

THE SHARE OF TRAFFIC TRAUMATISM IN INJURIES AT WORK

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ABSTRACT

The alarming increase of road accidents over the past few years has greatly increased the number of injuries at work in an area outside the present scope of activity of the general health service and the occupational health service.

The data on disabling and fatal injuries at work collected in the Register of Injuries at Work show that injuries sustained on the way to and from work and on business trips account for 12.2% of all injuries at work. The fact that 56.1% of deaths at work and 13.7% of injuries at work occur in road accidents, i.e. away from the workplace, necessitates a reconsideration of the present policies on injuries at work.

According to the authors, occupational health services should expand their activities beyond their traditional boundaries and take a major part in the organization of the urban environment in industrial regions, in order to help to protect the lives and health of the workers.

The epidemic of traumatism, spreading in the world today in direct proportion to the individual nations' levels of technical and technological advance and transport development, has acquired alarming proportions, its consequences affecting numerous aspects of life in most countries, and becoming an international problem. The resulting common concern to protect the lives and health of the workers, particularly in the light of the growing migratory trends among workers, requires close study and analysis on the basis of international statistics on injuries at work and road accidents. The rapid growth of means of transport in the world in general and in developing countries in particular, and the growing power and speed of these means lead to an increasing number of injured and killed in traffic accidents. The adverse consequences of traffic traumatism partly imperil the results of the efforts which are aimed at reducing injuries at work and which have recently shown favourable trend in Yugoslavia and abroad.

Based on official statistical indices in the Autonomous Region of Vojvodina, analyses of total accidents and fatal injuries and the simultaneous observation of traffic traumatism reveal that in recent years the number of

persons injured or killed in traffic accidents has affected the favourable trends in the fight against injuries at work and partly undone the work of the public health service and the occupational health service.

PURPOSE AND METHOD OF THE STUDY

The study was aimed at assessing the share of injuries sustained on the way from and to the workplace and on business trips and its significance in analyses of accidents at work.

It was also to point to the causes and consequences of the existing lack of standardization of definitions, criteria and statistical methods in official statistics on accidents at work and traffic accidents and their independence, and draw attention to the need for national and international efforts regarding adoption of common identical or comparable definitions, criteria and statistical methods.

The method of the study is based on the analysis of official statistical data on traffic accidents and injuries at work, and on a comparative analysis of the numbers of injured and killed, and their inter-relationship. In collecting data for Yugoslavia the existing definitions and criteria were used, while for European and some non-European countries the definitions, criteria and statistical methods were used which are applied in the official statistics of the respective countries.

For comparative analysis, the authors used the official report on accidents at work in Vojvodina and the official statistics on traffic accidents in Vojvodina for the period 1972-1976.

RESULTS

Analysis of the data on persons injured or killed in traffic accidents between 1972 and 1976 (Table 1) shows that their number increased in 1973 to decrease in 1974 and then rise again steadily in the following years. The average number of killed amounted to 467 and of injured to 5 184, which means that every 12th person involved in a traffic accident was killed.

TABLE 1
Traffic casualties in the period 1972-1976.

	1972	1973	1974	1975	1976	Total
Injured	4 999	5 047	5 019	5 082	5 777	25 924
Killed	485	501	421	457	472	2 336
Total	5 484	5 548	5 440	5 539	6 249	28 260

The number of accidents at work during the period under study remained roughly on the same level, but compared with number of the injured persons it shows a steady decline.

Table 2 shows that during the period covered by the study the average number of persons killed at work amounted to 60 and that of injured to 27 168 which indicates that every 455th person involved in an accident at work was killed. Comparative analysis of traffic accidents and accidents at work shows the number of persons injured at work to be 4.6 times as high as the number of persons injured in traffic accidents, and the number of persons killed at work to be 8.2 times lower than the number of persons killed in traffic accidents.

TABLE 2
Casualties in accidents at work in the period 1972-1976.

	1972	1973	1974	1975	1976	Total
Injured	26 999	28 059	27 526	26 431	26 925	136 140
Killed	86	60	45	51	57	299
Total	27 085	28 119	27 571	26 482	26 982	136 439

Of the total number of casualties, persons injured at work, on the way to and from work, or on business trips accounts for 12.2%. The percentage is higher in the case of injured (13.7%) and higher still in the case of killed, 56.1% of whom lost their lives on the way to or from work or on business trips.

