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Steegmans D., Dupont E.(2016) *Impact des accidents du travail dans la circulation*. Bruxelles, Belgique : Institut Belge pour la Sécurité Routière – Centre de Connaissance

Summary

Objectives and methodology

The main objectives of this study were, on the one hand, to seek an estimate of the number of occupational accidents that occur in traffic and, on the other hand, to understand how these accidents are distinguished from other occupational and road accidents. A distinction was also made between accidents while commuting and accidents during work-related travel.

An important factor investigated in this study was the severity of occupational accidents in traffic. This was calculated on the basis of the number of deaths and permanently incapacitated persons per 1000 accidents (including accidents without consequence). For comparison with the severity of "traffic accidents", it was decided to work with the number of deaths per 1000 victims (in traffic and occupational accidents in traffic). The evolution of the different indicators was examined on the basis of temporal variables (year, month, weekly period and time of the day), spatial variables (region, province) and the characteristics of the victims (age, gender). In addition, their representation in the working population was also taken into account when analysing the characteristics of the victims, by calculating So the "risk of an accident per 1000 employees" .

The main findings from these analyses are summarized below.

Main results

Out of all occupational accidents taking place between 2008 and 2012, 9.4% - or 81080 accidents - were classified as an occupational accident in road traffic. This is a fairly low number. Yet, when the severity (number of deaths and permanent incapacities per 1000 accidents) is examined, it is striking that it amounts to 130.7 for occupational accidents in traffic and to 93.1 only for all occupational accidents.

When examining the reason for travel, it must be noted that 84.0% of the accidents occur while commuting and only 16.0% take place during work-related travel. Nevertheless, it also appears that accidents taking place during work-related travel generally have more serious consequences (accident severity: 138.8) than commuting accidents (accident severity: 129,7).

Evolution over the years

It can generally be stated that the number of accidents has decreased between 2008 and 2012. This is applicable to occupational accidents in general, occupational accidents in traffic, and road traffic accidents altogether. This evolution was approximately the same for occupational accidents and occupational accidents in traffic. When looking at the victims of occupational accidents in traffic and the victims of road accidents, it can be noted that the number of victims of occupational accidents in traffic decreased more rapidly than the victims of road accidents. This suggests that the economic crisis had a greater impact on the number of occupational accidents than on the number of road accidents.

Temporal characteristics

When looking at the distribution of occupational accidents in traffic according to the time of the accident, a number of differences were also noted. They occur less frequently from July to September, but have more serious consequences during this period. Even though more occupational accidents in traffic occur during the winter months, these accidents are less serious compared to the rest of the year.

Most accidents happen during weekdays, which can be logically explained by the number of people at work during this time. Considering the accident severity, a different outcome was obtained: accidents happening at night are generally more serious and this applies to both commuting accidents and those occurring during work-related travel. The number of deaths and cases of permanent incapacity per 1000 occupational accidents is generally higher for accidents which happen at night (week and weekend) and is the highest during weekend nights.

The evolution of the number of road accident victims and victims of occupational accidents in traffic according to the time of day and week shows that there is a difference in the time when the accidents occur. The number of victims of road accidents reaches a higher peak in the evening than in the morning. This is the opposite for the victims of occupational accidents in traffic, where the peak is higher in the

morning than in the evening. This can be explained by the fact that fewer commuting accidents occurring in the evening are registered as occupational accidents, since homeward journeys are more often combined with shopping or leisure.

Spatial characteristics

The distribution of accidents according to the regions also shows up differences. More work-related accidents in traffic take place in the Flemish region than in the Walloon region or in Brussels. However, the three regions also show marked differences with respect to employment rates. If account is taken of the number of employees in each of them, it nevertheless appears again that there are more accidents per 1000 employees in the Flemish and Brussels regions than in the Walloon region. This suggests that the higher number of occupational accidents in traffic recorded for Flanders cannot exclusively be explained by a higher employment rate, but that the accident risk is higher in this region. Occupational accidents in traffic are characterized by a much higher severity in the Walloon region (151.5) and Brussels-Capital region (144.2) than in Flanders (122.3). In Brussels, the severity of accidents in work-related travel is still higher than in Flanders or Wallonia.

The number of occupational accidents in traffic per 1000 employees is the highest in the provinces of Antwerp and Flemish Brabant in Flanders, and in the provinces of Namur and Luxembourg in Wallonia. The severity of these accidents is also the highest in the provinces of Flemish Brabant and Limburg in Flanders and in the provinces of Namur and Liege in Wallonia. These results therefore suggest that Flemish Brabant and Namur are two focal points for policies targetting occupational accidents in traffic.

Victim characteristics

When considering the characteristics of the victims, it can be noted that the number of work-related accidents in traffic per 1000 employees drops with age. The "risk of an occupational accident in traffic" is the highest in younger employees (18 to 24, and below 18). However, the severity of the accident increases with the age of the victims.

While it seems that women have slightly more accidents per 1000 employees, the severity of occupational accidents in traffic is much higher in men (148.8) than in women. This is a striking difference.

"Object involved in the last abnormal event leading to the accident"

In the data collected by the Fund for Occupational Accidents no information is available on the mode of transport used by the victim. However, there is information concerning "the object that is involved in the abnormal event leading to the accident". This object was a vehicle in the majority of the accidents (76 %) defined as "road accidents".

Two-wheeled vehicles are more frequently represented among commuting accidents than among those occurring during professional travel. More trucks and buses are found in the latter category. This can be explained by the fact that these transport modes are more frequently used for different types of work-related travels. When closely examining the accident severity, it can also be noted that accidents involving trucks and buses generate the most serious consequences, followed by accidents involving two-wheeled vehicles.

The fact that the severity of accidents during professional travels is usually greater than that of commuting accidents can be largely explained on the basis of the means of transport involved in one and the other of the two types of travels . There are, however, two exceptions worth mentioning: accidents involving a truck remain more serious when they occur in the context of professional activities than during commuting, while the reverse is true for accidents involving two-wheeled vehicles.

Women are more often involved in accidents with passenger cars and vans. By contrast, men are more involved in accidents with trucks and two-wheeled vehicles. In addition, young people are more likely to be involved in accidents with two-wheeled vehicles.

Economic sector

When considering the risk of an occupational accident in traffic per 1000 employees, it can be noted that the risk of occupational accident in traffic is the highest for the education sector, followed by the transport sector. The agricultural sector scores the best in this analysis, but not where the severity factor is concerned; the sector is in second position in this regard. This is also the case in the hotel and catering

industry. The transport sector is one that does not fare well in both categories (i.e. frequency of accidents in traffic and severity). It is among the 5 worst-performing sectors in both categories.

Conclusions

Occupational accidents in traffic represent only a limited number in the total number of occupational accidents, but they clearly have more serious consequences than other types of occupational accidents. It is therefore important to focus on these accidents in order to reduce the impact. It is the joint responsibility of employees, employers and the government.

The report includes concrete recommendations at all levels (employees, employers, government) in view of improving road safety within an employment context.

Moreover, it is important to continue to do further research on the "traffic characteristics" (road type, infrastructure, etc.) of this type of occupational accidents. In this way, it will be possible to formulate better and more focused and recommendations for improving the safety of commuting and professional travel.

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