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A Synthesis of the WHO Employment Conditions Knowledge Network Final Report



Employment Conditions and Health Inequalities

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Table of Contents

| | |
|---|----|
| Main Messages | 3 |
| Executive Summary..... | 4 |
| Introduction..... | 7 |
| Main Employment Conditions | 8 |
| Country Typology of Employment Relations..... | 9 |
| Extrapolating the Welfare State Typology and Employment Relations..... | 9 |
| Employment Relations and Health: A Descriptive View..... | 10 |
| Power Relations | 10 |
| Labour Regulations and Industrial Relations..... | 11 |
| Employment Conditions..... | 11 |
| Unemployment..... | 11 |
| Precarious Employment | 12 |
| Informal Employment | 13 |
| Child Labour..... | 13 |
| Slavery and Bonded Labour..... | 14 |
| Working Conditions and Health | 14 |
| Occupational Injuries..... | 15 |
| Occupational Hazards..... | 16 |
| Psychosocial Occupational Stressors | 16 |
| Employment Relations and Health Inequalities: Pathways and Mechanisms | 17 |
| Labour Market Inequality..... | 17 |
| Employment | 18 |
| Full-time Permanent Employment..... | 18 |
| Unemployment..... | 18 |
| Precarious Employment..... | 18 |
| Informal Employment..... | 19 |
| Child Labour | 19 |
| Slavery and Bonded Labour | 19 |
| Working Conditions | 20 |
| Policies and Interventions..... | 21 |

| | |
|--|----|
| The Need for a Political Perspective | 21 |
| Employment Dimensions and Working Conditions: Policies, Interventions and Experiences..... | 22 |
| Full-time Permanent Employment..... | 23 |
| Unemployment..... | 23 |
| Precarious Employment..... | 24 |
| Informal Employment..... | 25 |
| Child Labour | 25 |
| Slavery and Bonded Labour | 25 |
| Conclusion..... | 25 |
| Recommendations..... | 27 |
| Endnotes | 31 |

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Main Messages

This document is a summary version of a report that was prepared for an international audience as part of the World Health Organization Commission on the Social Determinants of Health. This summary is intended to identify areas for discussion and application within public health in Canada.

This report shows how employment relations affect different population groups, and considers how this knowledge may help identify and promote policies and institutional changes to reduce health inequalities caused by these employment relations.

Pathways linking labour market situations to health outcomes can be identified both at the macro level and for every individual employment condition. The consequences of employment conditions for health and health inequalities are pervasive and should be considered in all decisions regarding labour markets and countries' strategies for economic growth.

This document includes recommendations which place considerable emphasis on social welfare (poverty alleviation, universal education and public health facilities, government inspectorates) and regulation of labour markets (international standards/agreements, laws and enforcement).

Executive Summary

The aim of this report is to show how employment relations affect different population groups, and consider how this knowledge may help identify and promote policies and institutional changes to reduce health inequalities derived from these employment relations. The report incorporates the political, cultural and economic context to provide a comprehensive account of the current international situation of labour markets and types of employment conditions.

How inequalities in health are understood and approached by any society is a political issue. They can be accepted as the inevitable result of individual differences in genetic determinants, individual behaviours or market transactions, or they can be seen as an avoidable outcome that needs to be remedied. Inequalities in health derived from employment are closely linked to other kinds of social inequalities including inequalities in wealth, political participation, and education. Thus, through regulating employment relations, main political actors can not only redistribute resources affecting social stratification, but also have an impact on the life experiences of different social groups including opportunities for well-being, exposure to hazards leading to disease, and access to health care. Although there is abundant literature on specific employment and working conditions and health, the literature rarely focuses directly on the important role played by employment relations and conditions as a key social determinant in shaping health inequalities. This report is a contribution toward filling these gaps in knowledge, hoping that a better understanding of these mechanisms will facilitate the task of making well-informed political decisions over such a crucial issue.

Employment relations, employment conditions and working conditions are different yet interrelated concepts. The first concept constitutes the relationship between an employer that hires workers who perform labour to sell a profitable good or service, and an employee who contributes with labour to the enterprise, usually in return for payment of wages. An important component of employment relations are the power relations between employers and employees and the level of social protection that employees can count on. In developed countries, employment relations are often subject to the provisions of the law or a contract of hire. In these societies, the government is often the largest single employer, but most of the work force is employed in small and medium businesses in the private sector. In developing and poor countries, however, most employment agreements are not explicitly subject to any formal contract, and a high proportion of total employment is in the informal economy.

Because employment relations greatly vary in nature, both within and between countries, the analysis presented here is based on a classification of employment conditions into five “dimensions” of global scope, thus incorporating: unemployment, precarious employment, informal employment and informal jobs, child labour and slavery/bonded labour. On the other hand, working conditions are related to the tasks performed by workers, the way the work is organized, the physical and chemical work environment, ergonomics, the psychosocial work environment and the technology being used.

Worldwide, unemployment remained at a historical high in 2006 despite strong global economic growth. Thus, growth failed to reduce global unemployment and even with continued strong global economic growth in 2007 there is serious concern about the prospects for fair employment creation and reducing working poverty further. Without employment opportunities or coverage by unemployment compensation, substandard work arrangements, mostly underpaid, are the only way to survive for many workers and their families. Indeed, the working poor constitute around 25 per cent of the employed labour force in all

developing and poor countries. In other words, one in every four employed persons belongs to a poor household. In addition, over the past two decades employment in the informal economy has risen rapidly in all regions of most mid- and low-income countries. A feature of informal employment is the lack of any statutory regulation to protect working conditions, wages, occupational health and safety, or injury insurance. Workers also tend to be less unionized or have limited access to the existent labour organizations.

The consequences of these employment conditions for health and health inequalities are pervasive and should be incorporated in all decisions regarding labour markets and countries' strategies for economic growth, which should include criteria of sustainability and fairness. Indeed, pathways linking labour market situations to health outcomes can be identified both at the macro level and for every individual employment condition. At the macro level, we have found that there is a strong association between labour market inequality and unfavourable population health outcomes. Among peripheral countries, higher labour market inequality results in higher probability of dying for men and women: higher under-five, infant, neonatal and maternal mortality rates; and more deaths from cancer and injury. Years of life lost by communicable diseases (both sexes) were also highly significantly and positively associated with the labour market inequality. Similar relationships between labour market inequality and health were observed among semi-peripheral countries with a few exceptions.

