

THE DISTRIBUTION OF OCCUPATIONAL INJURY IN THE FOOD INDUSTRY IN UKRAINE

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Abstract:

The aim of this study is to examine and compare all publicly accessible data on occupational injuries in Ukraine in the period from 2003 ... 2011. In recent years, industrial injuries, both general and fatal in Ukraine reduced. It is encouraging that this is happening at increasing production volumes and increased business. Despite the decline in Ukraine level, both general and fatal injuries, he remains unacceptably high and exceeds the performance of European countries.

In order to establish the most significant and hazards that pose the highest risk of injury, when were analyzed by grouping indicators of injury accidents and fatalities by uniform signs, such as an event, cause, profession of the victim, and defined particle distribution of accidents for each feature. Determine the status, trends and magnitude of the problem of occupational injuries in the food industry, the laws and the impact of various factors on injuries. Established traumatic profession in some sectors of the food industry, revealed qualitative and quantitative parameters of reasons and factors that characterize the current state of injury by type of work performed, which makes this topic relevant.

Keywords: safety and health at work, injuries analysis, occupational injuries, accident causation, specific gravity of the lost workers.

Introduction

Statistical accounting of occupational injury for now in Ukraine is maintained by State Department of Statistic, work accidents and occupational diseases, Social insurance fund of Ukraine, industrial and labor safety State Department of Ukraine. The figures of these agencies can have a big difference, cause they formed on different methodology bases. The presented work based on State Department of Statistic data. For analysis used are: absolute index – the number of injured with loss of working capacity for one and more working days, the number of injured with lethal consequences; and also relative values (to the 1000 of workers) – the frequency of occupational injury and relative mortal coefficient.

The aim of this work is to implement the statistical analysis of lethal occupational injury among employees of Food Industry.

The object of research is the lethal traumatism which connected with production in Food Industry for 2003-2011 years.

Material and methods

One of the methods of occupational injury research is the statistical method. It gives the opportunity to find out quantitative side of traumatism and also explore his basic reasons and patterns of action by large number of factors. Data for analysis was taken from the H-1 form. This is a standard act investigating accidents that occurred with great-ployees during labor (official) duties, including assignments in accordance with the Regulations on the investigation and management accounting cases accidents, occupational diseases and accidents at work [5-6].

Results and discussions

The analysis of literary sources, shows that 9,1 thousands of person was injured in food industry only for 2003-2011 years. Since 2003, in the food industry more than 541 employees had died (fig.1) [Evtushenko O.V. Analysis of occupational injury statistic in Food Industry of Ukraine. Food Industry.].

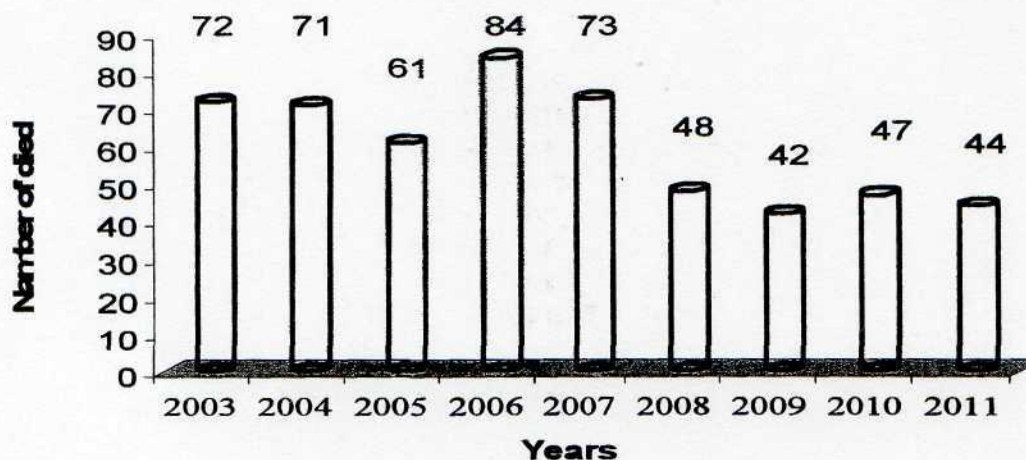


Fig. 1. Dynamic of occupational injury with lethal consequences in food industry of Ukraine, 2003-2011 period

The analysis of statistical data shows that the lethal accidents with dead of employee are: transport accident (34,6%), falling of injured (17,5%), in that number falling from the height (10,2%), influence of outfit and details that move, fly and spinning (11,6%) and falling, collapse of materials, rocks, soils etc. (9,5%) (table 1) [3-4].

