Supporting Parenthood

A mobile app for parents of children with ADHD

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Abstract:

In order to observe behavior changes and medication effect on children with ADHD, the health-care professionals usually request parents to keep track of different aspects during the day, such as medicine intake, behavior incident and side effects. To mitigate the problem of the lack of response to this request, we designed a mobile app - LogMe - that aims to support the parents in these tasks. In this thesis, we propose to demonstrate the usefulness of LogMe by conducting a user study with six parents of children with ADHD. The findings confirm the usefulness of the app, revealing that it provides overview of the registered aspects, facilitating a better understanding of the child's behavior, offers means for collaboration between parents, relatives and caretakers, and mitigates challenges observed with the use of paper or computer-based schemes.

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Chapter 1

Introduction

Families with children diagnosed with Attention-Deficit/Hyperactivity Disorder face major challenges in simple activities or daily routines that might seem trivial for families with children without the disorder. As a parent, it is important to adapt family life to the needs of the diagnosed child, which many times takes a great amount of effort and energy, leaving little space for free time or quality time with partners or the child's siblings. Attention-Deficit/Hyperactivity Disorder (ADHD) is a cognitive dysfunction that is frequently identified in children during their school age (APA, 1994).

Children with ADHD can present three different kinds of profiles: Hyperactive/Impulsive, Inattentive, or a combination of both. It is common to identify behaviors such as for example difficulty on completing tasks and keeping focus, losing or forgetting things, being easily distracted, having no notion of time, problems with staying quiet or seated, talkative and never able to stop (AAP, 2011). These children are usually very sensitive and have a great need for structure in their lives. Situations such as an unexpected substitute teacher at school or irregular bedtime hours may deeply disturb the child's mood, behavior and daily rhythm.

In a world where mobile apps are an essential part of our daily lives, we searched for a problem that could be improved by the use of a mobile app. We looked into the needs and opportunities to improve processes common in families with children diagnosed with ADHD, with special focus on supporting the parents. These families can face major challenges and struggle to keep a normal life, depending on the severity of the child's diagnosis. Especially when the diagnosis is new to the family, we identify an adaptation and learning phase to create the proper conditions to help the child. Structure, routines and personal habits need to be adjusted and adapted to the child's disorder and functioning. Our goal was

to find a way to support these families in some of these processes and contribute to their well-being.

In collaboration with a mother of a six-year-old boy diagnosed with ADHD, we explored possibilities of contributing to the daily life of these families. We looked into existing tools and apps and learned about the parenthood practices applied to the diagnosis. We came across a process that psychiatrists use at the beginning of the medical treatment: The parents had to make daily registrations on medicine, possible side effects, appetite and other observations (see Appendix B). This process was commonly done on paper or computer, using a dedicated excel spreadsheet. We saw potential in building an app to perform these registrations and creating a tool that parents can use to keep track of their child's behavior, medication and other aspects that might relate to the diagnosis.

Keeping registrations of behavior, routines, incidents and other aspects of the child's day can help detect patterns and possible issues that can be avoided or reduced. Ultimately, the access to this day-to-day information can lead the physicians to more precise diagnosis, a more effective guidance towards parenthood and, consequently, a better treatment.

We believe that using a mobile app with these features will improve the parents' motivation and ability to record important events about the diagnosed child, the share of information and collaboration between parties (parents, family and/or caretakers), and the compilation of important information to send to the physicians. We have, therefore, for our master thesis developed a user study to evaluate the usefulness of a mobile app as a support for families with children with ADHD. In order to perform the user study, we designed a mobile app, LogMe. LogMe should serve as a tool for registration, reminders and collaboration between the different parties, which has a significant presence in the child's daily life. We developed a prototype based on the app definition, as well as a user study to evaluate the usefulness of the mobile app in the target group. Our hypothesis was that the app would be useful and had potential to mitigate the challenges the parents had with registration of important observations, especially during the periods of trying out medicine and dosage. That being said, our research question was:

How can a mobile app support the parents of children with ADHD in activities such as registering behaviours, medication and sleep routines?

In order to answer our research question, we conducted a user study based on the evaluation of a prototype. We designed a mobile app - LogMe - that would offer the registering functions and gathered the parents' opinions by having them interacting with the prototype. LogMe allows parents to use their smart-phone or tablet to enter various information about their child's day, such as behavior, medicine, and others.

Chapter 2

Background

The first step to a successful application design is understanding the problem and its users. In our case, it was important to learn about the ADHD diagnosis, and how it affects children and their families. By learning about the users, we can design a mobile app that better fits their profile, interests and conditions.

We also investigated studies on mobile apps and user-centered design that can relate to our research question. Studies on mobile apps that offer support to parents of children with ADHD were our major focus. However, there is a very limited number of studies and we have therefore chosen to include a third study on an app dedicated to supporting parents of children with weight problems as inspiration for our work.

2.1 Attention-Deficit/Hyperactivity Disorder in children

Attention deficit hyperactivity disorder is one of the most common cognitive dysfunctions in children and adolescents (APA, 1994). ADHD is characterized by three main core symptoms: inattentiveness, hyperactivity and impulsivity (APA, 1994). These symptoms are reflected in behavioural aspects such as inappropriate activity level, distractibility, inability to sustain attention, and intolerance to frustration (Cormier, 2008). The degree of these symptoms varies from person to person, which can result, for example, in a diagnosis with a high degree of attention disorder, but lack of hyperactive behavior. Furthermore, ADHD is related to impairment of educational, social and behavioral functions, affecting family relationships as well (Cormier, 2008).

It is estimated that 3-7% of school-aged children around the World have ADHD (Cormier, 2008). In Denmark, between 2-3% of school-aged children are diagnosed

with it (Thomsen et al., 2014). More than half of the children are estimated to sustain traces of the disorder throughout adult age (Houmann et al., 2014).

According to the American Psychiatric Association (2017), when diagnosing ADHD, one of the three types is identified: the Inattentive type, the Hyperactive/impulsive type or the combined type. The Inattentive type is characterized by frequent symptoms such as:

- Does not pay close attention to details or makes careless mistakes in tasks
- Has problems staying focused on tasks or activities, such as during lectures, conversations or long reading
- Does not seem to listen when spoken to
- Often loses things needed for tasks or daily life, such as school papers, books, keys, wallet, cell phone and eyeglasses
- Is easily distracted

On the other hand, the Hyperactive/impulsive type reveals symptoms such as:

- Fidgets with or taps hands or feet, or squirms in seat
- Not able to stay seated (in classroom, workplace)
- Always "on the go," as if driven by a motor
- Has difficulty waiting his or her turn, such as while waiting in line
- Interrupts or intrudes on others (for instance, cuts into conversations, games or activities, or starts using other people's things without permission). Older teens and adults may take over what others are doing

2.1.1 Daily challenges for families of children with ADHD

The daily life of a family with children with ADHD can differ in many aspects from a family with children without the diagnose. Daily routines can represent great challenges: simple tasks as brushing teeth and getting dressed can take a long time and requires repeated interventions of the parents. Most parents have a need to adapt their lifestyle to a much more structured routine, and adopt different strategies, such as using reward boards, pictograms, reminders and calendars, to improve the support to their child (Firmin and Phillips, 2009).

Parents have the task of educating the persons in their child's life, in order to create an understanding of the ADHD diagnosis and to improve the interaction between them. They are usually compelled to have a higher involvement and frequent contact with schools and teachers, as a result of a possible higher frequency of conflicts, behavioral events or overall performance (Firmin and Phillips, 2009).

These children can be extremely sensitive to for example touch, noise, textures, crowds etc. Even the smallest change of plans can have a great impact on the child, which makes family events, extraordinary happenings or unpredicted situations a big challenge for some parents. Other situations, as for example the disturbance of a regular bedtime hour, can profoundly affect the child's mood and rhythm in days.

The American Psychiatric Association (2017) provides the parents with advice to build healthy habits and improve the relationship with the diagnosed child:

- Make clear schedules
- Maintain routines
- Make sure instructions are understood – use simple words and demonstrate
- Avoid multitasking - focus on your child when talking to him/her
- Supervise - children with ADHD may require more supervision than their peers
- Maintain communication with the child's teacher
- Model calm behavior
- Focus on effort and reward good behavior

2.1.2 Diagnosis and Treatment

ADHD is commonly diagnosed through information gathering, reports and standardized questionnaires, meaning that there is no lab test that can be performed in order to confirm its existence. Rating scales and checklists, such as the NICHQ Vanderbilt Assessment Scales (NICHQ, 2002), are one of the most used methods to evaluate the child's behavior. The process of diagnosis, evaluation and treatment must be conducted by authorized specialists.

Treatment for ADHD can assume three forms: Intervention, Medication or a mix of both. In terms of medication, methylphenidate and amphetamine are the main components for the majority of the approved medication. Some children

might have a poor response and high display of side effects to one of the compound groups, which leads to periods of trying out different medications to find the best fitted (AAP, 2011).

Besides the trials with the type of medication, it is also required to make trials to find the optimal dosage. Typically, the first dosages are very reduced, and then gradually raised after assessment, in order to find the optimal dose, providing maximum benefit with the least side effects. When it comes to children and teenagers, close supervision by the parents is highly recommended (AAP, 2011, NICE, 2018, Pliszka, 2007).

2.2 Mobile apps for families with children with ADHD

There are many applications on the market to help people structuring their day. Many of them also apply to the daily life of a family with children with ADHD. There are apps that can help plan and carry out activities and routines as *Mobilize Me* and *Tiimo*, help remembering as *AnyDo*, for note taking as *Evernote* and there are apps to support the communication between parents and school as for example *MyKid*. There are furthermore mood trackers as *Daylio* and medication reminders as *Medisafe*. However, these apps are all dedicated to one specific function - none of them provide the overview of different aspects of the child's' day. Our study aims to create a mobile app that can gather different kinds of important data in one place and give the parents the necessary insight to understand the child's behavior and detect patterns in order to improve the child's daily life. The above mentioned apps did however provide us with inspiration for the functionality of the LogMe application, which can be seen in the overview here below.

Mobilize Me creates consistency and helps people with cognitive dysfunctions such as autism, ADHD, dementia and acquired brain injury, to a less stressful everyday life. The tool visualizes the user's activities during the day using pictures, color codes and time markers, and it gives the user an overview of their day. Mobilize Me is focused on the diagnosed user and do not provide the functionality we had in mind. It did however, give us inspiration to provide our users an overview of their day, as well as the feature of reminders.

Tiimo is an assistive technology app for people who need structure and visual guidance in everyday life. Much like Mobilize Me, but Tiimo made us think on the possibility to connect our app with a smart-watch.

AnyDo is a calendar app that helps people stay organized by creating to-do lists, calendar events, grocery lists, reminders and prioritize the entries in a daily

planner. AnyDo inspired us to include a calendar, as well as access for several users.

Evernote resembles AnyDo, but has a greater focus on notes, which made us aware of peoples need to note for example ideas and thoughts.

MyKid is an app that supports the communication between for example school and parents. MyKid made us think about the importance of not only the communication between parents but also between parents and relatives, teachers, care-takers etc.

Daylio is a mood tracker, that enables the user to keep a diary without having to type a single line. Mood and activities are simply selected from pictograms and collected in the statistics and calendar to help the user keep track and see patterns to better understand habits. Apart from the fast and easy entry of information, Daylio also inspired us with the option to show the user entries in for example graphs and make it possible to print the information.

Medisafe is a medication management app that helps the user to remember their medication. This app inspired us to make the medicine function to be able to set different dosages for the medication, as well as provide an overview of the medication.

The research in mobile applications for families with children with ADHD is still very limited in the mobile Human-Computer Interaction domain. We explored two relevant examples of studies in the field, however not accessible or commercialized, and a third study on a mobile app developed for childhood weight management targeted at parents, as an inspiration for our work.

Pina et al. (2014) studied the use of mobile technology to support parental behaviour therapy for parents of children with ADHD. The developed application, *ParentGuardian*, focus on delivering parental behaviour therapy cues to the parents during stressful situations. These stressful moments were identified through a wrist-worn device and activated mindful cues in the parents' mobile device. The delivery of *in situ* cues under stressful contexts showed a very positive impact on the parents, by raising awareness and reminding the parents about the implementation of behavioral therapy in moments of need. However, the timing of the cues revealed to be crucial and as the accuracy of the wrist-worn device was not yet thoroughly developed, it did not prompt correctly. The study explored new domains and, consequently, raised more questions than concrete answers. Even though the study addresses applications for supporting parents of children with ADHD, as well as looks at the challenge of designing for these families, the problem is more about wearables and detecting stressful situations, than supporting the parents in structuring their daily life.

Sonne et al. (2016) studied the impact of the use of a mobile app on everyday practices of families with children with ADHD. The application *MOBERO* offered support for morning and bedtime routines, with the help of reminders, rewards systems, guidance for the child's activities and feedback. Sonne et al. (2016) studied the impact of the use of *MOBERO* on 13 children and their families during a two week period. The experiment revealed higher independence of the children, with a reduction of 16,5% in ADHD symptoms and 8,3% improvement of sleeping habits. Furthermore, it lowered parental frustration levels. The study concluded a significant positive impact on the life quality of families with children with ADHD. *MOBERO* does partially address our subject about supporting the parents, but focus on different functionality and explores its use by both children and parents.

Although not applied to the ADHD domain, we identified Curtis et al. (2015) study as an example of valuable involvement of the users in the design of a mobile application. The mobile app serves to promote parents' behavior change towards childhood weight management. In order to achieve its goal and avoid frequent problems such as the lack of engagement of the users, or lack of behavior change theory and evidence, the study proposes a User-centered, theory and evidence-driven application development approach, in which the participants had a major impact. The comprehensive and systematic design approach resulted in a mobile app that extensively understood and answered its users' needs, and serves as a template and practical guide to future development of interventions in the mobile apps for the health domain.

Chapter 3

Research Approach

This chapter describes the process and methods used during the thesis to conduct our user study. The development of our study followed a User-centered research approach and consists of two main phases: the Exploration phase and the Experimentation phase. In the Exploration phase, we gathered valuable data on the target group (parents of children with ADHD) expectations and ideas for the application. The results of the first phase were then used to develop our prototype and user study in the Experimentation phase. In the following, we first, present the background and definition of User-Centered Design (UCD), followed by different UCD research methods used in the Exploration phase and Experimentation phase.

UCD is a multidisciplinary design approach based on the active involvement of users to improve the understanding of user and task requirements (Mao et al., 2005). UCD was first coined by Norman and Draper in 1986 as having a good understanding of the potential users, but without involving them in the development process (Norman and Draper, 1986). Karat et al. (1996) emphasized the role of UCD as an "iterative process whose goal is the development of usable systems, achieved through the involvement of potential users of a system in system design." User-centered design urge the designers to employ a mixture of investigative (for example, surveys and interviews) and generative (for example, scenarios) methods and tools to develop an understanding of user needs.

Benyon (2014) explains how each iteration of the UCD approach involves four distinct phases, understanding, envisionment, design and evaluation. First, designers attempt to understand the context in which users may use a system. Subsequently, the requirements of the user are identified. Second, the ideas are made visible through for example sketches or prototypes. A design phase follows, wherein the design team develops solutions. The team then proceed to an evaluation phase, and assess the outcomes of the evaluation against the users' context and require-

ments. Further iterations of the four phases are made until the evaluation results are satisfactory.

