

Are our workplaces safe? ... Agents of Occupational Injuries (Sixth of a Series)

This issue of the LABSTAT Updates is the sixth in the series of statistical releases on occupational injuries that occurred in 2003. The inquiry is part of a nationwide survey called BLES Integrated Survey (BITS) conducted last year in coordination with the DOLE Regional Offices. The BITS is a nationwide survey covering around 6,000 non-agricultural establishments employing 20 or more workers. It aimed to provide an integrated data set on employment patterns, industrial relations practices and occupational injuries.

The principal purpose of statistics on occupational injuries is for planning and setting priorities for preventive efforts. Changes in the patterns and occurrences of occupational injuries guide policymakers, program planners, employers and workers in identifying persistent and new areas of risk at the workplace and in evaluating safety performance and effectiveness of current accident preventive measures. The statistics are also useful in developing training materials and programs for accident prevention and provide basis for identifying areas for future research.

This series of LABSTAT Updates identifies the economic activities where occupational injuries occurred in 2003, their extent, severity and the way in which they occurred. This sixth issue focuses on agents of occupational injuries with workdays lost.

In 2003, there were 23,265 cases of occupational injuries with workdays lost. Around 30 percent of these were due to deviations or abnormalities in operation or in handling of machines and equipment.



Around 30 percent of injuries due to machines, equipment

There are several factors that contribute to workers exposure to occupational accidents or injury producing events. These are so called agents of injuries like machines, equipment, hand tools, materials, objects, chemical substances, prime movers and distribution systems

located and needed in establishments, including building structures (See *definition of terms on page 3*). Knowledge about their correct operation, use of personal protective equipment and belief about preventing injuries, among others, promote safety behavior in the workplace.

In 2003, the survey estimated 23,265 cases of injuries with workdays lost. About 30.0 percent or 7,027 of these arose from the operation of machines/equipment which stood to be the most injury-causing agent. Use of materials/objects (21.5% or 5,012) and hand tools (20.7% or 4,821) also posed risks to workers.

The use of the abovementioned agents of injury resulted to 72.5 percent (16,860) of total cases of injuries with workdays lost.

Other agents behind work-related injuries were conveying/transport/packaging equipment or vehicles contributing 7.5 percent (1,735); building structures with 5.2 percent share (1,212) and chemical substances at 4.4 percent (1,033) of total injury cases.

The lowest share among agents went to distribution systems recorded at 278 cases or 1.2 percent of all cases.

Machines, equipment (4,824); materials, objects (3,337); and hand tools (3,234) were the leading agents of injury in manufacturing. These accounted for 79.1 percent of all cases in the industry group.

Lesser shares of cases were due to distribution systems at 0.9 percent; human, animals, plants, etc. with 1.6 percent; and prime movers at 1.8 percent.

Manufacture of food products, which had the highest number of cases at 3,723 in the major industry group, reported machines, equipment (1,274); and hand tools (1,117) as the primary instruments of injuries.

Wholesale and retail trade, a far second to manufacturing in cases of injuries at 2,690, largely attributed its injuries to machines, equipment

which accounted for 39.7 percent (1,068) of its total cases. Other contributing agents in the industry group, at lesser shares, were hand tools; and materials, objects at 14.8 percent and 14.5 percent, respectively.

Around 61 percent (1,644) of total injury cases in wholesale and retail trade was registered in the sub-industry retail trade, except of motor vehicles, repair of personal and household goods. Injury cases in the industry group brought about by machines, equipment were significantly noted in the aforementioned sub-industry at 93 percent (993 out of 1,068).

In transport, storage and communication, conveying/transport/packaging equipment or vehicles at 23.3 percent (363); materials, objects at 22.8 percent (355); machines, equipment at 19.1 percent (297); and hand tools at 14.5 percent (226) were the main agents of the 1,558 injuries in the industry group. Supporting and auxiliary transport activities; activities of travel agencies had the highest case occurrence (808) with the same four agents of injury as largely responsible for injury cases.

Hand tools (243); materials, objects (231); and machines, equipment (215) accounted for around 58 percent of the 1,195 injuries in hotels and restaurants. Prime movers at 24 cases; and human, animals, plants, etc. at 31 cases brought lesser injuries to workers in the industry group.

The two most causal agents in the 1,114 cases of injuries in construction were hand tools; and machines, equipment. These had proportional shares of 36.4 percent (405) and 32.3 percent (360), respectively. In contrast, distribution systems (2) and chemical substance

(8) contributed to minimal counts of injuries.

Electricity, gas and water supply took sixth place in number of injury cases with workdays lost at 3.5 percent (805) of national total. The leading agents of injury were prime movers (162), materials, objects (156) and conveying/transport/packaging equipment or vehicles (114). Most of the injuries in the industry group were in its sub-industry electricity, gas, steam and hot water supply which accounted for 91.7 percent of total.

The industry groups of real estate, renting and business activities (280 out of 566); financial

intermediation (33 out of 100); and private education (44 out of 132) posted materials, objects as the main instruments of casualty.

