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Occupational Health and Safety in Workplace: A Theoretical Approach

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ABSTRACT

This paper focuses on occupational health and safety of employees in the workplace and the laws so implemented. Occupational health and Safety is an integrated field that is concerned with the health, safety, and welfare of workers in all jobs. The Occupational Safety and Health Administration (OSHA) was found in 1970 as a result of the realization that all employees should have a reasonable expectation of safety at work. Occupational safety and health have grown to be a top concern for stakeholders when it comes to caring for the human resources because of the huge number of accidents and exposures that take place in all types of workplaces and the effects that these have on workers' organizations, society, and nations. This article addresses various policies that were implemented to guide the stakeholders. Further, this paper examines the development in the area of occupational health and safety in India. It also brings up light on the facilities that is brought up in the field of occupational health like the occupational hygiene, occupational medicine, etc. Finally the article ends by recommending to enhance the occupational risks for immigrants. Since Occupational health and safety are less concerning and not being discussed much, it has to be given attention.

Keywords: Occupational health, Safety, Legislation, Work Environment, Infrastructure, Immigrant workers, Recommendations, Non-Immigrant Workers.

Introduction

The area of study known as occupational health and safety encompasses a wide range of subdisciplines due to its expansive reach. In the most general sense, it should strive to achieve:

The placement and maintenance of workers in an occupational environment adapted to the physical and mental needs of workers; the adaptation of work to humans. The promotion and maintenance of the highest degree of physical, mental, and social well-being of workers in all occupations; the prevention among workers of adverse effects on health caused by their working conditions; the protection of workers in their employment from risks resulting from factors adverse to health. In other words, occupational health and safety refers to the well-being of workers in all aspects of their lives, including their social, mental, and physical selves (the "whole person"). A successful occupational health and safety practice requires the collaboration and participation of both employers and workers in health and safety programs. Additionally, it requires the consideration of issues relating to occupational medicine, industrial hygiene, toxicology, education, engineering safety, ergonomics, psychology, and other related field.

Because they are typically more challenging to address, occupational health concerns receive significantly less attention than occupational safety concerns the majority of the time. A healthy workplace is by definition also a safe workplace; however, when health is addressed, safety is also addressed because a



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healthy workplace is also a safe workplace. However, it is possible that the reverse is not true: a workplace that is said to as safe is not necessarily also a healthy workplace. The critical point is that problems pertaining to health and safety must be addressed in each and every place of employment. The definition of occupational health and safety that was presented before takes into account both health and safety in the most general senses possible.

National Policy and Legislation

After prolonged deliberations, the National Policy on Safety, Health and Environment at Work Places are approved by the Government of India in February 2009. To develop a safety culture and environment in work places various policies are implemented to provide general guidelines for all stakeholders. It also deals with the development of statutory frameworks, administrative and technical assistance, incentive systems, prevention methods, and their monitoring, as well as the incorporation of safety, health, and environmental considerations into other associated national policies. In accordance with this national policy, a general OSH legislation applicable to industries, mines, plantations, ports, construction, etc., as well as unorganized sectors such as homework, must be adopted. Workers' organizations, non-governmental organizations, and other organizations can persuade lawmakers to act quickly on the subject. The unstructured economy, which includes agricultural and home employment, requires the creation of appropriate norms. It is only fair that primary employers that outsource 'home work' bear some of the burden for the workers' fundamental safety and health. The current enforcement agencies need to be reformed and a proper enforcement plan to be implemented. The credibility, competence, and acceptability of law enforcement agencies must be bolstered immediately. Inspectors in manufacturing facilities should undergo intensive training. There has to be a central database tracking all cases of occupational illness and injury across the country.

Creating awareness

Legislators, businesses, workers, contractors, and the general public all stand to benefit from raising knowledge of occupational safety and health (OSH). There needs to be a focus on occupational safety and health (OSH) in high school, college, and vocational programs. Media campaigns should inform the public about issues like environmental pollution and the diseases that result from prolonged or repeated exposure to toxic substances. Effective OSH training and awareness initiatives are needed in the unorganized sector. Workers' and managers' perspectives on OSH need to be shifted immediately. The use of occupational safety and health in collective bargaining and the application of political pressure by labor unions can be very effective in reducing the incidence of workplace injuries and illnesses. Various industries could benefit from industry-specific standards of practice for occupational safety and health issues like noise, chemical handling, ship breaking, etc. It's also important to make and disseminate instructional videos, manuals, and pamphlets. Programs to improve occupational safety and health should be held at or near workplaces, and employers and their representatives should be required to attend. The participation of non-governmental organizations, expert groups, and employer groups should be actively solicited.

