

Development of an mHealth application for adherence to psychotropic medication.

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Background

Medication adherence is defined as the extent that the medication taken reflects prescribed intention¹. The seriousness of medication non-adherence is demonstrated in various studies which show that almost one out of two patients do not take their medication three months after therapy starts² and with only 43-78% patients with chronic conditions adhering to their medication on the long term³.

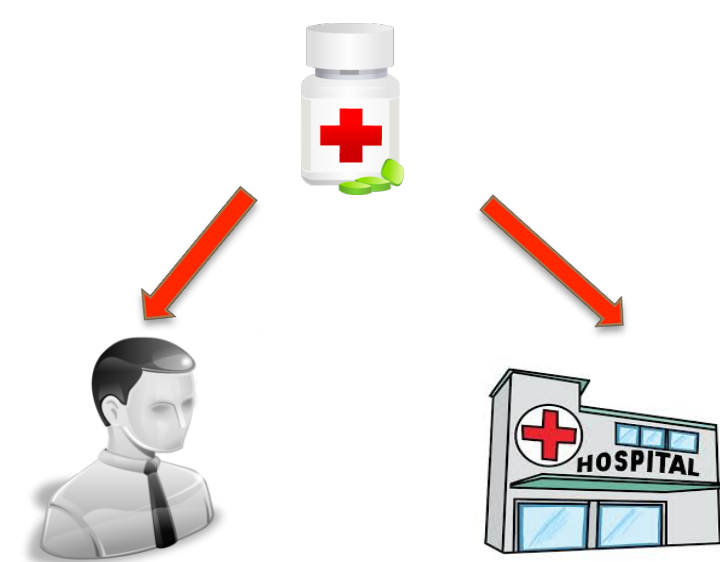
The prevalence of psychotropic medication non-adherence among patients with mental disorders varies:

35%-45%
Bipolar disorder

45%
PTSD

50%-60%
Schizophrenia

In general, medication non-adherence is associated with medical implications, poor health outcomes, poor quality of life, high healthcare costs and even risk of death^{4,5}. On the other hand, the benefits of medication adherence are reduction of psychiatric symptoms and relapse rates, reduced hospitalization, healthcare costs and better patient outcomes.



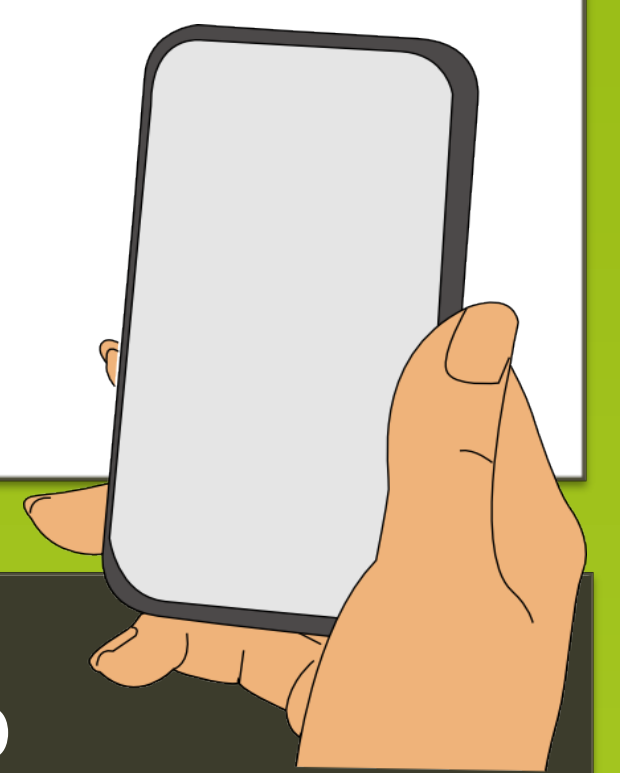
Aim of the project

- ✓ In 2015, the ‘research2guidance’ published a report as part of the annual ‘mHealth App Developer Economics’ suggesting that mHealth apps may be the future of healthcare reducing costs and benefiting patient outcomes.
- ✓ Currently in the US, the national hospital system allows physicians in New York City areas to encourage their patients to use mHealth apps.

The aim of the project is to design, develop and promote an mHealth app aiming to:

- Help patients using psychotropic drugs to adhere to their medication (patient interface).
- Help clinicians prescribing psychotropic drugs to more accurately monitor their patients’ adherence (clinician interface).

The app will aim to meet two specific challenges: a) the negative impact from non-adherence to psychotropic medication both for the individual (i.e. poor health outcomes, risk of death) and the society (i.e. to the national health system due to higher healthcare costs); b) the clinicians’ weakness of identifying their patients’ medication non-adherence.



