PIANO DI FORMAZIONE

**Nudge interventions in the workplace: applications in occupational health and safety**

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More than ten years ago, nudging was defined as using the influence of the environment to promote desirable behaviours while maintaining freedom of choice (Thaler & Sunstein, 2008). Changes in the choice architecture, so-called nudges, have been employed in a variety of contexts to alter people's behavior. Thaler and Sunstein advance the concept of 'nudge' policies - non-regulatory mechanisms designed to enlist people's cognitive biases or motivational deficits so as to guide their behaviour in a desired direction.

Nudging has gained a widespread popularity in policy making, business and organisations. "Nudge management" has been defined as a management approach that applies insights from behavioural science to design organisational contexts to optimize fast thinking of employees to improve efficiency, effectiveness, and motivation (Ebert and Freibichler, 2017).

Traditional interventions (e.g. training, education and sanctions) in organisations aim to change undesirable behaviour but have had only modest results. Very often we come across organisations that are frustrated because the numerous codes of conduct that have been established (e.g. relating to safety) are often not adhered to, creating a breeding ground for behaviour that is harmful to employees and the organisation itself. Nudge interventions are thought to offer an appropriate response to this problem, requiring minimal time and effort from staff and providing a viable alternative to traditional organisational interventions (Haugh, 2017).

In recent years, a number of field studies in industrial and organisational psychology have explored how nudges can help employees make healthier choices (e.g. increasing physical activity and healthy eating), help companies achieve sustainability goals (e.g. a greener culture) and promote existing rules in a company (e.g. safety and hygiene). Venema and van Gestel (2021) investigated how nudging has been applied in the workplace to encourage desirable behaviour by changing the environment. Different applications of nudges can be found: nudges to strengthen identification within the organisation, to reduce bureaucracy in some procedures to increase organisational efficiency, to improve healthier and safer behaviours, to guide employees in the digital choice environments.

There has been renewed interest in behaviour change in occupational health and safety following the development of classification systems for 'nudging' interventions such as 'Mindspace' (Vlaev et al., 2016) or 'Tippme' (Hollands et al. , 2017). Both frameworks incorporate insights from behavioural economics and aim to provide policy tools to influence behaviour. They classify behaviour change techniques such as priming, social norms, and they refer to "interventions in proximal physical micro-environments" (e.g. placement of products, changing the order).

A recent systematic review (Hummel & Maedche, 2019) reveals that only 62% of nudge interventions are statistically significant, the median effect size is 21% and depends on category and context. Other meta-analyses and scoping reviews (Mertens et al., 2022; Cadario, et al., 2020; Forberger et al. 2022) provide evidence and interesting insights. "Defaults" nudges seem to be more effective than others. Nudge interventions seem to work better with so-called "inconsistent chooser": strong attitudes, habits and intentions of the nudged person mitigate behaviour change.

The research assistant:

* will conduct a critical review to understand the effectiveness of nudging in specific work environments, addressing both the possibilities and the limitations and pitfalls of nudging theories and applications in the workplace;
* will illustrate the main opportunities and limitations of digital nudging and how it can be effective and how it can be used to individualise the intervention a work;
* will illustrate the ethical issues of nudging interventions in organisations, considerting the “transparency” of the interventions. How workers are aware of the mechanisms on which is based? In some organisations, it may be crucial to find the "environmental trigger" and not to neglect transparency towards the recipients of the nudge intervention;
* will conduct case study analysis about nudging-based interventions for health and safety in organisations;
* will contribute to the development of H-WORK Decision Support System (results will be used in the design the Decision Suppport System on itnerventions at work of the H-WORK H2020 project);
* will contribute to the development of one policy brief on nudging for healh and safety to OHS experts.

By the end of the contract, the research assistant will acquire the following research skills:

• Qualitative and quantitative methods to evaluate the effectivness of **nudge interventions in the workplace**

• Designing and testing an innovation platform for the H-WORK H2020 project, which includes novel digital services such as the Decision Support System that facilitate the selection of the interventions in organizations

• Conducting case study analysis about nudging-based interventions for health and safety in organisations, addressing both the possibilities and the limitations and pitfalls of nudging theories and applications

• Screening EU policy briefs, policy recommendations and whitepapers on psychological interventions in Occupational Health and Safety

Ebert, P., & Freibichler, W. (2017). Nudge management: applying behavioural science to increase knowledge worker productivity. *Journal of Organization Design*, *6*(1), 4.

Forberger, S., Wichmann, F., & Comito, C. N. (2022). Nudges used to promote physical activity and to reduce sedentary behaviour in the workplace: Results of a scoping review. *Preventive Medicine*, *155*, 106922.

Hollands, G. J., Bignardi, G., Johnston, M., Kelly, M. P., Ogilvie, D., Petticrew, M., ... & Marteau, T. M. (2017). The TIPPME intervention typology for changing environments to change behaviour. *Nature Human Behaviour*, *1*(8), 1-9.

Hummel, D., & Maedche, A. (2019). How effective is nudging? A quantitative review on the effect sizes and limits of empirical nudging studies. *Journal of Behavioral and Experimental Economics*, *80*, 47-58.

Mertens, S., Herberz, M., Hahnel, U. J., & Brosch, T. (2022). The effectiveness of nudging: A meta-analysis of choice architecture interventions across behavioral domains. *Proceedings of the National Academy of Sciences*, *119*(1), e2107346118.

Venema, T., & van Gestel, L. (2021). Nudging in the Workplace: Facilitating desirable behaviour by changing the environment. In *A Handbook of Theories on Designing Alignment Between People and the Office Environment* (pp. 222-235). Routledge.