



Mobile Phone Apps for CBT

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Plan

- Mob phone apps
- mHealth
- Issues re: mHealth apps
- Evidence for these
- For clients:
 - Adults
 - Young people
- Practical advice
- Research at UoN
- Q&A



Mobile Phones & Apps

- There is an estimated 2.6 billion smartphone users in the world.
- By 2017, over a third of the world's population is predicted to own a smartphone.
- In 2010 Android became the market leader of smartphone operating systems.
- In 2015 Android had 85% of the market share.
- Apple's operating system (iOS) is its main competitor,
- iOS accounts for around 15% of the share market.
(<http://www.statista.com/topics/840/smartphones/>)
- An app is software designed to run on an electronic device.
- There are more than two billion apps available.



mHealth apps



- MH phone apps fall under the term 'Mobile Health' (mHealth).
- mHealth apps are the fastest growing apps (physical + MH).
- There are 100 000 mHealth apps.
- 558 MH apps in 2013.
- Individuals with MH issues are willing to use apps for treatment (Proudfoot et al., 2010).
- It is estimated that 74% of healthcare professionals and 67% of consumers in the developed world will be using mHealth by 2017 (research2guidance, 2012).
- There are numerous ways MH apps can be used in MH issues.

Functions of mHealth Apps

- Help seeking
- Psychoeducation
- Screening and feedback
- Decision making, problem solving and goal setting
- Self monitoring and tracking of treatment progress
- Medication adherence
- Homework
- Skills training
- Self-management

(Hides, 2014)



Information from Sensors

How Many Sensors are in a Smartphone?



- Light
- Proximity
- 2 cameras
- 3 microphones (ultrasound)
- Touch
- Position
 - GPS
 - WiFi (fingerprint)
 - Cellular (tri-lateration)
 - NFC, Bluetooth (beacons)
- Accelerometer
- Magnetometer
- Gyroscope
- Pressure
- Temperature
- Humidity

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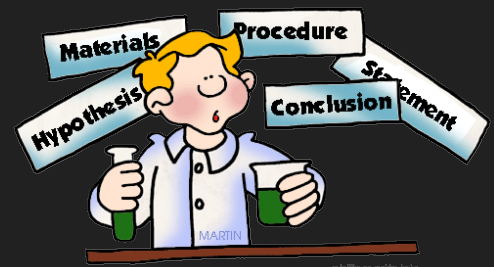
Issues with mHealth Apps

- Who developed the app?
- Security- who owns the data?
- Has it been studied or evaluated?
- How do you compare the mHealth apps?
- The cost of mHealth apps?
- Technology issues
- Discontinuation rates are high:
 - Replace with newer apps
 - Functionality
 - Engagement
 - User friendliness



Evidence for mHealth Apps

- The Donker et al. (2013) literature review of MH apps with:
 - Pre-post design
 - A control group
- 5645 abstracts reviewed
- 8 papers about 5 apps
- Targeted depression, anxiety, and substance use
- Effect sizes of 0.29-2.28 to 0.01-0.48.
- Two of the apps were available commercially
- They highlight the limited evidence in this area



Adults

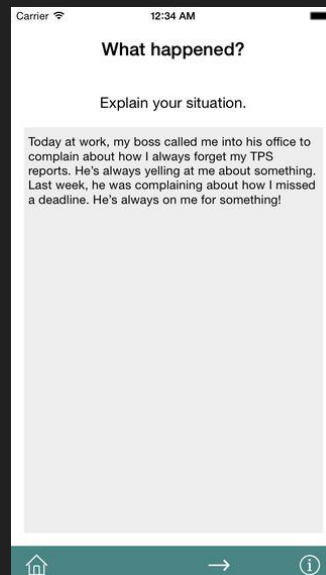
- iCouch CBT
- CBT-I Coach
- Depression CBT self-help guide
- eCBT calm
- Headspace
- Thought diary pro



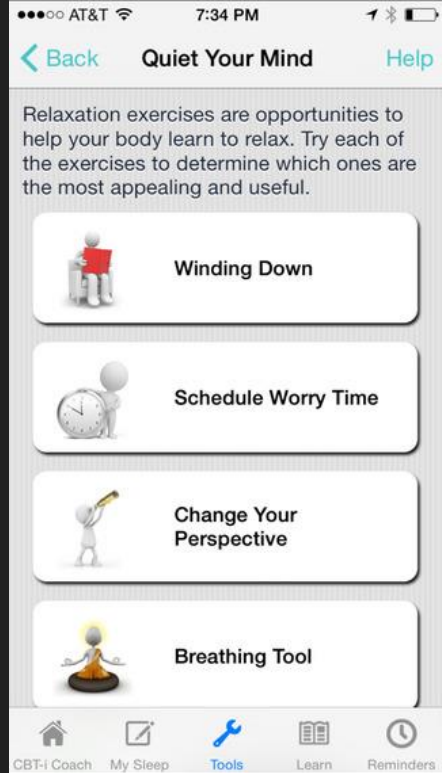
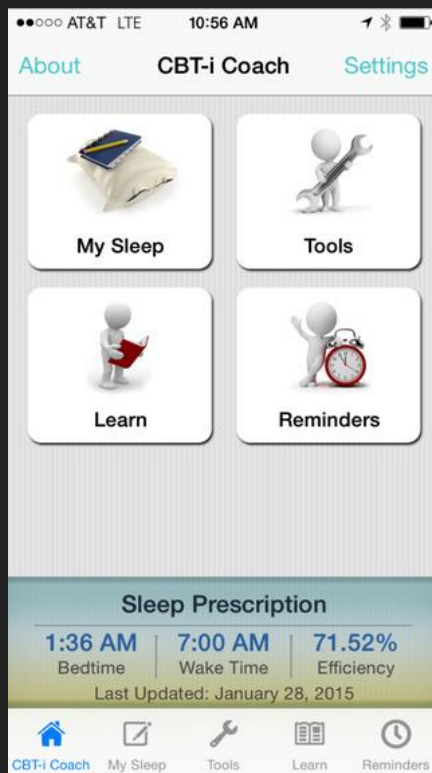
I-Couch CBT app



