

AN INNOVATIVE GAME-BASED TRAINING TOOL TO PROMOTE HANDWASHING AND HANDRUB IN HOSPITAL PHARMACIES

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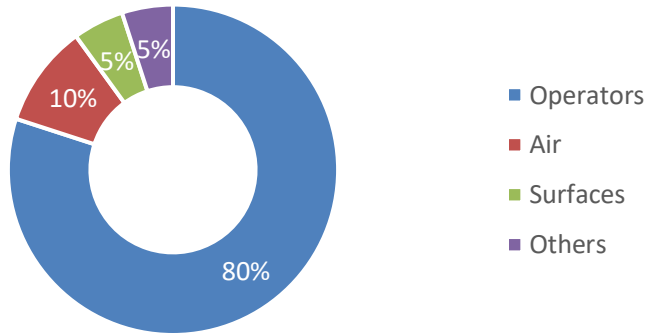
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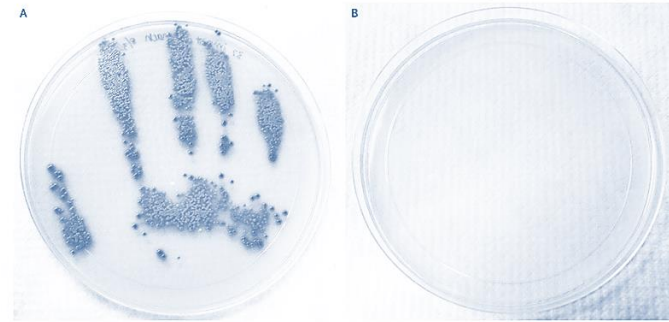
OP5/R-22

CONTEXT

Contamination sources
in a cleanroom



Total bacterial counts **on the hands**
from 3.9×10^4 to 4.6×10^6 CFU/cm²



WHO GUIDELINES

How to Handwash?

WASH HANDS WHEN VISIBLY SOILED! OTHERWISE, USE HANDRUB

⌚ Duration of the entire procedure: 40-60 seconds



How to Handrub?

RUB HANDS FOR HAND HYGIENE! WASH HANDS WHEN VISIBLY SOILED

⌚ Duration of the entire procedure: 20-30 seconds



World Health
Organization

Patient Safety
A World Alliance for Better Health Care

SAVE LIVES
Clean Your Hands



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Clean Your Hands

GAME-BASED TRAINING

American Journal of Pharmaceutical Education 2015; 79 (4) Article 59.

REVIEW

Educational Games as a Teaching Tool in Pharmacy Curriculum

Mona Hassan Aburahma, PhD, Heba Moustafa Mohamed, PhD

Faculty of Pharmacy, Cairo Univ

Submitted June 16, 2014; accepted

Game-Based E-Learning Is More Effective than a Conventional Instructional Method: A Randomized Controlled Trial with Third-Year Medical Students

Martin Boeker^{1*}, Peter Andel², W. Analyzing the Impact of e-Caducée, a Serious Game in Pharmacy on Students' Professional Skills over Multiple Years

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Katia Oliver-Quelennec^{1,2,3} ^a, François Bouchet¹ ^b, Thibault Carron¹ ^c and Claire Pinçon² ^d

