

Alcohol consumption in firefighters, urban cleaning workers and other municipal workers - an epidemiological study of public health determinants in occupational health

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Introduction and Objectives

Non-communicable diseases cause **41 million premature deaths** globally (71%), every year (WHO, 2018). These include cardiovascular diseases, cancer, diabetes and chronic respiratory diseases, having as its main risk factors (concerning avoidable risk behaviours) tobacco consumption, **hazardous alcohol consumption**, unhealthy eating patterns and sedentarism.

Lisbon City Hall's workers represent stable subpopulations of large dimensions (over 10,000 workers in total), and with **high relevance to the study of variables associated with Public Health determinants**.

Firefighters have day-to-day work within facilities, primarily related to (1) prevention and preparedness for emergency and relief interventions, and (2) night and day shift work. On the other hand, urban cleaning workers mostly have night work on outdoor circuits.

Do the Firefighters versus urban cleaning workers subsamples have different alcohol consumption patterns?

To answer the question we studied the alcohol consumption of these two professional groups.

Methods

Transversal observational study (Ongoing larger study) in the workplace setting, with a large sample of municipal workers (over 10.000 workers, with stable subpopulations), framed by a wider research study on avoidable behaviours: namely **alcohol consumption (Dependent variable)** and its association with **sociodemographic and professional variables, comorbidities and protective factors**.

Besides contributing to the knowledge of the epidemiologic profile of municipal workers, it intends to propose a **Health Surveillance and Intervention Model for municipal workers**.

Exploratory sub-samples:

Sample A: 1,130 municipal workers

Sample B: 314 workers (165 Firefighters; 149 urban cleaning workers)

DEPENDENT VARIABLES: Alcohol consumption (AUDIT and AUDIT-C).

Results

As a larger study on alcohol consumption by municipal workers is underway, a **sample A** of 1,130 municipal workers was collected, of which 150 urban cleaning workers, 166 firefighters, 8 gravediggers and 806 "other" professional categories, mainly with administrative work) that presented the following consumption pattern:

- **no consumption:** 170 of the total of 1,130 participants; 29 urban cleaning workers, 16 firefighters, 1 gravediggers and 124 from "other" professional categories;
- **low risk consumption:** 857 (75,8% of the total); 82 urban cleaning workers, 114 firefighters, 6 gravediggers and 616 "others categories";
- **hazardous and risky consumption:** 69 (6,1% of the total); 38 urban cleaning workers, 35 firefighters, 1 gravediggers and 34 "others categories".

A **sub-sample B** was selected (valid cases) to compare Firefighters versus urban cleaning workers in relation to their alcohol consumption.

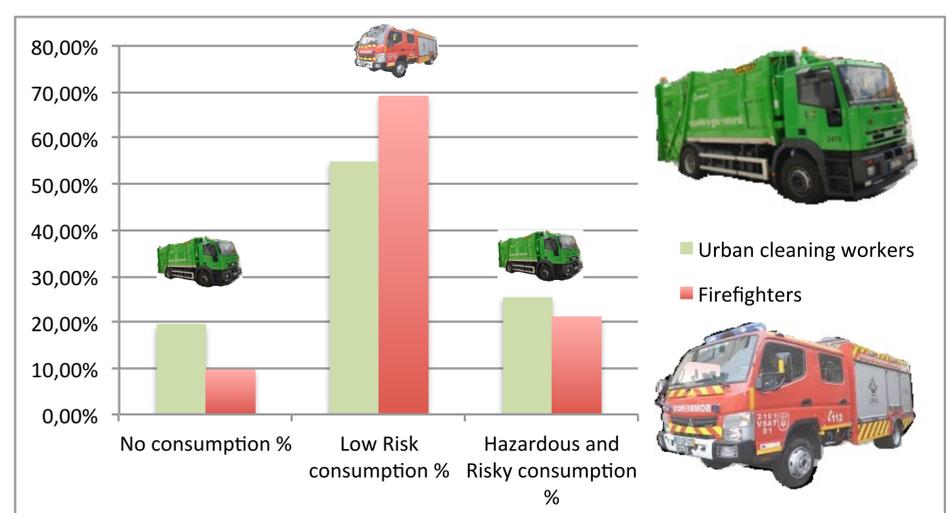
The comparison of alcohol consumption patterns among these workers confirms a **greater hazardous and risky consumption in urban cleaning workers than in firefighters**.

On the other hand, although approximately 1 out of 10 firefighters have alcohol consumption.

Exploratory sub-sample B (Urban cleaning workers & Firefighters)

Alcohol consumption (AUDIT-C)	Exploratory sub-sample (valid cases; n=workers)	NO consumption	%	LOW RISK consumption	%	HAZARDOUS and RISKY consumption	%
Urban cleaning workers	149	29	19,50%	82	55,00%	38	25,50%
Firefighters	165	16	9,70%	114	69,10%	35	21,20%
Total subsample (valid cases)	314	45	14,30%	196	64,40%	73	23,20%

Pearson Chi-Square (Urban cleaning workers vs Firefighters) – p Value = 0,016



Discussion and Conclusions

Alcohol consumption patterns among these workers confirms a **greater hazardous and risky consumption in urban cleaning workers than in firefighters**. The sub-sample B also shows that firefighters have more consumers of alcoholic beverages, especially non-high risk.

On the other hand, there are more urban cleaning workers choosing not to consume alcoholic beverages.

In conclusion, the firefighter's patterns of consumption seem to be **more frequently associated with contexts of socialization** (less non-drinkers and more low risk consumptions) indicating different workplace interventions than urban cleaning workers.

In the urban cleaning workers, there is a **pattern of higher hazardous and risky consumption**, and a less relevant context of socialization, but with a **greater need for individual and workplace interventions**.

Conflict of interest: None.

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