

Development of a tool for prevention of musculoskeletal disorders (MSDs) for kitchen workers in Hotels and Restaurants in Luxembourg

Ayse KAYA, ergonomist ; Ingrid LEMPEREUR, ergonomist ; Déborah SEUTIN, ergonomist ;

Dr. Nicole MAJERY, occupational health physician;

Department of Ergonomics – Service de Santé au Travail Multisectoriel

32 rue Glesener, L-1630 Grand-Duché de Luxembourg - www.stm.lu

OBJECTIVES

- To analyze the risks for MSDs (musculoskeletal disorders) in kitchens.
- To suggest ergonomic improvements, in terms of technical and organizational solutions.
- To raise awareness of MSDs risks and to train them.
- To inform employers and suppliers about the specific risk factors in HORECA.

➔ Prevention of MSD risks in kitchens (small companies, SME, SMI +++) to protect the target population.

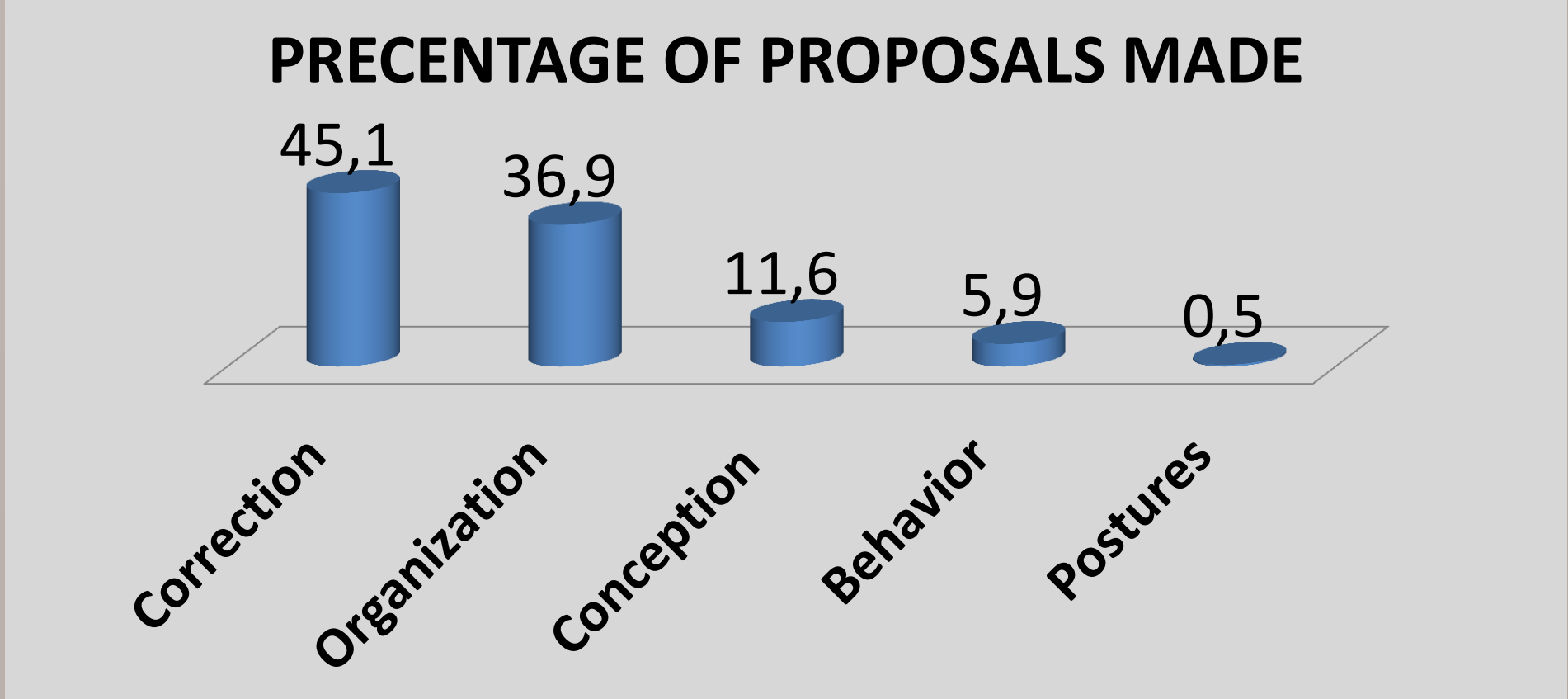
METHOD

- Pre-diagnosis :**
 - Literature review : gaining information about the context (socio-economic, organizational, environmental and conceptual dimension.)^{[2][3][4][5]}
- Sample :**
 - Population : **persons working in kitchen settings : chefs, dishwashers, storekeepers**
 - Business : all businesses with **kitchens** and **≥ 7 employees**
 - ➔ **135 establishments** contacted and **14 positive** replies of which are 6 hotels, 4 canteens, 2 fast-food restaurants and 2 caterers.
- Action plan :**
 - Participatory interviews** with workers, managers, ergonomists and occupational health physicians
 - Development and implementation of an **interview guide** adapted to the work sector (SOBANE approach MSD) and **visual support** (photos and videos).

