Occupational Health, Safety and Wellbeing: Global Issues and Opportunities

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Overview

• Worker Health in Context of Global Health
  – Human rights & workers’ rights
  – Emerging workplace health and safety challenges in an increasingly global economy

• Recognizing and addressing occupational health and safety problems
  – From public health perspective
  – From clinical perspective
The need…and right…to health at work

• 58% of world’s population spends one-third of its adult life at work, contributing to development and wellbeing of self, family, community

• We have a basic human right (WHO, ILO, United Nations)
  – To healthy and safe work
  – To a work environment that enables us to live a socially and economically productive life
Work can have both positive and negative effects on health
Garment Workers, Bangladesh
West Africa, Ebola Epidemic 2014
Potential for harm

• One-fifth of workers worldwide suffer occupational injuries or diseases annually, leading to high prevalence of work disability and even premature death, especially in
  – Mining
  – Forestry
  – Construction
  – Agriculture

• Shift from physical to sedentary work is changing the pattern of adult illnesses
Two edged sword: Wages v. Health

Foxconn Workers Unhappy Labor Laws Now Implemented: Report

The Huffington Post
Posted: 12/18/2012 2:32 pm EST | Updated: 12/18/2012 2:32 pm EST

Labor conditions may have improved at factories owned by China's Foxconn, the manufacturer responsible for assembling tech products for Apple and Samsung, among other major companies, but workers there still aren't happy.

After a rash of suicides, Foxconn responded to widespread criticism of working conditions at its factories by reducing the amount of time employees could work overtime, among other measures. The problem is that the new policy, which adheres to Chinese labor laws, is making it hard for employees to earn a living because they are working fewer hours at the higher overtime rates, the Wall Street Journal reports.
Potential for Benefit: Positive health effects of work

• Work provides income and material outputs for meeting necessities of life
• Psychological and physical well-being
• Contributes to achievement of economic objectives
Inextricable link between the workplace and Sustainable Development

• Workplace is critical for achieving sustainable development

• Healthy, productive, well-motivated workforce is key for overall socio-economic development

• Thus, the need for “public health at work”
  – Prevention of accidents, injuries, diseases
  – Protection against physical, chemical, radiation, and psychological hazards
  – Promotion of health and well-being in the workplace
Global health 2035: a world converging within a generation

A "grand convergence" in health is achievable within our lifetimes
### 1990

<table>
<thead>
<tr>
<th>Mean rank (95% UI)</th>
<th>Risk factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1 (1-2)</td>
<td>Childhood underweight</td>
</tr>
<tr>
<td>2-1 (1-4)</td>
<td>Household air pollution</td>
</tr>
<tr>
<td>2-9 (2-4)</td>
<td>Smoking (excluding SHS)</td>
</tr>
<tr>
<td>4-0 (3-5)</td>
<td>High blood pressure</td>
</tr>
<tr>
<td>5-4 (3-8)</td>
<td>Suboptimal breastfeeding</td>
</tr>
<tr>
<td>5-6 (5-6)</td>
<td>Alcohol use</td>
</tr>
<tr>
<td>7-4 (6-8)</td>
<td>Ambient PM pollution</td>
</tr>
<tr>
<td>7-4 (6-8)</td>
<td>Low fruit</td>
</tr>
<tr>
<td>9-7 (9-12)</td>
<td>High fasting plasma glucose</td>
</tr>
<tr>
<td>10-9 (9-14)</td>
<td>High body mass index</td>
</tr>
<tr>
<td>11-1 (9-15)</td>
<td>Iron deficiency</td>
</tr>
<tr>
<td>12-3 (9-17)</td>
<td>High sodium</td>
</tr>
<tr>
<td>13-9 (10-19)</td>
<td>Low nuts and seeds</td>
</tr>
<tr>
<td>14-1 (11-17)</td>
<td>High total cholesterol</td>
</tr>
<tr>
<td>16-2 (9-38)</td>
<td>Sanitation</td>
</tr>
<tr>
<td>16-7 (13-21)</td>
<td>Low vegetables</td>
</tr>
<tr>
<td>17-1 (10-23)</td>
<td>Vitamin A deficiency</td>
</tr>
<tr>
<td>17-3 (15-20)</td>
<td>Low whole grains</td>
</tr>
<tr>
<td>20-0 (13-29)</td>
<td>Zinc deficiency</td>
</tr>
<tr>
<td>20-6 (17-25)</td>
<td>Low omega-3</td>
</tr>
<tr>
<td>20-8 (18-24)</td>
<td>Occupational injury</td>
</tr>
<tr>
<td>21-7 (14-34)</td>
<td>Unimproved water</td>
</tr>
<tr>
<td>22-6 (19-26)</td>
<td>Occupational low back pain</td>
</tr>
<tr>
<td>23-2 (19-29)</td>
<td>High processed meat</td>
</tr>
<tr>
<td>24-2 (21-26)</td>
<td>Drug use</td>
</tr>
<tr>
<td>26 Low fibre</td>
<td>Sanitation</td>
</tr>
<tr>
<td>30 Lead</td>
<td></td>
</tr>
</tbody>
</table>

