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**POSTER ABSTRACT****The integration of home-based interventions for psychiatric care**

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***Introduction***

In recent years, we have seen a development in technology that draws on the brain's use of electric signals for diagnostics or treatment [1-2]. A range of medical devices have been constructed and priced so that they may be suitable for home-based use. Integrating this type of home-based care in psychiatric treatment may represent an important step forward as it may increase the availability of new diagnostic and treatment options and reduce costs. This may be especially important for elderly and frail patients. We will in the following focus on the promising method of transcranial Direct Current Stimulation (tDCS).

***Aims Objectives Theory or Methods***

tDCS is a non-invasive neurostimulation tool that works by inducing a low direct current in the cortical brain. Electrodes are placed directly above the targeted brain area. This stimulation aims to facilitate neuroplasticity. tDCS may be administered at home. Regular sessions during a longer period are required. Studies have suggested that tDCS can lead to significantly lower chronic pain, reduced depressive symptoms, and improved memory function, compared to placebo. tDCS has been associated with minor adverse effects (mainly itching or redness under the electrode), but more long-term studies are needed to fully assess effects/adverse effects.

***Highlights or Results or Key Findings***

The use of tDCS home devices are still in their infancy and there is clearly a need for studies that investigate long-term interventions of tDCS in this setting. A typical protocol may be 20 minutes daily tDCS stimulation for three months. tDCS has a broad range of applications, including for common disorders such as depression and chronic pain. Should future studies support the promising findings, this may prove to be a cost-effective way of increasing the treatment options for many patients in the future.

***Conclusions***

It is reasonable to conclude that tDCS has the potential to be an effective intervention in integrative care. There is clearly a need for more clinical trials to investigate the effect home application of tDCS. The promising results from previous studies combined with minor adverse effects warrant further investigation.

***Implications for applicability/transferability sustainability and limitations***

We have discussed one of the promising cutting-edge technologies that may be used in psychiatric home-care in the future. More research is needed to examine the usability, effects and adverse effects of this and other technologies in home-based settings.

References:

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2. Wahlström V, Åhlander F, Wynn R. Auditory brainstem response as a diagnostic tool for patients suffering from schizophrenia, attention deficit hyperactivity disorder, and bipolar disorder: protocol. *JMIR Res Protoc*. 2015;4(1):e16