Challenges of Businessman and software engineers in the era of Industrialisation

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ABSTRACT: From not civilisation to civilisation, from cart wheels to rockets, from birds to internet and from very poor to very rich content of various things, the role of human health played vital key factor for creation of industries. Industrialisation is good development to full fill needs of humans for many purposes. But industries on the other hand are harmful to nature and indirectly to health of humans. This paper focus on health challenges in era of industrialisation.

KEYWORDS: Product, Food, Industry, Diet, Exercise

I. INTRODUCTION

Health is the level of functional and metabolic efficiency of a living organism. In humans it is the ability of individuals or communities to adapt and self-manage when facing physical, mental or social changes. The World Health Organization (WHO) defined health in its broader sense in its 1948 constitution as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." This definition has been subject to controversy, in particular as lacking operational value, the ambiguity in developing cohesive health strategies, and because of the problem created by use of the word "complete". Other definitions have been proposed, among which a recent definition that correlates health and personal satisfaction. Classification systems such as the WHO Family of International Classifications, including the International Classification of Functioning, Disability and Health (ICF) and the International Classification of Diseases (ICD), are commonly used to define and measure the components of health.

Achieving and maintaining health is an ongoing process, shaped by both the evolution of health care knowledge and practices as well as personal strategies and organized interventions for staying healthy.

Following are important health factors:

1. Diet
2. Exercise
3. Sleep
4. Self-care strategies
Industry is the production of goods or related services within an economy. The major source of revenue of a group or company is the indicator of its relevant industry. When a large group has multiple sources of revenue generation, it is considered to be working in different industries. Manufacturing industry became a key sector of production and labour in European and North American countries during the Industrial Revolution, upsetting previous mercantile and feudal economies. This came through many successive rapid advances in technology, such as the production of steel and coal.

Following the Industrial Revolution, possibly a third of the world's economic output are derived that is from manufacturing industries. Many developed countries and many developing/semi-developed countries (People's Republic of China, India etc.) depend significantly on manufacturing industry. Industries, the countries they reside in, and the economies of those countries are interlinked in a complex web of interdependence.

Businesses is an organizational entity involved in the provision of goods and services to consumers. Businesses as a form of economic activity are prevalent in capitalist economies, where most of them are privately owned and provide goods and services to customers in exchange for other goods, services, or money. Businesses may also be social non-profit enterprises or state-owned public enterprises charged by governments with specific social and economic objectives. A business owned by multiple individuals may form as an incorporated company or jointly organise as a partnership. Countries have different laws that may ascribe different rights to the various business entities. The word "business" can refer to a particular organization or to an entire market sector (for example: "the music business") or to the sum of all economic activity ("the business sector"). Compound forms such as "agribusiness" represent subsets of the concept's broader meaning, which encompasses all activity by suppliers of goods and services.

II. RELATED WORK

The Industrial Revolution led to the development of factories for large-scale production, with consequent changes in society. Originally the factories were steam-powered, but later transitioned to electricity once an electrical grid was developed. The mechanized assembly line was introduced to assemble parts in a repeatable fashion, with individual workers performing specific steps during the process. This led to significant increases in efficiency, lowering the cost of the end process. Later automation was increasingly used to replace human operators. This process has accelerated with the development of the computer and the robot.

Industries can be classified in a variety of ways. At the top level, industry is often classified according to the three-sector theory into sectors: primary or extractive, secondary or manufacturing, and tertiary or services. Some authors add quaternary (knowledge) or even quinary (culture and research) sectors. Over time, the fraction of a society's industry within each sector changes.
Wrt economic sectors there are many other more detailed industry classifications. These classification systems commonly divide industries according to similar functions and markets and identify businesses producing related products.

Industries can also be identified by product, such as: construction industry, chemical industry, petroleum industry, automotive industry, electronic industry, meatpacking industry, hospitality industry, food industry, fish industry, software industry, paper industry, entertainment industry, semiconductor industry, cultural industry, and poverty industry.

Market-based classification systems such as the Global Industry Classification Standard and the Industry Classification Benchmark are used in finance and market research.

**Largest countries by industrial output according to IMF and CIA World Factbook, 2015**

<table>
<thead>
<tr>
<th>Country</th>
<th>Industrial Output (billions in USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>4,922</td>
</tr>
<tr>
<td>European Union</td>
<td>4,162</td>
</tr>
<tr>
<td>United States</td>
<td>3,752</td>
</tr>
<tr>
<td>Japan</td>
<td>1,082</td>
</tr>
<tr>
<td>Germany</td>
<td>1,051</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>588</td>
</tr>
<tr>
<td>India</td>
<td>559</td>
</tr>
<tr>
<td>South Korea</td>
<td>555</td>
</tr>
<tr>
<td>Brazil</td>
<td>496</td>
</tr>
<tr>
<td>Canada</td>
<td>456</td>
</tr>
<tr>
<td>France</td>
<td>453</td>
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<tr>
<td>Mexico</td>
<td>448</td>
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<tr>
<td>Italy</td>
<td>440</td>
</tr>
<tr>
<td>Russia</td>
<td>427</td>
</tr>
<tr>
<td>Indonesia</td>
<td>408</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>387</td>
</tr>
<tr>
<td>Australia</td>
<td>362</td>
</tr>
<tr>
<td>Spain</td>
<td>312</td>
</tr>
<tr>
<td>United Arab Emirate</td>
<td>214</td>
</tr>
<tr>
<td>Turkey</td>
<td>202</td>
</tr>
<tr>
<td>Switzerland</td>
<td>184</td>
</tr>
</tbody>
</table>

The twenty one largest countries by industrial output in 2015, according to the IMF and CIA World Factbook.