Research on the aggregate level has shown that high levels of unemployment in both societies and neighbourhoods are correlated with poor health and increased mortality. Also, precarious employees suffer adverse health effects through the action of material or social deprivation and hazardous work environments. Thus, the experience of various kinds of precarious jobs and the insecurity and vulnerability associated with them is likely to be associated to more hazardous working conditions and to higher income inequality. For example, temporary employees are exposed to hazardous working conditions, work more often in painful and tiring positions, are more exposed to intense noise, perform more frequent repetitive movements, have less freedom to choose when to take personal leave and are far less likely to be represented on health and safety committees. A systematic review of studies of temporary employment and health suggests that temporary workers suffer from a higher risk of occupational injuries compared with permanent employees

The available evidence consistently shows that workers in the informal economy or having informal employment have less favourable health indicators than do those in the formal economy or holding formal jobs. For both men and women, there is a strong positive association between an increasing proportion of informal jobs in countries and death and disability years of life lost (DALY) for all diseases. Being in informal business and informal employment may cause mental illness and psychological stress, because of job insecurity (i.e., the threat to lose long-term stable jobs).

A growing number of studies have shown that health problems are one of the main negative effects of child labour. These effects vary in nature ranging from occupational-related diseases and injuries, directly related to hazards in the workplace or when commuting, to increased vulnerability to biological or toxic agents due to children's immature immune system; ergonomic risks resulting from inadequate dimensions of tools and equipments; and impairment of physical, mental, and social development because of limited time for resting, playing, and studying; among other health and developmental problems. Therefore, child labour has been associated with problems related to the physical, physiological, mental and social development of children. Some of the reported health effects of child labour appear late in adulthood, such as those related to self-perceived health and reduced height and alcohol and drug abuse.

Given that politics are fundamental for health, as a cause of health inequalities but also as the only remedy to end with these inequalities, we have devoted considerable effort to provide not only a political analysis of employment relations and conditions, but also to provide some recommendations of what can be done to reduce inequalities in health related to employment. Our recommendations place considerable emphasis on social welfare (poverty alleviation, universal education and public health facilities, government inspectorates) and regulation of labour markets (international standards/agreements, laws and enforcement). Governments and their agencies are in a position to provide comprehensive standards and laws, and to enforce them. Welfare policies also set a framework for community expectations that influence other actions. Voluntary measures by employers/corporations have a role to play but are too fragmented and weak to reshape employment conditions and lift standards generally. Historically, it has been government action, often in response to community pressure that has set social standards. The combination of union and community pressure plays a vital role in ensuring government action. We hope that this report helps communities and unions, as well as interested governments, to make steps towards the realization of fair employment for all workers, independently of their place of origin, their class, their gender, their age or their ethnic origins.

Introduction

To study how employment relations, employment conditions and working conditions differently affect the health of populations we need to clearly define the meaning of those concepts and to understand both how society is structuring labour relations, labour/capital agreements, labour contracts or employment contracts and the social processes of production that affect the health of workers.

Employment relations, employment conditions and working conditions are different yet inter-related concepts. The first concept constitutes the relationship between an employer that hires workers who perform labour to sell a profitable good or service and an employee who contributes with labour to the enterprise, usually in return for payment of wages. An important component of employment relations are the power relations between employers and employees and the level of social protection that employees can count on. In developed countries, employment relations are often subject to the provisions of the law or a contract of hire. In these societies, the government is often the largest single employer, but most of the work force is employed in small and medium businesses in the private sector. In developing and poor countries, however, most employment agreements are not explicitly subject to any formal contract, and a high proportion of total employment is in the informal economy.

Because employment relations greatly vary in nature, both within and between countries, the analysis we present here is based on a classification of the employment conditions into six “dimensions” of global scope: unemployment, precarious employment, informal employment and informal jobs, child labour and slavery/bonded labour. On the other hand, working conditions are related to the tasks performed by workers, the way the work is organized, the physical and chemical work environment, ergonomics, the psychosocial work environment and the technology being used.

How inequalities in health are approached by any society is a political issue. They can be accepted as the inevitable result of individual differences in genetic determinants, individual behaviours or the economic market, or they can be seen as a social product of society that needs to be remedied. Underpinning these different approaches to health inequalities are not only divergent views of what is scientifically or economically possible, but also differing political and ideological opinions about what is desirable¹. Thus, the reduction of health inequalities, especially those interventions at the level of social policy, will depend in large part on the power distribution among key political actors and the role of the state.

In general, there is a great lack of research concerning the impact, pathways and mechanisms that connect employment relations and conditions with health inequalities. There is abundant literature on specific employment conditions and health, but it rarely focuses directly on the important role they play as a social determinant in shaping health inequalities. Social determinants of health and employment relations and conditions in particular have been neglected.

Main Employment Conditions

Definitions of key employment conditions used in this report are the product of an extensive review of specialized epidemiologic and public health journals, along with other sources. In this report we use only the following definitions of the key employment conditions and the new concept of “fair employment”.

Unemployment. Roughly speaking, the unemployment rate amounts to the proportion of all those of working age in a given area who do not have a job and are actively seeking one.ⁱⁱ

Precarious employment. Employment forms that might reduce social security and stability for workers.ⁱⁱⁱ

Informal employment and informal jobs. Non-regulated placement in the labour market which usually involves an informal arrangement between the employee and employer (informal employment) or self-employment (informal jobs).^{iv}

Child labour. According to UNICEF^v, child labour means children below 12 years of age working in any type of economic activity, or those from 12 to 14 years of age engaged in occupational duties not considered “light work”. For ILO, child labor is defined according to its effects, that is, work activities that are mentally, physically, socially or morally harmful and that affect schooling.^{vi}

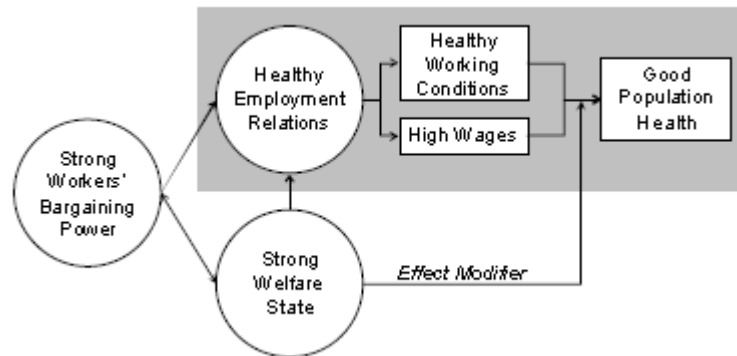
Slavery and bonded labour. According to Anti-slavery International, a slave is someone who is forced to work through mental or physical threat, owned or controlled by an “employer”, usually through mental or physical abuse or threatened abuse, dehumanized, treated as a commodity or bought and sold as “property”, is physically constrained or has restrictions placed on his/her freedom of movement.^{vii}

Fair employment. A public health perspective in which the relationship between buyers and sellers of labour as well as all the behaviours, outcomes, practices and institutions connected to the employment relationship, need to be understood as key factors in the quality of workers’ health. Fair employment implies a just relation between employers and employees.