RESULTS

452 problems concerning MSDs were reported and **778 proposals/solutions** were given to solve these problems (of which 513 during the interviews and 265 following literature reviews)

Listing and classification in several categories



After classification, development of an prevention tool consisting in **4 points**

1 MANUAL

Aimed at decision-makers, kitchen designers, suppliers.
It regroups numerous improvements which could be made in regard of **conception, correction and organization**



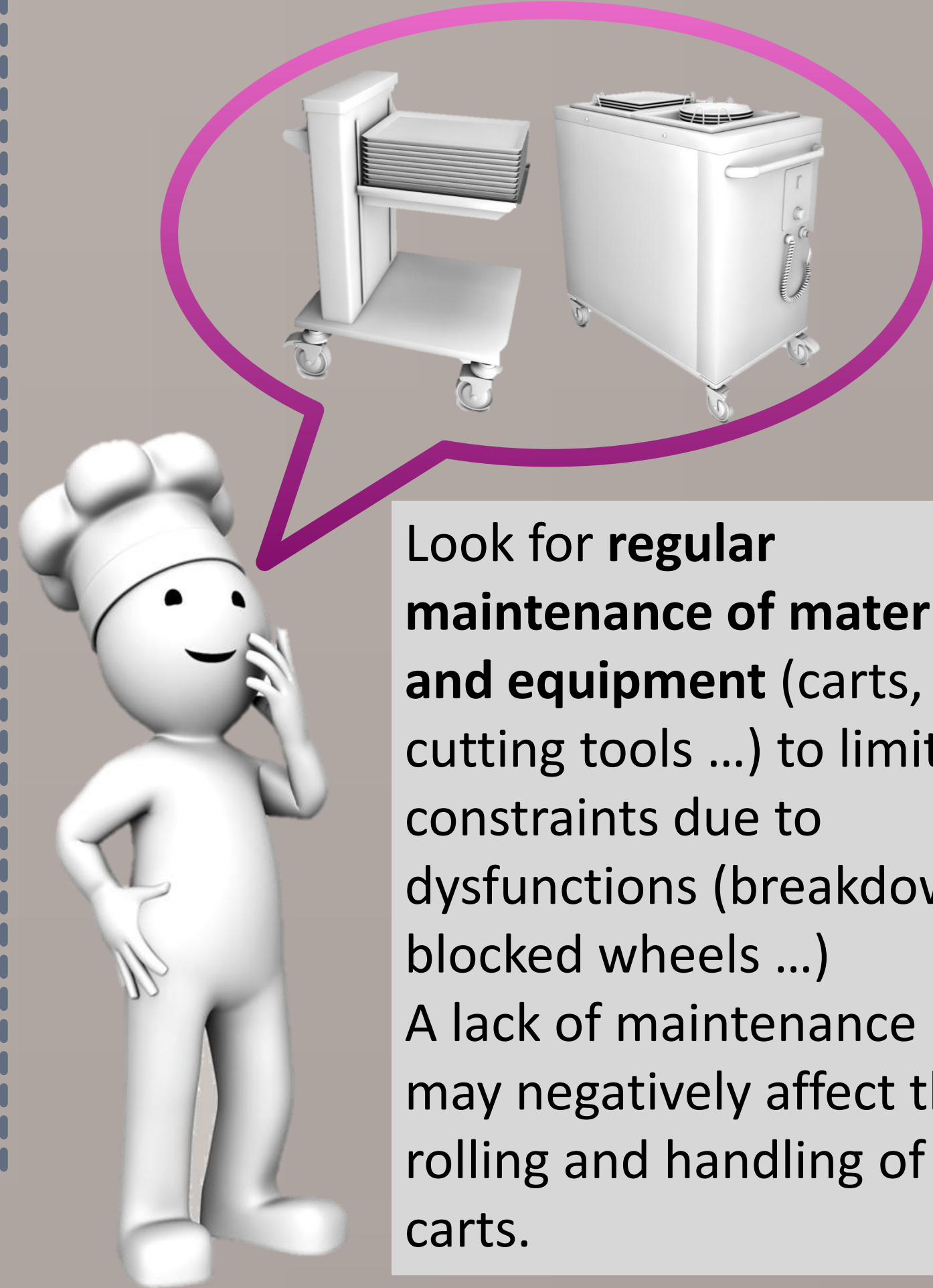
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(exists in french and german)

Examples



Improve the arrival of the conveyor (belt) to allow taking the plates in a **frontal position and with 2 hands**.

Favor **refrigerators and cupboards (hot or cold) with drawers instead of doors** to facilitate taking out the products (products used frequently are placed in the drawers at heights of the hips) and cleaning.



Look for **regular maintenance of material and equipment** (carts, cutting tools ...) to limit constraints due to dysfunctions (breakdown, blocked wheels ...) A lack of maintenance may negatively affect the rolling and handling of the carts.

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2 SHEETS

13 specific sheets for cooks, dishwashers as well as common ones for both profiles, developed regarding **behavioral adaptations**.



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Examples



Move the kitchen containers and tools **by sliding** them off the work surface (stove or other) onto the cart. **In order to do that:**

- position yourself on the side of the cart with your feet apart : the leg facing the work surface is bend ; the other leg is stretched ;
- pick up the object to be moved with stretched arms ;
- slide it onto the cart by putting your bodyweight from one leg to the other, keeping your arms in a stretched position (--> moving sideways).



3 TRAININGS

These forms are used as support during **prevention trainings**. They are **specifically aimed at kitchen personnel**



CONCLUSION / DISCUSSION

MSDs are a major health concern in the workplace but risk awareness raising for the staff is nearly not existent :
the tool will have its use in the work sector.

An evaluation of the tool's use and impact could be considered afterwards ?

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