Job-Driven Technical Assistance Center (JD-VRTAC)
Assistive Technology for Supporting People with Mental Health Disabilities: Part 2

Mark Harniss, PhD

Maria Kelley, OTR/L, ATP

Job-Driven Center Goals

Improve skills of state VR agency staff, other rehab professionals & providers of VR services, who are trained to provide "job-driven" VR services & supports to PWD, employers & customized training providers.

Four Topic Areas:

1. Business Engagement
2. Employer Supports
3. Labor Market Information (LMI)
4. Customized Training Providers

www.explorevr.org

Explore VR

Job-Driven Center Partners

Institute for Community Inclusion (ICI) at Univ. of Massachusetts, Boston

***In Partnership with*:**

- Jobs for the Future (JFF)
- Univ. of Arkansas
- Univ. of Washington
- Council of State Administrators of Vocational Rehabilitation (CSAVR)
- United States Business Leadership Network (USBLN)
- Association of University Centers on Disabilities (AUCD)

In Collaboration with:

- National Council of State Agencies for the Blind (NCSAB)
- Technical Assistance Center Collaborative

Explore VR

Webinar Objectives

- Provide assistive technology resources and expertise to all Washington residents with disabilities to aid in making decisions and obtaining the technology and related services needed for employment, education and independent living

- Each state has a federally funded and mandated AT program that provides comprehensive statewide services

How the AT Act Programs Can Help

- Low cost or free programs for consumers
  - Device Demonstration
  - Device Lending
  - Device Reutilization
  - Alternative Financing
  - Information and Referral

Explore VR

Objectives

- Part 1
  - Understand the cognitive impact caused by mental health conditions and the effects on employment outcomes.
  - Understand how assistive technology can help improve employment outcomes.
- **Part 2**
  - Identify specific assistive technologies that can be used as accommodations for people with mental health conditions.

Explore VR

How can Technology Help?

- Assistive Technology
  - Cognitive support
    - Reminders / Schedulers / Task Management - (Memory, Executive Function)
  - Calming/reducing arousal
    - Soothers / Comforters / Mindfulness - (Anxiety)
    - Distracters / Disrupters - (Agitation)

  - Self-management
    - Mood & Behavior Trackers / Screeners - (Therapeutic)
    - Safety / Monitoring - (Risk Behaviors)
    - Sleep / Diet – (Health Behaviors)
  - Passive symptom tracking
    - Breathing / Pulse / GSR – (Stress)

Explore VR

The Pros and Cons of Mental Health Apps

Pros

- **Convenience:** Treatment can take place anytime and anywhere (e.g., at home in the middle of the night or on a bus on the way to work) and may be ideal for those who have trouble with in-person appointments.

- **Anonymity:** Clients can seek treatment options without involving other people.

- **An introduction to care**: Technology may be a good first step for those who have avoided mental health care in the past.

- **Lower cost**: Some apps are free or cost less than traditional care.

http://www.nimh.nih.gov/health/topics/technology-and-the-future-of-mental-health-treatment/index.shtml

Explore VR

The Pros and Cons of Mental Health Apps

Pros

- **Service to more people**: Technology can help mental health providers offer treatment to people in remote areas or to many people in times of sudden need (for example, following a natural disaster or terror attack).

- **Interest:** Some technologies might be more appealing than traditional treatment methods, which may encourage clients to continue therapy.

- **24-hour service:** Technology can provide round-the-clock monitoring or intervention support.

- **Consistency:** Technology can offer the same treatment program to all users.

- **Support:** Technology can complement traditional therapy by extending an in-person session, reinforcing new skills, and providing support and monitoring.

http://www.nimh.nih.gov/health/topics/technology-and-the-future-of-mental-health-treatment/index.shtml

Explore VR

The Pros and Cons of Mental Health Apps

Cons

– **Effectiveness**: The biggest concern with technological interventions is obtaining scientific evidence that they work and that they work as well as traditional methods.

– **For whom and for what**: Another concern is understanding if apps work for all people and for all mental health conditions.

– **Guidance**: There are no industry-wide standards to help consumers know if an app or other mobile technology is proven effective.

– **Privacy**: Apps deal with very sensitive personal information so app makers need to be able to guarantee privacy for app users.

– **Regulation**: The question of who will or should regulate mental health technology and the data it generates needs to be answered.

– **Overselling**: There is some concern that if an app or program promises more than it delivers, consumers may turn away from other, more effective therapies.