- \$2.99
- Not rated
- Only available on itunes for ios.
- iPad and iPhone use
- V2.6
- “Your therapy. In your pocket”
- Helps to recognise thinking patterns



CBT-I Coach App



Young People

- In 2013 89% of young Australians used smartphones.
- [ReachOut.com](http://reachout.com) has recently reviewed the quality of mental health and wellbeing apps using the MARs as part of the Young and Well CRC.
- In 2015 health professionals and young people identified 50 high quality apps for inclusion in a web-based app portal for young people.
- <http://au.reachout.com/sites/thetoolbox>



mHealth Apps for Young People

- Smiling Mind
- The Checkin app (developed by Beyond Blue)
- ReachOut
 - breath
 - worrytime
 - recharge sleep



mHealth Apps for Young People

- Mood Assessment Program
- MoodGYM
- Moodkit
- iCope
- Smiling Mind
- Talking Anxiety
- Body Beautiful
- DeepSleep
- SuperBetter
- Live Happy
- Pillboxie
- iCounselor
- Mnt



(recommended by Michael Carr-Greg at The Young & Well Cooperative Research Centre)

MARS Rating Scale

- Mobile App Rating Scale (MARS) developed by A/Prof Leanne Hines and colleagues at UQ
- Was developed as part of the Young and Well Cooperative Research Centre (Young and Well CRC) (Stoyanov et al., in sub).
- Also due to the problems with comparing and choosing apps:
 - Star ratings
 - Not studied/evaluated



Mobile App Rating Scale (MARS)

- **Classification, quality and satisfaction dimensions:**
- **App classification** – developer/affiliation, cost (initial, updates), platform, target group, confidentiality, security, registration, community, sharing, internet access required to function.
- **App quality**
- Engagement – entertainment, interest, customisation, interactivity, appropriateness for target group
- Functionality – performance, ease of use, navigation, gestural design
- Aesthetics – layout, graphics, visual appeal
- Information – accuracy of app description, goals, quality and quantity of information, visual information, credibility, evidence base
- **App satisfaction** – would recommend, number of times would use app, would pay for app, overall (star) rating



Clinician Involvement I



- Utilise the MARS rating scale.
- Read about the app:
 - Look at the app store description
 - Look for apps with simple, realistic and clear purpose
 - Look for apps developed by a multidisciplinary team of designers, IT technicians and health professionals
 - Information on how the app was developed and tested should be provided
 - Search via Google scholar re: what up to date evidence base exists for the app.
 - Use the app with caution if none of this app exists

Clinician Involvement II

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- The app should then be trialled for at least 10 minutes to determine:
 - how easy it is to use
 - how well it functions
 - whether the app does what it purports to do.
- Clinical judgement should be used in evaluating the:
 - credibility, quality and quantity of the information contained in the app
 - how consistent the app is with evidence-based practice

Clinician Involvement III



- Apps that are more engaging to young people include those that are:
 - visually appealing
 - have a high level of interactivity,
 - can be customised to the user needs
 - have a high level of fun/entertainment value
- 'Gamified' apps which utilise game mechanics to increase engagement are also likely to be popular

Clinician Involvement IV

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- Clinicians' may also find the growing number of review articles describing:
 - the purpose,
 - functionality,
 - Quality
 - effectiveness (where available) of mental health and wellbeing apps helpful
- However, the methodological quality of these reviews is variable:
 - in terms of the search terms/procedures used,
 - the retail stores/research databases searched
 - the criteria used to determine app quality.
- Think about how to integrate the mHealth apps with therapy

(Hines, 2014)

Research at UoN

- Systematic review of mobile phone apps
 - Update of the Donker et al., 2013 study
- Trialling a healthy lifestyle app
- The BD Project



Summary



- mHealth is becoming increasingly popular.
- However, the evidence for mHealth apps are limited.
- A large number of mHealth apps have CBT features.
- Due to lack of evidence, clinical judgement is important.
- Younger people may engage more with mHealth.
- Be aware of what you can do to help your client choose a good mHealth app.
- Think of ways to incorporate mHealth is your clinical practice.

References

Donker, T., Petrie, K., Proudfoot, J., Clarke J., Birch, M-R., & Christensen, H. (2013). Smartphones for smarter delivery of mental health programs: A systematic review. *Journal of Medical International Research*, 15 (11), e247.

Hines, L. (2014). Are SMARTapps the future of youth mental health? *InPsych*, 36 (3)

research2guidance. (2012). *3rd mHealth Expert Survey*. Available from: <http://www.research2guidance.com/r2g/3rd-mHealth-Expert-Survey.pdf>.

Images

ClipArt

Cartoon Stock

Google Images

Further Reading:



Thank You

Q&A Time