Benyon (2014) identifies four ways in which UCD is beneficial:

1. With close user involvement, products are more likely to meet users' expectations and requirements. This leads to increased sales and lower costs caused by less customer service needs.
2. Systems designers tailor products for people in specific contexts and with specific tasks, thereby reducing the chances of situations with a high risk of human error arising. UCD leads to safer products.
3. Putting designers in close contact with users means a deeper sense of empathy emerges. This is essential in creating ethical designs that respect privacy and the quality of life.
4. By focusing on all users of a product, designers can recognize the diversity of cultures and human values through UCD – a step in the right direction towards creating sustainable businesses.

The UCD approach is an assembly of techniques, processes, methods and procedures that are used to designing a system that is usable; and doing so by placing the user in the center of the process.

3.1 Exploration

In the exploration phase, we used a mix of quantitative and qualitative research methods, like surveys, to gather essential data for the development of our prototype and user study. Furthermore, we gathered input from an expert on children with ADHD and their family's needs.

3.1.1 Semi-structured interview with Expert

An interview is an efficient data collection technique commonly used within UCD to "go deep" and can be invaluable for understanding user needs and concerns (Lazar et al., 2017). Direct conversations with participants can provide perspectives and useful data on for example what a new tool should do or if a proposed design do what it should do. Interviews can range from being free-form unstructured, to semi-structured to a fully structured interview. For this thesis, we used semi-structured interviews. According to DiCicco-Bloom and Crabtree (2006), the

semi-structured interviews is the format of interview that is most often used in qualitative research. In this format, the interviewer has a series of pre-prepared questions, but are able to vary the sequence of questions. Also, the interviewer usually has some latitude to ask further questions in response to what is seen as a significant reply Bryman (2015). Brace (2008) states that this type of interview also benefits from the possibility to explain the meaning of a question or possibility to correct misunderstandings of a question. Furthermore, the interviewer has the possibility to encourage the participant to provide deeper responses to open questions.

To further support our study and to gather in-depth information on our target group, we established contact with a child and adolescent psychiatrist specializing in neuro-psychiatry and mental development disorders. She offered us feedback on our concept and guidelines about psychological aspects and possible issues that can be applied to these families and correlate with our project.

We used a semi-structured interview to gather data from our session with the psychiatrist. An interview guide with open-ended questions was constructed and tested by two external subjects (see Appendix A). Our semi-structured interview was composed of two parts: the first part of the interview was dedicated to questions regarding her experience, the diagnosis, the ADHD disorder and its symptoms in children, and family characterization, while the second part was focused on presenting our app concept to the psychiatrist and gather her professional insight and opinion. Subsequently, the interview was transcribed and analyzed.

3.1.2 Survey of parents

Surveys are a research tool used to collect standardized data from a large number of people (Lazar et al., 2017). Brace (2008) states that surveys are vital for the market researcher as they draw accurate information from respondents, give structure to interviews, provide a standard form on which facts, comments and attitudes can be recorded, and facilitate data processing. A well-formed survey can be time-consuming, but gives the possibility to gather a large amount of data in a short period of time (Benyon, 2014). Besides the stated advantages, Bryman (2015) also lists elimination of the interviewer's influence as another benefit. As for users, a self-completion survey is convenient, because they can complete it when and where they want. However, this type of survey limits the researcher in a number of questions that he can ask since there is a greater possibility of respondent's fatigue and abandonment. Fan and Yan (2010) advise keeping the length of completion under thirteen minutes in order to obtain a good response rate. Another drawback of the survey is the possibility of participants misunderstanding questions and, thereby, not being able to give meaningful answers, as the researcher cannot explain or clar-

ify the question (Bryman, 2015). This can be partially addressed by pilot testing of the survey.

We created a survey with the aim to evaluate the target groups acceptance of an application to support them in their daily life. Furthermore, the survey gathered data on the target groups expectations and ideas. We designed an online survey targeting Danish-speaking parents of children diagnosed with ADHD (see Appendix C). We made use of Google Forms to create our online survey, which gave the advantage of being accessible for everyone. Furthermore, it allows a wide range of possibilities in terms of colour, formatting and response styles. In addition, it executes basic analytics on gathered data and can provide useful diagram and charts. This feature can save time and also reduce the likelihood of error during manual analysis. The survey consisted of both multiple choice questions and open-ended questions, resulting in a mixed quantitative and qualitative method. We kept a clear and simplified language, in order to make it accessible and understandable by everyone. To assure that the survey was clear and logic, we performed a pilot-test with two external subjects. At last, we distributed it through social media groups and associations related to our target group in Denmark. Afterwards, we made a systematic analysis of the answers. The quantitative analysis was partially facilitated by Google Form's tools. For the qualitative analysis, we categorized the answers into themes corresponding to the questions.

3.2 Experimentation

The data collected from our background research, the survey and the feedback from the psychiatrist, gave us important information on what the expectations and possibilities for the application were. This allowed us to define the system, its actors and functionality, design the app's user interface and develop a prototype. From this, we designed and conducted our user study based on a prototype evaluation in order to gather results that support our hypothesis on the usefulness of the app.

3.2.1 User Interface Design

According to Boukhebouze et al. (2014), an effective user interface (UI) is a key success factor for interactive systems. UI design is the process of making interfaces for machines and software, such as computers, home appliances, mobile devices and other electronic devices with a focus on looks or style, to maximize usability and the user experience (UX) (IDF, 2002). UI designers aim at making the user's interactions as simple and efficient as possible, in terms of accomplishing user goals. Thus, a thorough understanding of user needs is crucial. UI design typically

refers to graphical user interfaces and are designs' control panels and faces.

The focus of our study is the usefulness of the mobile app. However, there is a close connection between usability, utility and usefulness. Nielsen (2012) describes usability as a quality attribute that assesses how easy user interfaces are to use. He furthermore, describes utility as another key quality attribute. Utility refers to the design's functionality: Does it do what users need? Nielsen (2012) continues with how usability and utility are equally important and together they determine whether something is useful: "It matters little that something is easy if it's not what you want. It's also no good if the system can hypothetically do what you want, but you can't make it happen because the user interface is too difficult".

There have been developed many guidelines for good UI design. Norman (2002) describes six principles of design: *visibility, feedback, constraints, mapping, consistency and affordance*. The contemporary design thinker Shneiderman (1997) reveals eight golden rules of UI design: *strive for consistency, enable frequent users to use shortcuts, offer informative feedback, design dialogue to yield closure, offer simple error handling, permit easy reversal of actions, support internal locus of control, reduce short-term memory load*. For this thesis, we have chosen to let us guide by the *10 Usability Heuristics for User Interface Design* by Nielsen (1994).

The reason for choosing Nielsen (1994) as guidance for the design is that it covers the three key components of user experience *usability, utility and desirability* quite nicely and we were thereby most likely to achieve better results in terms of user experience of our design and thus usefulness.

3.2.2 Scenarios

Scenarios are stories about people undertaking activities in contexts using technologies (Benyon, 2014). It focuses on a user's motivations and documents the process by which the user might use a design. User scenarios help designers understand what motivates users when they interact with a design and are useful for ideation, as well as testing and evaluation of a system. By specifying a scenario, the designer dives into the experience and tries the user perspective in a more detailed way. For example, by creating a scenario where a mother wishes to register her son's new medication in the mobile app, the designer can come across questions regarding usability, requirements, system definition, etc, such as 'What are the fields that are needed in order to create a complete register?', 'Should the user write the name of the medicine or should the app feed on a database, making it possible to choose the medicine from a drop-down menu?'.

In this study, we used scenarios as a tool for developing our UI and prototype. We created three scenarios which were used as tasks for the participants to perform

during the prototype evaluation. With the scenarios, we were able to show the participants concrete contexts they could relate to, as well as test their opinion on the usefulness of the prototype's functionality.

3.2.3 User Study

A User Study has a focus on human behavior in contact with information systems. For our research, we developed a user study to explore the users' expectations and needs through a prototype evaluation that puts the user in connection with a possible solution.

Our user study is based on the evaluation of a prototype in terms of usefulness. Based on the UI design, we built a prototype divided into an interactive and a non-interactive part. The prototype evaluation consisted of three tasks within the interactive part of the prototype, and five demonstrations within the non-interactive part of the prototype. After each task or demonstration, the participants answered follow-up questions to clarify their opinion on the app's functionality and usefulness. Furthermore, the prototype evaluation consisted of two settings: the moderated *in situ* and the unmoderated remote.

Prototyping

A prototype is a draft or partial representation of a system design, that allows the designer to explore ideas and show the intention behind, for example, a function (Benyon, 2014). Prototypes can be used in all stages of the design process. They may be used to demonstrate a concept in early design, to test details of that concept in a later stage and sometimes as a specification for the final product. There are two main kinds of prototyping - low-fidelity and high-fidelity (Benyon, 2014). Low-fidelity prototypes are usually made of paper and are focused on the broad underlying design ideas. High-fidelity prototypes are interactive digital-based representations of a software or part of it, resembling the final product in terms of design and functionality.

Based on the already created scenarios and listed functionality, we started out by making our first low-fidelity prototype. With that, we were able to discuss ideas and work-flows. Later we turned the lo-fi prototype into a hi-fi prototype to give it a finished look and an appealing interface. This was done to avoid the participants focusing on the graphical aspects of the mobile app. Benyon (2014) though, mentions the finished look of prototypes as being a problem, as it makes people think they are finished products. This was mitigated by informing the participants of our prototype evaluation, that it was only a prototype and about the limitations of it. The hi-fi prototype was developed in the software Adobe Xd, which offers

great advantages for testing, such as the creation of an URL that can be accessed in any device with an internet connection, the possibility of making changes while tests occur, and high quality and fidelity of the interface and user experience.

We made use of prototyping as a way to involve the participants in evaluating our application idea and to provide them with a real experience of using the app for the functionality. This way, the participants could get a feeling of using a real mobile app for their family daily life and provide concrete feedback on their experience, while we could observe their behavior and explore their needs.

Prototype Evaluation

The evaluation aims to review the prototype, trying out or testing a design idea to discover whether it meets some criteria (Benyon, 2014). In our case, the evaluation of our prototype had the main goal of supporting our research question by confirming the usefulness of the LogMe application. As already stated, Nielsen (2012) explains how usability and utility are equal to usefulness. Furthermore, he says that to study a design's utility, the same user research methods that improve usability can be used. There are many methods to test the usability of a system. Overall they are divided into three categories: expert-based testing, automated testing and user-based testing (Lazar et al., 2017). An expert-based test involves interface experts in using a number of different structured methods for finding interface flaws. An automated test is a software program that applies a series of guidelines (developed by the experts) to an interface and determines where the interface do not meet the guidelines. A user-based test involves representative users performing representative tasks.

For this thesis, we have used the user-based Think-aloud protocols to evaluate the usefulness of our prototype. Think-aloud protocols are a widely used method for the usability testing of software, interfaces and websites (van den Haak et al., 2003). During the think-aloud test, participants are asked to perform predefined tasks, while encouraged to "think aloud" as they are going through the interface (Lazar et al., 2017). *"When users state their feelings, their frustrations, and their progress out loud, there is often very useful feedback"* (Lazar et al., 2017). We furthermore made use of a follow-up interview during the evaluation. After observing the participants using the prototype, they were asked a series of questions regarding their opinion on the function that they saw or tried, if it would apply to their case and if they had suggestions or ideas for development. As we were not interested in the more quantitative parts of the usability test, as for example time performance, the combination of the think-aloud protocol and the follow-up interview fitted our purpose perfectly.

For the convenience of our target group and to reach as many participants as

possible, we designed both a Moderated *In situ* Evaluation and an Unmoderated Remote Evaluation. The moderated evaluation or moderated usability test is where the moderator and the participant are both present at the test. This can be done either at the same location or remote, much like a Skype call. On the other hand, the Unmoderated Remote Evaluation or Unmoderated Remote Usability Test (URUT) is where the participant will work through the tasks of the test in their usual environment without the need for a moderator present, and at their leisure, without requiring the hassle of coordinating schedules (Moran and Pernice, 2018, Interaction Design Foundation, 2018, Lazar et al., 2017).

	Benefits	*Drawbacks*
Moderated	- the moderator has the option to change, skip or reorder tasks as needed - the moderator may ask follow-up questions or for clarification if needed - the test sessions can be longer (usually about an hour) and leave room for in-depth exploration of a design - The team can watch the test at the same time and discuss the findings immediately after the session	- it's time-consuming - it takes a lot of effort to recruit participants - it's costly - it takes the participant out of their usual environment
Unmoderated	- fast or no recruiting (remote-testing services can if necessary provide participants) - no moderation skills needed - fast results - low cost	- often less detailed than that from in-person testing - no way to clarify ambiguous or unclear instructions - no way to ask follow-up questions or ask the user to elaborate

Table 3.1: Pros and Cons of the moderated and unmoderated methods.

Both methods provide great insights and the one do not need to exclude the other (see Table 3.1). By complementing each other, it is possible to gather the data needed (IDF, 2018). In a study on unmoderated remote usability tests, Bruun et al. (2009) systematically compared three methods: user-reported critical incidents, forum-based online reporting and discussion, and diary-based longitudinal user reporting. In addition, conventional laboratory-based think-aloud testing was included as a benchmark for the remote methods. The results showed that each unmoderated remote method supported the identification of a considerable number of usability problems. Although it was only about half of the problems identified with the conventional method, it required significantly less time. This makes unmoderated remote methods an appealing possibility for usability testing in many software projects. Furthermore, studies have found that mostly due to a natural

setting, more relevant data are gathered from participants (Oztoprak and Çiğdem Erbuğ, 2008).

Our moderated evaluations were sound recorded and had both, in addition to the participant, a moderator and a note taker present. The remote tests were done through an online platform, *lookback.io*, which was chosen because it was easy to use, both for us and the participant, and the platform gave the option to record both sound, screen and body language (the latter, if the participant agreed to). The tests were done through lookbacks' own app Participate, which makes the prototype feel like a real app.

3.3 Analysis of qualitative data

One of the most widely used frameworks for analyzing qualitative data is the procedures from the *grounded theory* (Benyon, 2014, Lazar et al., 2017, Charmaz and Belgrave, 2012). The standard procedure of qualitative data analysis starts with a set of data, in our case, it would be the open questions from the survey, the transcribed interview with the psychiatrist and the six transcribed prototype evaluation sessions. The data is analyzed to identify concepts, ideas and themes, which are tagged with codes. As data is collected and re-reviewed, codes can be grouped into concepts, and then into categories. These categories may become proof for new theory (Lazar et al., 2017).

Regarding our user study, the coding of our qualitative data was done with the help of NVivo, a software that supports qualitative research by helping researchers to organize, analyze and find insights in unstructured data such as interviews, open surveys, articles, social media and web content. Through the analysis, we detected new pieces of evidence referred by the participants, which we then coded and grouped by categories. The use of NVivo facilitated processing of data and an overview of the findings.

Chapter 4

Exploration

The complexity of our target group led us to an initial exploration of our possibilities, in order to better understand the users, their expectations and needs. Through this, we were able to refine our study and collect findings that shaped our final experiment.

4.1 Expert input

In order to better understand the target group needs and assure the importance of the registration of behavior and medicine, we got in contact with a child and adolescent psychiatrist with focus on the diagnosis and treatment of neuropsychiatry and mental development disorders. Her long-time experience with diagnosis and treatment of ADHD provided an important contribution for the understanding of the disorder and the families that it affects.