It should be noted that in Yugoslavia, in the methodology of collecting data for the registration of traffic accidents, only those data are used which are determined on the basis of on-the-spot findings by the traffic police, while a period of 30 days is taken as the criterion of the occurrence of death. However, in the methodology of data recording within the area of work, the fact that a person was killed on the spot or during transport is taken as the criterion of fatal outcome, while any injury registered by a physician and requiring absence from work is regarded as injury. That highly different definitions and criteria are applied becomes even more evident on the international plane, as illustrated in Tables 3 and 4.

TABLE 3
Criteria of occurrence of death due to traffic accidents in various countries.

Time of death occurrence	Country
On the spot	Belgium
On the spot and during transport	Portugal
Within 24 hours	Czechoslovakia, Spain
Within 48 hours	Hungary, Poland
Within 3 days	Austria
Within 6 days	France
Within 7 days	Italy
Within 30 days	Denmark, F.R. Germany, Luxembourg, the Netherlands, Romania, Sweden, Switzerland, Turkey, England, Yugoslavia

While Yugoslavia is one of the countries which have accepted the 30-day period as the criterion of death (Table 3), there is still a considerable number of European countries which use other criteria. This has proved a major obstacle for the comparative analysis and evaluation of the results of different activities for the prevention of traffic accidents.

Even more pronounced are the differences in approach as regards data on accidents within the area of work which are collected for statistics of injuries at work (Table 4) : in addition to the criterion used in Yugoslavia and most European countries, there is another criterion according to which only compensated fatal injuries are recorded. There is also a marked difference in the methods of the statistical presentation of results which makes comparative analysis of international results more difficult.

TABLE 4
Criteria of fatal accidents due to injuries at work in various countries.

Criterion	Rate	Country
Ia Registered fatal accidents	per 1000 workers per year	France, Hungary, Spain, Great Britain
Ib	per 1000 workers	Czechoslovakia, Ireland, Morocco
Ic	per 1000 employee	Yugoslavia, Austria, India, Egypt, Zambia, Australia
Id	per 100 000 workers per hour	Japan, Tunisia, U.S.A.
IIa Compensated fatal accidents	per 1000 workers per year	F.R. Germany, Turkey
IIb	per 1000 workers	Luxembourg, Nigeria, Tanzania
IIc	per 1000 employee	Lybia, New Zealand, Syria

COMMENT

If we take the rate of accidents at work as the criterion of the entire care of the workers' health and lives, of the development level of safety at work, and of the effectiveness of the activities of the respective public health services and the occupational health service, then all that endangers or diminishes the results of these activities must become a major objective of our investigation and activity.

However, in our efforts to reduce the number of injured and killed at work and preserve the health of the workers we cannot do much about those accidents at work which occur on the way to and from work and on business trips, at least not within the present scope of safety measures at work and public health care of workers. In order to be able to deal with this problem properly, precise definitions of the cause and place of the occurrence of injury should be agreed upon both on the national and on the international level which would make possible a more detailed analysis of traumatogenic causes and their prevention.

If the number of killed and injured at work is considered as the degree of safety at work, we should abandon the policy of the traditional occupational medicine and study the work and life of workers on a broader basis. This means considering the workers' living and community environment, the location of the workplace and its distance from workers' homes, the manner of commuting and kind of transport used, the location of micro-settlements, the system of working hours and shifts and various other factors which must be properly dealt with if our ultimate objective is to be achieved.

CONCLUSION AND RECOMMENDATION

Traffic traumatism, in addition to its serious consequences for human and social interests, affects the interests of the occupational health service in its fight against injuries at work. With an increasing number of injured and killed on the way to and from work and on business trips, it has become the area in which the activities and the safety measures of the occupational health service are felt the least.

In order to ensure the protection of the health and lives of workers, it is necessary to abandon the traditional pattern of occupational health care and find new forms of work while at the same time taking part in the organization of life in the residential parts of industrial settlements and regions.

As part of the action aimed at solving the problem the following is recommended:

1. Efforts on both the national and the international plane at a unification of the definitions, criteria and methods applied in statistics of injured and killed in traffic accidents and in accidents at work which are needed for the comparative analysis and evaluation of preventive measures.
2. Clear definition of the groups of injuries at work and in traffic accidents occurring on the way to and from work and on business trips, in statistics of accidents at work.
3. Engagement of the occupational health service in the organization and transport services for commuting workers.