Explore VR

Cognitive Support

Explore VR

AT Solutions for Memory Loss

- Timers
- Recorders
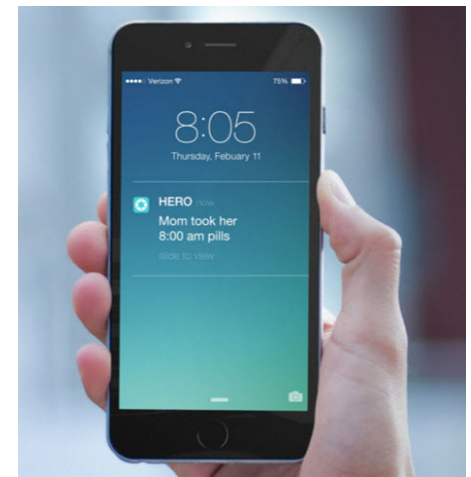- Locator devices
- Medication aids
- Picture phone

Explore VR

Medication Aids

- Meds organized in individual packs

- Order online or phone

- Insurance billing

https://www.pillpack.com/

Explore VR

HERO Pill Dispenser

- Can send notifications to support person if meds taken

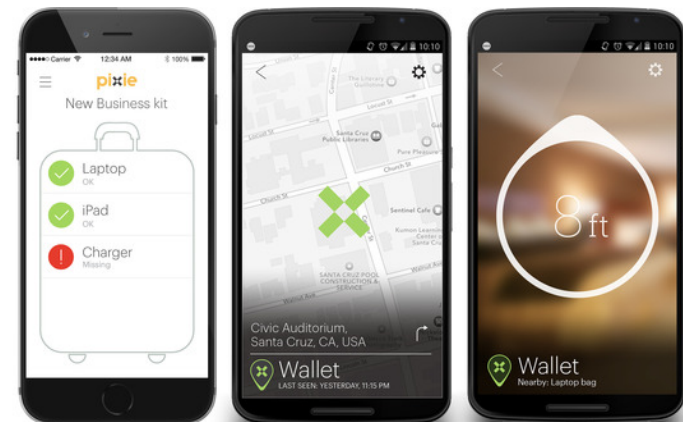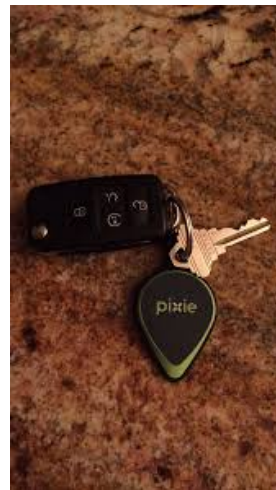- Auto reminders of medication times and dispenses pills on specific schedules

Explore VR

Trackers/Locators

Bluetooth Beacons

– Location tags that help locate lost items

• Stick n Find

• Tile

• Pixie

Explore VR

AT Solutions for Organization

- Visual Schedulers
- Calendars
- Smartwatches
- Apps

Explore VR

Technology to Accommodate Cognitive Changes Can Be Low Tech

- Sticky notes, day timers, color coding

- Don't make the AT solution a barrier

Explore VR

Google Calendar

- Allows user to schedule one time or recurring appointments

- Reminders can be created

- Can be synched to smartphone, computer and tablets allowing for user to enter and access information from various locations

- Shared calendaring can be set up if additional support is needed

Explore VR
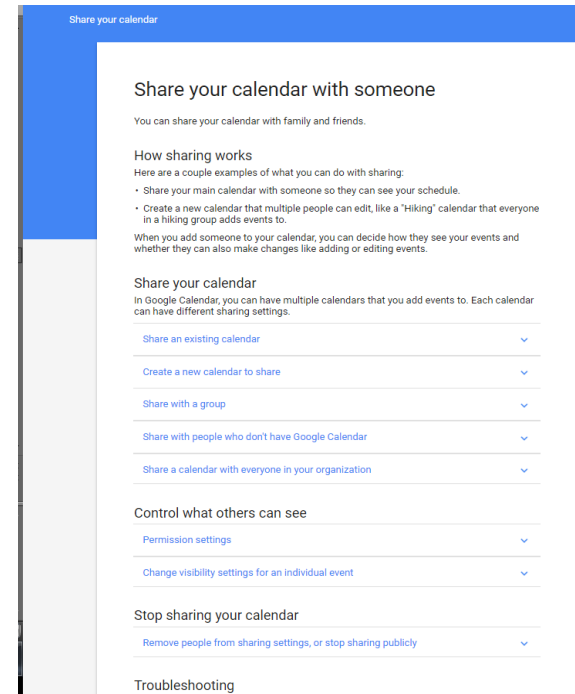
Apps for Task Management

- 30/30 (free, iOS, Android, Windows)
  - Set up tasks and time needed to complete
  - App will tell you when to move onto next task