Development of infrastructure and competence

The field of occupational health is severely understaffed in India. In the organized sector alone, there is a demand for almost 10,000 occupational health physicians and industrial hygienists, but there are now only a little more than 1,000 people in these roles. Most doctors haven't taken any courses in occupational



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health, therefore they don't know how to spot and stop the spread of occupational diseases. Both the delivery of occupational health services from medical college hospitals and the integration of occupational health into our general health services pose significant obstacles for India. Medical professionals in both the public and private sectors would benefit greatly from a broad program of intensive short-term training in occupational disease diagnosis. Universities should offer advanced degrees and faculty jobs in occupational health and industrial hygiene.

To provide uniform national standards for occupational safety and health, a non-governmental, accrediting body is required. Both the international exchange of OSH expertise and a system for auditing the efficacy of OSH in industries, ports, and mines would be beneficial. The government should enlist the help of employer groups, trade associations, non-governmental organizations, and professional groups like the Confederation of Indian Industries and the Indian Association of Occupational Health in order to conduct studies and surveys at the national level.

In addition, there are other concerns, such as the need for international cooperation and the coordination of care when hazardous companies relocate from developed countries. As a result of liberalisation, privatisation, and globalisation, occupational safety and health (OSH) issues have arisen in many different fields throughout India's workforce, especially in the service industry.¹

Disease and Economic Losses:

Diseases of the respiratory system, cardiovascular system, digestive system, urinary tract, neurological system and other sensory organs, hearing loss, musculoskeletal disorders, reproductive health difficulties, and skin allergies are only some of the occupational health concerns that plague the workforce. In 2003, the International Labour Organisation (ILO) estimated that 4,03,000 individuals in India died each year due to reasons related to their jobs, and in 2008, the ILO estimated that another 3,56,000 were affected by occupational diseases. To put it in perspective, this is an astoundingly high statistic because it means that each year per thousand working adults die from work-related causes. On the other hand, 55,200 people died in the US in 2003, the equivalent year. The official data, which greatly understate mortality, stand in stark contrast to these high projections. There may be a 10%-20% drop in GDP due to the lack of access to and quality of occupational health treatments, as well as the burden of occupational sickness. Lessons about the effects of rapid industrialization on occupational health can be learned from China's experience with rapid economic growth over the past few decades. The health and safety of Chinese workers suffered greatly as a result of the government's neglect of environmental and occupational issues during this time. In newly industrialised rural regions, for instance, where hazardous industrial agents are poorly controlled and occupational health services and medical care are limited, there has been a significant increase in respiratory disorders. Every year, work-related accidents and illnesses in China cost businesses and the government a combined -\$38 billion, or 6% of GDP. Despite having a far smaller industrial base than China, India has a burden of occupational disease and injury that is equivalent to China's. Any growth in this industry will have a negative impact on the health of the Indian population and economy.

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Shyam pingle, Sci-Hub / Occupational Safety and Health in India: Now and the Future / 10.2486/indhealth.ms1366, SCI-HuB (Apr. 11, 2012), https://sci-hub.hkvisa.net/10.2486/indhealth.ms1366



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Regulatory Framework:

For the sake of all working men and women in the country, the government is required by the Directive Principles of State Policy to regulate all economic activities for the management of safety and health risks at workplaces. For instance, Article 24 outlaws child labour, Article 39 mandates that the government to protect the health and safety of all workers, regardless of age, and Article 42 mandates that the government ensures that all workers, regardless of gender, have access to fair working conditions and maternity leave.

In India, the informal economy accounts for roughly 91% of overall employment and 95% of female employment. Based on data collected by the Directorate General, Factory Advice Services and Labour Institutes (DGFASLI), in 2012 there were 1,310,00129 people employed in 3,24,761 registered factories in 2009.