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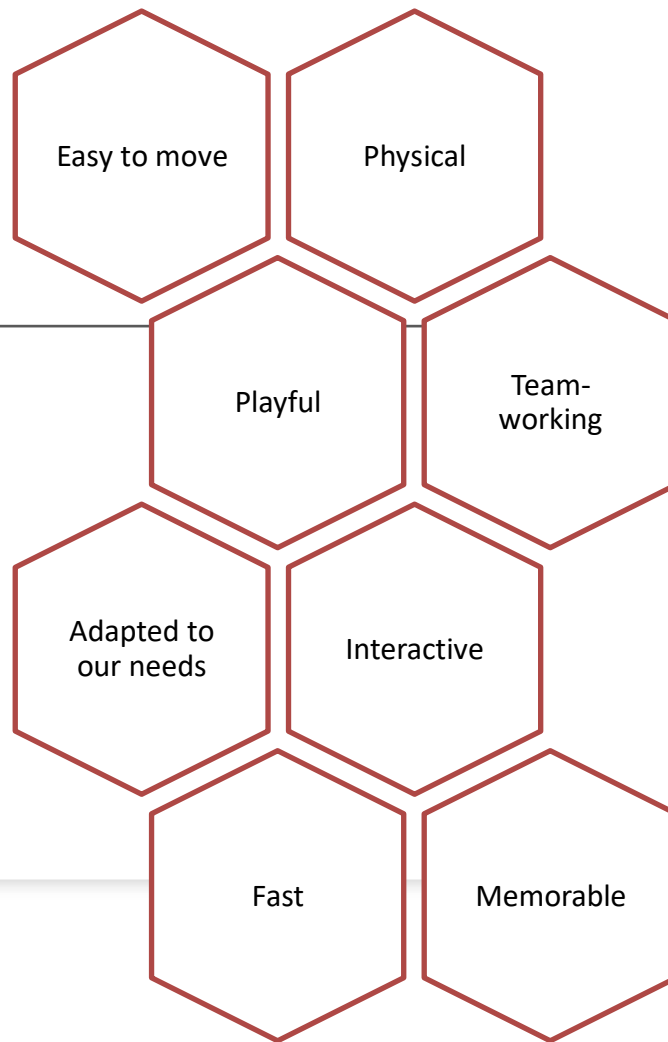
² Univ. Lille, CHU Lille, ULR 2694, METRICS: Évaluation des Technologies de Santé et des Pratiques Médicales,
F-59000 Lille, France

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CREATING THE TOOL



THE HANDTASTIC BOX TRAINING

→ Debriefing

How to Handwash?

WASH HANDS WHEN VISIBLY SOILED! OTHERWISE, USE HANDRUB

0 Duration of the entire procedure: 40-60 seconds



1 minute
of
reflexion



How to Handrub?

RUB HANDS FOR HAND HYGIENE! WASH HANDS WHEN VISIBLY SOILED

0 Duration of the entire procedure: 20-30 seconds



1 minute
of
reflexion



Introduction
video
handwashing

Handtastic Box
Module 1

Introduction
video
handrub

Handtastic Box
Module 2

HANDTASTIC BOX TRAINING - MODULE 1



Player 2



Player 1



HANDTASTIC BOX TRAINING – MODULE 2



Player 2

Observes,
comments,
corrects if
needed

Player 1

Disinfectant +
fluorescein



Hands of Player 1



Rub your hands together, palm to palm.



Rub palm to palm with fingers interlaced.



Rub the back of each hand, with fingers interlaced.



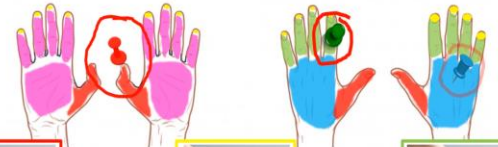
Rub each thumb clasped in the opposite hand using a rotational movement.



Rub the tips of the fingers in the opposite palm using a circular motion.



Rub with the back of fingers to opposing palms, with fingers interlaced.



Hypothesis: the Handtastic Box training improves knowledge and practice about handwashing and handrub

METHOD

Kirkpatrick pyramid

Level 4
Results

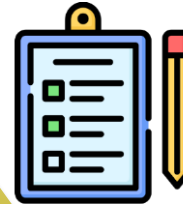
Level 3
Behavior

Level 2
Learning

Level 1
Reaction



Recording of real-life handwash (1 month before and after the training)
24-points scale