### 2010

<table>
<thead>
<tr>
<th>Risk factor</th>
<th>Mean rank (95% UI)</th>
<th>% change (95% UI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 High blood pressure</td>
<td>1-1 (1-2)</td>
<td>27% (19 to 34)</td>
</tr>
<tr>
<td>2 Smoking (excluding SHS)</td>
<td>1-9 (1-2)</td>
<td>3% (-5 to 11)</td>
</tr>
<tr>
<td>3 Alcohol use</td>
<td>3-0 (2-4)</td>
<td>28% (17 to 39)</td>
</tr>
<tr>
<td>4 Household air pollution</td>
<td>4-7 (3-7)</td>
<td>-37% (-44 to -29)</td>
</tr>
<tr>
<td>5 Low fruit</td>
<td>5-0 (4-8)</td>
<td>29% (25 to 34)</td>
</tr>
<tr>
<td>6 High body mass index</td>
<td>6-1 (4-8)</td>
<td>82% (71 to 95)</td>
</tr>
<tr>
<td>7 High fasting plasma glucose</td>
<td>6-6 (5-8)</td>
<td>58% (41 to 73)</td>
</tr>
<tr>
<td>8 Childhood underweight</td>
<td>8-5 (6-11)</td>
<td>-61% (-66 to -55)</td>
</tr>
<tr>
<td>9 Ambient PM pollution</td>
<td>8-9 (7-11)</td>
<td>-7% (-13 to -1)</td>
</tr>
<tr>
<td>10 Physical inactivity</td>
<td>9-9 (8-12)</td>
<td>0% (0 to 0)</td>
</tr>
<tr>
<td>11 High sodium</td>
<td>11-2 (8-15)</td>
<td>33% (27 to 39)</td>
</tr>
<tr>
<td>12 Low nuts and seeds</td>
<td>12-9 (11-17)</td>
<td>27% (18 to 32)</td>
</tr>
<tr>
<td>13 Iron deficiency</td>
<td>13-5 (11-17)</td>
<td>-7% (-11 to -4)</td>
</tr>
<tr>
<td>14 Suboptimal breastfeeding</td>
<td>13-8 (10-18)</td>
<td>-57% (-63 to -51)</td>
</tr>
<tr>
<td>15 High total cholesterol</td>
<td>15-2 (12-17)</td>
<td>3% (-13 to 19)</td>
</tr>
<tr>
<td>16 Low whole grains</td>
<td>15-3 (13-17)</td>
<td>39% (32 to 45)</td>
</tr>
<tr>
<td>17 Low vegetables</td>
<td>15-8 (12-19)</td>
<td>22% (16 to 28)</td>
</tr>
<tr>
<td>18 Low omega-3</td>
<td>18-7 (17-23)</td>
<td>30% (21 to 35)</td>
</tr>
<tr>
<td>19 Drug use</td>
<td>20-2 (18-23)</td>
<td>57% (42 to 72)</td>
</tr>
<tr>
<td>20 Occupational injury</td>
<td>20-4 (18-23)</td>
<td>12% (-22 to 58)</td>
</tr>
<tr>
<td>21 Occupational low back pain</td>
<td>21-2 (18-25)</td>
<td>22% (11 to 35)</td>
</tr>
<tr>
<td>22 High processed meat</td>
<td>22-0 (17-31)</td>
<td>22% (2 to 44)</td>
</tr>
<tr>
<td>23 Intimate partner violence</td>
<td>23-8 (20-28)</td>
<td>0% (0 to 0)</td>
</tr>
<tr>
<td>24 Low fibre</td>
<td>24-4 (19-32)</td>
<td>23% (13 to 33)</td>
</tr>
<tr>
<td>25 Lead</td>
<td>25-5 (23-29)</td>
<td>160% (143 to 176)</td>
</tr>
</tbody>
</table>