In contrast, agriculture and construction account for the great majority of the unorganised sector's around 400 million workers. Thus, despite many revisions, only about 9 percent of the workforce is covered by occupational health legislation like the Factories Act of 1948. The Mines Act (1952), the Plantation Labour Act (1951), the Dangerous Machines Act (1983), and the Radio-logical Protection Rules (1971) all apply to extremely specific subsets of the labour population. The Employees State Insurance Act is constrained in the same way as the Workers Compensation Law. Many workers, especially women, are still left unprotected by the Unorganized Sector of Social Security Act of 2008. There is a lack of specified exposure limits for the majority of hazardous pollutants, and there is no guidance for exposure and hazard monitoring. Additionally, there are no systems for periodic audits or for reporting accidents.

Occupational Health Facilities:

At the national level, there is a severe lack of qualified occupational health professionals such as occupational physicians, industrial hygienists, occupational nurses, and safety specialists. This deficit affects all areas of occupational medicine. According to data provided by (Directorate General Factory Advice and Labour Institutes) DGFASLI (2012), there were 2,642 safety officers and 938 factory inspectors in the country in 2009. Additionally, there were 26 medical inspectors, 18 chemical inspectors, and one hygiene inspector. In addition to there being a lack of human resources, the training that these inspectors have received to carry out their responsibilities is inadequate. A typical training programme for factory inspectors in India consists of merely a three-month certificate course in industrial health provided by the Central Labour Institute (CLI). In comparison, an occupational hygienist in Europe, North America, or Australia must complete a master's degree programme in these fields that takes a minimum of two years to complete. There are approximately 100 occupational hygienists across the entire nation. There are no competency-based syllabic, accreditation organizations, or specialized certifications such as the Certified Industrial Hygienist (CIH) designation in the fields of occupational medicine, nursing, or industrial hygiene.

The CLI, the National Institute of Occupational Health, the Industrial Toxicology Research Centre, and regional occupational health centres are some of the government agencies that do research and provide training in the field of occupational health. Nevertheless, they do not receive sufficient funding and, in general, do not have robust collaboration relationships with one another. Their output, measured in terms of the number of newly trained professionals that graduate each year, is far lower than the need for such newly qualified experts. There are no organizations that are responsible for formulating occupational



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exposure limits to serve as compliance yardsticks in workplaces or as guidance on the most effective practices.

Recommendations:

Investment in new and existing infrastructure is a critical factor in the maintenance of economic expansion. Occupational health is an essential part of the infrastructure of every nation, and ensuring the safety and well-being of workers not only boosts productivity but also has a beneficial effect on economic and social advancement. In addition to this, it offers a source of competitive advantage. Because of this growing realization, it is very necessary to adopt significant reforms in order to enhance India's occupational health and safety (OHS) infrastructure. Despite the fact that we are aware that it may be difficult to accomplish these goals, the following are some of the more pressing requirements:

- (i) Regulatory reforms are necessary to ensure that all workers, including those in the informal sector and those working in agriculture, are protected by occupational health regulations. These laws currently do not cover either group of workers. In addition, the regulations need to be modernized so that they cover the whole spectrum of physical, chemical, and biological dangers to which workers are exposed.
- (ii) Both the federal government and the state govern3ments will need to make significant financial investments in order to create trained staff in the fields of occupational medicine, industrial hygiene and safety, occupational nursing, social workers, and public health researchers. The best way to make these investments would be through a public-private collaboration. These will be required to meet the requirements of occupational health management in industry in addition to the requirements of compliance and enforcement actions required by both the central government and state governments. This calls for investments to be made in existing central institutes that are pertinent to occupational health and safety, as well as universities, in order to build multidisciplinary curricula and training programmes in OHS. In order to better customize the investments, a needs assessment should be carried out on both the national and state levels.
- (iii) It is necessary for these institutes and universities to realign their research and development operations so that they are in line with the priorities of the nation, with an emphasis placed on putting research into practise. For the purposes of directing the processes of standardisation and implementation, it is necessary to assign the responsibility of producing methodical and trustworthy data on toxicological and epidemiological information related to a variety of dangers to an institution that is located within the central government.
- (iv) Administrative reforms are necessary in order to improve coordination between various ministries that are relevant to occupational health and safety, such as labour, health and family welfare, human resource and development, industry and agriculture, environment and forest, and commerce, as well as affiliated institutes, in order to make better use of available resources. It is necessary to link the infrastructure for occupational health with primary health centers in order to deliver healthcare services that are readily available, easily accessible, and reasonably priced.
- (v) In the private sector, the larger firms need to take the lead in making occupational health and safety a priority and acknowledging that it can be a strategic enabler of growth and source of competitive advantage (for example, ISO certification). This responsibility falls on the larger companies