In order to collect information that could be useful for the development of our study, we conducted a semi-structured interview with the psychiatrist. As a first part of the interview, we focused on her practice and in the characterization of the target group. We learned that the diagnosis conducted by the psychiatrist involves the collection of information from the parents, school, network, and so on, and are complemented with supplementary investigation or diagnostic interviews. An example of a tool to help to conduct the diagnosis is the standardized assessment procedures (NICHQ, 2002), where the Inattention and the Impulsivity/Hyperactivity symptoms are remarkably distinguished. The use of LogMe in a regular basis would contribute for information gathering about the child and help the physicians to find answers and patterns and take conclusions: *"It would provide me resources and give a quick overview so that I can make conclusions."*

In terms of treatment, pedagogic intervention and education of families and network are the primary methods: *"Then the parents' knowledge comes into play, because if they got a child who has special needs, then they must also learn what is the right pedagogic approach for the child."* If those interventions reveal not to be enough, which commonly happens, the child starts a medicine trial. As for this process, the psychiatrist requires the parents to pay close attention to the child's behavior and issues before starting the medicine. When starting new medicine or regulating dosage administration, it is important to keep track of the effect of the medication on the child, display of the expected behavior, possible side effects, appetite, and further observations: *"If you want to find out if the medicine helps, then you should look at the behavior."*

Figure 4.1: An example of a paper-based scheme that is distributed by the psychiatrist

The psychiatrist shared some examples with us of schemes for registration of the child's behavior, as for example a table based on the Dundee Difficult Times of the Day Scale (D-DTODS) (see Figure 4.1). However, the psychiatrist's experience is that these processes of registering daily aspects are time-consuming and rarely implemented by the parents, even if simplified as much as possible. She says *"This scheme for example (see Figure 4.1), it may very well end up somewhere and then you forget it, or it can accidentally be thrown out, between the newspapers and advertisements."* Schemes in paper format get easily lost, the parents do not have the extra energy to turn on a computer and fill an excel sheet, and so on. The idea of building a mobile app with this functionality was very appreciated by the psychiatrist, agreeing that by being accessible on the parents' phone, it would be much easier to collect information about the child's daily behavior and so on: *"People have their mobile phone with them all the time. For example, if you sit for some leisure activity and watch one child, you might just grab your phone and fill out a form on the other."*

For feedback on the design of LogMe, we explained our concept and used a

first sketch as an illustration of our idea. The psychiatrist offered us advice in terms of the UI of LogMe. She highlighted that the choices must be as simple as possible, and so the general functioning of the app: *"The more choices there are, the more complex it becomes. What should I choose and how does this work. Sometimes if you can answer yes or no, it's good enough."*

Resuming, we confirmed the importance of behavior observation throughout time: (1) before the diagnoses, so the psychiatrist have a solid base to look into while making conclusions and doing a diagnose, (2) before starting medication, to document the normal behavior of the child without medication, and (3) after starting medication, so the parents and physician can identify the effect of the medicine and make sure the child shows the expected behavior. The psychiatrist also made us aware of the challenge of designing a mobile app for the target group, especially in what concerns the need for the simplicity of the app.

4.2 Survey

In order to support our study, we launched an online survey in different danish social media groups aimed at parents of children with ADHD. The main focus of the survey was to (1) verify the interest and need for the mobile app by the target group, as well as (2) to collect feedback and suggestions, and to (3) gather contacts of parents that would be interested in participating in our user tests.

A total of 115 (N=115) parents of children diagnosed with ADHD answered the survey to completion. Their children are between the age of 4 and 16 years old, being the average age of 10.452. The reason we asked about the child's age is that the study focused on the fact that it is the parents who primarily use the app for registration and not the child.

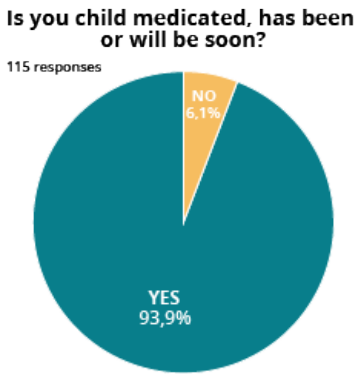

Figure 4.2: 93.9% or 108 of the parents confirmed their child is medicated.

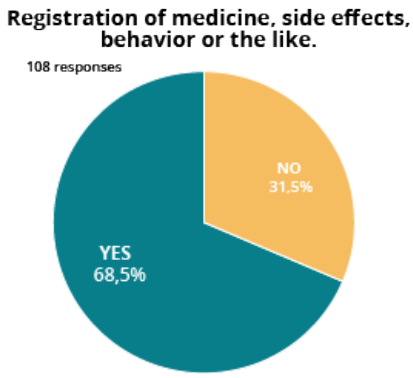

Figure 4.3: More than 2/3 of the respondents register their child's medicine, side effects etc.

The idea was that the app should primarily assist the parents in the start-up phase of new medication or dose adjustment. Therefore, we wanted to see how many of the diagnosed children were actually medicated. 108 of the parents confirmed that their children have been, already are or will be medicated in the near future (see Figure 4.2). As illustrated in Figure 4.3, it was furthermore confirmed by 68.5% of the parents with medicated children, that they had been asked directly by their physician to keep a register on the child's medication, side effects, behaviour and/or other things as for example appetite. This supported the need for a tool to help with registration.

App definition presented in the survey

"We want to develop a prototype of an app for parents of children with ADHD. The app aims to act as a diary, in which it is possible to register the child's medicine, side effects, behavior, sleep and others. The app is especially intended as support regarding the start-up of medicine or new medication. In addition, it will make it possible to send information directly to, for example, the child's doctor."

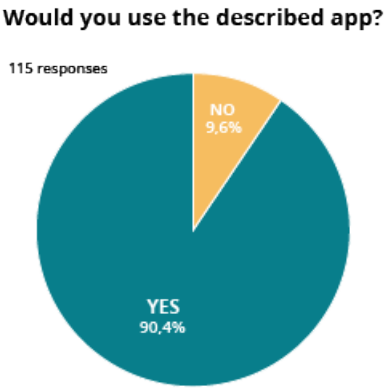

Figure 4.4: More than 90% found the idea of LogMe useful

To further support the need for the mobile app, we asked the 115 respondents if they would use the app described in the survey. More than 90% were positive about the idea (see Figure 4.4). We asked the last 11 parents, due to what reasons they did not think the app would be useful. As illustrated in the quotes below, the reasons were very different.

"It's not missing anything, just wouldn't use it".

> *"...I only need to see his sleep pattern and I can see that on his Vivofit*[1] *watch..."*.

> *"I don't see the purpose. It seems like more work in a hectic everyday life"*.

A few of the comments did, however, suggest that maybe the participants had misunderstood the purpose of the app, or the fact that digital registration is just not for everyone.

> *"Not missing anything as such. I just have enough to do with having to keep a written record of everything my son needs to do. So wouldn't be able to also keep a diary"*.

> *"I can observe fine by myself"*.

> *"In the start of the medication process, everything was supposed to be as simple as possible and in collaboration with the doctor ... I cannot see what the app should do when we still have to meet with the doctor between these periods and talk about what we have experienced"*.

The 104 parents (N=104) that affirmed that they would possibly use the described app proceeded to more specific questions about functions of the app. As a result of our background research, the gathered documentation and the different elements provided by the psychiatrist, we had narrowed down the functions to five main areas, as follows:

1. Registration of medication
2. Registration of side effects
3. Registration of behaviour
4. Registration of sleep
5. Send info to doctor/physician

Out of the 104 parents, we wanted to know which of these functions the parents found the most and least valuable, in order to figure out where to aim or focus at first. One parent did not answer the question about least wanted functions, as she thought *"All five functions are relevant."*

[1] Vivofit is an activity tracker in the form of a wrist-worn band. It counts steps, monitors active time, and tracks sleep.

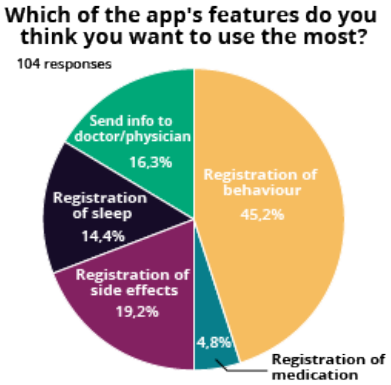

Figure 4.5: The top three most wanted functions are behaviour registration, side effect registration and send info to doctor/physician.

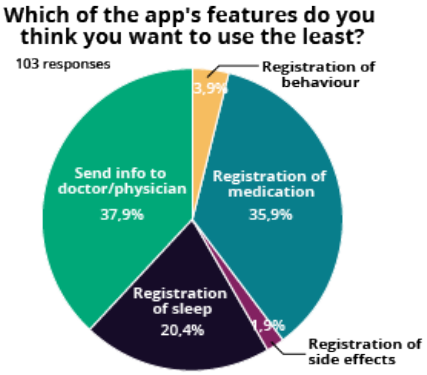

Figure 4.6: The three least wanted functions are send info to doctor/physician, medication registration and sleep registration.

To our surprise, many parents were focusing on the registration of behaviour and side effects, and not the registration of medication, as we first assumed (see Figures 4.5 and 4.6). This made us realize the need for flexibility and customization, as each family has specific challenges and may focus on different functions of the mobile app.

We asked the parents what other features they would like in an app as LogMe to offer. We received 23 interesting ideas. The parents' engagement reassured us that there is a great interest in an app like LogMe. Six parents mentioned meals and food intake as important aspects to track, as well as the weight of the child which was mentioned five times.

> *"Weight curves and possibly something with food".*

> *"Many ADHD children have problems with the appetite in connection with medication start-up, so it would be practical with a function where one can register food intake".*

Three parents mentioned collaboration between parents, and two mentioned reminders, as further functions.

> *"Accessible by both parents of the child".*

> *"Alarm function so that medicine is remembered".*

Other possible functions mentioned by the parents were:

- Registration of blood pressure (two)
- Registration of absence days (one)
- Registration of mood and behaviour patterns (two)
- Creation of graphs and statistics from the inputted data (two)

To the question of whether the parents use or have used similar apps, 99.1% of 115 responded that they did not. The only yes answer was the parent previously mentioned who used Vivofit Junior. This supported our own observations that the supply of similar apps as LogMe is very small or non-existent.

To support the parents' own suggestions of features for the app, we also asked them which tools they use in everyday life. The purpose was to see if some of these tools could be a part of LogMe and possibly make everyday life easier for the families. There were 79 responses from 115 persons. Many of the responses resembled each other and testified about the common denominators that are important to address in order to cope with a diagnosis such as ADHD. Below are a few examples of the most general statements the parents came with.

> *"Pedometer (Garmin watch for child), physical calendar (which the child and father, unfortunately, do not see) calendar with alarms on mobile (mother only) weekly schedule on paper for the child, SMS to father about remembering medication, sleeping times, etc."*.
>
> *"Time-timer and pictograms"*.
>
> *"Schedule with fixed eating/bedtimes"*.
>
> *"Educational tools, professional knowledge, structure, structure schedules for everyday life."*.
>
> *"Registration of behaviour"*.
>
> *"We have made our own form in Excel where we register different things"*.

Tools related to structure, schedules and registrations are mentioned many times. This assured us that we were on the right path in term of the functions we were already considering.

When the parents were asked if there were any digital tools, that could support them, that they were missing on the market today, there were answers like, timers,

trackers and reminders on activities for the children. As well as apps for communication between parents and teachers. More than that, many of the parents wrote that an app just like LogMe would be very useful to them.

> *"An app as mentioned above and which can "talk" with an activity, pulse and sleep tracker. It must be able to be shared/edited between parents, and the child must be able to follow and be able to add messages on his/her own mobile/tablet".*

> *"An overall tool as you describe will make things easier"*

> *"I think that this idea you have made could be super good for registration, instead of on a paper slip that, for example, get lost"*

> *"Yes, an easy and clear app where you can quickly register the things that you describe. Our psychiatrist has benefited greatly from our Excel sheet as she has been able to quickly and easily get an overview of how things go, but it is too much work to start up the PC every day and have to make schedules. It would be great just to register on an app, then you can also do it continuously throughout the day"*

The conclusions we take from the survey is that the parents showed great interest in the described mobile app. Furthermore, they showed commitment to make it suit their needs by suggesting improvements and other further functions. We also realized that the daily focus of parents of children with ADHD can be very different from family to family and, therefore, LogMe should be flexible and focus on different aspects, not just medication.

The last question of the survey served as a mean to gather potential subjects for our user study. As a result, 36 of the parents that participated in the survey shared their interest in being contacted for further experiments.

4.3 Summary

The Exploration phase allowed us to expand the knowledge that we previously gathered from the Background and explore the target group's needs and expectations. Our contact with the psychiatrist reinforced the importance of the goal of our app and offered us some guidance in terms of the User Interface design. Through the survey, we collected vast and rich feedback on the app, concluding that there is an interest in the described application. The survey participants that showed

interest in the app contributed to their opinions in the most and least important functions for the app and suggestions to functions and further developments. From the results collected, we concluded that the app should include a wide variety of functions, in order to suit most of the needs of the different families. Therefore, we included functions related to medicine, behavior, emotions, activity, meals, routines, reminders, secondary user log in, data overview and export, and a quick evaluation feature based on D-DTODS.

Chapter 5

Experimentation

The experimentation phase served the purpose of gathering data to support our hypothesis through a user study. The results from the background research, the survey and the expert contribution were our guidelines to define the app and build the experiment, providing us with the understanding of the parents' expectations for an app like LogMe. With the survey results on the parents' preferences for the app, we narrowed the focus of the prototype to fewer functions than the ones designed in the full app.

5.1 Experimentation goal

The experimentation had the ultimate goal to gather evidence on the usefulness of the mobile app, in order to confirm our hypothesis. Therefore, we proposed a user study based on a prototype evaluation with the parents of children with ADHD. The prototype evaluation gave the parents the opportunity to experience the use of a mobile application to perform the tasks that they would usually do on, for example, paper. The experiment had as a main focus in the following questions:

- Does the app fit the needs of the parents?
- Do the parents find the app useful?
- Do the parents have critics or suggestions to improve the app?

With this, we hoped to get a wider understanding of the users' behavior and opinion towards the presented prototype, in order to make conclusions over the app's usefulness and potential.

5.2 The LogMe app

We designed a mobile app that would offer support to the families of children with ADHD in their daily life. The app was designed with base in the survey results, adopting a design process where the users have great influence.

These results indicated that families have different needs and focus and flexibility is, therefore, an important characteristic to take into consideration when designing the app. Furthermore, the lack of time and energy at the end of a busy day demands an app that is quick and easy to use, for it to be attractive for the parents.

5.2.1 System Definition

As a starting point for designing the app, we defined the system and its actors. With usability and utility in mind, we designed an app in which the users could intuitively find the necessary functions, and quickly perform the necessary actions.

System definition

A mobile application where the parents can create and manage an account related to their child with ADHD. The system should primarily be a registering system, where the users have an overview of the entered data. The users should be able to input information regarding the child's medication, side effects, behavior, emotions, meals, activity, bedtime and morning routines, events and notifications. Secondarily, the system should offer features such as reminders and data exportation. The user should be able to create and manage reminders for medication, events, as well as notifications and daily reminders for information input. Furthermore, the user should be able to export the data to a file that can easily be interpreted, printed and opened by common tools. The mobile application should run on both iOS and Android, and be compatible with the majority of devices. The system should be designed for a non-expert audience.