Country Typology of Employment Relations

In Figure 1 we show a model of employment relations and population health.

Figure 1. The relationship between workers' bargaining power, welfare state, employment relations and health.



Employment relations affect workers' health via two different pathways. The first is related to the physical conditions of work at the point of production itself (i.e., the workplace), which has been traditionally the scope of industrial medicine and occupational health. The other pathway is an outcome of the labour process that affects workers' lives outside the workplace, namely, wages and benefits (vacations, pensions, workers' compensation). Thus, employment relations, their ensuing physical and psychosocial hazards and various forms of economic compensation affect the health status of workers. These two outcomes of employment relations are modified by government provided welfare services and result in the health status of the working population.

Extrapolating the Welfare State Typology and Employment Relations

The notion of workers' bargaining power becomes problematic when we look for indicators (i.e., union density, collective bargaining coverage) in less developed countries. The most notable difference is related to the high percentage of informal sector workers in low- to middle-income countries. Although the existence of an informal sector is not confined to less developed countries^{viii}, the often dire working conditions in the informal sector, such as child labour, slave labour and work at lower-than-subsistence compensation levels, are exacerbated in low- to middle-income countries. In addition, both in developed and developing/poor countries, precarious employment relations have reduced the proportion of

unionized workers, especially since the 1980s. These developments limit the validity of using indicators such as union density and collective bargaining coverage for characterizing the labour markets of low- and middle-income countries. Therefore, where the majority of workers are not covered by collective bargaining, alternative indicators should be developed.

The labour market is made up of a formal sector and an informal sector. In the formal sector, there are full-time regular workers and irregular workers in precarious jobs, the latter being on the rise in recent decades. These labour markets are characterized by different rules and regulations, and therefore serve as rough breakpoints in employment relations. While the popular concept of informal economy connotes a uniform “underground” economy with appalling working conditions and no social security, several empirical studies have shown that there are at least two distinctive class positions in the informal sector: small entrepreneurs and informal wage earners. Since the income inequality between these two class positions is larger than in the formal sector, the health implications of working in the informal sector should reflect such greater economic inequality as well. However, assuming that there are many more workers than employers, we can predict that the average level of health in the informal sector will be worse than in the formal sector.

Employment Relations and Health: A Descriptive View.

Power Relations

One of the aims of this report is to analyze the “political economy of health”^{ix}, contextualizing employment relations as an outcome of the interaction between powerful economic actors and political institutions. In an increasingly globalized market-based economic system, the political, economic, financial and trade decisions of a handful of institutions and corporations can have an effect on the daily lives of millions of people worldwide.

Large corporations are particularly relevant in the contemporary political systems not only thanks to their growing power and resources but also through their pervasive influence on key economic decisions that have serious consequences in the production of disease^x. Corporations manufacture many of the goods and services we consume, and they contract or subcontract millions of jobs, many of which have a negative impact on employees’ health. Corporate behaviours may directly or indirectly promote disease

through various practices, including advertising to create new customers; public relations to foster a positive image of their products or activities; litigation to delay, weaken, or overturn laws and regulations; sponsored research to support their points of view; or even using illegal strategies to advance their objectives. Also relevant are campaign contributions to finance and influence democratically elected governments and lobbying for legislation that furthers corporate economic interests^{xi}.

Labour Regulations and Industrial Relations

Export Processing Zones (EPZs) have become a symbol of the new global economic order and its potential effects on labour regulations, industrial relations, and workers' welfare. The ILO has defined an EPZ as an "industrial zone with special incentives set up to attract foreign investors, in which imported materials undergo some degree of processing before being re-exported."^{xii} These zones are intended to attract foreign investment, and thus are subjected to preferential treatment regarding fiscal and financial regulations. In 2002, there were 116 countries with EPZs and a total number of 3,000 EPZs. In this same year, 37 million people were working in EPZs. EPZs have been claimed to be an efficient strategy for poor countries to develop their economies, create employment and improve their infrastructures.

However, poor work environments and work practices have been a common concern. Relentless hostility to trade unions is a constant feature of most EPZs around the world, and is among the arguments put forward by the authorities to attract investors^{xiii}. Threats of dismissal, physical assault or even death threats are used to discourage workers from joining the unions. Several countries prohibit strike action in EPZs. Other kinds of abuses that have been reported are unpaid overtime work, inhuman working hours and deficient health and safety.

Employment Conditions

Unemployment

Overall, in 2006 there were about 195 million unemployed in the world, an all time high (6.3 per cent). In many non-industrialized countries, estimates of unemployment are around 30 per cent, while in developed countries unemployment is often around 4-12 per cent. Women are more likely to be unemployed than men (6.6 vs. 6.1 per cent respectively). There are over 85 million unemployed youth (aged 15 to 24) around the world, comprising nearly half of the world's total unemployment, though this age group makes up only 25 per cent of the working age population. Compared to adults, youth are more

than three times as likely to be unemployed^{xiv}.

The distribution of unemployment is more concentrated among the least educated. In 2003, a person in the developed economies with only primary education was at least three times as likely to be unemployed as a person with tertiary education. The pattern reflects the increase in demand for more highly educated and skilled workers in developed economies and the declining demand for workers with low education^{xv}.

Worldwide, unemployment remained at an historical high in 2006 despite strong global economic growth. Growth failed to reduce global unemployment and even with continued strong global economic growth in 2007 there is serious concern about the prospects for fair job creation and reducing working poverty further. In 2006, there were not enough decent and productive jobs to raise the world's 1.37 billion working poor - those working but living on less than the equivalent of US\$2 per person, per day – and their families above the US\$2 poverty line.