Explore VR
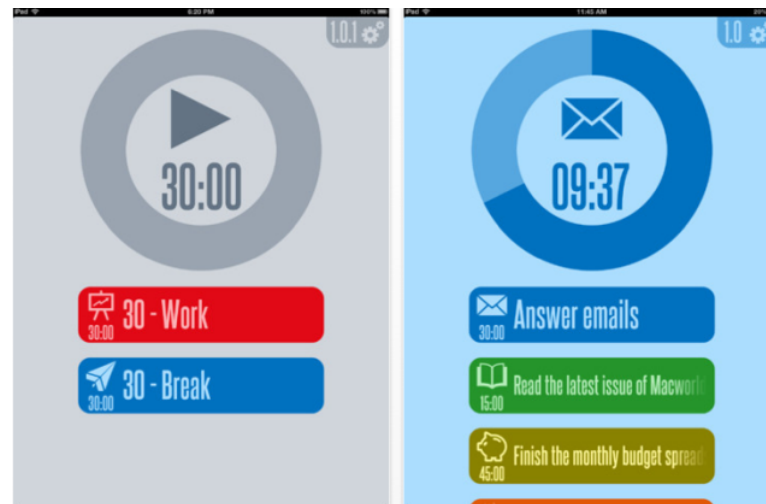
Apps for Task Management

- Evernote (free, iOS, Android, Windows)
    - Allows you to store text, photos, and audio notes on your device of choice. Create "notebooks" and categorize notes for meetings and to-do lists. Notes are tagged with geo-location for mapping or search. Keep all info in one place
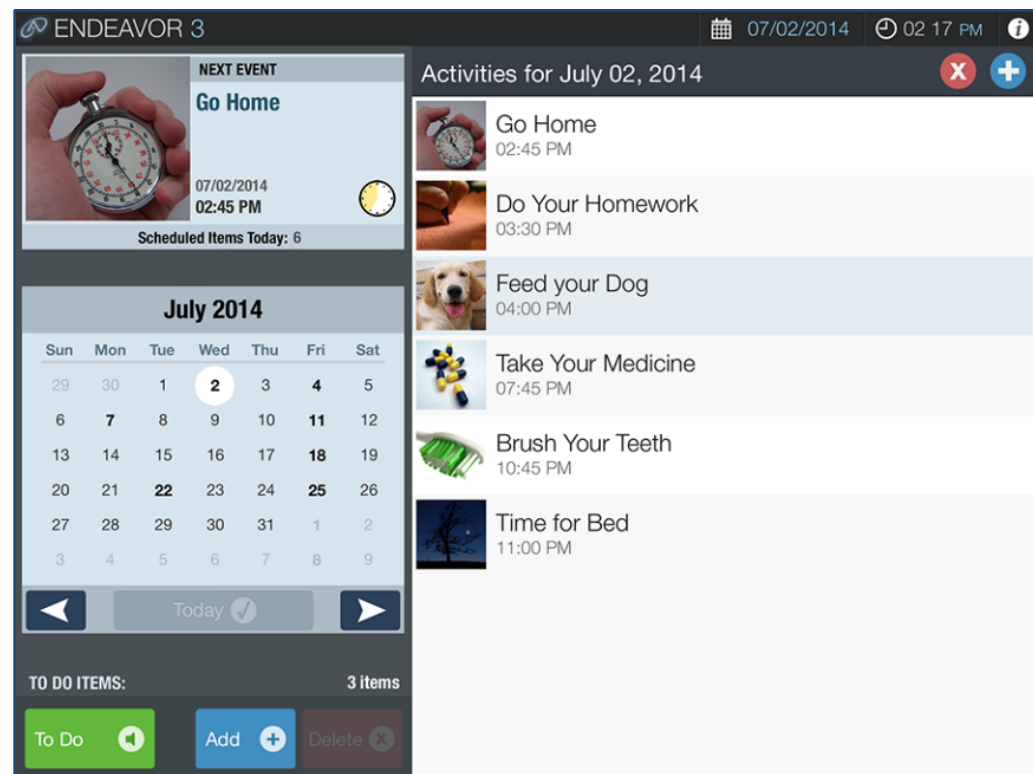
Explore VR
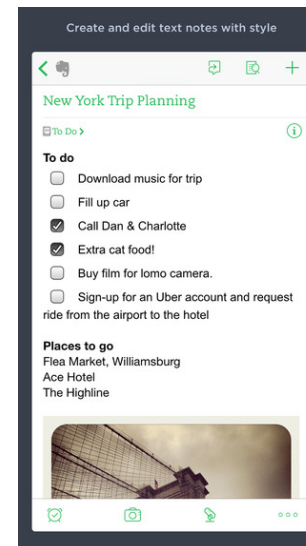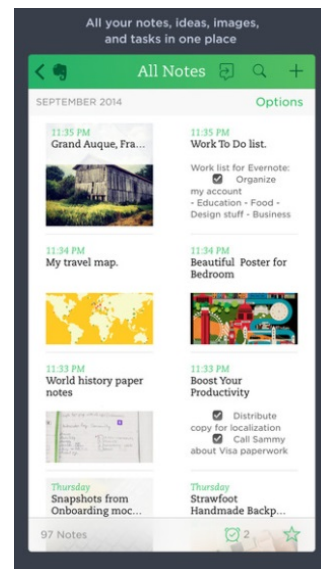
Apps for Reminders