The Actors of the system are mainly the main users and the secondary users. The main user is usually one or both parents of the child with ADHD. This user has an administrative role, with full access to all data and functions, and is the one who can grant permission for log in to a secondary users, as well as grant access to functions of the mobile app. The main user can create reminders to all or specific secondary users. The secondary user has limited access to functions (granted by the main user) and can only access information inputted by him/herself.

5.2.2 Functionality

The background research and the exploration work allowed us to define the functionality of the app in order to answer the needs of these families. We identified nine categories under which we grouped the app's features. Through using LogMe, the user must be able to:

Medication:

· Register medication and their specifics, as for example the name, the dosage, the frequency and the regular time of administration

· Log the administration of the medication and allow possible customization of each incident

· Log side effects with a description, time of day, impact evaluation and an optional note

Behavior:

· Log behavioral incidents with a title, time of day and an optional note

· Log emotional incidents or thoughts with a title, time of the day and an optional note

Routines:

· Log information about morning and evening routines, a general evaluation, information about time and an optional note

· Create and customize new routines

Activities:

· Log information about activities of the day, especially physical activity

· Connection with a smart-watch

Meals:

· Log information about meals, appetite, etc

Calendar / Data overview:

· Calendar function with creation of personalized reminders, appointments and events

· Overview of all or selected group of data in a given period

· Export to PDF or Excel for an easy way to share information with health-care professionals

Secondary user login:

· Connect secondary users to the account

· Main user controls the information and functions to be accessed by secondary users

· Create notes and reminders for specific secondary users

Reminders:

· Create new reminders, for example, for medication, appointments and routines

· Customize reminders to log daily information on routines

· Customize reminders, for example, the beginning of evening routine and medication

Quick feedback:

· Quickly evaluate difficult times of the day by scale-rating

With the functionality defined, we started exploring the design of LogMe by sketching diagrams and wireframes. Subsequently, we present the User Interface design of the mobile app.

5.2.3 User Interface Design

In the User Interface Design section we show the design of the entire app, from which we subsequently selected several functions and developed our prototype (see Figure 5.8).

Our goal was to design an app that is useful, easy to use by the target group, and where the user could perform their desired action in only a few steps. To facilitate navigation, we created an initial screen with access to all categories (see Figure5.1). As further navigation support, we adopted a fixed footer navigation bar and a head navigation bar that also described the selected category.

The initial screen is divided between sections. The first section shows the day and the type of day, in order to create a context for the user and attribute a general classification to the days, as for example school day, sick leave, weekend, vacations, etc. The first section also includes the **quick feedback** feature, showing questions about the difficult times of the day, as for example "How was the morning routine?", "How was breakfast?", etc. This feature encourages quick feedback through one click, aspiring to motivate the parents to regular use of the app. The second

section, shows the navigation by categories, which is characterized by relatively big buttons that lead the user to the different subcategories, where they can perform their desired actions.

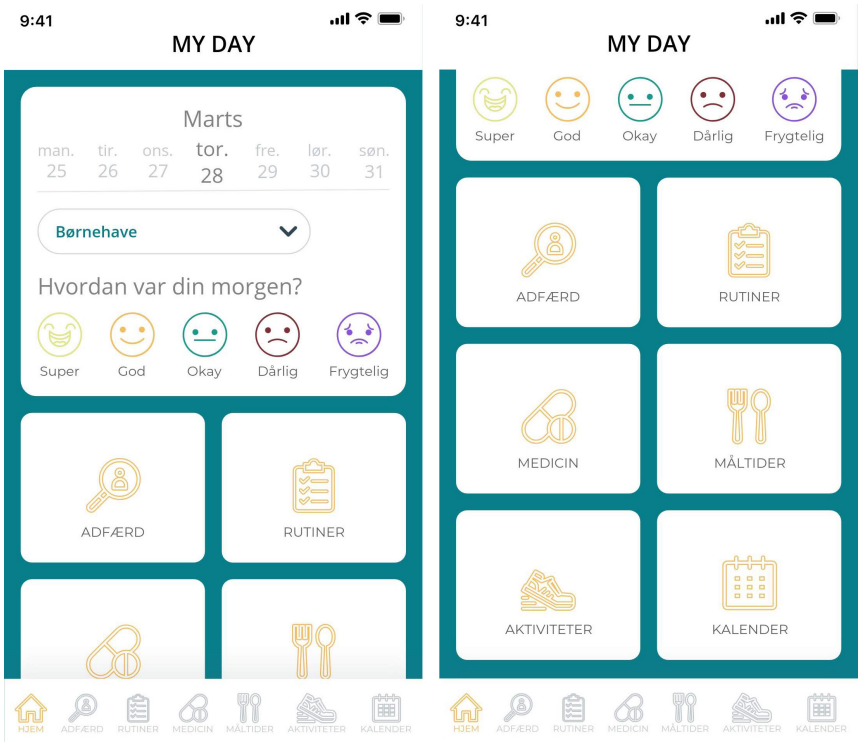

Figure 5.1: Prototype of LogMe's initial screen.

In the *Medicine*, the user is able to perform actions such as creating new medicine or register side effects, managing medicine intake and creating reminders. The screen is divided in two sections, day overview and medicine cabinet overview (see Figure 5.2). In the day overview, the user can observe the status of the medicine intake for the day and the side effects registered. The status of the medicine intake allows, for example, better coordination between the parents, as they can tick off the medicine in their own mobile phone when giving it to the child. The calendar row in the top allows the user to see the present day and consult previous days. The medicine cabinet shows the user an overview of all the medicine that the child currently is taking. This overview includes the name of the medicine, dosage and frequency.

The *Behavior* screen is divided into two sections, behavior and emotions. The sections display the registrations made that day, having the present day as default. Similar to the Medicine category, the calendar row in the top allows the user to select and view previous days. The behavior aims to gather registrations on par-

Figure 5.2: Prototype of LogMe's Medicine screen.

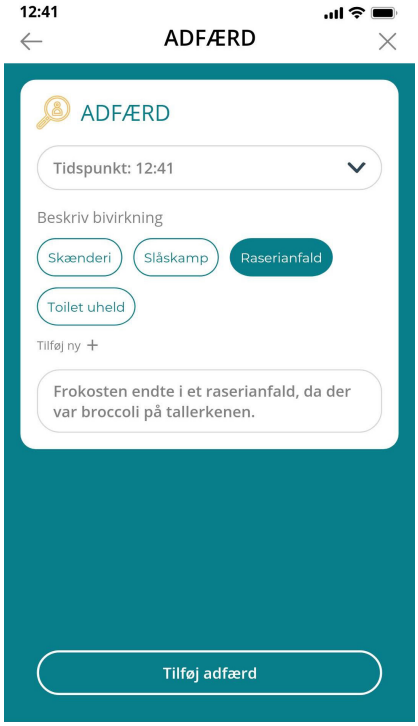

Figure 5.3: Prototype of LogMe's Behavior registration screen.

ticular situations or incidents, as for example a fight in school (see Figure 5.3), while the emotions is for more abstract data, such as feelings and thoughts the child might have troubles with. Both types of registrations include a time stamp, a description, different suggestions to behaviors and feelings, an option to add new behavior and feelings, as well as an optional note.

The *Routines* (see Figure 5.4) is based on the morning and evening routines. These routines frequently represent a challenge for families, as the child is easily distracted and can lose track of actions. Many times, it reflects the child's mood and severity of the ADHD symptoms in the specific day. The ultimate goal of the function is for parents to monitor how the child is performing from day to day, evaluate medicine impact and associate these aspects with causes that might go unnoticed. Furthermore, the parents can create and manage their own routines, according to what fits them better and what their biggest challenges are.

For the *Activities*, the goal was to gather information about physical activity. The Activities screen (see Figure 5.5) shows specific activities registered by the parents, and aim to gather information from smart-watches in order to observe the level of activity throughout the day. This category aims to give the parents a quick overview of how active the child is, in order to analyze and identify behavior

Figure 5.4: Prototype of LogMe's Routines screen.

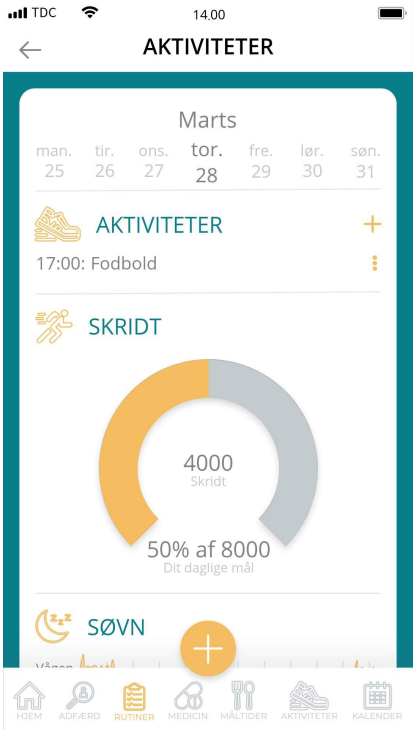

Figure 5.5: Prototype of LogMe's Activity screen.

patterns that can relate, for example, physical activity and fatigue with behavior

The *Meals* allows the user to register aspects related to the child's eating habits. As we learned from the survey, many ADHD children have problems with the appetite in connection with medication start-up or dose changes. This feature allows the parents to make notes on the development of the child's appetite, and other important matters connected to nutrition and food intake. Furthermore, and especially for communication purposes, it allows the parents to keep an overview of favorite and less appreciated foods.

The possibility of giving *Secondary users* access to the same child account supports communication between for example relatives or caretakers and the parents. The parents have an administrative role and can select the categories that the secondary users should be able to access. This way, the app presents a reduced complexity, focusing only on the features necessary for the secondary user. Furthermore, the secondary users cannot access information that was input by other users than themselves, in order to keep control and privacy over the child's data. The log-in for secondary users offers an initial screen where the first section presents an overview of reminders and notes created by the parents, and the reduced categories selected by the parents (see Figure 5.6).

Figure 5.6: Prototype of LogMe's initial screen for the secondary user.

Figure 5.7: Prototype of LogMe's overview of data through the calendar.

The *Reminders* are applied to several aspects and functions, and offers support to the parents on various perspectives of their daily life. The reminders used in connection with medication is intended to remind the user about medicine intake and make it possible to tick it off in the medicine intake overview. The quick-feedback reminder aims to suggest quick evaluations at different times of the day, in order to stimulate data registration by the parents. Other reminders are associated with future events and calendar notifications created by the parents. These could be, for example, reminders on starting the bedtime routine, a football game or a birthday party. Furthermore, all the reminders can be associated with a specific user, as for example, associating a specific medicine intake reminder with the grandmother, which is a secondary user of the app, so that the notification will pop-up in her mobile phone.

Another category of LogMe is the *Calendar*. Through this, the user can access common features of a calendar app, such as creation of events and reminders, and see an overview of the calendar entries. Furthermore, the category gives an overview of the data entries from the other categories, as well as the option to export these entries to either text or graphs. The parents can select specific categories of data and create an overview of a specific time period, for example, the current

month (see Figure 5.7). This feature supports the analysis and cross-reference of data, gives an overview of the child's behavior and reaction to treatment over time and makes sharing of information with the health-care professional much easier.

From these categories, we selected three main features from the LogMe app to integrate into our user study. In addition to their importance to the mobile app in general, these features also reflect the survey results regarding most wanted features by the parents. We made scenarios to better contextualize the use of the feature and develop our user study.

5.2.4 Selected Scenarios

In order to elaborate on our user study, we used scenarios to set up three tasks for the participants to perform during the prototype evaluation. With the scenarios, we were able to show the parents concrete contexts that they could relate to or identify in other families, as well as specific information to input in the app during the evaluation. The selected scenarios consisted of:

1. The registration of a new medicine
2. The registration of a side effect
3. The registration of a behavioral incident

Besides being some of the most wanted functions by the parents (see Chapter 4.2), the selected scenarios had to be simple to understand and relate to tasks in the parents' daily lives. For our prototype evaluation tasks, we started with the registration of a new medicine as a first task, mostly to introduce the parents to LogMe app, followed by the registration of a side effect, which is directly related to medicine, and finishing with the registration of behavior, which by far was the feature that the parents thought they would use the most.

To get a better understanding of the prototype, we present the scenarios in parallel with a test script, highlighting the use of the app and all the steps in order to succeed in the task.

Register medicine

Mrs. Jensen's son, 8 years old and diagnosed with ADHD, just received his first medication treatment from his doctor. For the last 4 weeks, Mrs. Jensen has been using the LogMe app to register her son's behavior, and now with the new medication, Mrs. Jensen wants to register it in the mobile app. Using her mobile phone, she opens the app and selects the category "Medication" on the initial screen. In order to register a

new medicine, she clicks the big "+" button at the bottom of the page, and then selects "Add medicine". Now in the new register screen, she writes the medicine's name "Medikinet", from a drop-down she selects the dosage that her son should take (10mg), she selects the frequency of intake (twice a day) and finally chooses the time for medicine intake (at 7am and at 3pm). When all the information is correctly inserted, a button with "Add medicine" appears at the bottom of the page. Mrs. Jensen presses the button, and is taken back to the "Medication" screen, where she can see the newly added medicine in the "Medicine cabinet".

Register side effect

Mrs. Jensen realized that her son was suffering from a mild headache 30 minutes after the medicine intake. She wants to register the event in the LogMe app as a side effect to the medicine. Using her mobile phone, she opens the app and selects the category "Medication" on the initial screen. In order to register a new side effect, she clicks the big "+" button at the bottom of the page, and then selects "Add side effect". Now in the new register screen, she selects the time of the event, instead of adding a new side effect herself, she selects "Headache" from the already suggested ones and evaluates the side effect as "Mild". A button with "Add side effect" appears at the bottom of the screen, which she ignores, since she wants to add a note saying "It disappeared after drinking two glasses of water". After this, she clicks the button "Add side effect", and is taken back to the "Medication" screen, where she can see the newly added side effect in the daily overview under "Side effects".

Register behavioral event

Mrs. Jensen's son had an outburst during lunch time. She believes that he is acting out more than usual and wants to register the outburst in the LogMe app as a behavioral event. Using her mobile phone, she opens the app and selects the category "Behavior" on the initial screen. In order to register a new behavior event, she clicks the big "+" button at the bottom of the page, and selects "Add behavior". Now in the new register screen, she selects the time of the event and instead of adding a new behavior herself, she selects "Outburst" from the already suggested ones. A button with "Add behavior" appears at the bottom of the screen, which she ignores, since she wants to add a note saying "Reacted on a piece of broccoli at the plate". After this, she presses the button "Add behavior", and is taken back to the "Behavior" screen, where she can see the newly added event in the daily overview, under "Behavior".

With the system clearly defined and the selected scenarios ready to be converted into prototype evaluation tasks, we proceeded with the construction of the user study.

5.3 User Study

The prototype illustrates the majority of the functions previously defined in Chapter 5.2.2. However, we only developed in detail the functions characterized in the selected scenarios, since those were the focus of the interaction with the prototype (see Figure 5.8). As for the remaining functions, we decided to demonstrate the Routines, the Reminders, the Secondary Users, the Connection with the smartwatch and the Export feature as a non-interactive prototype.