Other community, social and personal service activities attributed its 546 cases of injuries to buildings and structures (132); hand tools (132); and machines, equipment (100).

Health and social work except public medical, dental and other health services, which recorded the least share of injury cases with workdays lost at 96 (0.4%) indicated buildings, structures (30) as mainly responsible for its cases of injuries.

DEFINITION OF TERMS

Buildings, structures - include all types of buildings, scaffolding, other structures; also include stepladders, harnesses, drilling platforms, excavation trenches

Prime movers - include all types of engines, motors, electrical transformers, generators and power transmission systems

Distribution systems - include stationary or movable pipes for distributing gas, liquids, solid matter, and drains and sewers

Hand tools - those that are hand-held or hand-guided

Machines, equipment - include all types of machine or equipment, including machine tools

Conveying/transport/packaging equipment or vehicles - include all means of conveying, transportation and stockpiling

Materials, objects - include all materials or objects or parts of a machine

Chemical substances - maybe solid, liquid or gas; maybe caustic, corrosive, harmful, toxic, flammable, explosive, vaporous, radioactive or biological

Human, animals, plants, etc. - include also trees, insects, snakes and micro-organisms

Others - include natural disasters (flood, earthquake, tidal wave), or some natural

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**TABLE 1 - Cases of Occupational Injuries with Lost Workdays in Non-Agricultural Establishments Employing 20 or More Workers
by Industry and Agent of Injury, Philippines: 2003**

1994 PSIC	Industry	Total	Buildings, Structures	Prime Movers	Distribution Systems	Hand Tools	Machines, Equipment	Conveying/ Transport/ Packaging Equipment or Vehicles	Materials, Objects	Chemical Substances	Human, Animals, Plants, etc	Others
	Total	23,265	1,212	634	278	4,821	7,027	1,735	5,012	1,033	534	980
C	MINING AND QUARRYING	60	2	-	-	3	2	7	16	30	-	-
C10	Metallic Ore Mining	21	2	-	-	2	1	5	11	-	-	-
C11	Non-Metallic Mining and Quarrying	39	-	-	-	1	1	2	5	30	-	-
D	MANUFACTURING	14,403	485	258	129	3,234	4,824	738	3,337	696	232	471
D15 excl.												
D155	Manufacture of Food Products	3,723	211	55	32	1,117	1,274	239	505	136	88	66
D155	Manufacture of Beverages	664	11	3	1	138	152	17	301	25	4	11
D16	Manufacture of Tobacco Products	351	14	19	1	31	152	43	76	11	4	-
D17	Manufacture of Textiles	871	24	3	1	171	391	51	173	33	23	1
D18	Manufacture of Wearing Apparel	799	4	64	-	112	341	61	145	51	21	-
D191	Tanning and Dressing of Leather; Manufacture of Luggage and Handbags	26	-	-	-	-	-	-	26	-	-	-
D192	Manufacture of Footwear	52	1	-	4	5	36	1	3	1	-	1
D201	Manufacture of Wood, Wood Products and Cork except Furniture	253	-	-	35	74	84	15	46	-	-	-
D202												
	Manufacture of Articles of Bamboo, Cane, Rattan, Cork and the Like; Manufacture of Plaiting Materials	-	-	-	-	-	-	-	-	-	-	-
D21	Manufacture of Paper and Paper Products	329	15	11	-	60	133	16	50	29	5	11
D22	Publishing, Printing and Reproduction of Recorded Media	148	-	-	-	13	96	28	7	4	1	-
D23	Manufacture of Coke, Refined Petroleum and Other Fuel Products	4	-	-	-	-	-	-	2	2	-	-
D24	Manufacture of Chemicals and Chemical Products	718	7	23	7	379	148	64	48	37	0	5
D251	Manufacture of Rubber Products	129	-	-	3	31	33	7	29	16	11	-
D252	Manufacture of Plastic Products	802	7	4	5	217	379	23	131	23	12	1
D261	Manufacture of Glass and Glass Products	38	1	-	-	7	7	6	14	-	-	3
D262	Manufacture of Cement	97	-	-	9	8	47	-	29	-	3	2
D269	Manufacture of Other Non-Metallic Mineral Products,	511	51	2	2	19	87	6	338	1	4	1
D27	Manufacture of Basic Metals	777	24	3	14	101	290	31	222	88	5	-
D28	Manufacture of Fabricated Metal Products, except Machinery and Equipment	1,132	20	4	8	183	231	30	347	48	2	258
D29	Manufacture of Machinery and Equipment, n.e.c.	412	8	5	1	156	94	19	86	11	5	26
D30	Manufacture of Office, Accounting and Computing	149	6	1	1	19	83	2	19	5	4	8
D31												
	Manufacture of Electrical Machinery and Apparatus, n.e.c.	361	9	-	-	54	147	7	104	23	16	-
D32	Manufacture of Radio, TV and Communication Equipment and Apparatus	599	41	39	1	70	177	12	121	82	15	42
D33	Manufacture of Medical, Precision and Optical Instruments, Watches and Clocks	117	-	-	-	35	28	15	9	16	5	9
D34												
	Manufacture of Motor Vehicles, Trailers and Semi-Trailers	462	4	-	-	59	127	8	237	5	2	20
D35	Manufacture of Other Transport Equipment	155	17	20	1	22	15	16	56	7	-	-
D36	Manufacture and Repair of Furniture	648	4	-	2	136	243	7	207	41	3	4
D37	Recycling	9	-	-	-	-	-	9	-	-	-	-
D39	Manufacturing, n.e.c.	67	5	-	-	19	27	5	7	4	-	-
E	ELECTRICITY, GAS AND WATER SUPPLY	805	49	162	39	76	71	114	156	18	75	45
E40	Electricity, Gas, Steam and Hot Water Supply	738	49	162	29	61	67	99	140	14	74	44
E41	Collection, Purification and Distribution of Water	67	-	-	11	15	5	14	16	4	1	1
F45	CONSTRUCTION	1,114	113	15	2	405	360	55	123	8	22	10