- ## MyMed Schedule (free iOS, Android)

  – Keep track of medication

  – Refill Reminders

  – Healthcare Provider Profiles

  – Insurance Information

  – Allergies

Explore VR
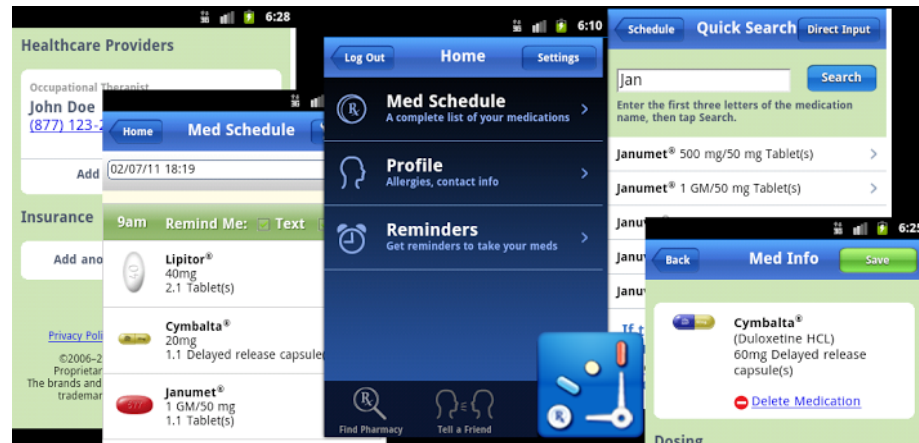
Reminders

- **Ablelink Technologies**
  - Endeavor 3 ($99, iOS)
  - Scheduling and to do list app

Explore VR

Visual Schedule/Modeling Apps

- Pictello ($20, iOS)
- Visual Schedule Planner ($15, iOS)
- AbleLink Technologies ($150)
  - Visual Impact 3

Explore VR

Pictello

- **Visual story creator to develop skills**

- **Easy to customize**

- **Multimedia can be integrated**

Add a story in wizard/expert mode

Explore VR

Visual Schedule Planner

- Designed to give an individual an audio/visual representation of the "events in their day"

- Able to view events daily, weekly or via a monthly calendar.
  -Custom images
  -Custom sound
  -Activity schedules
  -Video Modeling
  -Timer
  -Checklist
  -Reminders
  -Notes

Explore VR
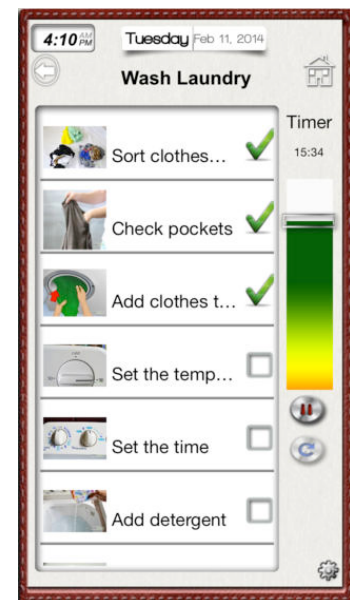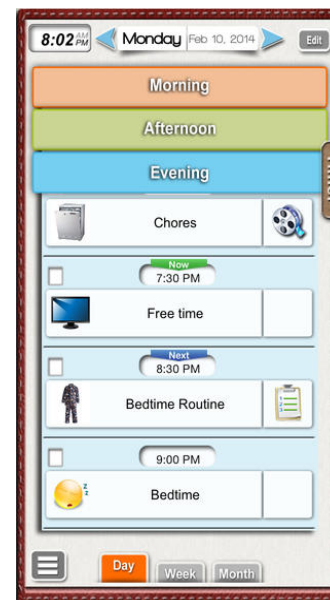
Visual Impact 3