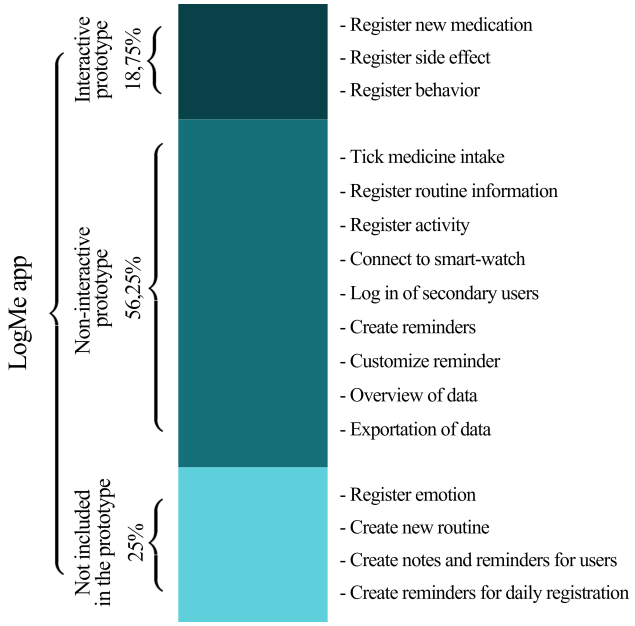

Figure 5.8: Analysis of the functionality included in the prototype representation of LogMe.

The user study made use of a prototype evaluation and follow-up questions as a mean to collect the participants' feedback and experience. The study adopted two different settings: the moderated *in situ* evaluation and the unmoderated remote evaluation.

5.3.1 Interactive Prototype

For the interactive part of the prototype, we considered the selected scenarios "Register medicine", "Register side effect" and "Register behavioral event" specified in

Chapter 5.2.4 as the guidelines for prototype development. Table 5.1 summarizes the content of the Interface, Function and Model system components of the interactive part of the prototype, which highlight its Focus, Limitations and Prerequisites. Regarding the Interface, the prototype focus was to provide the users with the experience of using a finished product, in order to avoid their focus on the interface while giving feedback. The prerequisites were the attractive graphics, intuitive actions and a user-friendly interface. The attractive graphics reflect our wish to have the participants in contact with a finished-looking prototype, in compliance with the focus. The intuitive actions were associated with the progression in the tasks, in which we wanted to make sure that the participants could easily find their objectives. The user-friendly interface referred to the overall understanding of the app, by adopting a clear structure and navigation, which should quickly be perceived by the participants. The limitations of the Interface component were the reduced possibilities of navigation and exploration of the prototype, as only part of the prototype allows interaction. This might have caused a negative impact on the participants, as they expected to be able to interact and explore the product. The Functions' focus was to provide the users with the real experience of using the three selected functions. As so, the prerequisite for the Functions was for the user to be able to perform these functions without any problem or obstacles, as well as not getting lost or ending up in a dead-end. Although we wished to provide a real experience to the users, the Functions were limited by the input options, which were predefined by us. Another limitation of the Functions were that, apart from the three selected functions, the remaining parts of the prototype were not interactive, which also impacts the feeling of experimenting with a finished product. There is no reference to aspects of the Model, as this system component is not included in our study.

	Focus	*Limitations*	*Prerequisites*
Interface	Give the users a feeling of using a finished product	Reduced navigation and functionality	Attractive graphics, intuitive actions and user-friendly interface
Functions	Provide the users the experience of using the functions of registering a new medicine, side effect and behaviour in LogMe	Predefined input data and text, remaining functions are not interactive	The three selected task should be performed without problems, the user should not get lost or reach a dead-end

Table 5.1: Interactive prototype's content.

5.3.2 Non-interactive Prototype

For the non-interactive part of the prototype, we created demonstrations of the remaining selected functions, namely the routines, the reminders, the login by sec-

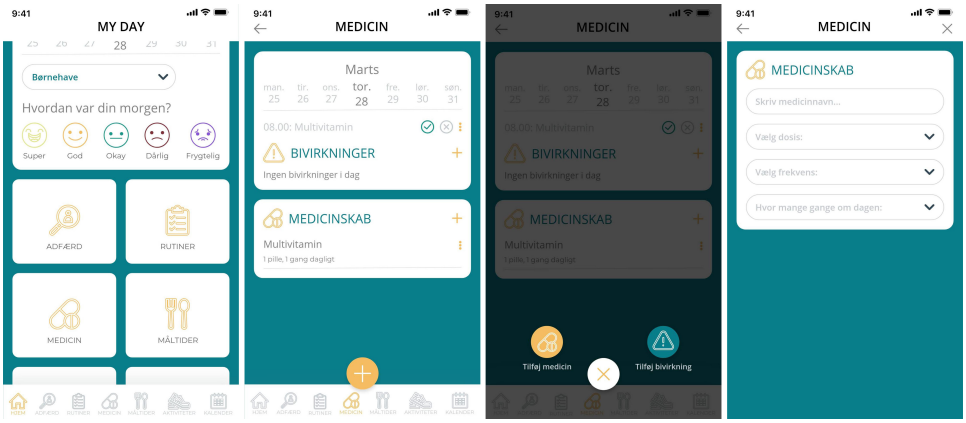

Figure 5.9: Example of the sequence of screens when performing the registering a new medicine task in the prototype.

ondary users, the connection with the smart-watch and the export feature. This part of the prototype served only to illustrate the potential of the app and these functions, without requiring the action of the participant's. As previously, Table 5.2 shows a summary of the system components' focus, prerequisites and limitations. The Interface component's aspects are very similar to the corresponding ones of the interactive part of the prototype, with the exception of the limitations, which now is the absence of interactivity. In this case, the Interface component is the most relevant, as the Functions only serve to support the use of this part of the prototype as a demonstration.

	Focus	*Limitations*	*Prerequisites*
Interface	Show the users the feeling of seeing a finished product	No interactivity	Attractive graphics and user-friendly interface
Functions			Should work as a demonstration

Table 5.2: Non-interactive prototype's content.

After each evaluation session, we had the opportunity to improve our prototype with small details to ensure the best possible participation for our users. For example, after the first unmoderated remote evaluation, we changed a small detail in the registration of a new medicine, in order to avoid the participants getting stuck.

5.3.3 Prototype Evaluation

Our prototype evaluation consisted of two settings, an moderated *in situ* evaluation and an unmoderated remote evaluation. Both evaluations are based on a think-

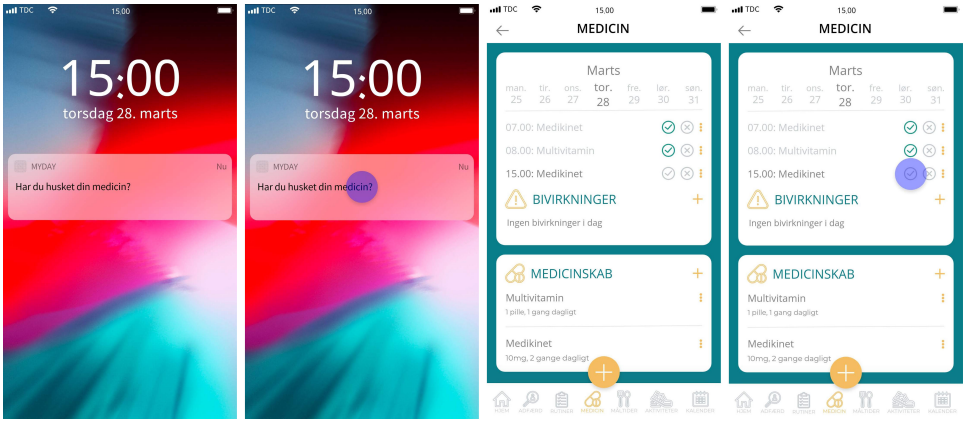

Figure 5.10: Example of the sequence of screens when demonstrating the medicine reminder in the prototype.

aloud method, where the participant is given a task to perform while speaking their thoughts on it (see Chapter 3.2.3).

The two evaluation settings followed the same structure and used the same questions. They both started with an explanation of the application and how the method of the evaluation would take place. Then the evaluation of the interactive part of the prototype started, with the participant receiving the first task. After completing it, they were asked follow-up questions for that specific task. The next two tasks followed the same procedure. In the second part of the evaluation, the participant was shown five more functions of the app through the non-interactive part of the prototype, still thinking out loud while watching. The non-interactive demonstrations were, just as the first part, followed up by questions after each function. After completing the evaluation of both the interactive and non-interactive part, it was rounded off with some overall final questions on the participants general opinion on the app's functions and usefulness.

In both evaluation methods, the participants used a mobile phone to perform the evaluation. In the moderated sessions, the participants used our mobile device dedicated to the study, while in the unmoderated sessions, the participants accessed the prototype through their own device. We believe that this fact did not influence the results of our study, as our goal was neither to evaluate usability or measure quantitative aspects.

To verify the feasibility of our user study, we performed two pilot experiments. We opted for performing the full experiment with both participants. The collected results were very satisfying. Both of them showed great commitment, recalled situations and contexts where they could use the mobile app, and shared thoughts, critics and ideas for further developments.

The detailed set of questions proved to be well adapted to collect appropriate information to support our hypothesis. Furthermore, the structure of the study revealed a good dynamic and length, since the sessions occurred without quiet moments and there was a frequent contribution of feedback, critics or thoughts by the participants.

Although we tried to make the two tests as similar as possible, there were of course differences. For example, the moderated evaluation had the advantage of a present moderator, to ask follow-up questions to statements made by the participant, as well as clarifying questions. On the other hand, the unmoderated remote evaluation gave the option to be more anonymous, which resulted in the positive effect that the parents seemed more relaxed and thus gave a more honest contribution. Furthermore, both settings contributed to great responses and ideas, and there were even some similarities in the responses between the two settings.

Moderated *In situ* Evaluation

At the moderated evaluation, there was, besides the moderator and participant, a third person present to take notes on the session.

We interviewed two subjects who fitted the target group, and a third subject whose child is diagnosed with Autism. This exception was made as parents of children with autism face many of the same needs to register medication, side effects and so on, and as of the subject's expertise in IT systems and development of applications for the target group.

The participants were two male and one female, between the age of 31 and 40. The participants showed openness to the use of new technology to support their daily family life, and made regular use of their mobile phones (calls, messages and use of applications for different tasks).

Unmoderated Remote Evaluation

In order to gather as much feedback as possible, we reached out to our target group once again, giving them the option to participate using an unmoderated remote evaluation method (see Chapter 3.2.3). The Method allowed for great flexibility, making it possible for the parents to contribute with feedback whenever it suited them best.

The method proved effective and we were able to get another eight interviews. However, they were not all of good quality, due to either technical problems of the online platform or that the interview was not completed. Therefore, we selected the three interviews with the most valuable feedback - one male and two female,

aged between 35 and 47.

5.4 Evaluation results

The results of the prototype evaluation revealed valuable and diversified findings supporting the usefulness of LogMe. Through our interviews, the participants kept on referring to the potential of our app, how and why it could be applied to their case.

Finding	N
It is quick to use and easy to understand	14
It is accessible from one's pocket	8
It gathers different types of information in one place	5
It gives an overview of the registered data over time	11
It supports collaboration with external parties	6
It helps to create structure in family life	6
It supports collaboration between parents	5
It allows self-report and can support the child in daily life	3
The UI must take the needs of users with ADHD into consideration	3

Table 5.3: Summary of the selected findings of our study, where N = number of pieces of evidence related to it.

5.4.1 Findings

We identified 61 different pieces of evidence, which were categorized by themes and coded accordingly. We narrowed down the identified themes to nine key findings, summarized in Table 5.3. Within these key findings, we highlight the three most referred ones by the participants during the sessions: 14 pieces of evidence support that the app is quick to use and easy to understand, 11 pieces of evidence underline the overview feature of LogMe and its importance, and eight pieces of

evidence reveal positive critics to the fact that LogMe was developed as a mobile app, and not as, for example, a desktop application, which makes the functions very accessible.

Regarding the presentation of our findings, we prioritized logic over the number of pieces of evidence for the first four findings. The first two findings are related to usability, while the third and the fourth respect the data analysis. We considered these last two as complementary, being that different types of information enhance the potential of the overview.

It is quick to use and easy to understand

From an early phase of design, we established that the mobile app should be easy to use by the parents. Due to the special needs and conditions that these families might be subjected to, LogMe should not be time-consuming and the interaction with it should be as efficient as possible.

As proof of our hypothesis, and while interacting with the prototype, several participants highlighted the fact that it was quick to make a register, and how important that was. As John said, *"there are only three clicks before one starts writing details"*, which he considered very important, otherwise the users will not use the application. He also referred to that *"if that (the simplicity of making a register) is not there, if that is not ultra simple in the registration phase, people won't do it"*. This aspect's importance is well illustrated when contextualized in the target group daily life: for most of these families, free time is reduced or nonexistent and attention over the child with ADHD requires a lot of energy from the parents, which leaves little or no room for extra activities in these parents' lives.

The easiness to perform a task was also considered an important aspect contributing to the regular use of LogMe. Thomas said that making a new register in the app was *"as easy as writing a text message."* As soon as the participants had completed the first task, it was very easy to get around and find things, which created a very positive impression among the participants.

Furthermore, Thomas referred to the quick feedback feature in the initial screen as a way to make a register with one click. When being shown the reminder feature associated with the quick feedback of the difficult times of the day, he said that *"it is very good, because if it was a good morning, it's not necessary to write a lot about it."*

Given that we did not focus on the usability of the app, it was a positive surprise to hear that most of the participants characterized the mobile app as very understandable, easy and quick to use.

It is accessible from one's pocket

One of the goals of designing LogMe as a mobile app was to mitigate the challenges of performing such actions on paper or desktop. The use of these two supports reveal obstacles such as not being reachable all the time by the user. The paper or the desktop are not objects that the parents would commonly carry around all day, being that a challenge to the actual registration of events and correct recall of details.

The fact that the functions are accessible on the user's mobile phone was pointed out several times by all the participants of the moderated evaluation. Some of them compared the use of the mobile phone with the previous experience of daily using a computer to fill in an excel file or even the papers handed out by the health-care professionals. Sarah said that being able to use a mobile app in her phone *"would be a great help and relief, instead of having papers lying around and a child drawing on them, or to turn on the computer every time."* The mobile app would remove these issues, as the parents would be able to register things at any time, since people usually have their mobile phone with. They would not have to turn on a computer just to register the day's events, or try to remember every detail at the end of the day. As Thomas said, *"also because one needs to remember every time, so it is easier when the mobile phone is right in one's pocket."* Even while being together with the child, or at the end of the day, when finally relaxing in the couch, the mobile app gives the parents the opportunity to register important aspects.

It gathers different types of information in one place

LogMe aimed to gather important aspects of the child's daily life in one place. As part of our background research, we identified several mobile apps that can serve as tools to gather information on medication, on behavior, mood or help organizing one's day through a specialized calendar. However, none of them encourages the cross-reference of data or the analyses of patterns involving diversified aspects. We believe that gathering all necessary functions in one place can contribute to the behavior analyses of the child and possibly encourage regular use of the app in the long run.

