Technical Articles

Personal mobility vehicles, one further aspect of a company's Occupational Risk Prevention

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The "Technical Articles" are documents focusing on one specific issue or aspect of risk prevention, setting out comments, observations and notes to help clarify content in this area, and serve as a guide to action.

Introduction

When the state of emergency came to an end, with the unwinding of the lockdown measures, the onset of the new normality and the return to our cities' workplaces, highways and streets, they have gradually filled with vehicles, unfortunately accompanied by environmental pollution and an upturn in traffic accidents.

In cities, the new normality has brought with it a number of changes in our transport habits, whether to reduce the possibility of catching Coronavirus to a minimum, and/or because of the onset of warmer weather, with greater use being made of bicycles and electric scooters.

Electric scooters, of which there are different variants on the market, are classified under Spanish law as 'Personal Mobility Vehicles', or 'PMVs', and have over recent months become an alternative option for our regular city commutes. Their emergence has also given rise to new causes and circumstances of work-related accidents if used to travel to and from work, or as a means of transport while performing occupational duties.

Travel to work

There are numerous benefits of bicycles and scooters as an alternative means of transport to private vehicles (cars, mopeds and motorbikes), above all in cities, where they not only help reduce environmental pollution (noise, CO, CO_2…), but also save users time spent travelling and parking, save them money, and offer health benefits by offsetting sedentary lifestyles and boosting the cardiovascular system.

However, when bicycles and human-powered scooters are used on public roadways, aside from the stated benefits they represent a risk of accident given the vulnerability of the user, which may be exacerbated if they are fitted with an electric motor, and appropriate safety measures are not taken.

Traffic accidents are a risk to be taken into account in occupational risk prevention, since they are considered work-related accidents if they occur when travelling to or from work (Article 115 of the consolidated text of the Spanish General Social Security Act, Royal Decree 1/1994, of 20 June 1994), or otherwise if the accident occurs as a result of work, whether on or off company premises.

The Occupational Traffic Accident Study which Asepeyo periodically compiles with information drawn from declarations of accidents involving time off work, reveals that in 2018, 15% of accidents leading to time off work at those member companies with workplaces in Catalonia were traffic-related (11.2% commuting and 3.8% on-the-job). Meanwhile, for accidents involving time off work in which the physical factor in question was a scooter or bicycle (physical factor code 12.03.02.00)*, there was a 127% increase in 2019 compared with the previous year, rising from 204 to 464 accidents.

Out of all cases analysed in 2019, it turns out that 88% occurred on the journey to or from work, 7% during on-the-job travel, 4% at the victim's regular workplace, and 1% at other company workplaces.

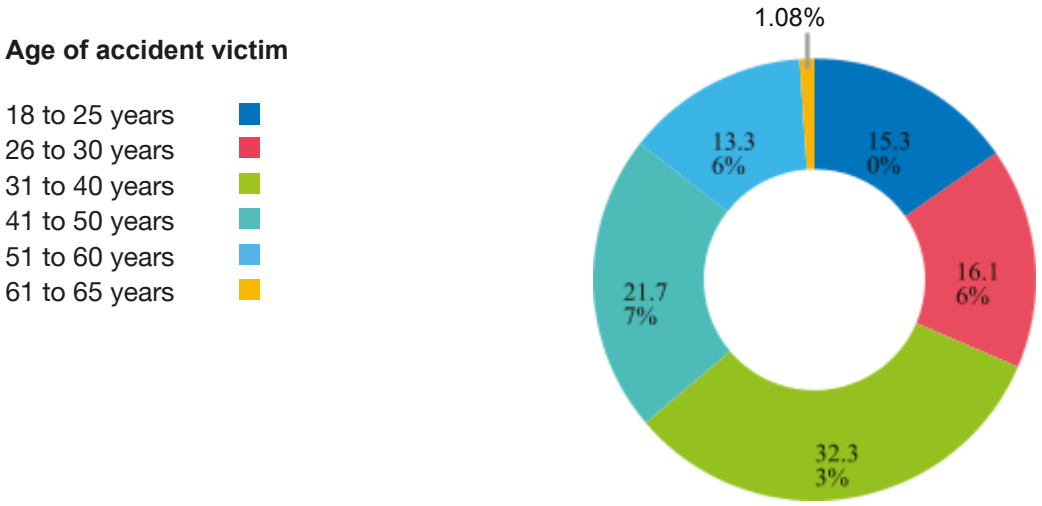
Accident location

Journey to or from work	402
Travel during the working day (on-the-job)	36
At the regular workplace	20
At another site or workplace	6
Overall total	**464**

As for the gender of the accident victims, 62% were men.

