



# Wa(tc)sh out! The effects of cues of being watched on implicit activation of norms and hand disinfection behaviour

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## Introduction

Hospital staff frequently has to cope with complex information, unpredictable circumstances, and prompt decision making. In such an environment, even the “Gods in white” are susceptible to fatigue and error. Noncompliance with hand hygiene guidelines in hospitals is one of these errors and enhances the risk that microorganisms are transmitted between staff and patients. Previous approaches to enhance this compliance aimed at raising awareness on hand hygiene, such as performance feedback or strategic sink placement, and have only appeared to be partially or temporarily successful. Research on human cooperative behaviour has demonstrated that subtle cues of being observed, such as an image of eyes, could enhance compliance with instructions (Bateson et al, 2006). It has been suggested that these cues might activate motivation to follow a local cooperative norm (Ernest-Jones et al, 2010). However, the underlying psychological mechanisms of possible implicit norm activation remain questionable, and it is unclear whether eye-cues could improve hand disinfection behaviour. We conducted two experiments to investigate this.

## Methods & Results

In experiment 1, 27 caregivers rated an image of a patient room with or without a picture of a pair of eyes. They completed a word fragment completion task which assessed activation of implicit mental representations of norms that are related to compliance. The image of eyes appeared to activate norms of compliance.

In experiment 2, the eye-cue was printed on a large canvas and placed above one dispenser for antiseptic hand rub on a

hospital intensive care ward, while an identical ward remained unchanged. Use of disinfectant agent was measured to assess hand disinfection behaviour of 30 staff members during 55 days. No differences in use of an antiseptic agent between the eye- and the control condition were observed.

## Conclusions

The present findings indicate that eye-cues could possibly activate implicit mental representations of norms of compliance, but might be too weak to influence (staff hand disinfection) behaviour. We will discuss several possible explanations for these findings.

Future research could investigate whether eye-cues that are more integrated within the design of the disinfection dispenser, and thus are more linked to the behaviour at hand, could result in improved hand disinfection compliance. On a more technological level, a dispenser might even include eye-cues that interactively “follow” the user’s movements.

While it appears that more research is needed to refine and extend the present results, the current study highlights the assumption that eye-cues could possibly activate implicit normative constructs. It thereby might provide a first and novel direction to approach improvement of hand hygiene compliance in hospitals.

As Anderson et al (2010) noted, it is time to move “beyond the study of human machine interactions [and to] consider interpersonal interactions involving technology”.

## References

Anderson, J., Gosbee, L.L., Bessesen, M., & Williams, L. (2010). Using human factors engineering to improve the effectiveness of infection prevention and control, *Critical Care Medicine*, 38, 8.