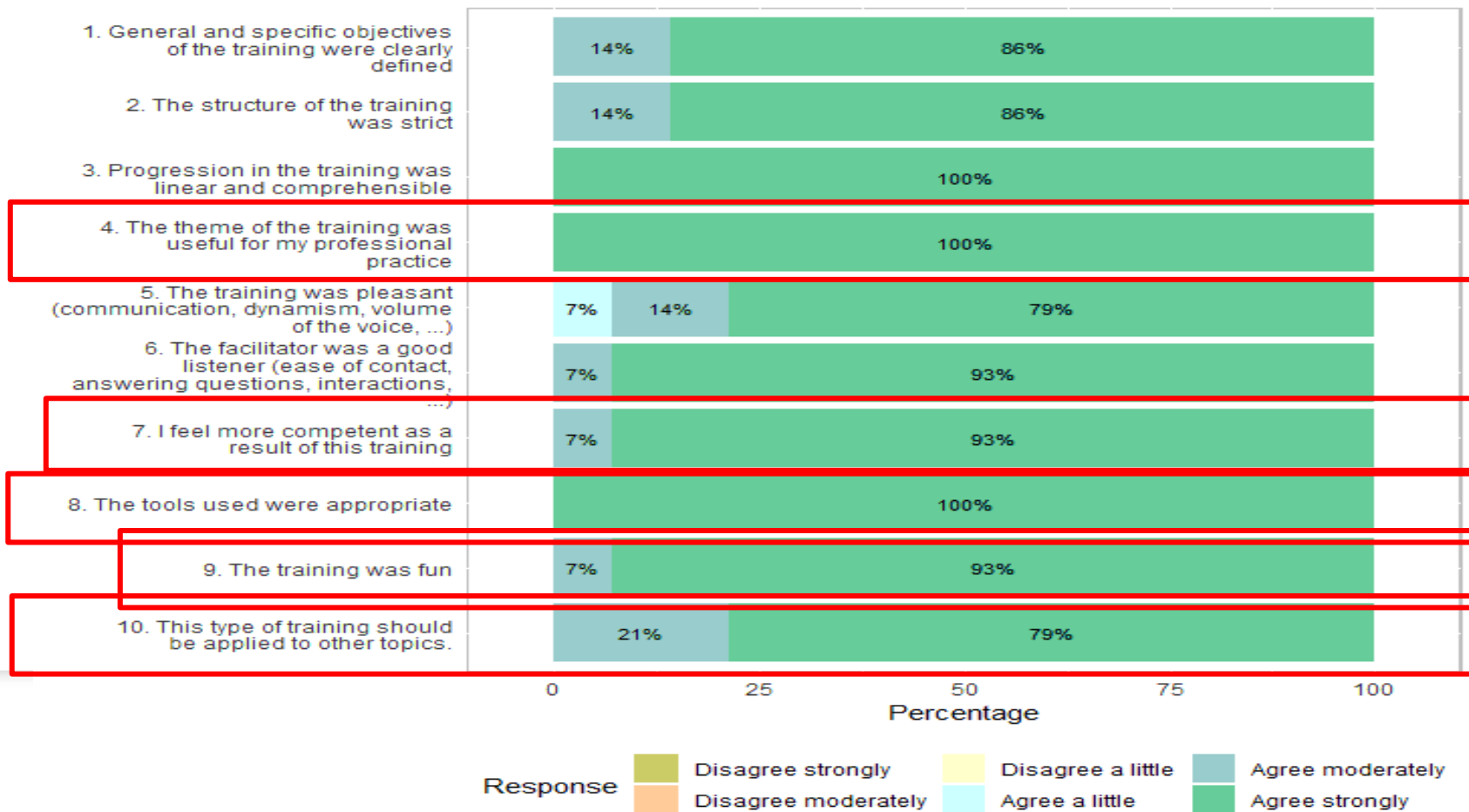
Knowledge assessment (**9 items**)
+ confidence in answers (**0-100**)



Satisfaction survey
(**10 questions**)