Available information shows a wide dispersion of unemployment rates throughout the world. Being unemployed excludes people from social participation and the health benefits that it brings. Evidence on the relation between unemployment and health is large in developed countries but it is much difficult to study this relationship in poor countries with an extensive informal economy.

Although the impact of unemployment on health has been studied for a long time, scientific evidence has mainly been gathered in two economic periods of crisis and high unemployment: in the '30s when research mainly focused on work-loss, and in the '70s when the focus was more on non-economic aspects. A study from Canada showed more malnutrition, underweight, cardiovascular diseases and anxiety among unemployed compared to employed^{xvi}. Research has shown that high levels of unemployment in both society and neighbourhood are correlated with poor health and increased mortality.

Precarious Employment

In an increasingly deregulated labour market, the former model of production has broken, “flexibility” has emerged as a main core goal and value, and precarious jobs have increased. Currently, in many low-income countries there are no data available on a single index of precarious employment that can be used for making international comparisons while at the same time indicators of essential dimensions of precarious employment such as “powerlessness” are yet to be developed and indicators of other

dimensions such as social benefits are not fully available. A considerable harmonization of the statistics on temporary employment, a key indicator of precarious employment, has been achieved in the countries of the OECD and the EU, allowing for interesting analyses and outcomes.

Informal Employment

Over the past two decades, employment in the informal economy has risen rapidly in all regions in most mid- and low-income countries. The informal economy comprises a wide range of production and distribution of goods and services characterized by being out of state control. Firms from the informal economy are unregulated, unregistered and have low level of organization. A feature of informal employment is the lack of any statutory regulation to protect working conditions, wages, occupational health and safety, injury insurance, etc.

Workers having informal jobs are disadvantaged compared to formally hired workers in several ways that can affect health and safety. The most important factor is poverty, since several studies show that informal economy firms usually have low profits, and informal workers have lower salaries than those in formal firms. Wages are a large component of family income and therefore the informal economy or informal jobs are important determinants of consumption patterns.

There is evidence that occupational hazards are common in informal firms. Informal workers reported receiving less training and supervision than formal workers and limited access to protective equipments. There are other factors associated with informal economy and informal jobs like low-standard housing and sanitation and inappropriate management of waste or toxic substances that can affect the environment and health.

Child Labour

A review of the literature on the topic of child labour identifies basic problems with child labour-related data. Although in certain areas indigenous and tribal children form the majority of child labourers, child labour among indigenous people continues to remain poorly documented. Three hundred and seventeen million children aged 5-17 are economically active and 218 million are child labourers; of these, approximately 126 million are engaged in hazardous work. The proportion of children in the labour market in the group of low-income countries shows a large variation. In industrialized countries, child labour accounted for about 2.5 million children under the age of 15 in 2000.

Slavery and Bonded Labour

The older forms of slavery were based on legal ownership and ethnic and racial division and relationships between slaves and slave owners were often long-term, sometimes multi-generational. The 'new' form of slavery is based not on formal ownership but on other legal instruments such as contracts and debts, most of it located in Asia and Pacific Region. The poorest members of society can be compelled to work, or induced into debt, which they or even their descendants find impossible to repay despite very long hours of hard work. They thus become locked in a cycle of poverty from which they cannot extricate themselves. It has been estimated that there are 27.9 million victims of slavery globally, of which 26.4 million are in Asia. Globally, there are at least 2.4 million people in forced labour as a result of trafficking in persons representing about 19.8 per cent of total forced labour.

Working Conditions and Health

The formal workforce (more than 3,000 million workers) constitutes about half of the world's population. When informal work and work at home are taken into account, however, the large majority of the whole population is involved in work. Working conditions, through an endless number of occupational hazards, threaten workers' safety and health, reduce well-being and working capacity, and thus affect the quality of working life and the economic status of workers and their families. Studies show that in hazardous workplaces at least more than half of workers may be exposed to high levels of occupational hazards^{xvii}. In the two last decades, important economic and technological developments have helped to reduce some occupational health problems, mainly in developed countries. Yet, in developing/poor countries where the majority of the world's working population lives, exposures to occupational hazards have even intensified^{xviii}.

Work-related injuries and diseases have a profound effect on the health of the working population, involving an enormous and unnecessary burden and suffering for workers' families and communities, and a high economic loss for firms and countries. According to the best available estimates, the number of non-fatal occupational injuries that cause at least three days' absence from work is 264 million per year: representing more than 700,000 injured workers per day^{xix}. It has been estimated that annually the global number of fatal injuries is approximately 350,000, meaning that every day 970 workers die due to their working conditions. Furthermore, work-related deaths, including injuries but also caused by cancers, cardiovascular disease, and communicable diseases, are estimated at about two million annually. Every

day 5,000 workers die due to work-related diseases^{xx}.

Occupational risk factors account for 37 per cent of back pain, 16 per cent of hearing loss, 13 per cent of chronic obstructive pulmonary disease, 11 per cent of asthma, eight per cent of injuries, nine per cent of lung cancer and two per cent of leukaemia. These work-related risks caused 775,000 deaths worldwide in 2000. There were five times as many deaths in males as in females (647,000 vs 128,000). The leading occupational cause of death among the six risk factors was unintentional injuries (41 per cent) followed by COPD (40 per cent) and cancer of the trachea, bronchus or lung (13 per cent). Workers who developed outcomes related to the occupational risk factors lost about 22 million years of healthy life. By far the main cause of years of healthy life lost (measured in disability-adjusted life years (DALYs)) was unintentional injuries, with 48 per cent of the burden. This was followed by hearing loss due to occupational noise (19 per cent) and COPD due to occupational agents (17 per cent). Males experienced almost five times greater loss of healthy years than females. The cost of work-related health loss and associated productivity loss represents around four to five per cent of the GDP.

Occupational health risks vary significantly according to many national and local factors, including social determinants of health such as employment conditions, age, gender, race or personal susceptibility. Thus, mainly due to factors such as the political tradition of each country, the economic activity and level of industrialization, the development of laws and regulations, the political tradition in industrial relations and the level of power and involvement of unions, workers will be more or less exposed to hazardous occupational factors. Developing/poor countries that still employ the major part of the workforce in agriculture and other types of primary production face occupational health problems that are different from those of developed countries. Like countries, not all workers are equally exposed to occupational hazards – data shows that health inequalities by social class, occupation, gender and type of firm are significant.

