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The Use of Culturally-Tailored Telehealth Interventions in Managing Anxiety and Depression in African American Adults: A Systematic Review

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Abstract

This systematic review examined studies aimed at reducing anxiety or depression in African American adults through use of telehealth interventions. Three small independent studies were identified. The findings showed significant reduction of depressive symptoms post-intervention (all p values < .05). However, effectiveness of telehealth intervention compared to face-to-face was not determined. The results highlight the need for additional research into the effectiveness of using telehealth to manage anxiety and depression in this population.

Keywords:

Telemedicine; African Americans; Mental Health

Introduction

In 2017, the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA) estimated that 46.6 million adults in the U.S. experienced mental illness in the last year [1]. The prevalence rate of mental disorders, excluding serious mental illness, has remained constant since 2008 [1]. A decade later, technology has allowed us to increase the options for delivery of mental health services; however, the percentage of adults with a mental illness who received mental health services in the past year (42.6%) was comparable to the rate for most years from 2008 to 2016 [1]. The expanding adoption of telehealth in the U.S. can increase access to mental health services, improving health outcomes and reducing health care costs. Although telehealth may not work for everyone, it has the potential to help many people included in the estimated 26.7 million U.S. adults (57.4%) who have a mental illness but did not receive mental health services in the last year [1].

Anxiety and depressive disorders are among the most common mental illnesses. A report by the Centers for Disease Control and Prevention (CDC) noted that 12.9% of non-Hispanic whites and 9.3% of non-Hispanic blacks reported having received a diagnosis of anxiety in their lifetime [2]. Moreover, the estimated prevalence of depression was higher for African Americans (12.7%) than their white counterparts (7.5%) [2].

Due to underreporting of mental illness, especially in underserved populations, it is unclear if the prevalence estimates depict the true rates, and if the differences observed between racial groups are accurate; however, there is significant unmet need and racial disparity in the use of mental health services [1]. Although there is less than a 4% difference in the prevalence of mental illness among white adults compared to black adults (20.4% vs. 16.5%), African Americans utilize mental health services at less than half the rate of their white counterparts (8.9% compared to 18.1%) [3]. Barriers to African Americans receiving health services are well documented in literature.

Methods

The methods outlined in the *PRISMA Statement* for systematic reviews were followed (see Figure 1). First, a comprehensive literature search was conducted using the PubMed, PsycINFO, Scopus, and Web of Science electronic databases for relevant articles published from 1970 to September 2018. A combination of keywords relating to African Americans, depression, anxiety, and telehealth were used. Second, reference lists of the included primary articles and retrieved systematic reviews were examined to identify any relevant publications.

The criteria used for inclusion in this review were: (1) intervention targeted Black/African American adults (≥ 18 years old); (2) primary outcome(s) include either diagnosis or symptom severity of depressive or anxiety disorder; (3) telehealth-based psychological intervention; (4) intervention effectiveness evaluated using one or more standardized measures of anxiety or depression administered pre- and post-intervention; and (5) feasibility of using telehealth modality to receive psychological help, acceptability of using telehealth modality to receive mental health services, or self-management through participation in the intervention assessed post-intervention.

Covidence software was used for article screening and data extraction. Two independent reviewers (T.M. and C.B.) independently analyzed each title and abstract of articles retrieved to determine their relevance. The full text of potentially eligible studies was retrieved and similarly analyzed by T.M. and C.B. to exclude papers that did not meet inclusion criteria. Any disagreement over the eligibility of particular studies was resolved by an adjudicator (S.K.). The *Critical Appraisal Skills Programme* (CASP) checklists were used to assess the quality of the identified studies.

Significant themes and trends of the studies were identified and discussed. A quantitative analysis and comparison of treatment effectiveness across studies was considered. However, due to the limited number of randomized controlled trials (RCTs) included, comparison was not feasible.

