

Pilot RCT of apps based on EMDR

The challenge and the potential



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Digital technology and mental health

- Digital technology, in the form of websites, apps, and teleconferencing, are the future of psychotherapy.
Browdy, 2019
- There is no doubt that as technology grows exponentially more advanced, highly digitized mental health treatment is the future.

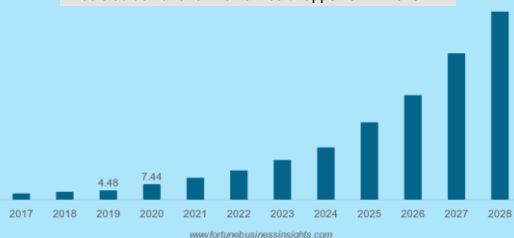
APA, 2022

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Digital technology and mental health

Predicted demand for mental health apps 2017 - 2028



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Digital technology and mental health

Uses of mental health apps

- Information
- Adjunct to treatment
- Self-help (eg; emotional regulation)
- Symptom monitoring
- Facilitating habit change
- Treatment compliance (e.g., on-time drug intake),
WHO, 2021

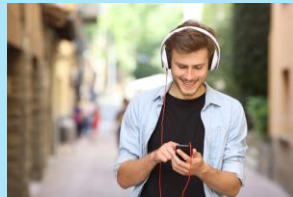
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Digital technology and mental health

Advantages of mobile apps

- Always accessible
- Client has control
- Inexpensive
- Augment therapy
- Safe?
- Effective?



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Digital technology and mental health

- 325,000 Health apps
- 10,000 mental health
- 555 for PTSD
- 25 based on EMDR
- Increasing use since COVID
- Little research

WHO, 2021

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Evidence-based treatments PTSD

1. Cognitive Processing Therapy
2. Eye Movement Desensitization & Reprocessing
3. Prolonged Exposure

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Mobile apps for PTSD (with research)

1. Cognitive Processing Therapy;
> 'PTSD coach' (n=16)
2. Eye Movement Desensitization Reprocessing;
> 'Healing trauma app series' (n=1)
3. Prolonged Exposure;

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Apps based on EMDR

- EMDR Therapy +
- EMDR Elite
- EMDR +
- The EMDR Helper
- EMDR for clinician basic &/or pro
- Anxiety Release based on EMDR
- Calm and Confident
- Sleep Restore
- Overcoming pain



'HTAS'

Marotta-Walters et al, 2018

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Defining characteristics of EMDR apps

- Based on AIP model
- BLS/Dual focus of attention
- Somatic focus
- Resourcing
- Cautions/caveats for dissociative users

Marotta-Walters, 2018

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Uses of apps based on EMDR

- Preparation phase:
 - Symptom management
 - Stabilization
 - Psychoeducation
- Desensitization phase:
 - BLS delivery vehicle
- Resourcing:
 - BLS + free association/imagery
 - Symptom management

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Healing trauma app series (HTAS)

Overcomingpain
Based on EMDR

Anxiety Release
Based on EMDR

Calm and Confident
Based on EMDR

Sleep Restore
Based on EMDR



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Why pain, anxiety, insomnia and self-esteem?

4 primary comorbidities PTSD:

- Medically unexplained symptoms (x 2-3 times normal)
- Anxiety (x 2 – 4 times normal)
- Insomnia (x 5 times normal)
- Identity/self-esteem issues

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Why EMDR?

- In a 2019 study published in Nature, Baek (et al. 2019) reported that fear conditioning in rats was more fully extinguished when they engaged in EMDR type eye movements than with other extinction learning interventions. The Baek et al results also found a psychophysiological path involving the Colliculus, Thalamus and Amygdala which appeared to account for the effects of the bilateral eye movement.

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Why EMDR?

- Analogue studies, and now an animal study, have unequivocally supported the value of the most controversial aspect, the eye movement activity. These studies have demonstrated the role of the eye movement in reducing emotional responsivity and vividness of imagery for personal emotionally evocative memories (Andrade, Kavanaugh, & Baddeley 1997; Gunter & Bodner, 2008; Kavanaugh, Freese, Andrade, & May, 2001; Maxfield, Melnyk, & Hayman, 2008; Sharpley, Montgomery, & Scalzo, 1996; Van den Houts, Muris, Salemink, & Kindt, 2001).