- Provides step by step multimedia instructions for various tasks
- Custom tasks can be created
- $150, iPad
- http://www.ablelinktech.com

Explore VR
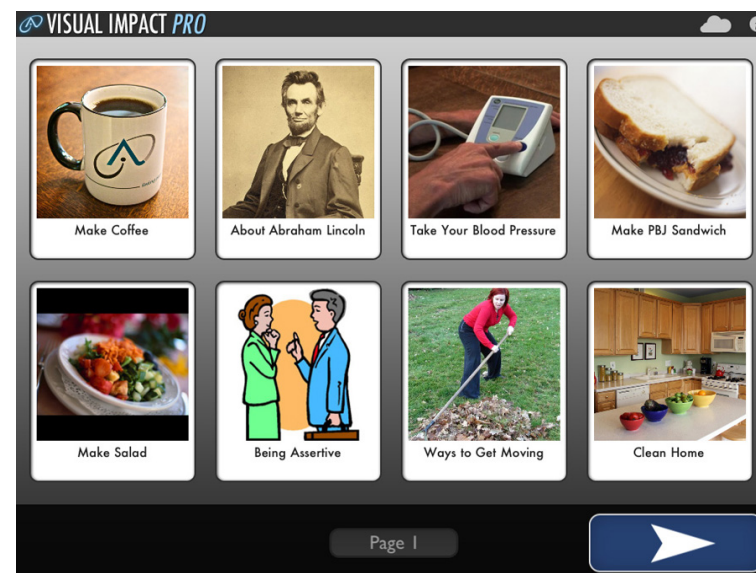
Work Autonomy App

- Full featured app designed to provide support in work environments

- 3 areas of support
  - Communication
  - Tracking tasks
  - Work schedules

- Each section allows for the capture and editing of content using video, photo, text and/or voice to meet the communication preferences and processing needs of the user.

Explore VR

ShowMeQR

- iOS and Android
  - Manager app $2.99
  - Scanner app $0.99
- Assist with the understanding and completion of tasks at home, school, or work
- Creates and prints proprietary codes that can be placed on objects
- After scanning the code, instructional videos or written instructions are presented
- Immediate live video or telephone support available

ExploreVR

Echo by Amazon
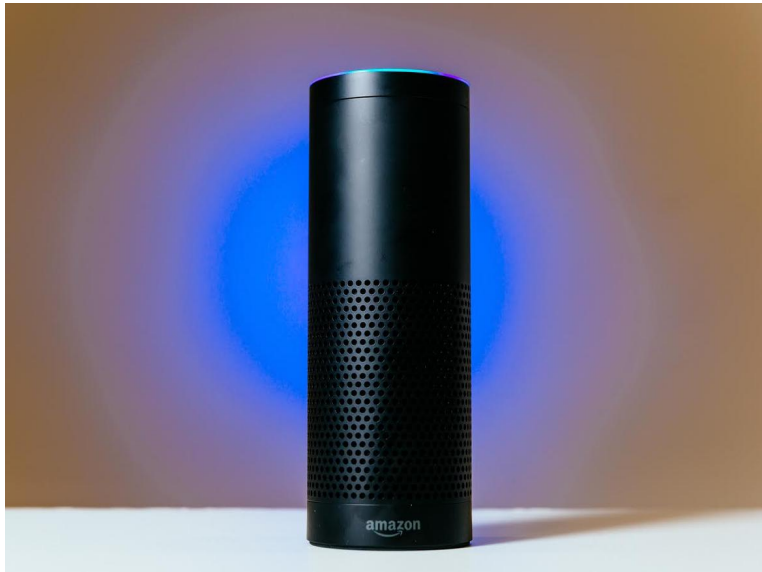
- Echo is always ready, connected, and fast
- Add items to "to do" list
- Stay on time and organized with voice-controlled alarms, timers, shopping, and to-do lists
- Get information from Wikipedia, definitions, answers to common questions, etc
- Echo App allows you to manage alarms, lists, etc

ExploreVR

Calming/Reducing Arousal

Explore VR

AT for Calming

- T. Jacket by T. Ware
- Wearable technology
  - Provides deep touch pressure to calm/soothe individual who is anxious or stressed
  - Pressure controlled via smartphone iOS or Android
  - Child/Adult sizes; $599

Explore VR

AT for Calming

- b-Calm

- Products for adult and children ($109 -$205)

- Preloaded audio sedation tracks

  – Acoustic masking signals work to make typically distracting noises unapparent to the user

