instituto de telecomunicações

IT-Porto

Improving engagement in mHealth

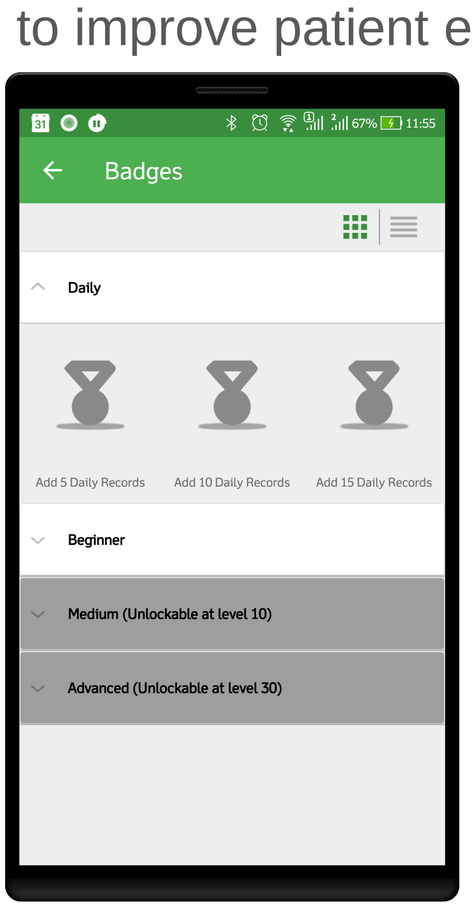
Networked Systems

Background and challenges

Cardio-vascular disease, cancer, chronic repiratory disease and diabetes are the **four main causes of death** in Non Communicable Diseases. In some of these diseases (all 4, except cancer) its **daily management** can **alleviate the disease** or even keep it under **control** (diabetes and chronic respiratory disease). There has been work on mobile apps to help patient. However, the question of usability of these applications and especially **patient engagement** is still a **problem**. A current trend in this line is the use of **gamification techniques** on health applications. Most of these approaches aim to change patient behavior towards more correct attitudes in daily life.

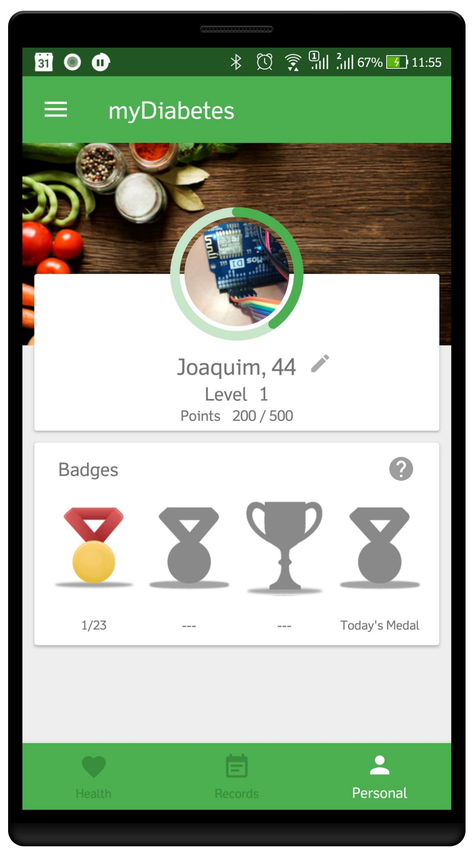
Description and main innovation

The aim is to apply user interface and application environment improvements to a diabetes management application MyDiabetes to **increase patient engagement** and thus **data registration**. Research is on **UI techniques** based on cognitive science together with **gamification approaches** to define methods to improve patient engagement in mHealth applications.



The effectiveness of the develop techniques will be evaluated with patients from the S. João Hospital following proved practices, as interviews and questionnaires, but also developing new approaches based on automatic collection of the application usage.

Badges/Medals for entering records.



Current Gamification on MyDiabetes

Achievements

- Research and design new approaches to improve user/patient engagement in mHealth, namely on chronic patients.
- Usability assessment and improvement with the use of techniques as gamification to increase engagement. Validated by developing in the MyDiabetes application and testing their effect on diabetic patients. The results should be measured in terms of improving data registered in the application, thus a better engagement.
- Evaluate the clinical endpoint of improving HbA1C, but this depends moslty on the management improvement the application can provide with the increase registered on data.

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