The need of “Stay in Track”

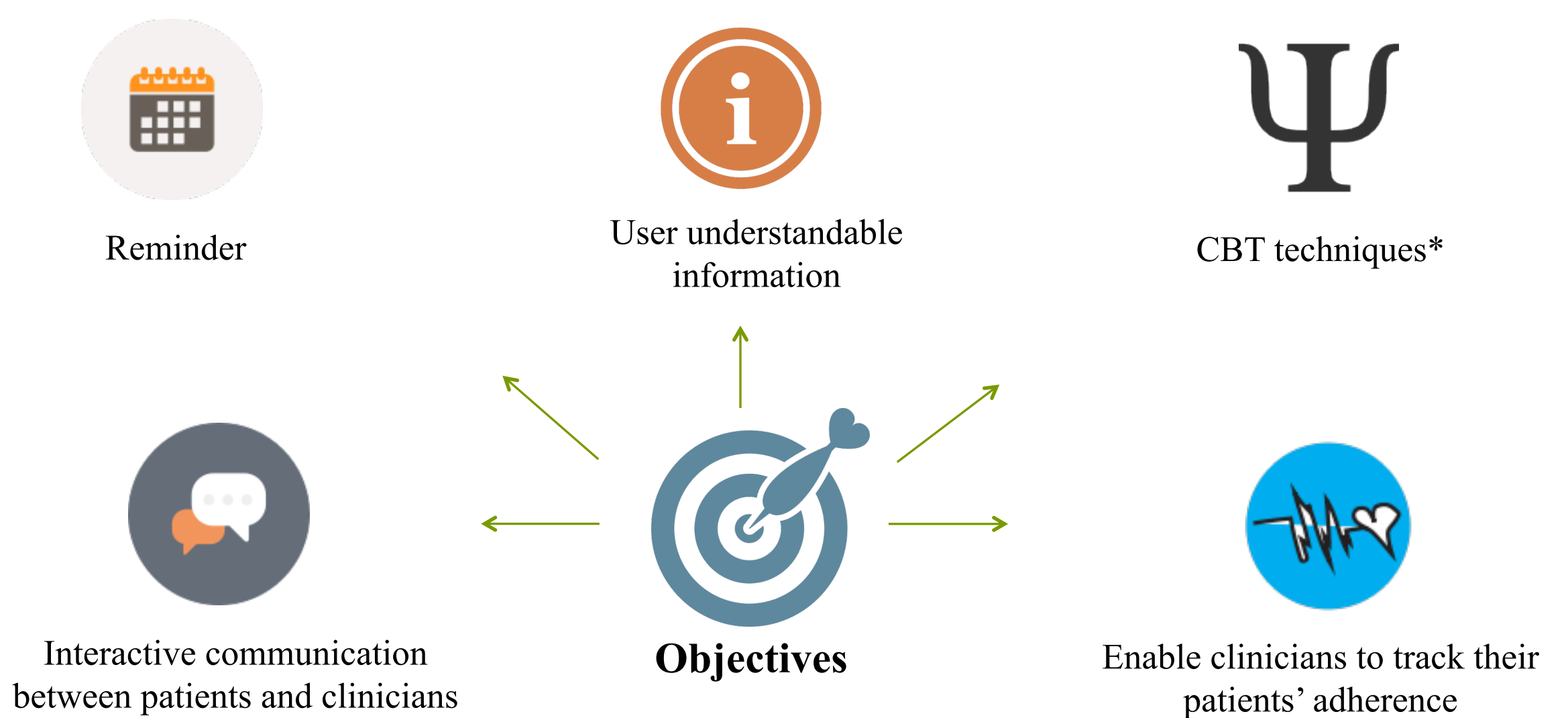
Despite the availability of a few mHealth apps for medication adherence, in both iOS Apple and Android platforms (i.e., MyMedSchedule®, PillMonitor, Dosecast), empirical analyses of their usability and benefits are lacking. Apart from that, none of the apps is available in Greek.

We aim to present a secure, valid and user-friendly app to compete other apps. **Secondly**, this will be the first mHealth app in both Greek and English language. In this way, it will replenish the gap in the Cypriot mHealth market and retain the potential for adoption by the hospitals and private clinicians. **Thirdly**, it will not provide patients only with a simple reminder for taking their medication but with a more sophisticated content. **Fourthly**, the app will be widely available (separate version for iOS, Android and Windows Phone).

Despite the existence of studies that did not support the improvement of medication adherence with the use of a mobile and mHealth apps, promising results of other studies and the general satisfaction of patients propose the need of developing this app.