  – Audio recordings to help with relaxation and focus

Explore VR

Modifications at the Work Environment

- Provide private office or work area with limited distractions/low traffic area

- Noise reducing headsets/ noise reduction ear muffs

  – Can decrease help to reduce stress and improve concentration

  – Can also reduce ambient noise at night and help with sleep

Explore VR

Modifications to the Work Environment

- AT for Reading
- Can help if vision is affected
- Can assist with reading comprehension
- Helpful with visual tracking
- Text to Speech Software
  - ClaroRead, TextHelp etc
- Text to Speech Mobile Apps
  - Learning Ally, Bookshare, Audible

Explore VR
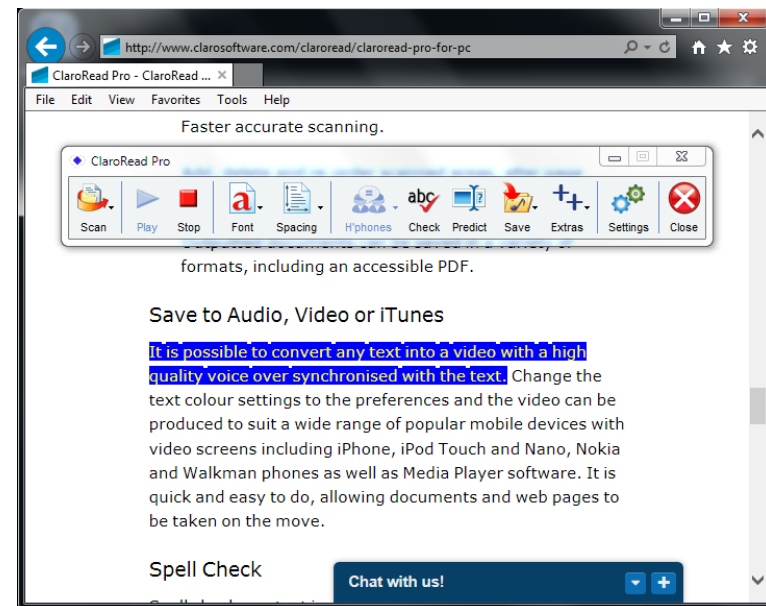
Modifications to the Work Environment

- Provide natural light or therapy lamps

    – Simulate outdoor lighting

    – Many options…make sure designed for SAD

    – Light box should emit reduced UV light

    – Brightness will affect hours of use; consult healthcare provider for hours of use

    – Recommended distance 2 feet from user

Explore VR

Self Management

Explore VR

On-line or Device Trackers

- Graph moods over time making it easy for the individual or their therapist to track daily rhythms

- Important to use secure and encrypted online tools when sharing data with family, providers or certified peer specialists

- Your phone "reminds" you to complete daily input

- Supplemental Tracking of:
  – Medications taken
  – Exercise completed
 – Food eaten

Explore VR

Apps for Mood/ Emotion Management

- T2 Mood Tracker (free iOS, Android)
  - Allows users to monitor moods on pre-loaded scales
- MindShift (free iOS, Android)
  - Tools for relaxation; develops new thinking; suggests healthy activities
- Breathe2Relax (free iOS, Android)
  - Uses guided breathing exercises to reduce anxiety

Explore VR

Apps for Mood/ Emotion Management

- Self-Help for Anxiety Management (SAM) (free iOS, Android)
  - Tell the app how you're feeling, how anxious you are, or how worried you are
  - App's self-help features walk you through some calming or relaxation practices.

Explore VR
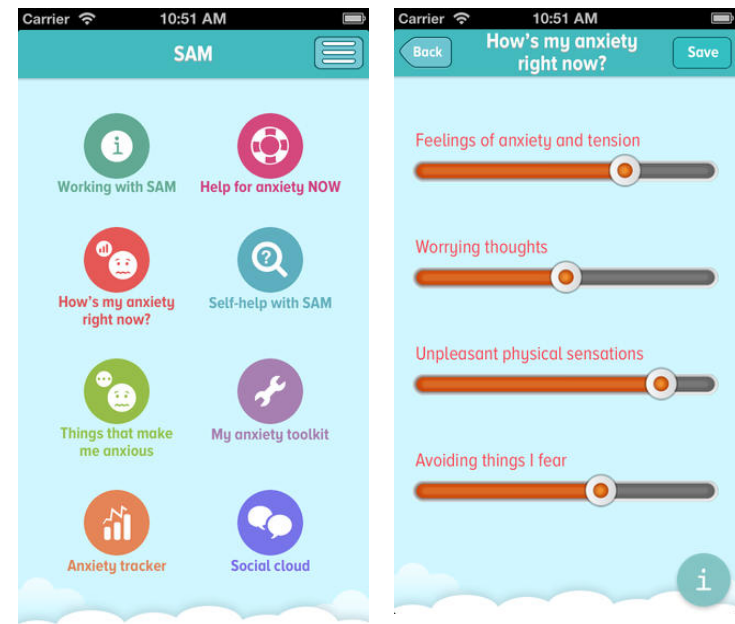
Apps for Sleep Management

- Sleep Time-Alarm Clock (free, iOS, Android)
- Sleep Cycle ($1, iOS, Android)
- Sleepbot (free, iOS, Android)