Notes: 1. Details will not add up to totals due to rounding of figures.

2. A dash (-) entry implies zero (0) or no case/s reported.

**TABLE 1 - Cases of Occupational Injuries with Lost Workdays in Non-Agricultural Establishments Employing 20 or More Workers
by Industry and Agent of Injury, Philippines: 2003 (Cont'd.)**

1994 PSIC	Industry	Total	Buildings, Structures	Prime Movers	Distribution Systems	Hand Tools	Machines, Equipment	Conveying/ Transport/ Packaging Equipment or Vehicles	Materials, Objects	Chemical Substances	Human, Animals, Plants, etc	Others
G	WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES, MOTORCYCLES AND PERSONAL AND HOUSEHOLD GOODS	2,690	90	94	9	397	1,068	252	389	98	91	202
G50	Sale, Maintenance and Repair of Motor Vehicles and Motorcycles, Retail Sale of Automotive Fuel	429	7	22	-	146	53	3	32	1	15	149
G51	Wholesale Trade and Commission Trade, Except Motor Vehicles and Motorcycles	617	62	14	-	145	21	59	173	59	31	51
G52	Retail Trade, Except of Motor Vehicles and Motorcycles, Repair of Personal and Household Goods	1,644	21	57	9	106	993	189	183	39	45	1
H55	HOTELS AND RESTAURANTS	1,195	135	24	62	243	215	80	231	122	31	53
I	TRANSPORT, STORAGE AND COMMUNICATION	1,558	105	57	14	226	297	363	355	27	41	73
I60	Land Transport, Transport Via Pipelines	478	27	41	3	91	56	172	52	12	20	4
I61	Water Transport	125	10	1	-	1	33	16	61	-	1	3
I62	Air Transport	3	-	-	-	-	-	1	1	-	-	-
I63	Supporting and Auxiliary Transport Activities; Activities of Travel Agencies	808	37	14	11	116	208	147	213	15	6	41
I64 excl. I6411	Post and Telecommunications except National Postal Activities	144	31	1	-	17	-	27	29	-	14	26
J	FINANCIAL INTERMEDIATION	100	-	1	13	13	5	19	33	1	8	8
J65 excl. J65100	Banking Institutions except Central Banking	33	-	1	-	-	1	14	13	-	4	-
J66	Non-Bank Financial Intermediation	41	-	-	12	12	-	2	16	-	-	-
J67	Insurance and Pension Funding, Except Compulsory Social Security	25	-	-	1	1	4	3	3	1	4	8
J68	Activities Auxiliary to Financial Intermediation	1	-	-	-	-	-	-	1	-	-	-
K	REAL ESTATE, RENTING AND BUSINESS ACTIVITIES	566	45	21	7	57	62	46	280	3	15	28
K70	Real Estate Activities	128	10	-	-	3	3	-	94	3	-	16
K71	Renting of Machinery and Equipment Without Operator, Personal and Households Goods	-	-	-	-	-	-	-	-	-	-	-
K72	Computer and Related Activities	-	-	-	-	-	-	-	-	-	-	-
K73	Research and Development	4	-	-	-	-	2	-	2	-	-	-
K74	Miscellaneous Business Activities	434	36	21	7	54	57	46	184	-	15	12
M81	PRIVATE EDUCATION SERVICES	132	27	2	1	22	8	7	44	8	10	4
N85 excl. N8511	HEALTH AND SOCIAL WORK EXCEPT PUBLIC MEDICAL, DENTAL AND OTHER HEALTH SERVICES	96	30	-	1	13	15	15	9	4	6	3
O	OTHER COMMUNITY, SOCIAL AND PERSONAL SERVICE ACTIVITIES	546	132	-	2	132	100	38	39	17	3	82
O90	Sewage and Refuse Disposal, Sanitation and Similar Activities	-	-	-	-	-	-	-	-	-	-	-
O92	Recreational, Cultural and Sporting Activities	523	131	-	2	129	94	38	37	7	3	82
O93	Other Service Activities	22	1	-	-	3	6	-	2	10	-	-

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2. A dash (-) entry implies zero (0) or no case/s reported.

Source of data: Bureau of Labor and Employment Statistics, BLES Integrated Survey.