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Figure 3: Global risk factor ranks with 95% UI for all ages and sexes combined in 1990, and 2010, and percentage change. PM=particulate matter. UI=uncertainty interval. SHS=second-hand smoke. An interactive version of this figure is available online at [http://healthmetricsandevaluation.org/gbd/visualizations/regional](http://healthmetricsandevaluation.org/gbd/visualizations/regional).
Regional variation
Economic Prosperity

Productive

Healthy and Safe

Happy

Environmental Wellbeing

Colorado School of Public Health
Workers are more satisfied and more productive when four core needs are met:

- **Physical**: Opportunities to recharge at work
- **Emotional**: Feeling valued and appreciated for contributions
- **Spiritual**: Doing what they do best & enjoy most
  Feeling connected to a higher purpose at work
- **Mental**: Opportunity to focus in absorbed way on their most important tasks
  Define when & where work gets done
Total Worker Health™
Integrating Health Protection and Health Promotion
Top Reasons to Create a New Pathway for a Safer and Healthier Workforce
Public Health @ Work

Health Promotion
Wellness

Health Protection
Safety

Colorado School of Public Health
International Labour Organization Initiatives

Working poverty rates across the world

Working poverty rate (<2$ per day), in % of total employment (2013))


Quick links
- International Conference of Labour Statisticians
- International Standard Classification of Occupations

Stress Prevention
50 easy-to-implement checkpoints for identifying sources of stress in the workplace and mitigating their harmful effects.
- ILO version

Ergonomics
132 realistic and flexible solutions to ergonomic problems, applicable across a whole range of workplace situations.
- ILO version

Ergonomics in Agriculture
100 practical actions to improve safety and health and increase productivity, tailored for rural and agricultural settings.
- ILO version

Colorado School of Public Health
ILO Special Multimedia Report: Child Labour in Malawi

Garment Industry in Bangladesh

Rana Plaza: Never again

One year after the global garment industry’s worst-ever industrial accident, the International Labour Organization together with the government of Bangladesh, employers, trade unions and the international community are working together to make sure it never happens again. More than 1,100 people died and more than 2,500 were injured when the Rana Plaza building collapsed in 2013. It was a wake up call heard around the world, and significant steps are being taken to address the root causes of the Rana Plaza disaster to ensure Bangladesh’s garment industry can provide jobs in a safe working environment for its employees.

Date issued: 23 April 2014
Size/duration: 00:04:22


Colorado School of Public Health
Lured by a job, trapped in forced labour

In search of a job to support his family, a man accepts an offer from a recruiter and signs a contract for a job with decent wages. Once at destination, the reality is very different.

Date issued: 10 February 2014
Size/duration: 00:01:16


Colorado School of Public Health
Clinical considerations in global occupational medicine

- When treating patients abroad, or at home, practice good medicine by taking an occupational and environmental history.

- The “Sentinel Health Event”: Where there’s one, there’s more.

- Is the chief complaint related to work?

- Ask: “What kind of work do you do?”

- Ask: “Are co-workers also ill (injured)?”

- Know where to turn for assistance in addressing suspected work-related health problems to start a cascade of prevention.

Learn more

Suggested courses in Colorado School of Public Health:

- EHOH 6614: Introduction to Environmental and Occupational Health
- EHOH 6628: Health Promotion and Health Protection in the Workplace
- EHOH 6616: Environmental and Occupational Toxicology
- EHOH 6624: Infectious Diseases, Environmental Contexts
- EHOH 6670: International Travel and Health

Occupational and Environmental Medicine
Residency Training Program (includes MPH)
Thank you
Figure 8: Links between health and GDP per person

- Lower fertility and lower child mortality
- Improved child health and nutrition
- Increased school attendance and cognitive capacity
- Higher GDP per capita
- Increased ratio of workers to dependants
- Larger labour force from increased survival and later retirement
- Improved adult health and nutrition
- Increased access to natural resources and global economy
- Increased investment in physical capital