Occupational Injuries

Occupational injuries are one of the most visible ill-effects of poor employment and working conditions. Together, fatal and non-fatal occupational injuries produce about 10.5 million disability-adjusted life years, representing about 3.5 years of healthy life lost per 1,000 workers every year globally. This is responsible for 8.8 per cent of the global burden of mortality^{xxi}.

Economic costs related to compensation, lost working time, interruption of production, training and

medical expenses are estimated to amount to four per cent of annual global GDP, thus representing in 2001 US\$1,250 billion - more than 20 times greater than official development assistance. Although governments may pay for some medical services or for sickness benefits, the cost to public health budgets and insurance is ultimately borne by society as a whole, and high rates of injuries and cases of ill health might have an impact on national productivity as well. At the company level, only a small fraction of the world's workforce is covered by compensation systems, so most workers receive no income during absences from work.^{xxii}.

Occupational Hazards

Millions of workers both in developed and developing/poor countries are regularly exposed to thousands of chemicals, hundreds of biological factors and dozens of physical conditions with significant consequences for their health. Individual or combined exposures to these hazards contribute to the appearance of millions of occupational injuries, diseases, and stress reactions, as well as job dissatisfaction and absence of well-being^{xxiii}. High-quality information is lacking and standard data available often underestimates the real situation^{xxiv}.

It is estimated that around one-fourth of the workforce in developed countries and up to more than three-fourths in developing/poor countries are exposed to such physical factors and in some high-risk sectors such as mining, manufacturing and construction all workers may be affected^{xxv}. Chemicals are also increasingly used in virtually all types of work, including nonindustrial activities like hospital and office work, cleaning, cosmetic and beauty services and numerous other services. Thousands of chemical products today in use in workplaces constitute an important threat for worker's health, although the extent of exposure varies widely according to industry, activity and country.

Psychosocial Occupational Stressors

A substantial body of research has linked sources of stress in the workplace to a variety of illnesses and injuries. The most widely studied health outcome is cardiovascular disease (CVD), along with its risk factors, such as hypertension, cigarette smoking, and diabetes^{xxvi}. Work stressors have also been associated with psychological disorders, such as depression and anxiety^{xxvii}, musculoskeletal disorders, such as carpal tunnel syndrome and tendinitis^{xxviii}, and acute injuries^{xxix}.

Key characteristics of the industrial assembly-line approach to job design, whether implemented in blue-

collar or white-collar settings, are high workload demands combined with low employee control or autonomy (known as “job strain”)^{xxx}, and, during periods of economic growth, long work hours. Other work stressors include high effort combined with low reward^{xxxi}.

Threat-avoidant vigilant work, which involves continuously maintaining a high level of vigilance in order to avoid disaster, such as loss of human life, is a feature of a number of occupations at high risk for CVD, e.g., truck drivers, air traffic controllers and sea pilots^{xxxii}. More recently, researchers have been investigating the health effects of job insecurity and downsizing^{xxxiii}. Long work hours have been associated with a wide variety of health effects, including work accidents and injuries, musculoskeletal disorders, fatigue, psychological ill health, unhealthy behaviours, CVD risk factors (including blood pressure elevation), and CVD^{xxxiv}. Strong, consistent evidence of an association between job strain and CVD has been observed in men^{xxxv}.

Workplace trends in developed countries, resulting in part from economic globalization, such as the growth of job insecurity, contingent (temporary and part-time) work, and new systems of work organization, appear to be increasing work stress^{xxxvi}. In developing countries, there has been a rapid increase in the prevalence of hypertension, while in developed countries, the recent trend of a decrease in hypertension prevalence is reversing^{xxxvii}. These data suggest the need for greater efforts to document the health effects of work stress, to assess trends, and to undertake greater efforts to reduce and prevent work stress.

Employment Relations and Health Inequalities: Pathways and Mechanisms

Labour Market Inequality

A country’s employment relations determine exposures that affect workers’ health via two pathways: compensation and working conditions^{xxxviii}. In low and middle income countries labour markets are characterized by the size of the informal sector and inequitable employment relations (child labour, slave labour, low wage work, women’s unemployment, unemployment and underemployment rates). Labour market characteristics correlate significantly with health outcomes. Some studies have found evidence that labour institutions in wealthy countries are associated with population health indicators^{xxxix}.

Employment

Full-time Permanent Employment

“Full-time permanent employment” is used as the reference against which these more hazardous employment relations are compared.

Unemployment

The health consequences of unemployment are well-known for both men and women. Also, early unemployment has been shown to have lasting negative effects for later employment^{xl}. The question about whether the relation between unemployment and ill health could be related to exposure or to health-related selection (i.e. prior poor health status increases the risk of unemployment) has been much debated in unemployment research^{xli}, although few of all studies can control for health-related selection.

There is a lack of research about possible mediating mechanisms between unemployment and ill-health. Theoretically, the following causal pathways related to exposure have been proposed. The economic deprivation models assume that unemployment leads to deteriorated economy for the unemployed, which in turn worsens the prerequisites for health^{xlii}. According to the stress theory^{xliii}, unemployment and uncertainty about one's work situation in the future may act as a stressor which in turn can lead to physiological changes, changed health behaviour as well as deteriorated health.

Precarious Employment

The analysis of the pathways linking precarious employment and health inequalities is a complex phenomenon. There are many potential ways that different types of these employment forms may differentially damage the health of workers. Precarious employees may suffer adverse health effects through the action of material or social deprivation and hazardous work environments^{xliv}. The experience of various kinds of precarious jobs and the insecurity and vulnerability associated with them is likely to be associated to more hazardous working conditions and to higher income inequality. A systematic review of studies of temporary employment and health suggests that temporary workers suffer from a higher risk of occupational injuries as compared with permanent employees^{xlv}.

Non-permanent workers enjoy less job autonomy and control over working time than workers on permanent contracts and are likely to be occupied in less skilled jobs^{xlvi} and they have worse health outcomes as compared with permanent workers^{xlvii}. Temporary jobs tend to be less paid than permanent

jobs and often have less access to paid vacations, sick leave, unemployment insurance and other fringe benefits as well as less access to training. All these adverse factors may increase the risk of developing negative health-related behaviours as well as of producing detrimental psychological and physio-pathological changes leading to poorer health outcomes.

Informal Employment

Relations between informal economy/informal jobs and health and occupational-related health outcomes that may result in health inequalities are not much studied. Overall, employment status and other occupational data are not always available or lack quality in large demographic or health-related databases. Also, the lack of official statistics about workers in the informal economy, the scattered spatial distribution of shops and workers and the uniqueness of workplaces such as domestic employment are all drawbacks for research.