Results

A detailed search in all databases identified a total of 622 articles. Twenty-one additional articles were identified through examining other sources. After the removal of duplicates, 529 articles were included in the title and abstract screening process. The majority of the articles that were excluded did not involve psychological interventions that targeted black adults. Fifty papers were identified as relevant to the research question and

included in the full-text screening process. Following the independent full-text screening process, three articles were identified that met the inclusion criteria and were included in the analysis [4–6].

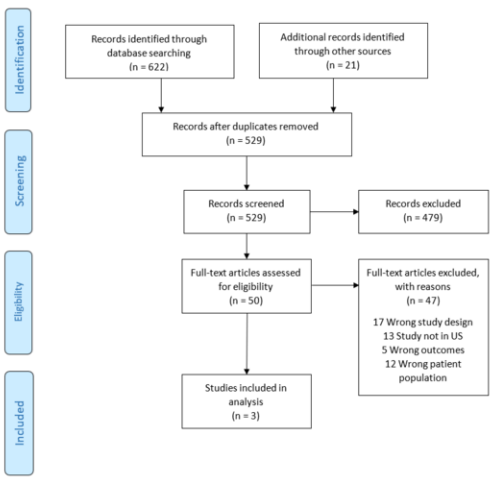

Figure 1– PRISMA Flow Diagram of Search Strategy

The three independent studies had a pooled total of 32 participants (range 6-15 per study). Telephone-based cognitive behavioral therapy (CBT) [4,6], or a mobile phone-optimized online intervention [5] was used. Only one of the studies was a randomized controlled trial (RCT) [4]. The remaining two studies were prospective cohort studies assessing the feasibility of interventions [5,6]. Two of the studies reported a majority (> 80%) of their sample were female [4,6]. All participants reported to be HIV-positive in one study [6], and another reported 60% of participants were HIV-positive [5]. All of the studies used validated assessments (the Center for Epidemiological Studies Depression Scale (CES-D) [4,5] or Hamilton Depression Rating Scale (HAM-D) [6]) to assess the primary outcome of depression pre and post intervention.

All of the studies [4–6] met a majority of the criteria used for consideration in the assessment of study quality in the CASP appraisal checklists (i.e. reviewers T.M. and C.B. answered 'yes' for > 80% of the questions). Two studies lacked control groups [5,6], and all had small sample sizes (6-15 participants) and short follow-up periods (< 6-months) [4–6]. This resulted in the reviewers rating all of the studies to be of 'fair' quality; however, all studies were published in peer reviewed journals and deemed appropriate for inclusion.

Statistically significant reduction of depressive symptoms (measured by improvement in mean CES-D or HAM-D score) was observed post-intervention in all of the studies ($p < .05$) [4–6]. In addition, one study showed a significant reduction in depression severity post-intervention ($p = .02$, measured by improvement in mean Quick Inventory of Depressive Symptomology (QIDS-SR) score) [6]. All studies reported patient satisfaction with the interventions [4–6]. Hightow-Weidman et al. also reported improvements for social support ($p = .012$) and social isolation ($p = .050$) for study participants post-intervention [5]. Furthermore, the RCT conducted by Glueckauf et al. found significant within-subjects effects for time across caregiver subjective burden ($p < .02$, measured by improvement in the subjective burden subscale of the Caregiver Appraisal Inventory (CAI)) and assistance support ($p < .03$, measured by improvement the Assistance subscale of Interpersonal Support Evaluation List (ISEL)) post-treatment [4]; however, no statistically significant effects were observed for group (telephone vs. face-to-face CBT) and the group x time interaction (all $p > .05$) on any of the measures [4].

Conclusions

Given the burden of unmet need and disparity in mental health utilization among African American adults, there is great potential to use telehealth to deliver services to this population. Telehealth is proving to be acceptable for some mental health services, such as CBT; however, to increase the likelihood of adoption among African American adults, telehealth interventions should be culturally-tailored. A "one size fits all" approach to designing telehealth interventions to help African American adults manage anxiety or depression may lead to more options but continued disparity in receiving care.

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