- Monitors sleep habits
- Uses accelerometer in the smartphone, tells you how quickly you fall to sleep, when you enter each phase of sleep, and how efficient each sleep cycle is. The app gently wakes you up at the right time, not in the middle of a deep sleep

Explore VR

DBSA Wellness Tracker Depression and Bipolar Support Alliance

- Online - iOS App - Android App
  - www.DBSAlliance.org/Tracker
- Provides key health trends for mood disorder
  - Overall Mood – (depressed to manic)
  - Well-Being – (cheerful, calm, active, rested)
  - Mood Disorder Symptoms – (rate and comment)
  - Lifestyle (including sleep, exercise, etc.)
  - Medication and Side Effects
 - Physical Health

Explore VR
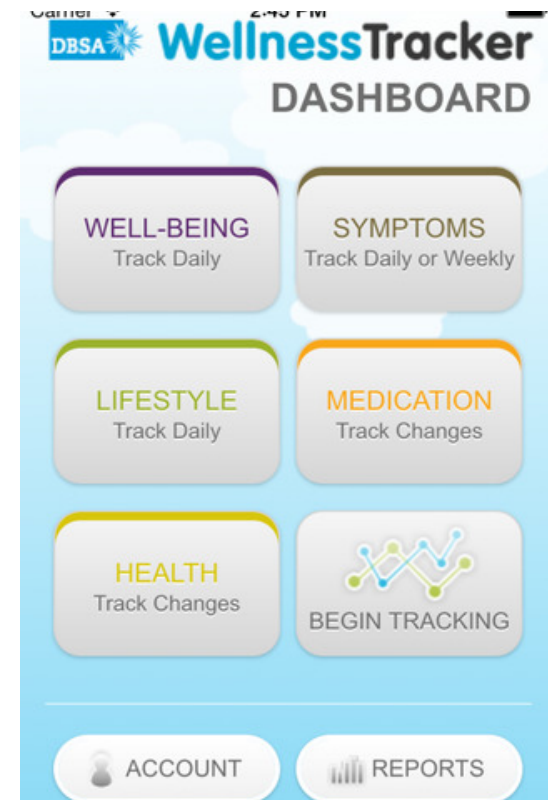
PTSD Coach

- Reliable information on PTSD and treatments that work

- Tools for screening and tracking your symptoms

- Convenient, easy-to-use tools to help you handle stress symptoms

- Direct links to support and help

- Always with you when you need it

Explore VR

Pacifica

- An app for stress, anxiety, and worry based on Cognitive Behavioral Therapy, relaxation, and wellness.

  – Track your mood

  – Guided relaxation techniques

  – Thought diary

  – Health tracking (exercise, sleep, caffeine)

  – Set Daily Goals

  – Review mood history

Explore VR
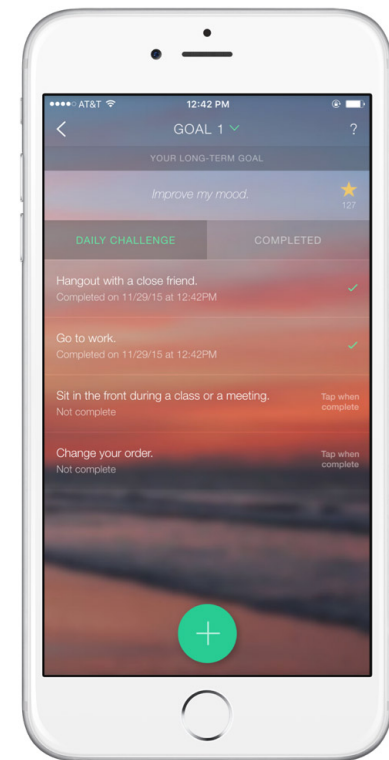
Apps for Nutrition & Fitness

- MyFitnessPal
  - Track food intake
  - Track exercise
  - Participate in community

