

# AN ASSESSMENT OF PATIENT NEED FOR A TECHNOLOGY-ENABLED REMOTE EXERCISE REHABILITATION PROGRAMME AMONG A CHRONIC ILLNESS POPULATION

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## Background:

MedEx is a community-based chronic illness rehabilitation programme, located in Dublin City University, Ireland. The aim of MedEx is to provide exercise rehabilitation, supported by medical supervision, to people with a diverse range of chronic illnesses. Remote technology solutions for physical activity participation, adherence and monitoring, are potentially a new way to provide further support to individuals in their chronic illness management. Therefore, the purpose of this study was to assess the level of interest and use of technology by individuals living with chronic illness in order to explore patient desire for the provision of a technology-enabled remote exercise rehabilitation programme.

## Method:

A technology usage questionnaire based on a previous study investigating the role of technology and mHealth in a cardiovascular disease population was used (Dale et al., 2014) to ascertain the current level of technology use. This consisted of 8 questions about demographic and clinical characteristics, 9 questions about current technology usage and 13 questions about interests, needs and wants from a technology-based, virtual exercise intervention. Participants attending the community based exercise programme, known as MedEx, were invited to take part (N=156; M age = 64.75 years, SD= 9.81, Range= 28- 83 years old; Males =61%, Females=35% [4% missing]). This included participants from a wide range of illness specific classes from HeartSmart - a cardiac rehabilitation programme (52.6%), BreatheSmart - a pulmonary rehabilitation programme (18.6%), SmartSteps - a vascular rehabilitation programme (11.5%), Diabetes Health Steps - a programme for people with diabetes (3.2%), Move On - a 12 week cancer rehabilitation programme (10.37%) and a mixed group class (6.4%).

## Results:

Technology usage was high with 61% of participants owning a smartphone. 50% of participants accessed the internet everyday, with a further 22.4% accessing the internet over three times per week. Participants endorsed the idea of technology enabled remote exercise rehabilitation, with 47.4% indicating that they would either 'like to try' or found the idea of remote

exercise participation via a computer-based physical activity game 'interesting/useful'. 73% were interested in receiving ongoing exercise rehabilitation support via their smartphones, 72.4% were interested in receiving ongoing exercise rehabilitation via the internet, and 47.4% of participants reported that they would like to monitor their heart rate using a wrist worn device during remote exercise participation.

**Conclusion:**

This study provides evidence of patient desire for a technology-enabled remote exercise rehabilitation programme. Further to this, the current study provides promising preliminary evidence for both the high level of technology use and capability among a cohort of people with chronic illness.