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because of their greater market share. If the larger corporations insist on it, then the culture of awareness of ohs has the potential to diffuse the global supply chain.²

Occupational health risks for immigrant workers:

It is widely acknowledged that migrant laborers are among the most defenceless members of society. They frequently take part in activities that are referred to as "3-D jobs," indicating that they are dirty, hazardous, and demanding (sometimes humiliating or demoralizing), and yet these employees are frequently hidden from or invisible to the public eye and from public policy. They are subjected to human rights violations, abuse, human trafficking, and violence on a regular basis, and they labour for less compensation, for longer hours, and in poorer conditions than non-migrant workers do. Most importantly, these people may be more willing to take risks on the job, do their duties without receiving proper training or protective equipment, and may not complain about the harmful working circumstances that they are subjected to. The situation is especially dire for immigrant workers who do not have authorization to work in the United States and run the risk of being fired from their jobs and perhaps deported from the country. Immigrant employees face a higher risk of occupational fatalities and injuries as a result of these conditions when compared to native-born workers performing the same job in the same industry, even though both groups are engaged in the same activity. Recent increases in the number of occupational injuries and fatalities as well as expenditures associated with those accidents have been predominantly attributed to immigrant employees. This reflects the increased burden of occupational injuries and fatalities that is shouldered by immigrant workers.

To put it another way, the proportion of fatal and nonfatal workplace injuries among immigrants has been increasing, which is reflective of the fact that the most dangerous jobs have been shifting to the workforce comprised of immigrants. Immigrant employees have greater rates of unfavourable occupational exposures, which leads to poor health outcomes, workplace injuries, and occupational fatalities. This phenomenon is seen all around the world. According to estimates provided by the International Labour Organization (ILO), there were 2.3 million deaths attributable to occupational causes worldwide in the year 2014. The increased incidence of occupational fatalities among immigrant employees may be ascribed to a range of factors, including the inherent risks that are present in the jobs itself as well as the lack of training and protection that is provided for foreign workers. In the United States, the vast majority of immigrant workers are employed in the service sector; natural resources, construction and maintenance (NRCM); agriculture; and production, transportation, and material movement; all of which are industries that report significantly higher rates of injury in comparison to other industries. A similar trend of employment may be found in Canada, with the majority of immigrants finding work in the agricultural sector. Agriculture is one of the most dangerous sectors and has the highest rates of occupational injuries and deaths, much like it does in the United States.

Agriculture is also one of the most dangerous industries in Canada. In contrast, native-born employees in Australia are more likely to work in agriculture and construction. This finding is likely attributable to the push for "skilled" or professional migration to Australia, which refers to workers with talents that will contribute to the Australian economy. As a consequence of this, native-born workers in

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² G. Ramachandran & Sigamani Panneer, OCCUPATIONAL HEALTH AND SAFETY IN INDIA: THE NEED FOR REFORM (Nov. 2014), https://www.researchgate.net/publication/289075117 Occupational health and safety in India The need for reform.



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Australia may have a higher risk of occupational injury than workers born in other countries. An examination of over 30,000 workers from 31 different European nations, which was carried out with the help of the European Working Conditions Survey, found that migrant workers had greater rates of negative occupational exposures in comparison to native workers. It was more likely for migrant employees than it was for native workers to be subjected to high temperatures, loud noises, powerful vibrations, and quick labour speeds, as well as to stand for extended periods of time. These employees frequently worked without contracts and were required to adhere to inconvenient work patterns.

Many times, the sectors that are most likely to hire migrant workers are also the industries that pose the greatest threat to the health of its employees. According to the US Census of Fatal Occupational Injuries, immigrant employees have a 15% increased risk of being fatally injured on the job compared to their counterparts who were born in the United States. Studies have indicated that a greater number of people reporting poorer health is connected with the absence of a permanent job contract. This is especially true for migrant employees, who are less likely to have a permanent employment contract than native-born workers.