We received very positive feedback on this feature of the app. The combination of the different functions of the app would allow the parents to register different aspects of their children's lives in one place, which makes it possible to co-relate facts and happenings with, for example, the child's behavior. Many times, parents search for answers to certain behaviors in aspects of the child's day, for which the app would offer support, as Thomas exemplified regarding the analyses of data collected by his child's smart-watch: *"it was mostly to find out if it had an impact*

on how his day in kindergarten was." This is made possible by gathering qualified data, from for example the smart-watches, as John said *"then one might start to see something like that after he sleeps badly, he always gets a meltdown the next day. Then we have to find out why he sleeps badly."* This aspect would also allow the parents to analyze the child's level of activity during the day and relate it to other aspects, for example, as what Sarah referred to: *"it happens frequently that the body gets tired, so they get calmer."*

It gives an overview of the registered data over time

This feature is closely related to the centralization of data previously described, complementing each other. By having the possibility of consulting all the data registered in a certain period of time, the parents can, for example, identify patterns between different aspects and search to improve their child's life. The parents manifested a great interest in consulting the information in order to identify the medicine effect on the child during the initial phases, or possible changes regarding the medication effect. Thomas gave an example where the data overview could help understanding why the child is not sleeping well: *"we could look at activities and behavior and such, so that we would see if it is because of the medicine or it is because of what happened during the day."*

Some participants also referred to the overview of data as a way to look back and be reminded of positive moments and aspects, which tend to be forgotten. As Thomas explained, *"it is very draining as parents and we always think about the negative, so it is good to go back and look a bit."*

Besides the possibility of overview in the app, the parents can export this data in different formats and share it, for example, with the health-care professionals. The parents gave very positive feedback over this feature, as Claudia exemplified *"so we have some kind of common base that I can export and take with when we have some appointment."* Thomas also said that *"it is important for them (health-care professionals) to know, so they can see a pattern."*

It supports collaboration with external parties

The possibility for other people to use the app connected to the child's account, such as relatives or care-takers, offers the parents support in terms of communication and collaboration to provide the best conditions and a stable routine for the child. When, for example, the child stays at his grandparents, Sarah usually makes *"a long note with guidance on what medication needs to be taken and when."*

In terms of school and kindergarten teachers, it could be an easy alternative

to the books and apps that they already use, since the parents would have the possibility to manage medicine reminders and access to only specific information. Sarah saw the potential for the use of the app by the caretakers: *"if they (kindergarten) had an app where they could choose the individual child, and then write if there has been anything."*

Besides the possibility to login as a secondary user, LogMe provides the parents the means to export and share information with their physician. Although this aspect was already mentioned under data overview, it is also directly related to collaboration with external parties. The participants refer to this feature as a major advantage, for reasons as Sarah exemplified: *"she (the psychiatrist) has something concrete to look at and to work from."*

It helps to create structure in family life

LogMe was designed to support the families with children with ADHD in various fronts. One of the goals was to help the parents maintaining stability and structure in their daily life through different reminders for bedtime routine and for medicine, or different notes on things that the child needs to remember. Although it was not Sarah's case, she illustrated the potential of the app: *"We are quite structured at home, but it's not like all parents, and then there is shared custody over children, and so on. (...) There are certainly some families who need help to structure things more."*

When routine and structure are not so easy to maintain, due to special events, weekend or vacation, the app can support the parents by making sure to remind about things like medicine intake, as Betty refers *"usually in the weekend, when we don't do as usual, we can easily forget about that afternoon medicine."*

It supports collaboration between parents

LogMe supports access to the same account associated with the child by both parents, allowing them to use the app in their personal devices. This way, the parents can consult the different registers, status of medicine intake, and so on, in real-time. We did not explore the participants' personal life in terms of marital status, although we believe it would influence the way parents can use LogMe as a collaboration tool.

Having each their own device, it would make it easier to have one place where they could, for example, consult when in doubt if their partner gave the child a specific medicine, as Sarah referred to *"we are two parents who give medicine. So sometimes we think 'have you given?'."* Thomas also described the challenge as *"he also gets fish oil, multivitamins and so on, so we can quickly forget one of them"*, so it can

be quite a challenge to manage the medicine intake.

It allows self-report and can support the child in daily life

Even though it was not part of our functionality, some parents referred to the use of the app by the child itself, which is technically possible through logging in as a secondary user. This would be an advantage for the communication between parents and children, making it possible for the parents to create reminders and make sure they take their medicine while in school, just like Betty exemplified *"then one of these reminders comes to you (her son), for example, on your phone. So you remember your medicine at school."* Another aspect referred to by Sarah focused on the registration of thoughts and emotions by the child. Some children have extreme emotional responses: *"there are so many thoughts that one cannot possibly get all of them down, so it would be nice to be able to add them yourself."*

The UI must take the needs of users with ADHD into consideration

Although these arguments do not support or refute our hypothesis of usefulness of the mobile app, we found important to consider the identified UI challenges as key findings regarding the design process and the user study's target group.

Matthew, who is father to a child with ADHD and self diagnosed with ADHD, referred to the challenges of apps to comply with the needs of people with such disorders. *"There are many things in the screen at the same time"*, says Matthew, which distracts the user from the final goal. *"As soon as there is more than one thing to pay attention to, we have trouble"*, he explains.

Matthew also refers the danger of some terminology applied. In specific cases, the wording used in the prototype can be stigmatizing to the target group. Even though the mobile app is only a prototype, it is a challenge worth paying attention to in the future.

5.4.2 Further developments

As part of our six evaluation sessions, we asked the participants if they thought something was missing or if they would like something to be different in the mobile app. We gathered some valuable feedback, which we divided between suggestions that apply to the present app and further developments.

Some suggestions were regarding specific functions. Two of the participants referred to adding notes to the routines, so they were able to describe the situation or add a note on the possible reason. Sarah referred to the specific case of the

bedtime routine: *"and maybe even if it has gone terrible (the bedtime routine), then it's nice to be able to add a note. For sometimes there is a reason for that, maybe Grandma was here and then he wouldn't sleep."* Another suggestion was to add health indicators to the child's profile, such as weight, blood pressure and pulse. Regarding the reminders, two parents referred to the importance of being able to snooze, so it would remind the parent in five or ten minutes, as John exemplified *"Because if you do not want to say yes now but would like to remember it, then you will have to remind me in five, ten, or half an hour, we cannot right now because he is taking a shower."*

Furthermore, some participants pointed out less clear details related to the content of the app. For example, when registering a new medicine, the frequency of medicine intake is not very clear, and we observed some confusion from the participants while performing the task. The same issue happened when demonstrating the evening routine, where a field is asking how many time the child got up. These type of issues reveal that more thought needs to be put into LogMe's design, in order to make sure the app is logic and adapted to the users' needs. A further detail was observed by John, due to his background in IT and technology, which referred to PDF and Excel as very limited choices for exportation of data, suggesting the integration of, for example, CSV files: *"you must have Excel and PDF, but you must also have a comma-separated file format as CSV, which all possible other programs also use."*

As suggestions for further developments of the app, we identified several ideas with distinct approaches. The parents' commitment and contribution to improving the app is proof of their openness for the use of technology and potentially a result of positive experiences with it. A suggestion brought up by both participants with a background in IT was the use of Geo-location in the app. With this technology, some registers could have a related location, such as at school, home, or at a relative's place. Another feature of using Geo-location could be the activation of alarms when, for example, arriving home. This could help to avoid the classic mistake of, as Matthew exemplified, *"leaving their school bag in the hall with a sour lunchbox."*

Two participants referred to the importance of focusing on positive aspects of the day. The app could inspire positive thinking and encourage the registration of positive memories and moments, as well as showing signs of improvement in specific aspects or review past positive entries. As John said, *"we have to focus on the positive to make it happen more,"* and suggested doing it through the app by *"ask about positive aspects, for example, 'what has been the best thing today?'."*

Another possible development could be in relation to objects that parents usually have as supporting tools at home. Adapting the use of pictograms and the

Time Timer watch[1] to a mobile app tool would offer the parents support, as Sarah said, *"mostly to use when we are on the go."*

Regarding emotions and feelings, Matthew referred to how complex and difficult it can be to express, especially for children. The suggestion to adopt alternative ways to illustrate feelings and improve the communication between child and parent could involve more engaging and creative ways, such as painting emotions. As an example of this feature, Matthew pointed out the existing app EmoPaint[2] and its features.

5.5 Summary

The user study allowed us to gather valuable input about LogMe and the target group behaviour. Besides the differences between the moderated *in situ* and the unmoderated remote settings, the results of the sessions followed the same pattern and contributed to arguments with similar perspectives. Out of the nine findings, eight support our hypothesis of the usefulness of LogMe. These findings covered domains such as usability, data analysis, collaboration and structuring routines. The last finding focused on UI challenges pointed out by one of the participants, diagnosed with ADHD, which gave us a new perspective and important information to consider when designing an app for the target group. Finally, we gathered the suggestions for improvement and development that we collected during the sessions. The engagement of the parents in the study was reflected on their valuable contributions, in both feedback and ideas for development.

[1]Time Timer is a time measuring equipment for people with special needs. It is a silent analog-look timer that helps visualizing time passing (Time Timer, 2018).

[2]EmoPaint is an innovative way to represent emotions and sensations of the body through painting a body map. The app is a result of a research project focused on mindfulness, body and emotional awareness (García-Magariñoa et al., 2018).

Chapter 6

Discussion

The user-centered design process we adopted focused on involving the users in the design of the app. In order to involve the users, we adopted procedures as an online survey in the exploration phase, and a user study in the experimentation phase. The survey results provided us essential information to define LogMe according to the users' expectations. After building a prototype based on selected features of the app, we conducted a user study consisting of the prototype's evaluation. The evaluation was composed by two different settings: the moderated *in situ* and the unmoderated remote setting. We carried out a total of six sessions with six parents of children with ADHD, three in each setting. The focus of the prototype evaluation was to verify the usefulness of LogMe, to evaluate how well it fitted the users' needs and to explore future development ideas. As a result, we gathered eight relevant findings supporting LogMe's usefulness, arguments regarding aspects of the UI to be considered when designing for the target group, and a collection of suggestions in relation to improvements of the app and ideas for further developments.

Our study's contribution was divided between the findings related to the LogMe app and our reflection on the parents' implication on the design process. The user study revealed aspects that compose the essence of LogMe's usefulness, and how parents saw its potential and its suitability for their daily lives. The parents' implication in the design process was divided into two perspectives: designing for the target group and designing with the target group. Here, we presented some of our reflections on aspects to consider when developing a mobile app for the target group and our experience with involving the target group in our design process. Lastly, we discussed the study limitations and further developments.

6.1 LogMe as a supporting tool

Our study concluded that the parents find LogMe mostly useful for its registration functions, overview and collaboration between parts. The lack of studies and experiments dedicated to support parents of children with ADHD motivated us to search for evidence on the potential usefulness of a mobile app to improve the registration of incidents regarding children with ADHD. The studies explored in the Background (see Chapter 2.2) refer the use of mobile technology as a way to support these parents (Pina et al., 2014, Sonne et al., 2016). The apps *MOBERO* and *ParentGuardian* aim to reduce the parents' level of frustration, raise awareness and improve the child's capacity of performing a routine without the parents' intervention, or simply helping to remember to keep a strict sleeping routine. Our user study concurs with the previous studies in the fact that mobile technology can indeed offer support to the parents. However, LogMe adds a new perspective to the research of these dedicated apps by offering a registration and overview tool that can contribute to the understanding of the child's behavior.

Unlike the apps available in the market we explored in Chapter 2.2, LogMe aspires to offer support to a family's daily life with focus on information registration and overview through a complete and flexible solution. The apps analyzed in the background research consisted mostly of a specific function or a combination of functions with a determined focus. For example, the app *Medisafe* focus on the management and tracking of medication, *Tiimo* addresses time management and notifications delivered to the child through a dedicated wristband, and *Daylio* allows emotions and mood tracking. LogMe was created with the goal of including these and other functions in one app and, therefore, it is distinguished by gathering important aspects of the child's daily life in one place. This broad collection of data serves the purpose of information overview, cross-reference and behavior analysis.

An important result of our study was that the participants identified LogMe as a tool with great potential to offer the parents the desired overview of aspects and incidents related to the child. This overview can contribute directly to the elaboration of the diagnosis by providing concrete information on behavior incidents, routines and others. The interviewed psychiatrist highlighted the importance of information gathering when the child is being diagnosed or when starting or modifying medication (see Chapter 4.1), as the child's behavior is a direct expression of the symptoms and medicine effect. Besides that, the overview allows the parents to analyze different aspects that might be the cause or effect of other incidents. For example, the parents can identify that the child had trouble sleeping on days that involved visiting relatives or friends. Furthermore, during our background research, we did not find any mobile application that could offer such a broad

overview.

Another relevant result of our study was the number of references to the collaboration between parties through LogMe. As a way to encourage communication and learning about the diagnosis, we designed the app with the possibility of login by secondary users. This feature was meant to be a way to get relatives and caretakers involved in the process of registering events and receive guidance from the parents, supporting the fact that it is the parents' duty to educate the involved parts about the child's needs and diagnosis (see Chapter 2.1.1). In addition to the participants' positive response to this feature, they elaborated on further uses and advantages of collaboration through LogMe. For example, there was a big focus on collaboration between parents, so they could manage medicine, routines and other aspects of the child's daily life. Regarding this, we see further advantages in two different perspectives: for the parents as a couple, and for the parents that share custody over the child. For the parents as a couple, we believe that the fact they can rely on the app to consult and manage daily aspects of the child might have an indirect positive impact on the relationship. This way, the parents could reduce the amount of interaction in relation to daily responsibilities and have a broader understanding of their child's behavior based on the overview of registered data. For the parents sharing custody, LogMe can help to create structure and routine, especially during adaptation periods of, for example, diagnosis or medicine modifications. These functions can be found in existing mobile apps, however, none is dedicated to support the target group. Once again, LogMe offers an extended solution when compared to the apps available on the market (see Chapter 2.2).

Another possibility created by the login of secondary users would be the contribution by the child through self-report and interaction with functions, such as the reminders and notifications. The parents would be able to create reminders associated with the child's user, and the level of independence of the child could improve inside and out of the home context. Through our background research, we did not find any app that could offer the possibility of combining the use of the self-reporting user and the observer. Although this perspective was not initially included in our study, the feature would be easy to incorporate in LogMe. The use of the app by children with ADHD has the potential to be the focus of a study for itself, given the children's diagnosis and its influence on the UI.

Lastly, another important fact highlighted by the parents, now regarding usability aspects of LogMe, was the benefit of having the functionality on a smart-phone. Although the tracking of behavior, medicine, medicine effect and side effects is a process that health-care professionals advice (see Chapter 2.1.2), the parents rarely keep a regular register of these aspects (see Chapter 4.1). By being able to access the functions through their personal device, the parents recognized the app as a way to counter the challenges of using computer or paper-based schemes. With

LogMe, instead of being dependent on a specific object located somewhere in the house (computer, paper), the parents can perform the registrations at any time, anywhere.

6.2 Designing for the parents

Our target group consisted of parents of children with ADHD. As characterized in Chapter 2.1, and more specifically in 2.1.1, dealing with a child with ADHD can be quite challenging and overwhelming. We highlight the fact that these parents have a busy schedule, usually dedicating great part of their efforts to their children. Their level of stress and frustration can be high, and understanding the needs and behavior of the child is not always successful. This way, we considered that designing a mobile app for the target group should be a collaboration with the users in order to well understand their needs and achieve a useful and simple app that would be used by the parents in a regular base.