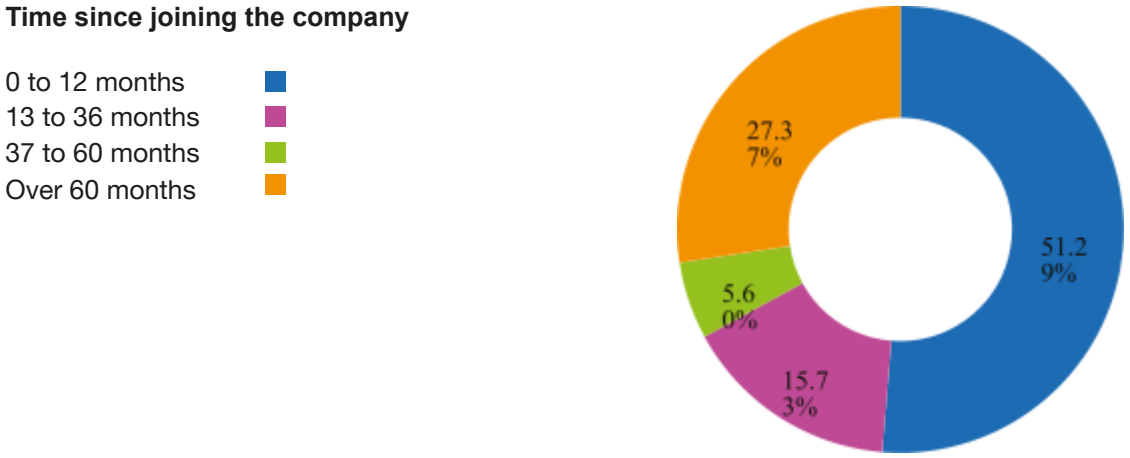
In terms of the victims' ages, the largest number lay within the age band from 31 to 40 years, accounting for 32% of recorded cases.

Age of accident victim



In terms of how long the worker has been at the company, it may be seen that more than half of accidents are suffered by employees hired less than a year ago.

Time since joining the company



The types of injury suffered are set out in the following table:

Description of the injury

Sprains and twisted joints	26.29%
Dislocations and partial dislocations	8.19%
Fractures	10.99%
Open wounds	5.60%
Multiple injuries	13.36%
Internal injuries	7.54%
Superficial injuries and foreign bodies in the eye	6.47%
Other classes of wound and superficial injury	8.19%
Bruising and other wounds	13.36%

As for the body parts injured:

Injured body part

Upper limbs (arms, hands and fingers)	24.14%
Lower limbs (legs, feet and toes)	17.89%
Trunk (back and chest)	3.23%
Shoulder and shoulder blade	8.84%
Head and face (facial area and teeth)	4.31%
Multiple body parts affected	36.64%
Other	4.96%

The 5 sectors of the economy registering the largest number of scooter and bicycle accident victims among employees in 2019 were: hospitality (13.36%), retail (9%), IT and services (5%), cleaning (4%) and police (4%).

The distribution of the number of days off work in each case reveal that 25% of accidents lasted for 7 days or fewer, 50% for 20 days or fewer, and 75% for 60 days or fewer.

A total of 22,069 days off work resulted from these 464 accidents, generating a total cost of €1,000,233 (75% of the Daily Regulatory Basic Pay).

What does and does not count as a Personal Mobility Vehicle (PMV)?

On 4 December 2019 the Spanish Directorate-General for Traffic published a transitional instruction setting out a series of clarification criteria intended for users of such vehicles, local authorities and law enforcement officers, pending publication of the corresponding regulations in this regard being debated within the European Union.