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Why EMDR?

Effects of BLS

- BLS significantly increased "accessibility" to positive memories ($p = 0.022$) and "relaxation" ($p = 0.020$).
- A trend towards significance was observed for "increased vividness" ($p = 0.074$).
- The majority of subjects felt BLS was more effective than non-tactile stimulation for enhancing memory recall.

Armano & Toichi, 2016

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'The use of an app to overcome CTS'

- 39 year old Carpal tunnel sufferer
- Previous health; cancer (-lung)
- Rx: Panadene Forte (paracetamol & codeine)
- Surgery?
- Anxiety correlated with CTS
- Used app 3 months (no psychological treatment)
- Pain-free, ceased all medication
- Surgery cancelled

Grant, 2014

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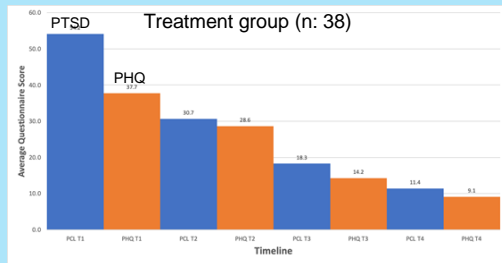
A pilot RCT of apps based on EMDR

- 77 subjects PTSD and pain/MUS
- Tests: PCL-C, PHQ
- Average duration PTSD 10.4 years
- Recruited via online advertising/therapist referral
- Control group (n: 39) Treatment group (n: 38)
- Treatment: Use 1 or more apps daily for 3 month
- Control: TAU/nothing
- Testing: Post (T2), and 3-month (T3), and 6-month (t4) f/up
- Questioned about adverse events

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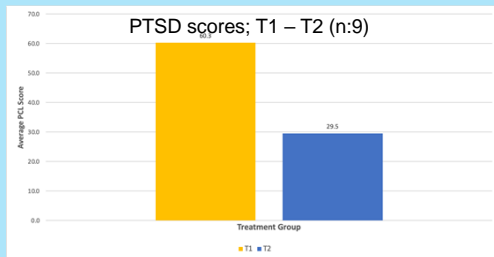
Results



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Results



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Results

- Helpful when used
- High drop-out rates
- Safe?
- Can facilitate access therapy



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User feedback

- All the apps have been helpful. I can't believe how fast the sleeping one works.
- Anxiety, Pain and Calmness ~ especially link with brain, pain and PTSD is changing my mindset. I'm not so hard on myself.
- Your apps have got my through some very trying times. I've struggled.
- As soon as I hear the BLS I seem to calm down. Having the first calm day in my life....it is a wee bit unnerving.

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Self-management of cancer diagnosis

- Cancer?



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EMDR apps as adjunct to treatment



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EMD at Changi airport



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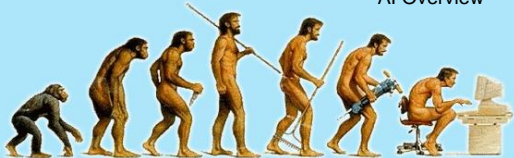


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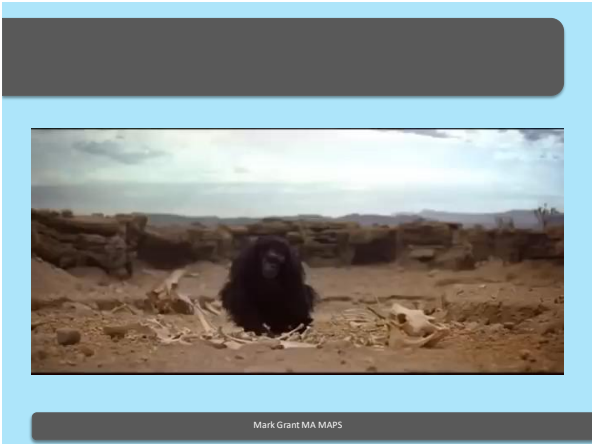
'Technology, broadly defined, is the application of scientific knowledge for practical purposes, encompassing tools, techniques, and processes.'

AI Overview



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