

Transcranial direct current stimulation (tDCS) and behaviour therapy on-line training at home: community mental health team (CMHT) patients with depression symptoms

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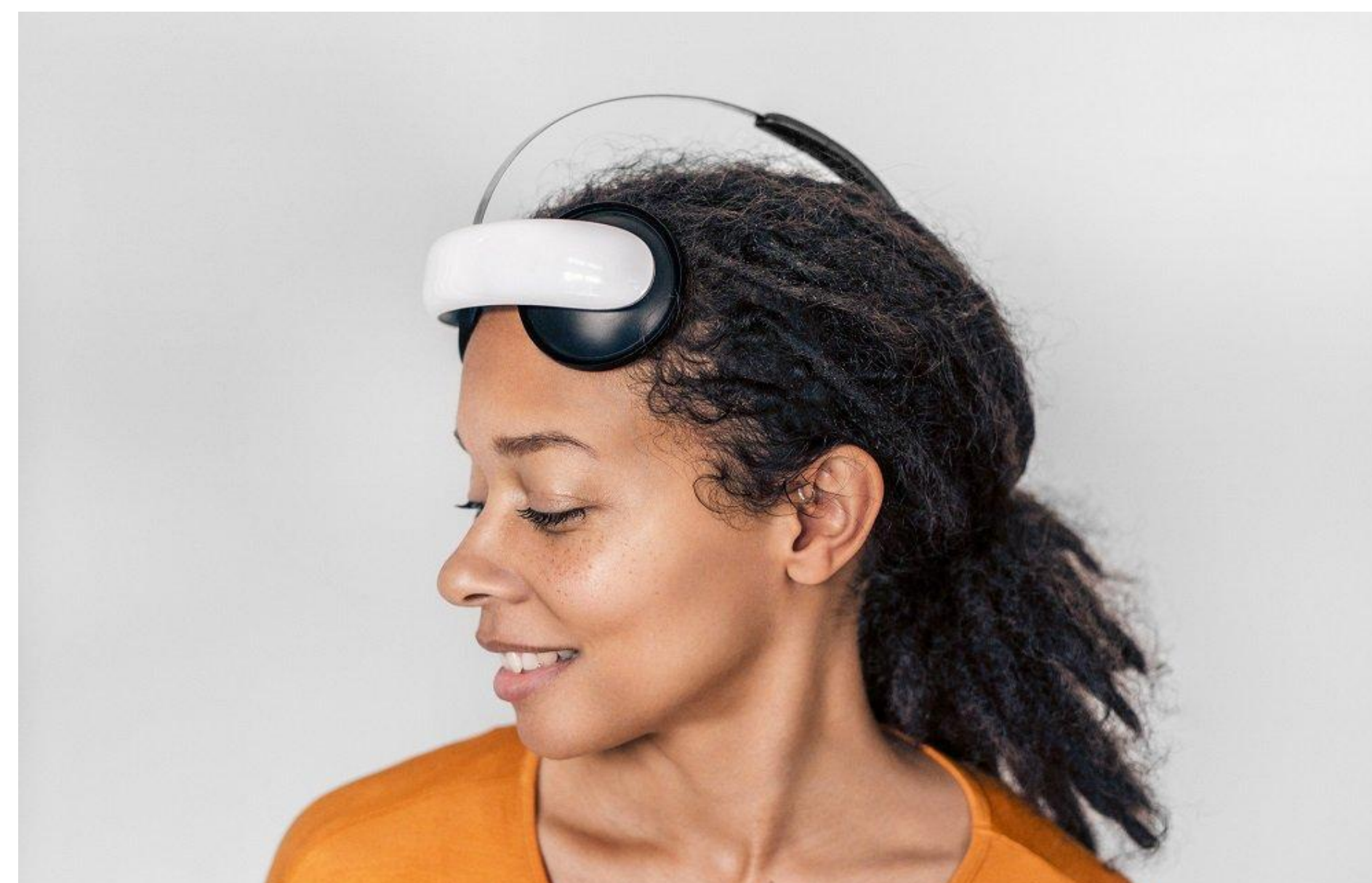
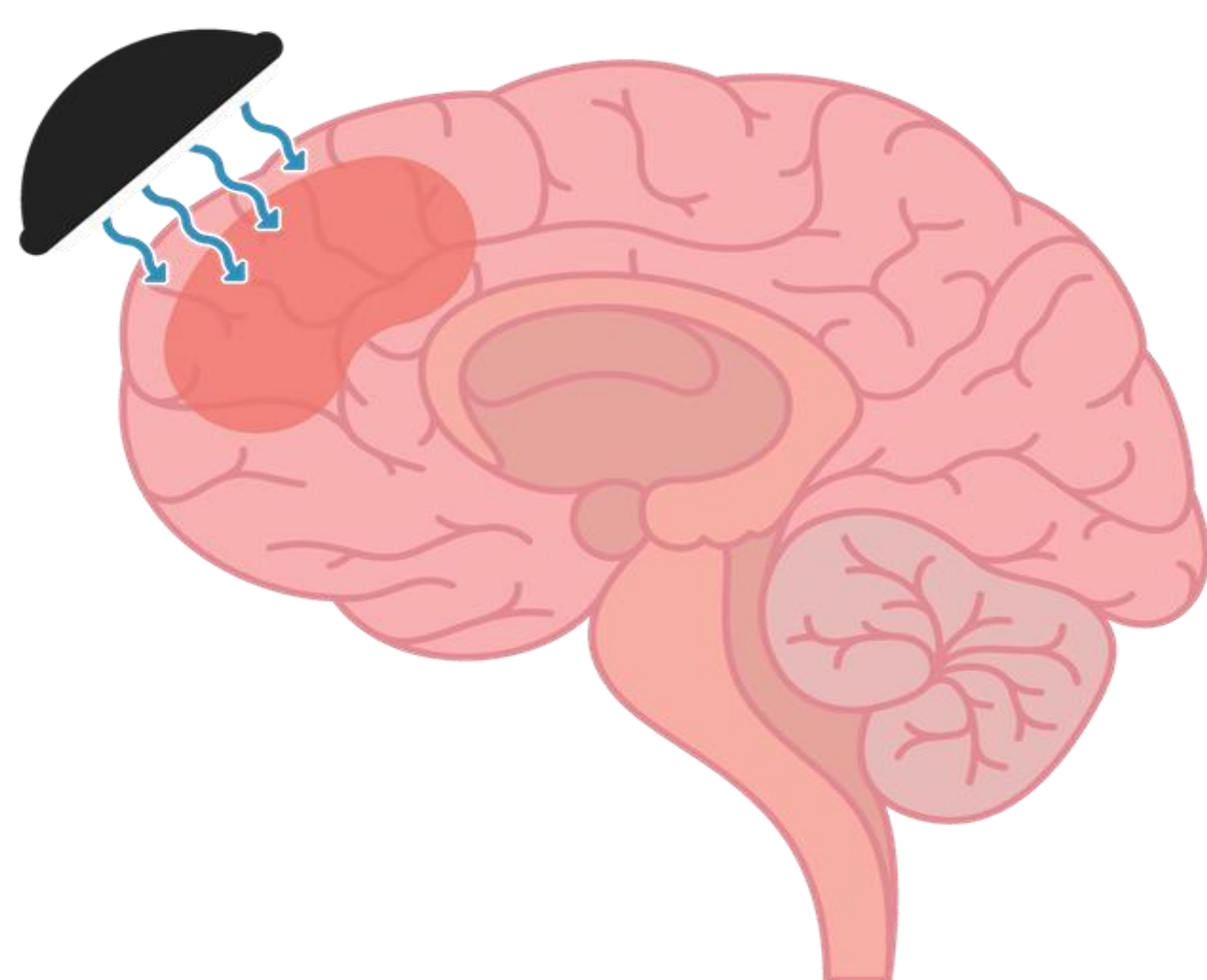
Introduction

