

## Pedometer, self-determination and autonomy based physical activity for cardiac patients in a telerehabilitation program

### Motivation and significance

Physical activity is the most important part of cardiac rehabilitation. This PhD will investigate whether a pedometer can help the patient to achieve goals for physical activity in a cardiac telerehabilitation programme. In this study, the accuracy and reliability of the pedometer will be tested. Furthermore the steps taken by hospitalized patients' will be examined in order to potentially predict physical activity on a long term basis. The patients' self-determination in relation to numbers of steps taken will be investigated with special attention placed on autonomy. Telecare is expected to empower patients to take an active role in their own healthcare and self-management. Autonomy however seems to be at stake because technology might create surveillance instead of independence.

### Objectives

1. To test the accuracy and reliability of the pedometer used by cardiac patients in a telerehabilitation programme, both in a laboratory, in a hospital and in the patients home with special focus on measurement of steps and activity (Study 1)
2. To assess the amount of steps patients take in the initial in-hospital period after a cardiac event and up to one year after the cardiac event (Study 2)
3. To explore patients experiences of self-determination in relation to physical activity supported by a pedometer in a telerehabilitation programme with special attention toward autonomy (Study 3)

### Methodology

The PhD project is based on a sequential explanatory strategy mixed method approach. Thus the first study will inform the next and vice versa. The PhD will consist of three individual studies and each study will use different methods. Study 1 and 2 will be quantitative studies and study 3 will be performed as qualitative interviews.

### Expected outcome

It is expected that the PhD study will clarify to what extent pedometers and self-determination can support the achievements of physical activity goals in a telerehabilitation programme. Furthermore the study will show how many steps a patient take after a cardiac event. Finally the study will disclose yet unknown aspects of autonomy in relation to pedometer based physical activity in telerehabilitation.

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