Being in informal business and informal employment may cause mental distress and psychological diseases, because of job insecurity, i.e., the threat to lose long-term stable jobs. In developed countries, such as the U.S. and Canada, positive associations were observed between self-employment and stress^{xlviii}, or self-perceived health^{xlix}, but other studies did not find similar evidence. Informal jobs have also been analyzed with regard to nutrition-related outcomes. Although poverty is correlated with poor nutrition, there is a more complex relation when employment status is taken into account.

Child Labour

A growing number of studies have shown that health problems are one of the main negative effects of child labour. These effects vary in nature ranging from occupational related diseases and injuries, directly related to hazards in the workplace or when commuting, to increased vulnerability to biological or toxic agents due to the immature immune system, ergonomic risks resulting from inadequate dimensions of tools and equipments and impairment of physical, mental and social development because of limited time for resting, playing and studying, among other health and developmental problems. Therefore, child labour has been associated with problems related to the physical, physiological, mental and social development of children!

Slavery and Bonded Labour

As compared to the health dimension of other types of employment conditions (or unemployment), the links between forced labour and health are very complex and challenging to get information due to their

clandestine nature of practice and denial mode of the authority regarding its existence. The working environment in terms of employee-employer relation essentially determines the health of the forced labourers on account of physical and mental trauma due to coercive action including restriction of movement and violence. Evidence on adverse health outcomes and health inequalities resulting from physical violence and mental trauma, risky behaviours, absent or inaccessible welfare measures and cultural barriers has been shown. Moreover, even after abolition of slavery practice, its legacy still persists and influences health outcomes.

Working Conditions

Globalization has increased the unequal work-related transfers between countries and social classes. A particularly important problem is the transfer of hazardous substances, materials and persons from rich to poor countries and vice-versa.

Worldwide, there are about 60 million health workers. About two-thirds of them provide health services and another one-third is management and support workers. Fifty-seven countries, most of them in Africa and Asia, face severe workforce shortages. WHO estimates that at least 2,360,000 health service providers and 1,890,000 management support workers, or a total of 4,250,000 health workers, are needed to fill the gap. Without prompt action, the shortage will worsen.

The contribution of unequal distribution of working conditions is a key contributor to social inequalities in health through multiple exposures and mechanisms. Workers are unequally exposed to occupational hazards and data showing that health inequalities across social groups, occupations, genders and firms are significantly large. For example, research has shown that the lower the occupational class, the more likely people are to experience hazardous work conditions, including physical strain, low job control, greater noise and air pollution, shift work, a monotonous job and a hectic work paceⁱ.

Several social aspects of work may raise health concerns, for example, the gender distribution and segregation of jobs and equality at the workplace, social relationships between managers and employees, and social support from fellow workers are aspects of work that may enrich or reduce social contacts. In many services and public jobs the social pressure from customers, clients or the public may cause additional psychological workload. Measures for improving social aspects of work are mainly those that promote the creation of open and positive contacts at the workplace, support the individual's role and

identity at work and facilitate team-work.

The special occupational health problems of working women are recognized in both the developing and developed countries. In the former, heavy physical work, the double burden of job and family, less developed working technologies and traditional social roles are the factors that increase the burden of female workers. In the industrialized countries, where women also face a double burden, lower-paid manual jobs are often left to female workers.

Another important issue that reflects working conditions inequalities is the association between contract and occupation status with the level of information regarding workplace risks. Nearly one out of five workers working with no contract, temporary contract or in a manual occupation are not well-informed about workplace risks as compared to only about 12 per cent among permanent and white-collar workers^{lii}. This issue is one of the main causes of fatalities among these workers.

Policies and Interventions

The Need for a Political Perspective

In scientific papers, reports, or other publications on public health, little attention is paid to the political issues that shape health policy. Policies and interventions on health cannot be thought of as a financial or a technical value-free process; rather, it is influenced by the political ideology, beliefs and values of governments, unions, employers, corporations or scientific experts and agencies, among others^{liii}.

An important issue of discussion relates to the common assumption that workers and employers share an interest and responsibility in relation to health and safety at work. This assumption is inherently flawed since it ignores the power imbalance and the existing conflict of interest in which only one party controls the means of production^{liv}. Differences in the distribution of political and economic power have a profound influence on the work environment and health. In capitalist economies, health and safety in the workplace is largely determined by economic conditions. While employers may have a long-term interest in reducing the economic costs of occupational diseases and injuries, the immediate expenditure can be high and returns may not be expected for years^{lv}.

Employers are thus faced with decisions about what constitutes appropriate expenditures and a “satisfactory level of health”. They can use economic incentives to lure workers into dangerous occupations rather than spending money to reduce the risks associated with the work. In these situations of exploitation and domination of labour, workers weigh up the cost (i.e., an injury) versus the benefit (more money) of working in these jobs. Moreover, occupational health knowledge is strongly influenced by scientists and experts.

Governments often adopt a neutral role, mediating conflicts between workers and companies, and along with experts and employers determine safe levels that do not necessarily mean absence of risk, but just what can be considered a “reasonable risk”^{vi}. These conflicts of interest shape public and occupational health policies. Acknowledging an underlying (political and ideological) conflict over workers' health is a necessary step to the process of understanding occupational health policy^{vii}.

Employment Dimensions and Working Conditions: Policies, Interventions and Experiences

The fact that many of the changes in employment practices (including global subcontracting networks) described in this report transcend national boundaries — the traditional venue of labour standards and social protection law — has raised fundamental questions about how health issues are to be addressed. One logical response would be to look to international labour standards that could ensure that global trade and business practices do not result in a “race to the bottom” as countries strive to retain their competitiveness. However, labour standards are not a component of WTO agreements or rulings, with some governments labeling them as culturally insensitive or “hidden” protectionism^{viii}.

At the social and political level, community groups, including religious bodies and ethnic associations, unions, and NGOs, have sought to garner public support (including consumer boycotts) to pressure industry and government into taking action on the worst abuses of employment practices in both developed and developing countries. New forms of community organizations and alliances have been spawned^{ix}. Sometimes of their own volition, but also in response to community pressure, a number of private corporations (such as large retailers) and NGOs have adopted ethical or corporate social responsibility (CSR) codes in relation to labour and occupational health and safety standards of both their domestic and, more importantly in the case of developing countries, international suppliers. Compliance with these voluntary codes has often been problematic due to less-than-rigorous monitoring and

enforcement on the part of the corporation or evasion on the part of suppliers^x.

