design an epidemiology which should both be beneficial for the workers and the organisation and which can pre-judge the coming health threats so that preventive measures could be taken in advance. The overall outcome of the study is considered to be valid with authenticity from reliable bodies and could be used to pre-define the current health statistics of the European population.

The core strength of the study is that much of the occupational health threats are identified at all level of hierarchy in an organisation and also many effective epidemiologies proposed that can control and monitor occupational health hazards and other employment issues. Unfortunately, all such epidemiologies show less effectiveness in all cohort studies as these epidemiologies are failing to define the link between the causes of the occupational health

hazards and less is predetermined for women as the study comprises of less number of women preventing from defining the broad spectrum of the social ascent of women. Also less is done for legal rights of the employees. The study does comprise the relationship of the workers and experience within an organisation but there is again lack of moderate number of ethnic minority groups in the study. The study thus creates added opportunity to amplify the research in the field of health and safety with more correspondents.

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