
EMOTIONAL BIAS MODIFICATION FOR INDIVIDUALS WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER: PROTOCOL FOR A CO-DESIGN STUDY

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INTRODUCTION

Attention deficit hyperactivity disorder (ADHD) is a common neurodevelopmental disorder. Individuals with ADHD tend to have difficulties with emotional regulation, leading to characteristic short-temperedness and irritability. [1] Emotional regulation can potentially be improved by targeting emotional biases (the preferential allocation of attention toward emotional stimuli).

The role of gamification in mental health interventions has shown promise in areas such as neuropsychological rehabilitation and improving psychiatric symptoms. [2,3]. It is proposed that gamification could successfully target emotional biases, potentially improving emotional dysregulation in individuals with ADHD to supplement treatment.

Our aim is to present the premise of the paper, explain the research protocol, and evaluate its advantages and limitations.

METHODOLOGY

A qualitative research approach (focus group) was employed, with principles from participatory action research. Healthcare professionals from the Department of Development Psychiatry (Institute of Mental Health, Singapore) with expertise in the treatment of children/adolescents with ADHD were invited to participate in this study. A total of eight participants volunteered and were recruited for this study. This comprised three psychiatrists, three psychologists, and two therapists.

Prior to the 1.5-2 hour focus group discussion, participants had to complete a baseline demographic questionnaire which includes information about their age, gender, and their years of experience in child psychiatry/treatment of children with psychiatric disorders.

Participants were asked to comment on the benefits of such a form of intervention, identify limitations, and suggest possible methods to overcome the limitations. Following this, participants were shown a list of gamification techniques. Participants were asked if the inclusion of such techniques would be appropriate for the existing application.

Interviews were transcribed verbatim. The responses were coded and subsequently re-organised into themes.

RESULTS AND DISCUSSION

Results from the study have been collated but are still pending publication.

We think that the inclusion of healthcare professionals from the different specialties, and the fact that these were individuals who were deeply involved in the management of ADHD patients, really substantiated the quality of the information gathered.

However, this study is not without its limitations. A small sample size comprising eight participants is not sufficient to conclusively ascertain the perceptions of all healthcare professionals involved in the management of ADHD. Furthermore, the inconsistent number of participants across the different disciplines may have led to the under-representation of the therapists' opinions. Lastly, themes may not be sufficiently comprehensive to fully represent the participant's view.

While the perspectives of health care professionals are critical, it is nevertheless important to seek out the perspectives of the service user/individuals with ADHD. The authors of the paper intend to undertake this as soon as they complete the existing study.

RELATED LITERATURE

[1] Shaw P, Stringaris A, Nigg J, Leibenluft E. Emotion dysregulation in attention deficit hyperactivity disorder. *Am J Psychiatry* 2014 Mar;171(3):276-293 [FREE Full text] [doi: 10.1176/appi.ajp.2013.13070966] [Medline: 24480998]
[2] Strahler Rivero T, Herrera Nuñez LM, Uehara Pires E, Amodeo Bueno OF. ADHD Rehabilitation through Video Gaming: A Systematic Review Using PRISMA Guidelines of the Current Findings and the Associated Risk of Bias. *Front Psychiatry* 2015 Oct 22;6:151 [FREE Full text] [doi: 10.3389/fpsy.2015.00151] [Medline: 26557098]
[3] Lau HM, Smit JH, Fleming TM, Riper H. Serious Games for Mental Health: Are They Accessible, Feasible, and Effective? A Systematic Review and Meta-analysis. *Front Psychiatry* 2016 Jan;7:209 [FREE Full text] [doi: 10.3389/fpsy.2016.00209] [Medline: 28149281]

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