**III. Hearth problems due to industry**

In addition to safety risks, many jobs also present risks of disease, illness and other long-term health problems. Among the most common occupational diseases are various forms of pneumoconiosis, including silicosis and coal worker's pneumoconiosis (black lung disease). Asthma is another respiratory illness that many workers are vulnerable to. Workers may also be vulnerable to skin diseases, including eczema, dermatitis, urticaria, sunburn, and skin cancer. Other occupational diseases of concern include carpal tunnel syndrome and lead poisoning.

As the number of service sector jobs has risen in developed countries, more and more jobs have become sedentary, presenting a different array of health problems than those associated with
manufacturing and the primary sector. Contemporary problems, such as the growing rate of obesity and issues relating to stress and overwork in many countries, have further complicated the interaction between work and health.

Many governments view occupational health as a social challenge and have formed public organizations to ensure the health and safety of workers. Examples of these include the British Health and Safety Executive and in the United States, the National Institute for Occupational Safety and Health, which conducts research on occupational health and safety, and the Occupational Safety and Health Administration, which handles regulation and policy relating to worker safety and health.

IV. BALANCE HEALTH

An important way to maintain your personal health is to have a healthy diet. A healthy diet includes a variety of plant-based and animal-based foods that provide nutrients to your body. Such nutrients give you energy and keep your body running. Nutrients help build and strengthen bones, muscles, and tendons and also regulate body processes (i.e. blood pressure). The food guide pyramid is a pyramid-shaped guide of healthy foods divided into sections. Each section shows the recommended intake for each food group (i.e. Protein, Fat, Carbohydrates, and Sugars). Making healthy food choices is important because it can lower your risk of heart disease, developing some types of cancer, and it will contribute to maintaining a healthy weight.

Physical exercise enhances or maintains physical fitness and overall health and wellness. It strengthens muscles and improves the cardiovascular system.

Sleep is an essential component to maintaining health. In children, sleep is also vital for growth and development. Ongoing sleep deprivation has been linked to an increased risk for some chronic health problems. In addition, sleep deprivation has been shown to correlate with both increased susceptibility to illness and slower recovery times from illness. In one study, people with chronic insufficient sleep, set as six hours of sleep a night or less, were found to be four times more likely to catch a cold compared to those who reported sleeping for seven hours or more a night. Due to the role of sleep in regulating metabolism, insufficient sleep may also play a role in weight gain or, conversely, in impeding weight loss. Additionally, in 2007, the International Agency for Research on Cancer, which is the cancer research agency for the World Health Organization, declared that "shiftwork that involves circadian disruption is probably carcinogenic to humans," speaking to the dangers of long-term nighttime work due to its intrusion on sleep. In 2015, the National Sleep Foundation released updated recommendations for sleep duration requirements based on age and concluded that "Individuals who habitually sleep outside the normal range may be exhibiting signs or symptoms of serious health problems or, if done volitionally, may be compromising their health and well-being."

<table>
<thead>
<tr>
<th>Age and condition</th>
<th>Sleep Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Newborns (0–3 months)</td>
<td>14 to 17 hours</td>
</tr>
<tr>
<td>2) Infants (4–11 months)</td>
<td>12 to 15 hours</td>
</tr>
<tr>
<td>3) Toddlers (1–2 years)</td>
<td>11 to 14 hours</td>
</tr>
<tr>
<td>4) Preschoolers (3–5 years)</td>
<td>10 to 13 hours</td>
</tr>
<tr>
<td>5) School-age children (6–13 years)</td>
<td>9 to 11 hours</td>
</tr>
<tr>
<td>6) Teenagers (14–17 years)</td>
<td>8 to 10 hours</td>
</tr>
<tr>
<td>7) Adults (18–64 years)</td>
<td>7 to 9 hours</td>
</tr>
</tbody>
</table>
8) Older Adults (65 years and over)  7 to 8 hours

Personal health depends partially on the active, passive, and assisted cues people observe and adopt about their own health. These include personal actions for preventing or minimizing the effects of a disease, usually a chronic condition, through integrative care. They also include personal hygiene practices to prevent infection and illness, such as bathing and washing hands with soap; brushing and flossing teeth; storing, preparing and handling food safely; and many others. The information gleaned from personal observations of daily living – such as about sleep patterns, exercise behavior, nutritional intake and environmental features – may be used to inform personal decisions and actions.

V. CHALLENGES
There are several challenges of Health and diet for Business Men & Software Engineers in era of industry.
1. Maintainable diet
2. Exercise
3. Balanced Food and food free from harmful fertilisers
4. Self-care and time
5. Effects of industrial wastes on environment which in turn effects to sound, water and air pollution
6. Natural imbalance due to industrials action on trees, rain, Global warming, damages to ozone and to earth layers
7. Diagrams shown below are also effected due to industrialisation indirectly, so it is having effects on human health also directly , which needs to be resolved

VI. CONCLUSION AND FUTURE WORK
In the future industry may give best products to human beings but at the other hand consequences will be too serious if the Challenges listed in previous section are not resolved with proper care. It may even lead to health problems and also huge amount of effects on entire globe. The Business Man and Software Engineers who sit and work for long hours must take care for proper sitting positions and Balanced Diet foods with good levels of physical fitness. It needs to take care for providing good quality air, water and food to human beings and to eliminate the hazards from industrial to have good balanced health for humans.
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ACKNOWLEDGEMENTS

We authors are hereby express our sincere thanks and acknowledgements to the mother Smt. PUSHPA c/o Sri Eranna swamy Infront of anjaneya temple Lig24 vinobanagara Shivamogga karnataka for continuous encouragements. We also present special thanks to Doijode Mahadimane Subbarao, Saraswathi and chinnu Anna for their support.

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