Explore VR
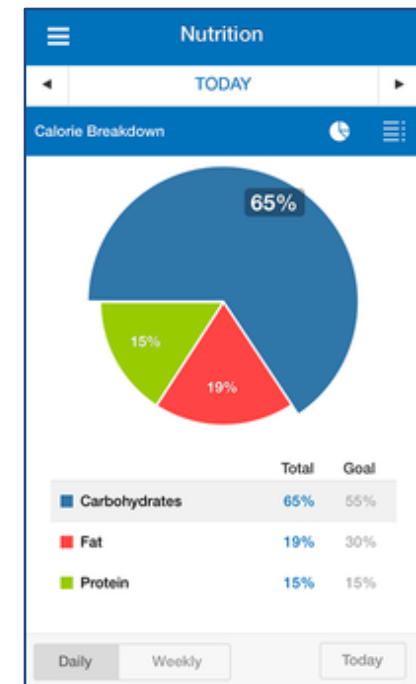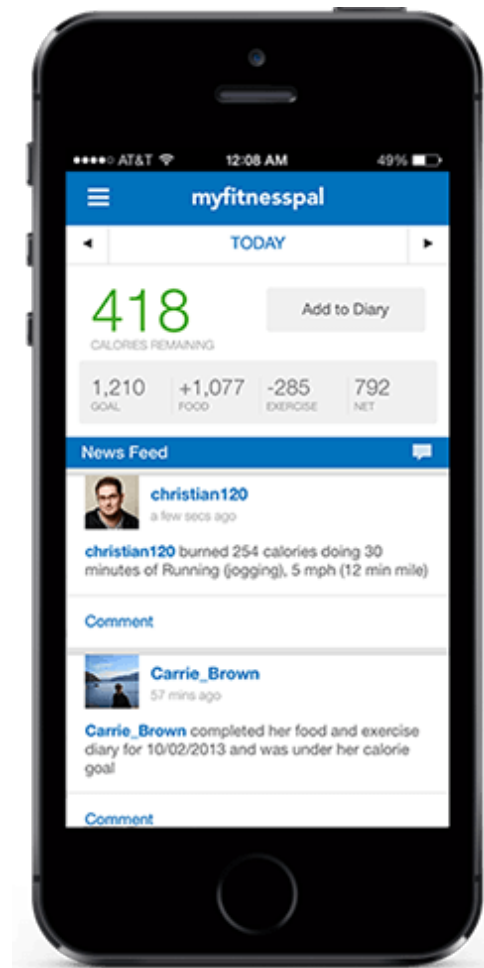
Passive Symptom Tracking

Explore VR

Embrace Watch

- ## Stress management
  - – Monitors physiological stress
- ## Sleep Management
- ## Activity Tracker

https://www.empatica.com

Explore VR

Spire (Mindfulness/Relaxation)

- "Fitbit for the mind"
- Measures breathing patterns and tracks steps.
- Breathing visualizations.
- Guided breathing meditations.

Explore VR

Withings Aura (Sleep)

- Passively tracks sleep patterns (heart rate, motion, respiration) and sleep environment (light, noise, temperature).

- App visualizes sleep patterns.

- System identifies best time to wake you up.

Explore VR

Smartphone data tracking

- ## Your phone knows if you are depressed:
    - The more time you spend using your phone, the more likely you are depressed. The average daily usage for depressed individuals was about 68 minutes, while for non-depressed individuals it was about 17 minutes.
    - Spending most of your time at home and most of your time in fewer locations -- as measured by GPS tracking -- also are linked to depression. And, having a less regular day-to-day schedule, leaving your house and going to work at different times each day, for example, also is linked to depression.
    - Based on the phone sensor data, Northwestern scientists could identify people with depressive symptoms with 87 percent accuracy.

Mobile Phone Sensor Correlates of Depressive Symptom Severity in Daily-Life Behavior: An Exploratory Study: http://www.jmir.org/2015/7/e175/

Explore VR

Smartphone data tracking

- Ginger.io: https://www.ginger.io/
  - Passively collects "millions of interaction and location data points. Motion data is captured by a phone's accelerometers. Global positioning systems pinpoint where a person visits. It also logs the duration and frequency of phone calls and texting patterns." Establishes persons normal patterns and looks for significant deviations.

- Health Rhythms: https://healthrhythms.com/en/
  - "We leverage passively collected data to gain a continuous and refined view of daily behavioral activities."

Explore VR

Questions?

Explore VR

Washington Assistive Technology Act Program

University of Washington

(800) 214-8731 Toll-Free Hotline

(206) 616-1396 TTY

(206) 543-4779 Fax

http://watap.org/

Email: watap@uw.edu

Explore VR