Through our study, we learned that the ADHD diagnosis might be a common occurrence in parents of children with ADHD, although there are only a few studies referring to it. As Starck et al. (2016) concluded from their study with 75 mothers and 49 fathers of children with ADHD, *"ADHD occurrence for mothers of children with ADHD was 41.3%, for fathers 51.0%."* These values justify the importance of the fact that part of the target group might have a considerable level of ADHD. This fact gave us a new perspective on the use of LogMe. We know that people diagnosed with ADHD have, for example, a deficit of focused attention, and therefore, different needs in terms of interfaces. This could suggest a future user study, comparing the use and behavior of parents with and without ADHD, and learning how to better adapt the UI for the diagnosed users.

We also observed differences in the needs and profiles of these families. As described in Chapter 2.1, the diagnosis can have a different focus and the symptoms vary from person to person. Together with the results from the survey (see Chapter 4.2), we conclude that each family have specific needs for support and focus on the child's behavior. This means that a piece of supportive technology like LogMe should be flexible and highly adaptable to the families' profiles. Although this aspect was not explored in our prototype, the users could have, for example, the option to personalize their initial screen, by positioning the functions that are more interesting for them at the top, or hiding functions that they do not find useful.

6.3 Designing with the parents

As we described in the previous section, the target group can have a restricted daily life due to the child's diagnosis. That being said, we considered the participation of the parents in the design process of LogMe of high importance, in order to reach a result that realistically answers the needs of the target group in the best way possible. The parents that participated in both the survey and the user study were engaged and open to the use of mobile technology. Although the participation in our prototype evaluation was lower than our expectations, we believe that many of the parents are willing to contribute and share their experience.

The approach and time required in the experiment discouraged the parents' participation in our user study. While the online survey (see Chapter 4.2) gathered a total of 115 answers, only four out of the 36 initially interested parents actually participated in the prototype evaluation. By the moment we started contacting these parents to participate in the moderated *in situ* evaluation, we realized that they were not willing to fit the session into their usually busy schedules. None of the 12 parents that we reached out to in the first round showed willingness in meeting us and participate in the prototype evaluation. There were several reasons and conditions that contributed to this lack of participation by the parents, which are quite understandable given the diagnosis of the children. For example, some parents told us they would like to contribute, but they did not have time or energy for it. This contrast in the parents' participation indicated that they were much more likely to participate in a remote study, not depending on schedules or specific places to be.

Given the lack of time and energy of many of these parents, we, therefore, opted to develop an unmoderated remote evaluation. This way, the participants were offered flexibility in terms of time and place. As a way to lure the participation, we established a partnership with an online store of special educational materials and offered the participants a 20% discount voucher. However, the strategy did not have exactly the impact we desired. Some of the parents shared that they felt uncomfortable about authorizing voice and screen record for the study through the Participate app (see Chapter 3.2.3). Furthermore, even though we created an instructional video and specified the process step-by-step in the description (see Appendix E), we believe that the installation of the Participate app was a barrier to the parents' participation.

6.4 Limitations and Further Developments

Throughout our study, we realized that there were many independent variables that play an important role in the success of the app usefulness, which we did not include in our study. An example of this is the severity of the diagnosis and ADHD symptoms in the child, which can make the child's dependence level very high and, therefore, demand more from the parents. Another example is the child's age, which would reflect a certain level of independence and capability of using LogMe for self-reporting, which could consist of a new study for itself. A third variable that we did not consider was the fact that parents can also have ADHD (Starck et al., 2016). This perspective could be the base for a new user and usability studies with focus on how to create a UI that is compatible with the ADHD diagnosis.

Although we gathered the expected results, the number of participants was lower than we initially expected. One of the possible ways to mitigate the issue of reduced amount of participants in our study would be to reduce the complexity of the unmoderated remote evaluation's procedure. For our study, the participants were asked to install an app in their mobile phones, access the study link and grant authorization for recording of the session. We were informed by a few parents that not wanting to be recorded was the reason why they did not contribute, not feeling comfortable with sharing their statements that way. Some other parents commented on the complexity and extension of the instructions, which supported our theory of the need for simplicity in the task. To avoid these issues, we suggest the conversion of the user study into, for example, a Google Forms online survey. Although this platform does not support the interaction with the prototype, the participants can still access it through a link, try it, and then write their feedback in the survey. However, the possibility of hearing and, if possible, seeing the participants expressions and interaction with the prototype reveals an important part of the experience feedback.

Another possibility to extend the number of participants would be to create an English version of the unmoderated remote evaluation and distribute it in international channels and social media groups. We believe that we would be able to reach a broader audience and, perhaps, collect various perspectives and arguments, considering, for example, the cultural differences that could be involved.

Given the results of our study, we conclude that LogMe is considered useful. However, we cannot conclude that the app is, in fact, useful, as we did not evaluate the use of LogMe in its context. To demonstrate and study its usefulness in depth, we propose a user study with a working prototype and a higher number of families during a period of time. A prolonged use of a working prototype would give the parents the opportunity to freely explore the app and use it to their specific needs. This way, we could observe the behavior of the users in relation to the app's use in

their familiar context. Additionally, we would be able to gather specific feedback on the benefits and drawbacks of its use, as well as challenges that might result from a longer experiment with the app.

Chapter 7

Conclusion

In this master thesis, we conducted a user study in order to demonstrate the usefulness of a mobile app that aims to support parents of children with ADHD in registering activities related to the child's behavior, medication, activities and so on. We first explored the parents' opinions, needs and expectations in order to strengthen and narrow the design options for the mobile app. For this, we collected data through an online survey that gathered 115 answers regarding the parents' common practices, their opinion on the described app and the functions that they would use or expect to be a part of the app. With the background research, the survey results and the interview with a psychiatrist, we designed the app LogMe and built a prototype, over which we conducted the user study. The user study was based on a prototype evaluation with the parents of children with ADHD, consisting of three interactive tasks and five demonstrations of functions, each one followed by a follow-up interview. In order to involve more parents disregarding their geographical placement, the user study consisted of two settings: the moderated *in situ* and the unmoderated remote evaluation. We gathered a total of six sessions, three in each setting, and collected valuable arguments and ideas from the parents' interaction with the prototype.

The gathered findings support our hypothesis of the usefulness of the app. The parents considered that LogMe would contribute to the overview and insight over the child's behavior. This feature of the app makes it possible for the users to analyze the relation between different aspects, identify patterns and understand the child's behavior, as for example relating an event where the child went to bed one hour later than usual with considerably more outbursts and conflicts the day after. The parents also identified the collaboration between parties as a useful feature of LogMe. This way, parents could better coordinate things like medicine intake, could involve third parties in the registration of incidents and encourage information sharing, by for example writing notes and assigning reminders to specific

users.

Besides confirming our hypothesis, our study allowed us to reflect on the involvement of the parents in the design process and the user study. From our experience through the study, we conclude that working with these parents was particularly challenging, given their lack of time and restrictions due to the child's diagnosis. Several parents affirmed that they would like to contribute, but their busy schedule and lack of energy for extra activities could not allow them to participate in the prototype evaluation. We considered that an unmoderated remote test would be the best solution to get the parents participation. However, the technology and means required must be as simple as possible, preferably not involving the installation of software or unknown tools.

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Appendix A

Interview with the Expert [DA]

A.1 Script

Introduction

Først vil jeg lige forklare hvad vores app kan. Den er påtænkt som en slags dagbog, hvor det er muligt at registrere dit barns medicin, bivirkninger ved medicinen, adfærd, søvn og lignende funktioner. App'en er især tiltænkt som en støtte i hverdagen, herunder f.eks. i forbindelse med opstart af medicin eller ved ny medicin.

Inden vi går i gang, skal jeg først og fremmest bede om din tilladelse til at optage vores samtale?

Questions about ADHD

- Kan du fortælle os lidt om hvad dit job er mht. Børn med ADHD?
- Kan du kort forklare lidt om processen når du modtager en ny patient?
- Hvis barnet skal medicineres eller tilpasse medicin, hvad er så vigtigt, at forældrene registrerer og er opmærksomme på?
- Er der meget forskel på hvor meget information der registreres fra familie til familie?

Prototype

Så vil jeg gerne demonstrere vores prototype for dig.

Kort fortalt omhandler projektet en app som skal støtte forældre med ADHD

børn i blandt andet registrering af medicin og dens mulige bivirkninger, samt barnets adfærd, konflikter og søvn. App'en kan specielt være en støtte i opstart af medicin/ny medicin, samt i kontakten med læger og sundhedspersonale.

- Hvad synes du generelt om prototypen?
- Hvad kunne du bedst lide?
- Hvad kunne du mindst lide?
- Ud fra dit syn, vil app'en være brugbar ift. opstart eller tilpasning af medicin?
- Vil den også være brugbar ift. Børn som endnu ikke er diagnosticerede, til f.eks. registrere informationer om barnet?
- Hvad kunne nogle fordele være ved at bruge app'en?
- Hvad kunne nogle ulemper være?
- Hvilke andre funktioner vil være nyttige i en sådan app?

A.2 Transcription Expert

Expert

00:00: I1: Sådan helt generelt, først, vil vi gerne hvis du kunne fortælle os, hvad dit job består i med hensyn til børn med ADHD?

E: Jeg er ungdomspsykiater og jeg arbejder med udredning, stiller diagnoser og sørger for de kommer i gang med behandling.

I1: Den her process fra de kommer til samtale her hos dig og til de kommer i for eksempel medicinering eller de får en diagnose, hvordan foregår den?

E: Det er en almindelig undersøgelsesprocess man går igennem, hvor man snakker med forældrene til barnet, man indhenter oplysninger fra netværket, skolen, SFO, børnehave eller hvor de nu går. Når det hele så er kommet hjem, så laver man måske nogle supplerende undersøgelser eller diagnostiske interview

01:00: E: Og vurderinger og så kommer man til diagnosen. Når man har fundet diagnosen, så skriver man hvilke anbefalinger der er herfra og hvad skal der ske og så, det er i hvert fald hvad jeg prøver at gøre, er det selvfølgelig vigtigt at forældrene for det at vide, men også netværket får det at vide. Så dem som har barnet har forståelse for hvad det drejer sig om. Så kommer forældrenes faglighed i sigte, for hvis de har fået et

barn, som har specielle behov, så skal de også vide hvordan tilgangen skal være til barnet.

I1: De her anbefalinger du giver, hvilke forskellige anbefalinger kan det for eksempel være?

E: Det er meget overordnet. Jeg går ikke så meget i detaljer med det konkrete barn,

02:00: E: jeg giver sådan overordnet råd til hvilken slags pædagogik der skal bruges.

I1: Og hvad kan det for eksempel være?

E: Det kan for eksempel være, hvis nu jeg siger det er et barn med ADHD diagnose, så skal det være pædagogik, som tager hensyn til ADHD problematikker. Hvis det er en autist, så er det autistisk pædagogik og hvis det er andre sygdomme, så tænker man hvordan kan man håndtere barnet og hvordan omgivelserne de skal være og hvordan kan man tilpasse omgivelserne, fordi barnet ikke kan tilpasse sig ret godt. Så det er hovedopgaven og når man så gerne vil være mere konkret, så mødes man med forældrene, som er dem der kender barnet bedst, pædagoger og lærer, som har barnet til hverdag og ved om den her metode

03:00: E: er den bedste måde at gøre det på eller er der en anden og bedre måde. Og så er der kommunen, som selvfølgelig også skal justere og tilpasse deres tilbud. Hvad skal der til? Det er meget forskelligt.

I1: Er det rigtig forstået, at det ikke er alle børn der bliver diagnosticeret med ADHD, der også bliver medicineret?

E: Det er alt afhængigt af sværhedsgrad. De børn der kommer til mig, er det meget sjældent der er nogen som ikke bliver medicineret. Vi afventer også altid med at give medicin, til det er afklaret om barnet kan klare det. Det er vigtigt, at finde ud af hvad er rammerne om barnet og er det ansvarligt at prøve medicinen. Og hvis ikke, så prøver man først at starte op på de pædagogiske

04:00: E: Rammer og omgivelser og så videre. Når så alle pædagogiske muligheder er udtømte, så går man i gang med medicin.

I1: Hvis barnet det så skal medicineres, eller medicinen skal tilpasses, hvad er så vigtigt at forældrene de for eksempel registrere eller er opmærksomme på?

E: Det er først og fremmest vigtigt, at være opmærksom på virkningen, har det nogen virkning. Så de skal have informationer og forklaring på, hvilke konkrete symptomer og vanskeligheder kan afhjælpes med

medicin. Hvad er det de kan forvente. Det er en ting. Den anden er bivirkninger. Man skal registrere omgående hvordan mit barn har det nu og er der nogle problemer, før man starter på medicinen. Bagefter så tjekker man hele tiden, er der noget som er gået væk, eller noget som er kommet til eller hvordan hænger det sammen

05:00: E: med medicinen. Så det vil sige virkning og bivirkninger, det er det vigtigste.

I1: Er der meget forskel på hvad du beder dine forældre om at registrere fra barn til barn? Eller er det overordnet meget det samme man registrere?

E: Jeg forsøger at gøre det på samme måde, men det er meget forskelligt. Forældre har forskellige ressourcer og kapacitet til at gøre det og forståelse. Det må man indrette sig lidt efter. Jeg har et forslag, som er mit udgangspunkt og som jeg forsøger at få forældrene til at udfylde, men det er ikke så nemt. De kan have haft en travl dag og selvom jeg forsøger at sige, gør det så enkelt så muligt

06:00: E: og at når de kommer i gang og de gør det, så kan de se meningen med det og man bliver klogere på tingene. Men har de så en eller anden modgang, så ja... Så er det jeg må bruge al min faglighed for at finde ud af hvad det drejer sig om, og så er det at jeg spørger skolen, lærerne eller pædagogerne om hjælp.

I1: Okay, og det var egentlig mit næste spørgsmål, om der er meget forskel på hvor meget information forældrene registrere, men det har du jo ligesom svaret på.

E: De bruger alle mulige forskellige spørgeskemaer og alle mulige forslag til registrering. For eksempel er medicinalfirmaer meget obs på, at hvis de annoncer for deres medicin, så skal de også være opmærksomme på hvordan man kan registrere effekten af det her stof.

07:00: E: Men prøv at se det her spørgeskema, 29 spørgsmål i en travl hverdag. Hvis der så også er 2 andre børn, som løber rundt og man skal lave aftensmad og så videre. Hvor meget tid har man så lige til at udfylde det her. Det skal være meget enkelt og kontant. Så kan man derefter gå ind i detaljer og finde ind til kvaliteten af det kryds eller svar man har givet. Men de her giver ikke mening og jeg har prøvet så mange gange, men har aldrig fået svar tilbage eller jeg har fået medium svar tilbage fordi folk er venlige og så får du det hvis du vil have det. Dem her har det nogen gange lykkes mig at få dem til at udfylde alligevel.

08:00: E: Det er det firma som fremstiller Stratera. Det er deres forslag, men det er ikke ret langt fra Medikinets forslag, som er her. Det er meget det samme.

I2: De giver bare ikke så meget, man kan se at det er gået dårligt, men ikke hvorfor det er gået dårligt.

E: Det kommer efter. Det er derfor jeg siger det er noget man skal, det er et krav, at barnet bliver vurderet. De kommer selvfølgelig også med det følelsesmæssige, men de her smileys betyder jo ikke om barnet er smilende eller vred, det er ikke det der er meningen. Meningen er at finde ud af hvordan er barnets funktion

09:00: E: og det kan godt være han er utrolig vred og vil ikke i seng og vil ingenting, men han gør det. Det er det det drejer sig om.