Recommendations to improve occupational risks for immigrants:

Recent developments have begun to mitigate some of these hazards and lessen the disparities between immigrant and native-born workers. Despite the fact that immigrant workers are at an elevated risk for occupational diseases and accidents, recent innovations have begun to mitigate some of these dangers. Examples drawn from different parts of the world are used to illustrate various strategies for improving the health of workers. Enhanced Instructions Regarding Safety The attention that is paid to legislation and one-of-a-kind collaborations may improve working conditions as well as the health of workers, despite the fact that immigrant workers face higher risks of occupational injury and fatality on the job. An important first step is to make strides towards improving health and safety training. In multi ethnic work environments, providing safety information in English or through the use of flyers or worksheets is not sufficient since there are hurdles to communication caused by differences in literacy skills, varying levels of education, and unequal access to formal education.

Methods that are universally applicable in terms of culture, education level, and language should be incorporated into safety training. These methods include pictograms, pictures, and hands-on activities. Trainings that take place on the job are just one of many ways to improve the health and safety of workers. It is possible to extend trainings and messages on public health beyond the confines of the workplace and into the realm of social media, or through partnerships with local community centres. An innovative relationship between the National Institutes for Occupational Safety and Health and the government of Mexico was formed with the goal of enhancing the health and safety education opportunities available to immigrant employees of Mexican ancestry. The agency is able to give culturally relevant occupational training designed in collaboration with Mexican nationals by utilising the fifty consulates located around the United States. These training are carried out in an environment in which immigrants feel comfortable and secure.

The Occupational Safety and Health branch of the United States Department of Labour recently put into effect its Site-Specific Targeting programme in order to focus on professions that have a high incidence of injuries. This programme includes sending a letter to the organizations that have been identified to warn them about the high injury rates and conducting inspections to ensure compliance with the legislation regarding workplace safety and health. In spite of the fact that the outcomes of these



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initiatives are inconclusive, comparable strategies that make use of risk-based audits to direct resources in the direction of probable occupational safety issues show positive effects. It is possible that giving industries that are known to employ immigrant workers in high-risk employment more attention from the federal government will help lower the number of occupational injuries and fatalities. The usage of social media and government partners is one of the innovative tactics that has been devised to improve workplace safety on a national level. These strategies might be broadened to reach workers who have immigrated to the country. Adjustments to Policy The International Labour Organization (ILO) has taken the initiative to protect the health of immigrant workers. The ILO's objective of social justice is to create fair labour practices in host nations in order to promote worker protection. The International Labour Organization urges governments to enact policies that "recognise the contributions that migrant laborers make to host countries", as well as measures that encourage "decent work opportunities" and social protections. Migrant workers accept and carry a large deal of personal risk in order to contribute to the economy of both their place of origin and the country in which they find employment.

The International Labour Organisation (ILO) is working to establish agreements that will improve the health and safety of workers by encouraging collaboration between countries of origin and countries of destination. The Migrant Welfare Fund, which is run by the government of the nation of origin, is one of the methods that can be utilised to encourage fair labour practises. The Overseas Workers Welfare Administration, which is run by a specialised government agency inside the Department of Labour and Employment in the Philippines, is a good example of a well-developed migrant welfare fund. This administration is part of the Philippine government. The fund protects the rights of workers migrating from the Philippines by providing predeparture orientation, loans to defray the costs of migration, life and personal accident insurance, and immediate repatriation of workers who become ill while working abroad. The modest membership fees are paid by the migrant or the recruiting agency. Another strategy that has been utilised successfully all over the world to strengthen worker rights is to increase the role that nongovernmental organisations (NGOs) play in the process. For instance, non-governmental organisations (NGOs) in China's Pearl River Delta provide migrant workers with ongoing trainings on topics such as their legal status, capacity building, and financial resources. Fair Recruitment Policies Predatory recruitment practises in the country of origin are the first step towards creating a vulnerable environment for foreign migrants. When migrating to a new nation, workers are frequently expected to pay substantial recruitment fees to the company or individual that is supporting them in the relocation process. It may be difficult for the migrant to evaluate whether or not the recruiting agency is a reputable organization or one that takes advantage of the migrant's vulnerabilities. Because of the worker's incapacity to pay the expensive recruiting expenses, the worker is at risk of being forced into servitude or trafficking. Recruiting prices should be reasonable.

