Computerized Cognitive Behavioral Therapy Mobile App (cCBTvr): Designing a Usability and Feasibility Study
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Overview:
- **Background:** Behavioral health disorders are among the most costly health conditions in the US, and one of the leading causes of disability. More than 50% of Americans with a behavioral health disorder do not have access to treatment due to decreased mobility, transportation concerns, stigma, and living in underserved areas.
- CBT-based treatment models address symptoms of anxiety via Android/IOS.

**cCBTvr Mobile App:**
- 8 CBT-based modules: (1) psychoeducation on the cognitive triangle; (2) antecedents, response, and consequences of behaviors (ARC); (3) automatic thoughts; (4) thinking traps; (5) challenging thoughts; (6) challenging behaviors; (7) coping through grounding; and (8) response, and consequences of behaviors (ARC); (3) automatic thoughts; (4) thinking traps; (5) challenging thoughts; (6) challenging behaviors; (7) coping through grounding; and (8) response, and consequences of behaviors (ARC).

**The Current Study:**
- **Overall Goal:** Design a mixed-methods research study to assess the usability and feasibility of the cCBTvr app from the perspective of patients and providers within our health system.
- **Data Collection:** Surveys and focus groups will inform further development of the app.

**System Data:**
- Log-ins, time spent, modules completed, symptom data, mindfulness activities used, etc.

**References:**

**Participants:**
- **Two URMC Healthcare Sites**
  1. Post-surgical physical therapy (PT) services at Brockport/Brighton/Vineyard (B), Canandaigua; Penfield, Greece
  2. Behavioral Health Partners (BHP)

**App Training:**
- **Participants**
  1. Providers (n = 40)
  2. Participants (n = 130)

**Content:**
- Rational for use of app
- Overview of app
- Procedure for introducing app to patients
- Procedures for checking/monitoring patient progress
- Study probes

**Participants:**
- **App Training**
  1. Providers
  2. Patients

**Fit between Individuals, Task and Technology (ITT):**
- **Conceptual Framework**
  - Measure
  - Data Source
  - User
  - Participates in demographics, comfort with technology
  - Self-report and focus groups

- **Technology**
  - Data source: self-report, error tracking, and focus groups
  - Use of app identified and used features
  - Self-report, error tracking, and focus groups

**Qualitative Methods:**
- **System Data:**
  - Log-ins, time spent, modules completed, symptom data, mindfulness activities used, etc.

- **Attitudes Towards Computers Questionnaire (ATCQ):**
  - 35-item self-report scale assesses patient/provider’s attitudes related to computers/internet

- **User Version of the Mobile Application Rating Scale (uMARS):**
  - 20-item self-report scale assesses patient’s perspectives of the usability and feasibility of app

- **Provider Teasibility Questions:**
  - 12-item self-report survey regarding feasibility of app for use in clinical practice

- **Patient-Reported Outcomes Measurement Information System (PROMIS): Anxiety:**
  - 29-item bank of self-report items

- **Analytic Plan:**
  - Descriptive statistics to examine app use (e.g., frequency, modules completed, drop outs, etc.) and average ratings on self-report measures. Examine relationships between key constructs (e.g., attitudes towards computers and anxiety) and frequency of app use/completeness of modules.

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