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Evidence-Based and User-Centred Development of an Ecounseling & Learning-System for Parents of Children with ADHD

Lisa-Sophie GSTÖTTNER^a, Andrea KERSCHBAUMER^{a1}, Carina HAUSER^a, Erna SCHÖNTHALER^a, Károly SZABÓ^a, Franz WERNER^a and Peter PUTZ^a *^aFH Campus Wien University of Applied Sciences, Vienna, Austria*

Abstract. Attention deficit hyperactivity disorder (ADHD) is one of the most common mental disorders in childhood and adolescence. It is characterized by attention deficit, hyperactivity, and impulsivity as the main symptoms. These can lead to increased stress in everyday life for the entire family. The e-counseling and e-learning application is being developed within the ELSA project to support parents of ADHD-diagnosed children in everyday life. The requirements identified included, for example, advice on children's restlessness or measures against sibling rivalry.

Keywords. Attention Deficit Disorder with Hyperactivity, ADHD

1. Introduction

With a prevalence of approximately 5%, attention deficit hyperactivity disorder (ADHD) is among the most common mental disorders in childhood and adolescence [1]. It can lead to increased stress for parents [2] and siblings [3]. A variety of approaches, ranging from cognitive training to nutritional supplements are used to treat the symptoms [4, 5]. Although parental work plays a central role in the treatment [6], there is a lack of therapy support for guardians of children with ADHD in Austria [7]. Despite an increase in technical solutions in the health sector, there is a shortage of evidence-based development and efficacy studies [8, 9]. Furthermore, pertinent studies hint at the importance of including the perspective of children and their guardians in the co-design process [10]. This project aims to design and evaluate an app to support the everyday life of parents with ADHD-diagnosed children in an evidence-based and user-centered way.

2. Methods

In the initial *requirements survey*, qualitative interviews were conducted with 9 parents of children with ADHD and 7 occupational therapists working in the pediatric field. Two workshops were held with 12 ADHD-diagnosed children. The ongoing *developmental evaluation* aims to evaluate the prototype of the app through interviews with parents of affected children and the children themselves. The *end evaluation* will then investigate the technical performance, usability, acceptance, and usefulness of the app and evaluate

¹ Corresponding Author: Andrea Kerschbaumer, FH Campus Wien University of Applied Sciences, Vienna, Austria, E-Mail: andrea.kerschbaumer@fh-campuswien.ac.at

the content. From May 2023 on, the application will be tested over a period of eight weeks in the home environment. Follow-ups will assess the effects after 3 and 8 weeks.

3. Results

Improvement points identified in the requirements survey encompassed content items, ideas for activities as well as functions of the app, such as a forum for exchange or printable templates. Content items included, for example, advice for the children's restlessness or measures against sibling rivalry. Ongoing technical adjustments are being made, based on feedback from the *developmental evaluation*.

4. Discussion

Individualized content is important because not all tips and recommendations are equally suitable for every child and family. Therefore the inclusion of end-user needs is important for user-oriented app development [11]. After prototype completion, it is important to test the prototype in a further study with end-users and again gather views to continue improving the application [12].

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