Full-time Permanent Employment

The changes to work described in this report are not confined to particular categories of work arrangements. Just as downsizing/restructuring, outsourcing and privatization have contributed to the growth of temporary work and self-employed sub-contractors; they have also affected the health and well-being of workers holding secure jobs. Repeated rounds of downsizing and restructuring in large public and private sector employers has contributed to increased job insecurity and worker concerns that their commitment is not reciprocated. These changes often entail increased workloads/work intensity and changes to jobs and work processes (such as multi-tasking).

There is now a substantial body of evidence that workers who 'survive' downsizing suffer from stress and other adverse occupational health safety effects. Reduced staffing levels and increased workloads may contribute to premature burnout by professional workers; reduced staffing may also affect the health and wellbeing of others, such as hospital patients. Downsizing and the growth of precarious employment can also affect the working conditions of all workers in particular industries as a result of increasing work intensity or specific spillover effects. While the occupational health and safety laws of some countries require risk assessment/control and consultation when employers make changes to work practices that could affect occupational health and safety, implementation has usually been minimal.

Unemployment

The devastating health consequences of unemployment have been well-established by research since the 1930s. There is compelling evidence that unemployment has profound long-term effects on the health of individuals and communities. Unemployment has a number of well-documented unfavourable health consequences which will increase the burden on health services and bring about suffering among those who are stricken by illness. It will also affect the distribution of health and welfare in the direction of greater health divides in society.

In developed countries, changes to macroeconomic policies, social security and unemployment benefits have increased financial and other burdens on the unemployed, the hidden unemployed (discouraged job seekers, including many older workers and women), the under-employed (a growing group, including older workers, seeking more hours or more regular work) and encouraged often marginal forms of

self-employment^{lxii}. While labour market flexibility has been seen as a means of reducing unemployment (and its well-documented serious health consequences), research on the adverse health consequences of extensive precarious employment brings into question whether there is a net health benefit to the community^{lxiii}.

Intermittent employment (with periodic bouts of unemployment) may be especially debilitating^{lxiii}. In developing countries without extensive unemployment insurance, the extent of unemployment is often poorly recorded and under-employment is extensive and often disguised by minimal forms of self-employment in the informal sector.

Precarious Employment

The growth of precarious employment has weakened mechanisms for worker voice or involvement (workplace committees and health and safety representatives), a situation worsened in some countries by declining union presence^{lxiv}.

In developed countries, government responses to these issues has been slow and incomplete, including amending occupational health and safety and minimum labour standard laws, codes, and guidance material; adding contractual obligations (e.g., occupational health and safety provisions in government tender standards); strategic enforcement campaigns; industry-specific packages (e.g., agreements dealing with small builders and subcontractors in construction); and the establishment of (often union-backed) roving safety representatives. In most developing countries limited laws, shortfalls in inspectoral resources, weak or repressed unions and a political climate not conducive to enforcement inhibits implementation of basic standards^{lxv}.

Competitive work arrangements, pressure on precarious workers, restructuring and under-staffing have also been linked to increased bullying and more overt forms of occupational violence although more research is required^{lxvi}. Insecure and erratic hours of work and earning streams associated with contingent work can affect non-work activities (e.g., arranging childcare, family needs, and leisure), budgeting and the accumulation of pension entitlements—a potentially serious issue for older workers holding these jobs^{lxvii}.

Informal Employment

The informal sector can be seen as a step beyond precarious employment with respect to vulnerability. The economic pressure (including effort/reward imbalance), social disadvantages and disorganization surrounding much informal economy work exposes workers to an array of heightened risks including poor mental health, physical over-exertion, and exposure to sexual harassment and violence^{lxviii}. The informal economy remains invisible in terms of OHS statistics and the existence of such a substantial sector alongside the formal sector can corrode regulatory protection of the latter, because it means there is no universality to minimum labour standards and the informal sector can be used as an alternative source of supply (through outsourcing) by local or foreign firms seeking to evade regulatory standards^{lxix}. Informal workers have sought to organize on occasion to protect themselves, although social marginality and workplace isolation make this difficult and these bodies have, on occasion, been shunned by unions more concerned about restricting than appearing to give legitimacy to the informal economy.

Child Labour

Child labour remains both pervasive and concentrated in the informal economy of developing countries in Africa, Latin America, and elsewhere; and the conditions of some of these workers may have worsened^{lxx}. Child-labour has also reemerged as an issue in developed countries (seven per cent of Australian children aged five-14 work^{lxxi}). Children are concentrated in precarious employment (temporary and seasonal jobs and home-based work) and numbers are found in high-risk industries such as farming/agriculture — something that has caused governments to reconsider their child labour laws^{lxxii}.

Slavery and Bonded Labour

Although legalized slavery is now rare, millions of men, women, and children in developing countries are forced to work under various forms of debt bondage or contractual servitude that government authorities tolerate. While the clandestine nature of forced labour makes its health effects difficult to assess, the violation of human rights and the health inequities it entails justify stringent attention.

Conclusion

Few of the policy interventions identified here have been the subject of detailed evaluation. Many make intuitive sense because they are directed at those characteristics that evidence suggests cause the problem. Evidence on the effectiveness of some interventions that have been promoted internationally, such as corporate social responsibility and micro-credit, is ambiguous^{lxxiii}. On the other hand, available

evidence indicates that less-publicized measures such as food/income support for the poor have alleviated the incidence of child labour in countries like Brazil.

This report places considerable emphasis on infrastructure (poverty alleviation, universal education and public health facilities, government inspectorates) and regulation (international standards/agreements, laws and enforcement). This is because governments and their agencies are in a position to provide comprehensive standards and laws and to enforce them. These policies also set a framework of community expectations that influence other actions. Interventions may also occur at the employer/organizational level and the job/task levels.

Voluntary measures by employers/corporations have a role to play but are too fragmented to reshape employment conditions and lift standards generally. The same applies to union and community activities although unions can generalize collectively negotiated protections (nationally and internationally) and, as evidence from developing countries attests, community actions can act as an important adjunct/impetus to government measures. Historically, government action, often in response to community pressure, has set minimum social standards. Mandating of standards or enactment of regulation will have little effect without adequate supporting infrastructure and rigorous enforcement.