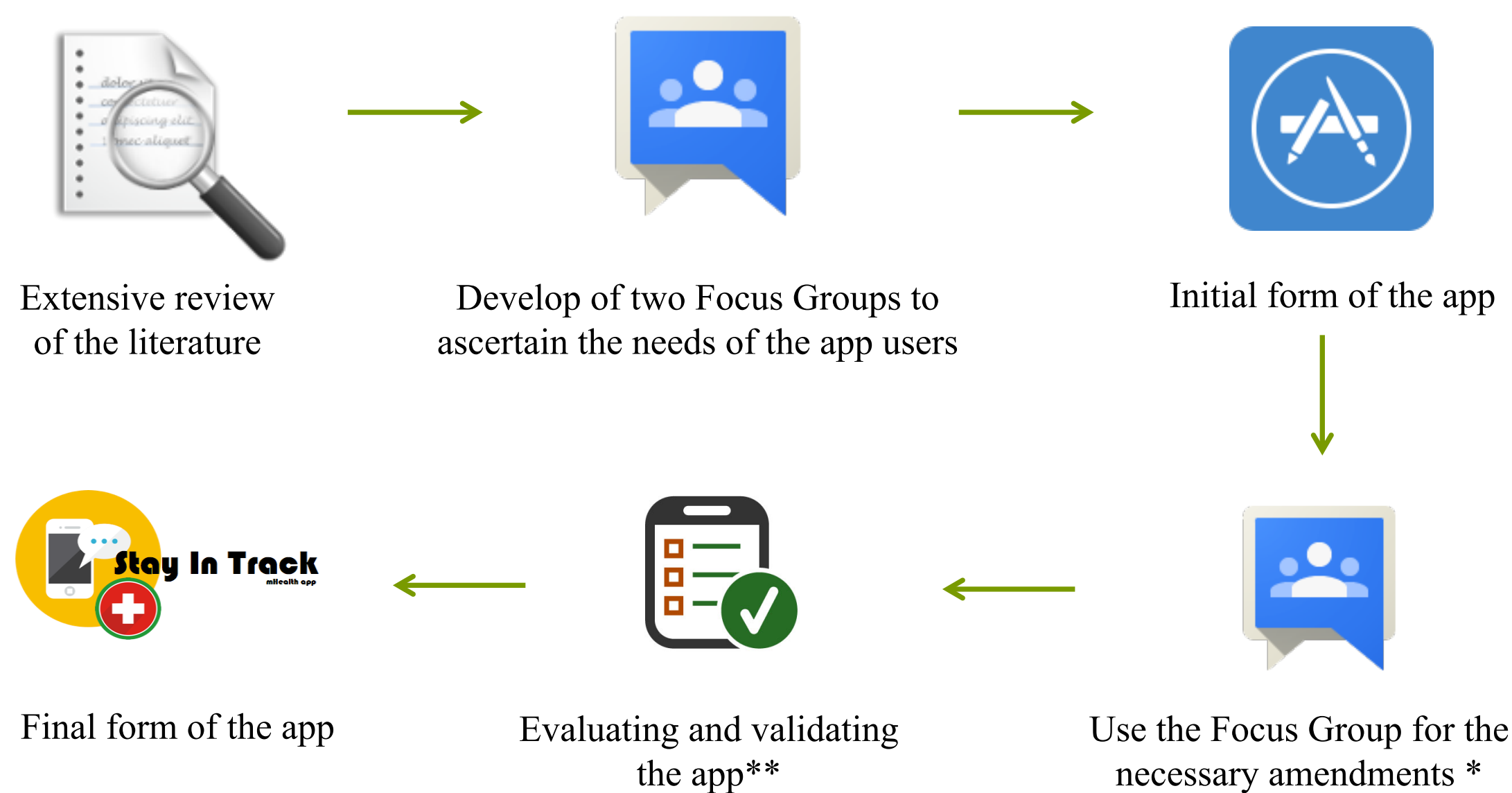
Features of the mHealth app



* We believe that techniques based on CBT will enhance the ability of the app to interact effectively with the user.

Methodology

This will be a multi-methods project incorporating four phases: a) Investigating the features of the application, b) Building the mHealth application, c) Investigating the application’s usability and d) Evaluating and validating the application



* Thematic Analysis

** Clustered randomized control trial.

Results/Conclusions

The current project will be designed and developed based on patient and clinician needs. The whole process will be assessed and all the necessity changes will be done. For these reasons we are expecting that the app will be effective.



The team of the project consists of multidisciplinary and qualified members. Members with a research and clinical background are responsible for designing the concepts of the app based on a theoretical framework, investigate the usability and validate its use. Members with a technical background design the app and investigate potential features.

Social Benefits can be summarized as: higher quality of care, clinical effectiveness, reduced healthcare costs and time consumption, advantages of online possibilities and better patient outcomes like quality of life and patient satisfaction with care provision.



“Drugs don't work in patients who don't take them.”

C. Everett Koop, M.D pediatric surgeon

Reference

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Abbreviations

mHealth: mobile health
App: Application
PTSD: Post Traumatic Stress Disorder
CBT: Cognitive Behavioral Therapy

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