

Feasibility of using the Health Information Technology Acceptance Model (HITAM) for assessing readiness to adopt telecare in older patients with multiple chronic diseases

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Background

The Clinical trials for elderly patients with Multiple Diseases (CHROMED) is a European study, involving seven European countries. The study looks at electronic home monitoring systems for patients with multiple morbidities, in particular Chronic Obstructive Pulmonary disease (COPD) and Chronic Heart Conditions (CHF). Both diagnoses are associated with high health and social care costs. COPD is the fifth largest cause of mortality in the UK and 20% of COPD patients has CHF as comorbidity. Objective measurements in the home setting are needed and it has been mentioned that ICT could help with this. However very little is known about the perceptions and experiences of older people in using ICT in their healthcare. The Health Information Technology Acceptance Model (HITAM) was developed by Kim and Park (2012). This model includes 11 determinants that could mediate someone's attitude towards using health information technology (HIT).

Aims of study

As part of the CHROMED study we aimed to:

1. Find out patients' **perceptions and experiences** on using the telecare monitoring equipment in their homes.
2. Identify **facilitators and barriers** for using ICT in healthcare in this particular situation.
3. Compare these findings with the existing Health Information Technology Acceptance Model (**HITAM**) and look at the **feasibility** of this model in this setting.

Methods

Participants (older patients with COPD and CHF) used the equipment in their homes:



Symptom questionnaires



Wrist Clinic



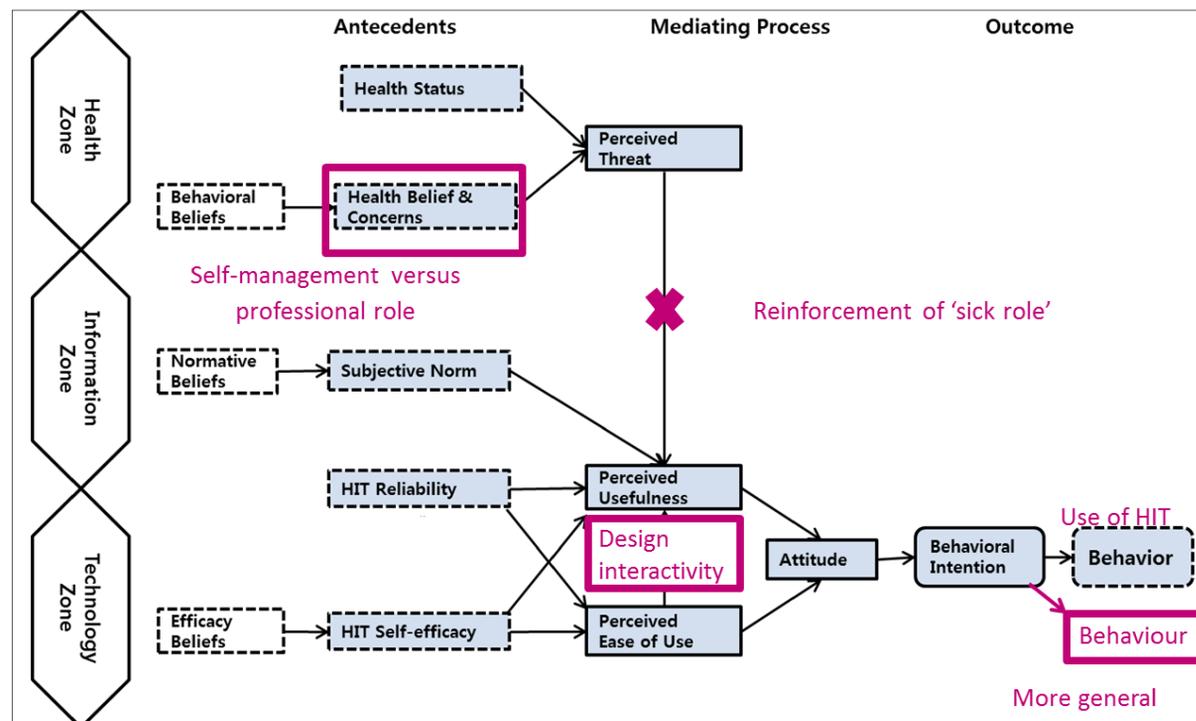
Resmon Pro

Interviews were conducted to explore their experience on using this equipment. Independent coding by two researchers was followed by mapping the findings onto the existing HITAM of Kim and Park (2012).

Results

In the setting of older people with multimorbidity, some **additional elements** are worth considering when looking at the acceptance of HIT:

- When using HIT, face-to-face contact remains an essential element of healthcare for patients. Boundaries, of where the patients responsibility might stop and the **professional** comes in, need to be identified. Clarity is needed regarding roles and responsibilities when **self-management** is encouraged.
- Besides the advantages of HIT (e.g., reducing appointments) it was mentioned that HIT could have the potential to **reinforce the 'sick role'** by continuously reminding patients of their diseases.
- When **designing HIT** for this population, attention needs to be given to the size of the equipment, the readability of the outputs it generates, the possibility to react with the equipment and an idea on what happens to the data.



Note: Original HITAM by Kim and Park (2012) displayed in blue and black. Suggested elements to consider in this particular population, added in pink.

Discussion

The HITAM (Kim and Park, 2012) provides a foundation to help us understand and explain the acceptance of HIT. Our study looked at a very specific population and the findings suggest some additions to the model for this particular setting. The use of HIT is only part of a full set of behaviours one daily displays. It helps us 'predict' and 'explain' the likelihood of using HIT, but does not inform us about whether or not this will result in **behavioural changes**. As the potential of HIT starting to reveal, this study supports the idea to have designers, patients and researchers working closely together. Patients will be the end users of the HIT, incorporating their experiences and opinions in the **design process**, increases the likelihood that HIT is both effective and meaningful. The need to bear in mind patient's needs for face-to-face contact and reassurance, the advantages of HIT in reducing appointments and feeling looked after, the risk of some patients to be reinforced in their sick role further emerged from this study.