RESULTS – SATISFACTION – LEVEL 1

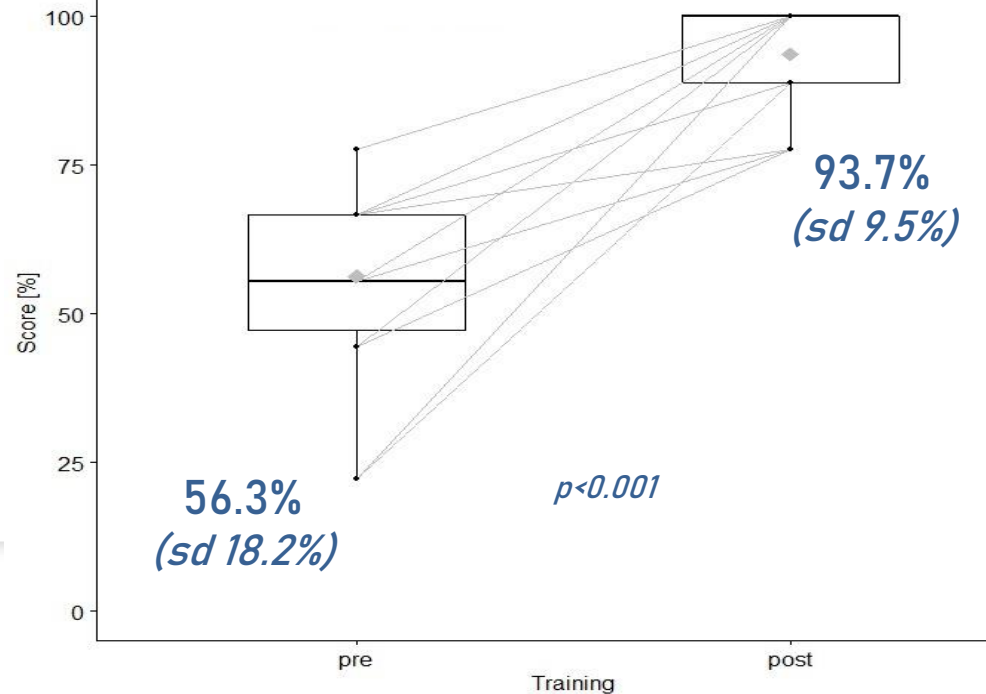
n=14



RESULTS – KNOWLEDGE – LEVEL 2

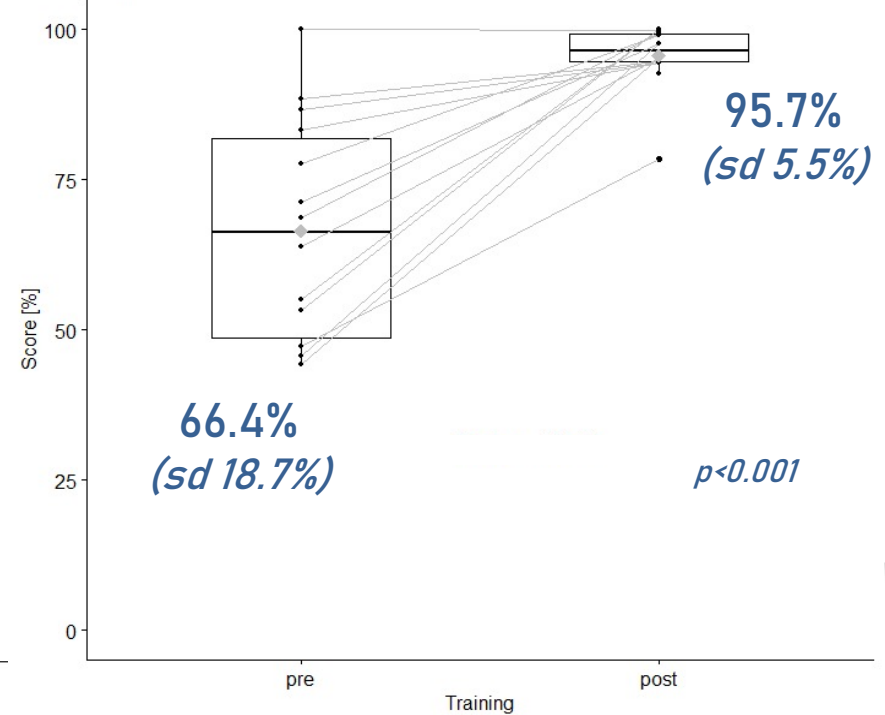
Effect of Game-Based-Training on the survey results