According to the instruction, **a PMV is a vehicle with one or more wheels to carry one single person and powered solely by electric motors, capable of delivering a maximum design speed of between 6 and 25 km/h**, a definition which would thus exclude:

- Vehicles with no self-balancing system and with a seat.
- Vehicles designed for racing.
- Vehicles for people with reduced mobility.
- Vehicles included within the scope of Regulation (EU) 168/2013: scooters with a seat, mopeds, two-wheeled mopeds requiring administrative authorisation to ride and use on the road, and also requiring an insurance policy and use of a helmet.

The aforementioned instruction does not detail different categories of device, but does indicate that as a general rule, all devices with a speed of no more than 6 km/h will be classified as toys.

The text furthermore adds that as PMVs will not require administrative authorisation to ride or use on the road, and have no mandatory insurance, their users will not have points put on their driving licence.

Punishable conduct

The fact that drivers do not have points put on their licence does not mean that improper conduct cannot be penalised. The instruction gives the following details in this regard:

- Personal mobility vehicle users are obliged to undergo alcohol and drugs tests, and can be fined the same amount as if driving any other vehicle.
- The hand-held use of a mobile phone or any other communication system is prohibited while riding such vehicles.
- Nor may riders wear headphones or earphones connected to sound reproduction or receiver devices.
- As rules have not yet been laid down in the General Traffic Regulations, the use of helmets and other protective elements will be governed by the provisions of the corresponding municipal ordinances in the town or city in question.
- Riding on pavements and in pedestrian zones is forbidden, since Article 121 of the General Traffic Regulations prohibits the use of any vehicle on pavements (except for skateboards, human-powered scooters or other devices which travel only at human pace).
- PMVs and other electrically propelled lightweight vehicles are authorised for only one person, and penalties therefore apply if they are used to carry two people.
- Use at night without lighting or reflective items or elements allowing the user to be seen by other drivers and without necessary precautions to avoid dangers will be considered to constitute negligence, which will thus be subject to penalties.
- It will be down to municipal ordinances to establish any bans regarding where such vehicles may stop and park. The Directorate-General for Traffic argues that pavements should be only for pedestrians, although the regulations are entirely down to each municipality.
- In the case of violations committed by those aged under eighteen, their parents, guardians, foster carers or those who are by law or de facto responsible for them will also be liable for any violation committed by a minor.

Conclusions

Since electric motors are increasingly compact, need little maintenance, make no noise, and require increasingly small batteries with ever greater capacity, electric scooters and bicycles will undoubtedly be at the forefront of this new mobility, above all in urban areas.

Although their emergence is accompanied by unquestionable benefits for the environment and their individual users, this sudden boom has led to an increase in commuting accidents, and hence a rise in companies' accident rates.

A review of the figures contained in the declarations of accidents involving time off work processed via the regulatory notification system serves to confirm that the current physical factor code 12.03.02.00 is insufficient to distinguish the vehicle involved in the accident (bicycle or scooter), or whether it is electric or manual.

The sectors of the economy with the greatest number of employees suffering accidents involving such vehicles are the hospitality and retail trades.

The age band accounting for the largest number of accident victims is between 31 and 40 years, with men in the majority.

Sprains and twisted joints are the most frequent type of injury, and the upper limbs the most commonly injured body parts.

It should be acknowledged that mobility risk prevention measures are easier for companies to implement in the case of travel for occupational duties and by professional drivers, than in the case of journeys to and from work, where the employees themselves choose their means of transport and route.

Since the consequences of accidents derived from riding PMVs also impact on the company, we would emphasise the necessity and importance for company risk prevention plans to include oversight of traffic-related risks occurring during working hours, by implementing company Mobility Plans and road safety campaigns, highlighting the need to respect others and to travel safely on public roads.

(*) The current Work-Related Accident Report form follows the template of Ministerial Order TAS/2926/2002, of 19 November 2002, establishing new forms for the reporting of work-related accidents, and enabling electronic transfer. (DELTA / CONTA).

The physical activity and associated physical factor indicate what the victim was doing when the accident occurred. Code 12.03.02.00 (Table 13) corresponds to bicycles and scooters, but does not distinguish between human- and electric-powered models.