

GoDIS; Digital innovations in self-determined exercise motivation

A project in Research for Innovation

– the overarching strategic research programme of Halmstad University, supported by The Knowledge Foundation

Knowledge Foundation ><

Partners:

Tappa Service AB, and HPI-Health Profile Institute AB



Humans have throughout our history probably never been as sedentary as we are now and World Health Organization states 2 million deaths and 20 million DALY's (Disability Adjusted Life Years) could be prevented globally through interventions successfully promoting a more physically active lifestyle in the population (Bull et al., 2004). These are considerable benefits from a public health perspective as well as for the separate individual's well-being, quality of life and perceived health status, not to mention the potential health economy benefits.

Interactive tools are rapidly advancing into our lives and tomorrow's healthcare is already here, using life logging, remote controlled and home-based healthcare services, countless applications, digital interventions and so on. New visions and innovation strategies on e-health issues flourish at different levels of society, indicating almost limitless possibilities, but also considerable challenges regarding user demands and needs, technical solutions and personal data security.

Research in exercise and health psychology highlight the use of theory based interventions (e.g. Biddle et al., 2012; SBU 2007; Rhodes & Pfaeffli, 2010; Nigg & Geller, 2012), showing the importance of using adequate theoretical frameworks to promote behavior change in all applicable arenas, i.e. also in digital interventions and e-health.

Self-Determination Theory (SDT; Deci & Ryan, 1985, 2000; Ryan & Deci, 2002) has received a growing body of evidence for its application in exercise and physical activity promotion (Fortier et al., 2012; Teixeira et al., 2012). This multidimensional theory emphasize social context and its ability to facilitate or thwart optimal motivation and on the extent to which behaviours are generally self-determined or controlled in nature (Ryan & Deci, 2002).

The project aim is to define the best way to integrate and scientifically study health technology innovations by initiating an interdisciplinary co-production between Innovation Science, Information Technology, Health and Life-style research and the e-health industry during 2014.

The project idea is to design an interactive tool grounded on comprehensive knowledge from the field of psychology combined with the latest expertise from information technology and business model innovation, based on e-health industrial requirements and user needs.

This will be done by **designing, applying and marketing** exercise intervention methods developed in an on-going PhD-project by Weman-Josefsson, aiming to enhance exercise adherence.

Specific research questions relate to:

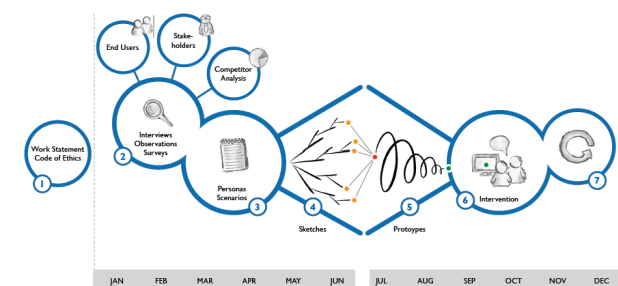
- What new principles based on an interactive design is most attractive to try out, implement and examine?
- How could the final product be labeled and marketed?
- What is the efficacy of using Self-Determination Theory in designing, constructing and evaluating an exercise intervention?

Publications

Weman-Josefsson, A. K., Halila F, Johnson U, Lindwall M, Wickström M, & Wärnestål P. (2014) Digital innovations and self-determined exercise motivation: a person-centred perspective. VITALIS - Nordens ledande eHälsomöte; 2014; Göteborg. Göteborgs universitet; 2014. <http://hdl.handle.net/2077/35435>

Weman-Josefsson, A. K., Halila F, Johnson U, Lindwall M, Wickström M, Wärnestål P. (2015). *Digital Innovations and Self-determined exercise motivation: an interdisciplinary approach*. Proceedings of The 6th International Multi-Conference on Complexity, Informatics and Cybernetics: IMCIC March 2015. Orlando, Florida.

Service Innovation and Experience Design Process – GoDIS 2014



- 1. Initiate**
Clarify objectives, ethical considerations, literature review. Define the questions that fuel innovation.
- 2. Collect Data**
Identify stakeholders, users, and competitors. Investigate needs, behaviors, goals, barriers, and desires.
- 3. Model**
Analytical methods and techniques to organize and synthesize qualitative data into accessible models.
- 4. Ideate**
Explore multiple service directions by sketching. Concepts across multiple platforms and channels.
- 5. Prototype**
Prioritize opportunities, establish and test requirements with functional prototypes.
- 6. Evaluate**
Iteration and evaluation of prototype and/or service with end-users.
- 7. Report**
Tell the story, get feedback, generate consensus, and continue to improve the service with confidence.

Contact Information

karin.weman@hh.se
urban.johnson@hh.se