As in the past^{lxxiv}, evidence attesting to the effectiveness of new policy/regulatory measures addressing the OHS threats of employment conditions will only accumulate slowly, and involve a process of trial, error and refinement in the context of ongoing community pressure. Fundamental questions also need to be asked about what employment conditions best serve the long-term health and well-being of the global community and to identify the current national and global policy settings that are inconsistent with this. Leaving the health consequences of employment conditions as an afterthought consideration in trade, commercial transactions and business practices will simply perpetuate the problems identified in this report.

Recommendations

- Public efforts at improving the health inequalities produced by employment relations should take into account power differences among social actors such as employers (owners of big businesses and micro-entrepreneurs), workers and government.
- A more equitable balance of power in employment relations in most parts of the world is needed to create decent job growth and improve health.
- The quest for economic development in countries must not come at the cost of the health of the people who make that development possible.
- Fair employment should imply a just relation between employers and employees that requires: freedom from coercion, job security, fair income, job protection and social benefits, respect and dignity at work, workplace participation, and enrichment and lack of alienation.
- There is a strong need to develop communication and dissemination campaigns concerning employment and working conditions as social determinants of health inequalities.
- Political and public health international institutions should recognize fair employment and decent working conditions as universal human rights.
- Full employment policies should be promoted to reduce the health inequalities associated with unemployment.
- Tailored employment policies must be developed for young workers in developing/poor countries and for both, old and young workers, in developed countries.
- Regulation of the labour market via protective legislation (wages, benefits and working conditions) and independent strong unions are necessary to reduce the size of the precarious workforce and its determination of health inequalities.
- Economic development policies and programs should be promoted mostly in middle and low income countries taken into consideration the offer of formal job posts thus assuring social sustainability and unemployment reduction.
- Development of policies targeting the reduction of informal business such as special taxation gradients for unregistered small and home-based firms.
- Support the creation of informal workers organizations based on shared relevant features such as occupation (domestic workers, taxi drivers, etc.), workplace location (farmer markets, streets), conditions such as being a migrant worker, and production chains (food industry chain composed of small agricultural farmers to international trade corporations). These organizations, like labour

unions, will strength and make politically visible informal workers interests and needs.

- Development of occupational training and empowerment programs, including occupational health and safety contents, targeting informal workers and social movements.
- Support collective arrangements for production based on solidarity as exemplified by the so-called solidarity economy.
- Provision of universal coverage by health care, including occupational health and safety programs integrated to primary health care, especially family health care programs.
- Government lead national industrial policies devoted to full employment, universal education and enforcement of fair employment standards are necessary to eliminate child labour.
- Development of programs to raise parents' awareness about the social and health problems caused by child labour, and when applicable, conditional cash transfer programs to poor families with school-age children.
- Government lead national policies devoted to full employment, and educational opportunities, national and international law enforcement of fair employment standards are necessary to eliminate slavery.
- Developments of international campaigns to raise awareness about sex traffic targeting potential victims, and provision of support and protection to those who is seeking for help.
- Supporting land reform in developing countries can potentially reduce slavery most common in areas of rural land conflicts.
- Unless guaranteeing fair employment is recognized as a priority by public health agencies and international regulatory institutions, health inequalities at the workplace are unlikely to be reduced.
- More longitudinal empirical research and reviews are needed in relation to issues such as the mediating mechanisms between employment dimensions, their interrelation one to each other, and several health outcomes. Most studies of employment dimensions should stratify by social class, gender, age, ethnicity/race and migration status.
- Much more research is needed about the public health and health inequalities consequences of employment relations in middle and low-income countries.
- There is a lack of theoretical frameworks showing the links and pathways that create employment dimensions leading to poor health outcomes.
- There is a need to generate models that specify how macro-social processes, operating at the

country and regional levels, individual employment situations, and health are interrelated.

- Explanatory models are also needed for guiding public health interventions but also for the evaluation of policy interventions at various levels.
- Governments and health agencies should establish adequate surveillance information systems and research program to gather public health data on new forms of non-standard employment and “hard to reach” precarious employees.
- There is a large gap in employment relations and health data between high, middle and low-income countries. Middle and low-income countries should be able to update their information systems on employment relations to establish useful comparisons with wealthy countries. For example, in poor countries there is a massive gap in data regarding work related injuries and accidents among children.
- While interventions in relation to employment conditions may occur at the organizational and job task level, employment and working conditions should be restructured at the social policy/regulatory level.
- Voluntary measures by employers/corporations have a role to play but are insufficient and too fragmented to reshape employment conditions and lift standards generally. Union, social movements and grassroots community activities are important. Unions can generalize collectively negotiated protections (nationally and internationally) and, as evidence from developing countries attests, community actions can act as an important adjunct/impetus to government measures.
- International regulatory agencies should have the power to influence governments to adopt fair employment policies. United Nations other international agencies dealing with the rights of workers should have the power to influence the adoption of fair employment practices among countries members.
- Policies to achieve better employment and working conditions require the implementation of evaluated inter-sectorial actions and programs, where health policymakers need to be actively engaged.
- Enforceable standards (with effective sanctions) are essential at national and international level along with economic and health policies designed to alleviate poverty in developing countries.
- The state should guarantee health and work as rights, along with access to fair employment and decent work. The state must take responsibility to ensure real participation of the less powerful social actors.

- The health sector should assume a fundamental role in the achievement of health equity for workers and their families. It can do so by including in discussions about economic development models, the labour market, and norms and regulations on employment and working conditions, the centrality and importance of the impact of these factors upon the protection and promotion of the health of workers and their families.
- Health and health equity among workers should be a matter of public health, thus they should be guaranteed to working people independent of their conditions of employment. Here the strategy and model of primary health care has a capacity and a responsibility to reach these sectors with preventive and curative interventions and with support for reinsertion into work.
- The principal guarantors of health and health equity for workers are the workers themselves. Health cannot be delegated. For this reason, society as a whole must guarantee to workers the right to know about the health risks generated by employment and working conditions and must provide them with the tools for participation and real influence in the negotiation and modification of employment and working conditions.
- It is necessary to develop information systems that include health and health equity among workers, as well as follow-up and impact of policies and programs to mitigate and reduce health inequities among workers.
- It is necessary to develop education and training in social epidemiology, with emphasis on workers' health and employment conditions, directed both at health professionals and workers.

Endnotes

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