In 2014, in response to violations of worker rights, the International Labour Organization (ILO) announced the Fair Recruitment Initiative. The objective of this initiative was to reinforce laws and policies surrounding international labour recruitment, to encourage fair corporate practices, and to empower employees with avenues to oppose corruption. The government of Bangladesh established official offices to monitor the recruitment of its people after realizing that remittances paid by emigrants were providing a significant boost to the country's economy. After conducting an investigation into work contracts, the Bureau of Manpower work and Training awards licences to employment placement companies and grants immigration clearance. Under the terms of the Free Movement and Residence Agreement, inhabitants of certain countries in Latin America have the opportunity to work in a nation that



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is a party to the agreement without the need for a work visa. Despite the fact that government regulations are unable to defend against all unethical recruitment practices, bringing national attention to the process is a step in the right direction to ensure worker safety. Last but not least, platforms such as social media and investigative journalism have the potential to play a part in bringing to light some of the instances of foreign workers being subjected to abusive working circumstances and, ultimately, in leading to improvements in those situations. Both the research of nail salon workers in New York and some of the conditions of female domestic workers in the United Arab Emirates fell into this category. The authorities have been forced to make much-needed reforms as a direct result of the negative publicity as well as the actions taken by customers in these cases.³

Current and Future Needs:

Liberalisation, privatisation and globalisation have had an impact on working life in India and provide new occupational safety and health problems across a wide range of professions.

The three most important OSH needs are:

- 1.Law to extend occupational safety and health coverage to all segments of the workforce, including the unorganized sector.
 - 2.Increasing Occupational Safety and Health awareness among stakeholders.
 - 3. Developing OSH infrastructure and OSH personnel.

Other issues include integration of occupational health with primary health care.

Conclusion:

It is necessary to create new, longitudinal data sets containing detailed information on workers' employment histories and the specific demands of the job, as well as objective information on the health and safety risks to workers in the job, in order to allow for an effective examination of the relationship between health and employment and work-related factors among older workers. This is necessary in order to permit an effective examination of the relationship between health and employment and work-related factors among younger workers. These kinds of data set do not currently exist since it is prohibitively expensive to produce them.

An ideal longitudinal data set would provide baseline information on the health status and previous work histories of a representative sample of older Americans, with an over representation of minority and other high-risk groups. This would be an ideal set of data because it would allow researchers to better understand the factors that contribute to health disparities. The survey that collects these data would periodically collect from respondents and their employers data that provides researchers with consistent, reliable, and continuous information on respondents' employment and earnings, the risk factors that are associated with employment, including work organization and job demands on physical and mental capacity, and exposure to risk factors such as harmful chemicals. These statistics are necessary for tracking work and retirement patterns among ageing cohorts of employees and for determining how working affects one's health. These data are also required to evaluate the influence of factors such as one's health, the health risks posed by their place of job, the duties of family life, and other causative factors on employment

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³ Moyce S C & Schenker M, *Sci-Hub* | *Migrant Workers and Their Occupational Health and Safety. Annual Review of Public Health*, 39(1), 351–365 | 10.1146/annurev-publhealth-040617-013714, SCI-HUB: KNOWLEDGE MUST BE FREE (Dec. 19, 2017), https://sci-hub.se/https://doi.org/10.1146/annurev-publhealth-040617-013714



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in later life. The previous Retirement History Survey and the more recent Health and Retirement Study, in addition to the other longitudinal surveys that are now accessible, do not provide any information that is accurate or continuous on the risk variables to which workers are exposed in their careers.

Creating the perfect data set would be highly expensive, but it may be the only technique that has a chance of producing enough information to provide a comprehensive understanding of the connection between workplace risk factors and the health of employees as well as their employment habits in later life. Altering already-conducted longitudinal and non longitudinal surveys in such a way that they include vital data on the health hazards of the workplace represents an alternative that is both more constrained and less expensive. The collection of longitudinal records for a convenience sample is less expensive than the collection of longitudinal records for a nationally representative random sample that includes periodic in-person or telephone survey updates. This provides an additional option for the data collection process. A comprehensive set of baseline interviews with a group of workers and people who have recently retired from a large national employer, such as the United States government, is one approach that could be taken. For the purpose of constructing lifetime work histories, measuring subsequent employment and retirement patterns in the cohort, and conducting less frequent in-person interviews, personnel and other administrative records as well as less frequent interviews would be employed. The large number of people employed by the government would also make it possible to conduct targeted sampling for a more accurate analysis of demographic subgroups. However, this would almost certainly preclude the possibility of evaluating a comprehensive variety of vocations.