Using Handtastic BOX®

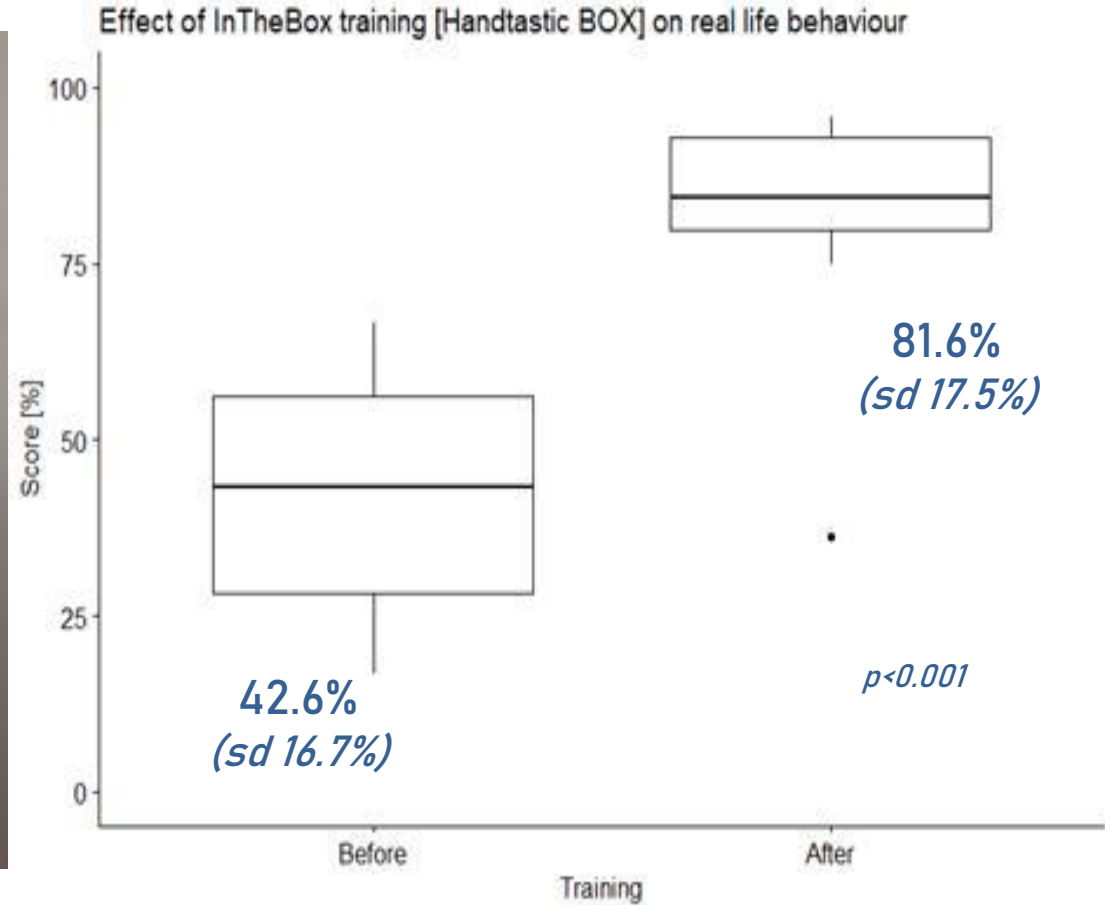


Effect of Game-Based-Training on the confidence results of the survey

Using Handtastic BOX®



RESULTS – BEHAVIOUR HANDWASHING – LEVEL 3



INTERESTS & LIMITS OF THE STUDY

- Innovative training
- Fun and interactive training + team-working skills
- Adhesion of the operators
- Memorable training (last results at 3 months)
- Tool easy to carry around (other hospitals?)

- Small number of participants
- Time consuming
 - Only one reviewer of the recordings

CONCLUSION

- Great satisfaction of participants
- Significant improvement in :
 - theoretical knowledge related to hand washing and disinfection
 - the application of real-life handwashing recommendations



THANK YOU FOR YOUR ATTENTION



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IN THE BOX
CONSULTING

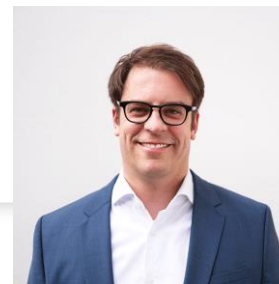
Anyone can learn. We know how.



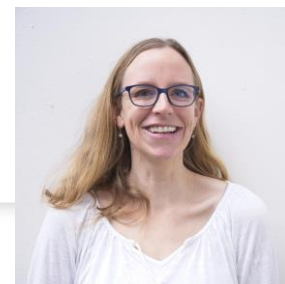
Prof. Pascal Bonnabry
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