Table 1. Dividing of dead by the accidents of occupational injury in Food Industry in 2003-2011

Types of accidents	Percent
1	2
Transport accidents	34,6
Falling of injured	17,5
<i>Including the:</i>	
Falling from height	10,2
Falling during the move	3,6
Falling, collapse, ruing of objects, materials and other	9,5
Influence of outfit and details that move	11,6
<i>Including the:</i>	
influence of outfit and details that move, fly and spinning	7,3
Electric Shock	5,5
<i>Including the:</i>	
Touch to the power line and broken wires	1,8
Extreme temperature effects (except fire)	2,9
Effect of hazardous and toxic substances	4,4
Drowning	0,4
Asphyxia	1,8
Murder or injury caused by another person	1,8
Natural disaster	0,4
Fire	2,5
Explosion	3,6
Other types	3,5

Analysis of injury reasons (table 2) allows us to make the conclusion that the main reasons of injury among Food Industry workers are: breach of labor and production discipline (16,2%),

traffic infraction (16,2%), drawbacks in study of labor rules (12,9%). Technical reasons of injury also have a big importance. They appears in cause of construction drawbacks, limitation of capital goods quality (5,4%), discrepancy of technological process safety requirements (4,2%), unsatisfactory technical status of industrial objects, buildings, constructions, territory, capital goods and transport (9,6%) [3-4].

Table 2. Dividing of dead by the reasons of occupational injury in Food Industry for 2003-2011

Accident reason	Percent
1	2
Technical	
Constructive drawbacks, imperfection, low reliability of capital goods	5,4
Constructive drawbacks, Imperfection, low reliability of transport	0,3
Low quality of development or absence of the project documentation for construction, reconstruction of production objects, buildings, etc.	2,7
Imperfection, mismatch between the security requirements of technological process	4,2
Poor technical condition of production facilities, buildings, structures, territory	3,9
Poor condition of the capital goods	3,3
Poor condition of the transport	2,4
Poor condition of the working environment	0,3
Organizational	
Unsatisfactory functioning or absence of labor protection system	5,4
Drawbacks during study of working safety methods	12,9
Unsatisfactory of creating, imperfection or absence of labor protection instructions	0,6
Absence of labor protection duties in job instructions	0,6
1	2
Violation of work and rest regime	0,9
Absence or poorly medical survey (professional selection)	0,9
Unused personal protection in fact of its' absence	1,2
Work with switched off, broken collective protection devices, alarm systems, ventilation	1,2
Using of workers with another profession	0,3
Violation of technological process	1,2
Safety violation during the operation of machines, mechanisms etc.	4,5
Violation of safety rules during the transport using	3,6
Traffic infraction	16,2
Disuse of personal protection (if you have it)	3,6
Disuse of collective protection	0,3
Violation of labor and production discipline	16,8
Psychophysical	
Alcohol, drug, toxic intoxication	3
Poor physical and health	0,3
Injury as a result of wrongful act of another person	1,2
Other reasons	2,8

Above 66% of deadly injured employees in Food Industry accounts for next groups of professions: drivers (26,3%), low-skilled employees (17%), operators (11,6%) and locksmiths (11,3%).

Dividing of deadly injured employees of Food Industry by the age in 2003-2011 years showed on picture 3 and dividing by the professional experience is showed in table 3. We can see that above 30% of deadly injured employees are 40-50 years old. And above 25% of injured was

30-40 years old. Thus, dead of age 30-50 years old are 57% from all deadly injured in this branch. It means that most of Food Industry employees are from this age category. Big number of injured workers with service record over the 20 years (51,3%) had injured cause of "accustom to danger". This is the psychophysical reason of safety rules violation. Big number among dead employees with low professional experience: less than year 30% and less than 3 years above 23%. It can indicates that professional training of employees is failed and inexperienced workers have a low control in Food Industry enterprises.

