

PathMate: Effects of Ubiquitous Healthcare Information Systems on Performance of Obesity Expert and Teenager Teams

Prof. Dr.-Ing. Wolfgang Maass, University of St. Gallen & Saarland University

Overview

The prevalence of overweight and obesity in childhood has increased dramatically over the last decade (Sassi 2010). The PathMate project has therefore the objective to build and evaluate a healthcare information system (HIS) that has **direct effects on the performance** of obesity expert and teenager teams and **indirect effects on the outcomes of obesity programs** in Switzerland.



Approaches and Results

A structured design-science methodology for the development of the HIS is adopted (Janzen et al. 2010). Design workshops with **eight overweight children, their parents and obesity experts** were conducted.

A pretest has shown that the HIS supports **perceived group cohesion** and that the children are **emotionally activated** during HIS use and that this arousal had a positive valence.

Methodological Questions

1. How to build a **shared understanding** among computer scientists, domain experts (therapists) and patients?
2. How to use a **mixed methods approach** from social sciences, computer science and medical behavioral science for the design of HIS?
3. Which **interdisciplinary tools** can be adopted to evaluate IT-supported health interventions?



Discussion

- Interdisciplinary research teams should transparently **communicate their goals and methods**.
- Adopting a **mixed methods approach** is inevitable to improve the outcomes of interdisciplinary projects.
- **Physiological and IT-based tools** (e.g. skin conductance measurement, log file analysis) can be used to build and evaluate IT-supported health interventions.



Mind Media BV © Image retrieved from <http://www.mindmedia.nl>

References

Janzen, S., Kowatsch, T., and Maass, W. 2010. "A Methodology for Content-Centered Design of Ambient Environments," in Global Perspectives on Design Science Research, 5th International Conference, DESRIST 2010, St. Gallen, Switzerland, June 4-5, 2010 Proceedings, R. Winter, J.L. Zhao and S. Aier (eds.). Berlin, Germany: Springer, pp. 210-225.

Sassi, F. 2010. *Obesity and the Economics of Prevention - Fit Not Fat*. Paris, France: OECD.