Flow is a transcranial direct current stimulation (tDCS) treatment for depression that patients use at home and is without the negative side effects associated with anti-depressants. Over 30 years of research/clinical use show tDCS is safe and is reported by users as acceptable and well-tolerated, with mild and transient physical sensations (Razza et al. 2020). Flow is CE-marked for treating depression in Europe. Meta-analyses of randomised sham-controlled trials (RCTs) show tDCS is associated with significant improvements in depressive symptoms and high rates of clinical response and remission relative to placebo sham stimulation (Mutz et al., 2018; 2019; Moffa et al., 2020; Razza et al. 2020). Flow RCT depression clinical response = 58.3% and remission rates = 45% (Woodham et al. 2025); patients describe improved depression symptoms and functioning (Rimmer et al., 2022, Griffiths et al., 2023; 2024).

This study: In a first for the NHS, in a post-marketing informed consent study, NHFT's community mental health team (CMHT) offered Flow to patients with a diagnosis of depression and evaluated the feasibility, acceptability, and impact.

Intervention

The patient self-administers and remains awake (NICE, 2015), treatment sessions last for 30 minutes, 5 times weekly for three weeks, then 3 sessions per week for 3 weeks, and then 3 times a week if required (Flow, 2024). Flow incorporates an evidence backed healthy lifestyle behaviour training software app, and depression symptom tracking to monitor progress/symptoms. Training modules on: 'Behaviour activation', 'Mindfulness', 'Physical exercise for your brain', 'Anti-depression diet', and 'Therapeutic sleep'. Flow provides an online platform for clinicians to monitor use and depression symptoms.



Methods

Design: Open-label patient cohort design with no control group.

Methods: Outcome measure data collection from baseline to 6-week follow-up. Self-report measures: depression: Personal Health Questionnaire (PHQ-9); health related quality of life: EQ-5D-5L; and functioning: Work and Social Adjustment Scale (WSAS). In-depth interviews undertaken with 14 participants. Analysis method: Interpretative Phenomenological Analysis (IPA)

Sample: 50 participants, 22 males and 28 females, with age range of 21-64, and average age of 31.7 years. 26 (72%) were using antidepressants.

Results

Significant improvement in depression, health related quality of life, and functioning, with medium effect sizes. PHQ-9 reliable improvement: 51.61%. There was support for the feasibility, acceptability, useability, and value of Flow. Most participants used Flow as per standard protocol and described a positive impact on depressive symptoms, mood, motivation, and functioning. Those who did the training found it was beneficial to their health and wellbeing. Negative side effects: one participant reported 'dizziness' and one reported 'headache', both temporary and did not prevent use of Flow tDCS.

Quote 1: "...it's massively helped my symptoms of depression; I just wish it had been offered years ago. I do feel slightly happier, motivated in mood and more relaxed. My colleagues have noticed I appear a bit happier."

Quote 2: "So, a massive difference, like three months ago I was suicidal, I just wasn't functioning as a person. I was having some periods of time off work. I was non communicative with my partner. I just, everything now just feels brighter, and I feel a lot more kind of present in life."

Conclusions

It is important to offer CMHT patients an evidenced-backed alternative to existing depression treatments (anti-depressants and psychotherapies), some patients do not wish to use antidepressant due to side/withdrawal effects and some do not want psychotherapy due to cultural beliefs, travel cost of attending appointments, other time commitments, or have found psychotherapy and antidepressants ineffective. The results support Flow tDCS use for CMHT patients with depression symptoms. All NHS Trusts can provide tDCS for CMHT patients with depression symptoms.

References: Griffiths, C., Walker, K. & Willis, A. (2024). A Qualitative Study Exploring the Experience and Value of Flow Transcranial Direct Current Stimulation (tDCS) and Behaviour Therapy Training Software Used at Home for Community Mental Health Team (CMHT) Patients with Symptoms of Depression. Open Journal of Depression, 13, 6-23. doi: 10.4236/ojd.2024.131002

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