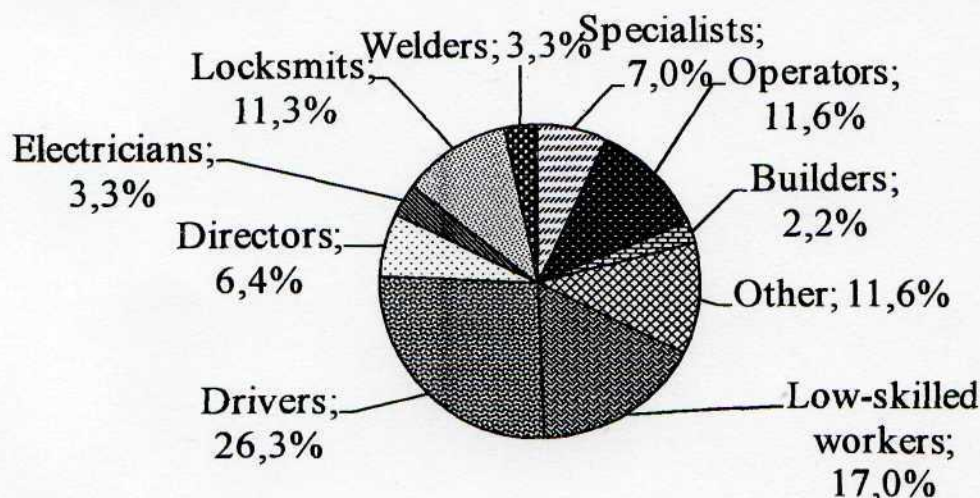


Fig. 2. Dividing of deadly injured employees of Food Industry by the profession groups in 2003-2011

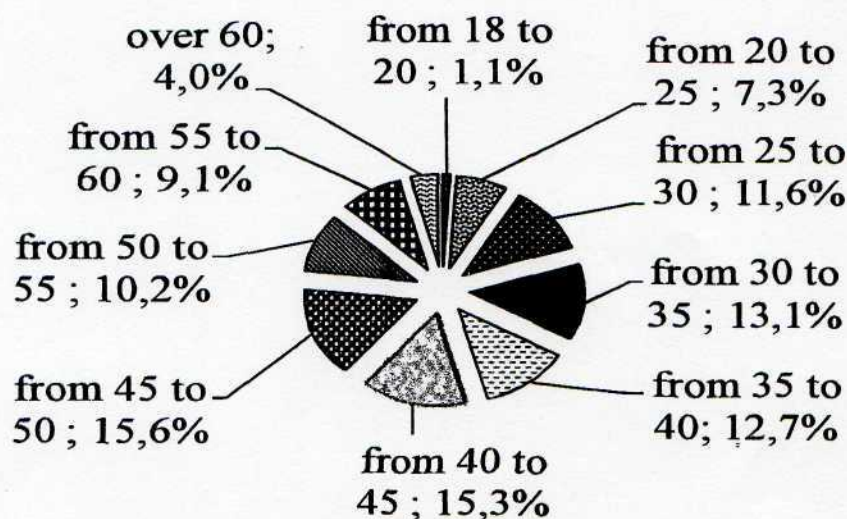


Fig. 3. Dividing of deadly injured workers of Food Industry by the age in 2003-2011

Analysis shows us that 30% of dead workers in Food Industry are not educated by the profession or kind of work, that causes accident. Besides, 11-13% of injured wasn't instructed with entrance or second instructions.

Table 3. Splitting of specific weight of dead workers by the experience in Food Industry for 2000-2011 period

Years range	Work experience, years	
	Total	By profession
Less than 1 year	4,4	29,8
From 1 to 3	3,6	23,6
From 3 to 5	3,6	7,6
From 5 to 10	10,2	12
From 10 до 15	12,7	10,2
From 15 to 20	14,2	6,2
Over 20	51,3	10,5

Analysis data shows that from all deadly injured workers those who educated by profession of type of work above 37% got injury during six month after training. From all injured who pass the workplace training over 80% had died during 3 month after training. This facts suggests about drawbacks in professional training of branch workers and defective implementation of instructing in Food Industry enterprises [7].

21% of deadly injured workers in Food Industry during the accident was in alcohol intoxication condition what means the low discipline on branch enterprises. Analysis shows that in 48% of cases the injured has violated the labor protection law and another person violated law at 77% of cases. Above a half of accidents was caused by a different level directors who violated the labor protection law. Meanwhile, the part of injured directors amounts slightly more than 6%.

CONCLUSIONS

The results of research shows, that in food industry of Ukraine during 2003-2011 the number of work accidents was decreased almost in 4 times.

Big part of injuries accounted for experience workers who have service record over than 20 years and for workers with professional experience less than one year. We should to pay special attention during the primary and second instructing on the workplace. Besides, it is necessary to improve quality of instructing, intensify the control for low-skilled workers. It is necessary to enlarge the responsibility of all level directors on branch enterprises with aim to prevent the labor safety law violation which leads to work accidents.

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