I1: bivirkninger, barnets adfærd, hvis der er nogle konflikter, hvordan sover barnet, hvor meget bevæger det sig og så videre. Den er specielt påtænkt og kunne hjælpe i for eksempel opstart af medicin eller tilpasning af medicin. Så nu vil vi prøve at vise dig den her. Det her er den brugertest som vi har

10:00: I1: Sendt ud til nogle forældre med børn diagnosticeret med ADHD og har forsøgt at få dem til at gennemgå.

E: Og hvordan lykkedes det?

I1: I1: Ja. . . .

E: Okay, jeg forstår. Tak for jeres reaktion. Jeg behøver ikke at høre mere.

I1: Det har nok været lidt svære end vi troede det ville være. For det er egentlig ikke så forfærdelig mange brugertests vi skal bruge. Vi skal bruge ca. 10 og alt over det ville bare være fantastisk, men 10 vil være et godt tal og indtil videre har vi fem der kan bruges. Så det har været sådan lidt svært og vi har måtte presse på et par gange. Det første spørgeskema vi sendte ud, fik vi egentlig rigtig god respons på og der var

11:00: I1: også næsten 35 familier, som meldte sig til at ville deltage i brugertesten, men da vi så fik prototypen færdig og fik den ud til dem, så hørte vi desværre ikke rigtig noget. Så det har vi været nødt til at tage til os, at de her familier skal gribes lidt anderledes an end man er vant til. Men her kommer prototypen. Den første opgave her, er at de skal forestille sig at barnet tager medikinet, 2 gange om dagen, kl 7 og kl 15. Det skal man så indtaste i prototypen og det er kun en prototype, så den kan ikke alt.

12:00: I1: Men den ser sådan her ud indtil videre.

E: Og hvor står medicinen?

I1: Det står her. Så går man for eksempel ind i medicin og så kan man tilføje medicin. En dosis, hvor ofte de tager den. Om det kun er nogle dage i ugen eller hver dag eller hvor meget. Hvor mange gange om dagen. Og så kan man sætte nogle tidspunkter ind, hvor det er meningen man kan blive påmindet om man har husket sin medicin.

E: Nu er det tablet form, findes der også. . . .

I1: Det er meningen du skal kunne vælge for eksempel kapsler eller tablet og så videre.

13:00: I1: Så kommer det ind her, hvor du så har dit medicinskab, så du kan se og holde øje med hvilken medicin får barnet lige nu, hvilken dosis og så videre. Og den kan redigeres, hvis det er nødvendigt, eller slette eller tilføje et andet medicin. Og heroppe kommer der en oversigt over, hvad har jeg taget i dag og hvad kommer der. Det næste vi kommer til, det er bivirkninger. Hvor man så for eksempel kan sige på et eller andet tidspunkt af dagen, så fik man en eller anden bivirkning og det her er jo bare lige nogle få eksempler på bivirkninger som vi har lagt ind. Der skal laves, så man selv kan gå ind og tilføje

14:00: I1: Nogle bivirkninger. Det her for eksempel en hovedpine og det var bare en mild hovedpine, så den var okay og så kan man gå ind og beskrive bivirkningen. Her har vi bare indsat en standard tekst. Og så kommer den også op her i oversigten.

E: Står der også et tidspunkt for bivirkningen?

I1: Ja, det gør der, så man kan vide, nå men det var efter jeg tog min morgendosis. Så har vi lavet en der hedder adfærd. Den her går for eksempel ud på,

15:00: I1: at de har haft en kontrovers ved frokosten og så kan man så gå ind og skrive hvad er der sket i løbet af dagen. Det kunne også være gode ting i stedet, man kan selv gå ind og tilføje andre muligheder. Men det er meget baseret på adfærd, hvad er der sket i løbet af dagen. Man kan gå ind og lave nogle små inputs og skrive en note hvis det er nødvendigt. Det var de første tre opgaver, derudover har vi nogle videoer som kører automatisk. En der hedder rutiner. Hvor det for eksempel her er en aftenrutine, hvor lang tid fra de er startet på deres aftenrutine, til hvornår er barnet i seng og hvordan har natten

16:00: I1: så været. Hvor mange gange er barnet vågnet og hvad synes man generelt. Den feedback vi har fået indtil videre, er at der mangler at man kan skrive en note. Så er der sådan noget som påmindelser, at man for eksempel bliver påmindet om sin medicin i løbet af dagen.

E: Og det kommer op på ens telefon?

I1: Ja for eksempel, eller aktivitetsur, at at app'en også arbejder sammen med det. Udover påmindelserne om medicin, kunne det også være en påmindelse om hurtigt at notere hvordan er ens morgen gået. Den minder en om, hele tiden

17:00: I1: Eller ikke hele tiden, det kan man selv indstille hvor meget man vil mindes om, men den minder en om, hvordan var din morgen eller din eftermiddag.

I2: Ideen er faktisk baseret på den her. Man behøver ikke skrive så meget, man sætter bare en smiley.

I1: Og hvis man så synes, at der er behov for en note, så kan man også det. Så havde vi tænkt os den skulle kunne deles, med for eksempel mor og far og bedsteforældre, eller det kunne være lærer og pædagoger, eller en klasselærer.

E: Det er meget vigtigt. Hvordan ser i det med klasselæren, hvordan vil det se ud?

I1: Vi har ikke lavet et eksempel med klasselæreren,

18:00: I1: men vi har lavet et med en bedsteforældre. De har så for eksempel kun adgang til nogle ting, for eksempel hvornår barnet skal have medicin igen eller de kan indtaste hvis der har været en eller anden kontrovers eller en god oplevelse. Det kunne også være noget i skolen. De har så kun adgang til nogle funktioner i app'en. For eksempel her, så har mormor kun adgang til medicin, adfærd og måltider, men hun har ikke adgang til aktiviteter eller kalender og så videre.

19:00: I1: I1: Så er der de her aktivitetsure, som der er mange af dem der sover med. App'en forbinder til uret og registrere hvordan ser søvnen ud og hvor meget har barnet bevæget sig.

E: Det kræver jo så, at uret er på hele tiden.

I1: Ja, det er korrekt. Som en sidste ting har vi, for at gøre det nemt at man for eksempel kan gå ind og vælge april måned og så kan man vælge for eksempel bivirkninger eller aktiviteter og så kan man eksporter det til en pdf eller et excel ark, printe den og tage den med til dig.

20:00: I1: Hvor der for eksempel også står de her noter, som man har foretaget, så man nemmere kan huske, hvad var det der skete først på måneden.

E: Ja, så kan man sammenligne.

I1: Ja. Men det er sådan prototypen ser ud indtil videre. Og så vil vi gerne spørge dig, hvad du generelt synes om app'en? Tror du det er noget der vil kunne fungere?

E: Jeg synes det er et meget stort arbejde i har lagt i det. Der er rigtig meget i har læst og tænkt og gennemtænkt og så videre. I har lavet utrolig meget forarbejde. Det er meget fint, når man tænker på hvor lang tid det tager at udfylde de her.

I1: Ja, det er jo det. For når de nu ikke vil udfylde den her, hvad vil fordelene, så være ved at bruge en app?

21:00: E: Jamen, mobilen har man jo på sig hele tiden. Sidder man for eksempel til en eller anden fritidsaktivitet og kigger på det ene barn, så kan man måske lige udfylde et skema på det andet. For man har jo mobilen på sig hele tiden. Det her skema, det kan godt ligge et eller andet sted og så glemmer man det, eller det ryger sammen med affaldet, som aviser og reklamer, det kan jo også ske. Så på den måde er det meget bedre med en app. Nogen gange siger jeg også det kan være en god ide at lave skemaet i word, så man har det på sin computer. Så det er meget bedre elektronisk.

I1: Hvad tror du nogle ulemper kunne være?

E: Det tager tid.

I1: Så det du siger, er at det skal være så nemt så muligt?

E: Ja, men hvor meget nemmere kan man gøre det?

22:00: E: Alt den information i gerne vil indsamle, den er jo vigtig. For mig, for eksempel, hvis jeg kunne få sådan et udskrevet ark... wow fantastisk. Så kan jeg afkorte samtalen omkring medicin og vi kan få lov at snakke om andre ting. Så det vil frigøre ressourcer for mig og give et hurtigt overblik, så jeg kan konkludere. For de professionelle vil det også være rigtig godt, også for skolen, men det kan også være rigtig godt for forældrene. Det er lige en ting jeg tænker på. De her super, god, okay, dårlig og frygtelig. Jeg tænker, jo flere der er af de her smileys, jo svære er det, at finde ud af.

I1: Så det er bedre hvis det bare var tre?

E: Det tror jeg og så hvis det er virkelig super, så kan man for eksempel sætte tre gode smileys. For jo flere valgmuligheder der er,

23:00: E: jo mere indviklet bliver det. Hvad skal jeg vælge og hvordan hænger det sammen. Nogen gange hvis man kan svare ja eller nej, så er det også fint nok.

I1: Der kan jo faktisk også sagtens bare være fire, de to ligner jo egentlig lidt hinanden.

E: Også hvis man for eksempel vil have en teenager med i det, så er det vigtigt, så vidt det er muligt at visualisere. Der er selvfølgelig grænser for hvor meget man kan visualisere. Det jeg bare vil sige er, for eksempel før med bivirkninger og adfærd hvor der kom sådan nogle forslag...

24:00: I1: Den her? Adfærd. Den er påtænkt, sådan noget med hvis der er nogle udbrud, hvis barnet er udfarende.

E: Jeg vil anbefale, at hvis det går ud på medicin, virkning/bivirkning, så skal der også være den adfærd man forventer, hvis man for eksempel har ADHD eller autisme. Så de adfærdsmønstre der indgår der. For eksempel, det her er bare som inspiration, det er ikke mig som har fundet på det her, det er noget undervisningsmateriale jeg har fået. Den inspiration

25:00: E: jeg fik det er det her, som går på en samtale man kan have med barnet, hvor man går igennem nogle spørgsmål med barnet, som bliver stillet på en måde så de forstår hvad det drejer sig om. Hvis jeg for eksempel spørger et barn med ADHD, om de har popcorns-tanker, så forstår de omgående hvad det betyder. Men spørger jeg dig, så ved du ikke hvad jeg mener. SÅ det er godt at bruge sådan nogle udtryk. Men overordnet, opmærksomhedsforstyrrelse, hvad går det ud på.

26:00: E: Og hvordan kan jeg se mit barns adfærd. Impulsivitetsproblematikken, hvordan kan jeg se mit barns adfærd og aktivitetsproblem, hvordan kan jeg se mit barns adfærd. Og der findes de her godkendte skemaer, ADHD skemaer, et skema er til voksne, som jeg anvender flittigt, og så er der et andet skema til børnene og der findes faktisk forskellige udgaver, en mindre og en lidt større udgave. Det betyder ikke det skal være lige nøjagtige de samme spørgsmål, men bare at i ved, at hvis i gerne vil finde ud af om medicinen hjælper, så er det adfærden. Børnene kan ikke selv sætte ord

27:00: E: På alting. Det her kan hjælpe dem til en dialog. Forældre ved heller ikke altid hvordan de skal spørge, for barnet ved ikke selv hvordan de skal fortælle det.

I2: Der er også mange gange hvor det er første barn. Hvordan opføre barnet sig, er det normalt eller unormalt.

E: Det er også det, men som sagt, er det bare til inspiration

I1: Ja, så man husker at få målt på de her ting, at det er dem man har i mente, når man for eksempel starter dem op på medicin.

E: Ja, nemlig, fordi ellers hvis man siger ADHD eller autisme, de synes jo aldrig ens. Jeg kan sende det på mail til jer.

28:00: I1: Det må du meget gerne.

E: Det er sådan nogle retningslinjer lægerne har, som vi anvender. Man skal selvfølgelig være klog på hvad det er for noget og hvad meningen er med spørgsmålene. De første ni går altid ud på opmærksomhed og koncentration. De næste er aktivitet og de sidste er impulsivitet.

29:00: E: Sådan bliver man spurgt om, om dit barn gør dit og dat og så videre. Hvis jeg får svar på det her skema, kan jeg meget hurtigt blive klog på hvad det drejer sig om. Hvordan er barnets ADHD profil.

I2: Kunne det være en ide, at gøre det hver uge?

I1: Eller hvor ofte skal man gennemgå sådan en her?

E: Den her for eksempel, den skal ikke gennemgås hver dag, det er fint at gøre det en gang hvert halve år. Man får ikke meget ud af det, hvis man krydser af hver dag, men måske er der nogle spørgsmål der giver mening, hvis man sætter lidt fokus på til hverdag. For man kan jo finde ud af mit barns profil er sådan.

30:00: E: Og er der andre ting der ikke er relevante. Hvad er det, der er relevant for mit barn. Relevans.

I2: Det er ikke ens, det er meget forskelligt fra barn til barn.

E: Meget. Hovedsymptomerne, kasserne, de ser ens ud, men indholdet det er aldrig ens. Og det kan jo skifte, fra en forældre til en anden forældre, fra en dag til en anden dag. Kommer der en vikar i klassen, så det hele måske bliver vendt på hovedet med det samme. Så på den måde, er det aldrig noget konstant eller specifikt. Det bliver specifikt, når man lære barnet at kende og dets behov. Så bliver det mere specifikt.

I1: Hvor tit

31:00: I1: er for eksempel lærer og pædagoger inde over og notere ting på barnet?

E: Ikke ret tit. De gør det et par gange i løbet af måneden eller året, når de er her hos mig. Så når man starter på undersøgelsen, så tager men det her spørgeskema frem og krydser det af og igen når man afslutter eller hvis man starter medicinsk behandling. Og så er det meget spændende at se hvordan det bruges. Det kan anvendes forskelligt. Nu for eksempel det som i har lavet, er jo sådan eller et andet back up eller arkiv eller lignende. Så det er jo en stor fordel, for hvis man kigger på hvordan det var dengang og hvordan det er nu, så kan man

32:00: E: udfra det komme i gang med at kigge på. . . . For eksempel sådan en her. Mor og far og hvornår er det? Det er da vi begyndte på undersøgelsen.

Her er det ham selv der har krydset af og det her er bivirkningsskemaet, som jeg anvender. De kan jo være forskellige. Det er måske ikke altid relevant, men for mig som læge er det fint. Der må gerne være mindre spørgsmål, så skal jeg nok finde ud af hvor relevansen er. Så på den måde kan man hele tiden tjekke, hvad mon der sker. Er der nogen dynamik.

33:00: E: Så bruger jeg de her bivirkningsskemaer til at se om der er sket noget eller ej.

I2: Noget der måske kunne være en ide med eksport funktionen, ville være at kunne samle denne type information.

E: Det ville give mening med det samme og så kan man hurtig taste ind og se hvad lavede vi nu den dag. Jamen vi skændtes jo helt vildt og så sker det. Eller vi var på besøg der og der. Jamen det var jo ferie. Så kommer de her miljøpåvirkninger pludselig ind og det er meningen med alle de her spørgeskemaer, at man bliver klog på noget. Hvis jeg vil gøre det på den måde, så bliver det sådan. Vil jeg det eller vil jeg ikke. Kan jeg forebygge det?

34:00: E: Hele tiden fokus på, hvad skal jeg bruge det til. Giver det mening for mig. For mig giver det for eksempel mening med alle de her apps som hjælper mig med at kigge på hvor meget mediter jeg, hvordan er min søvnrytme, hvor meget motioner jeg og hvor meget vand har jeg drukket. Så kan jeg kigge, nå jeg mangler lige en halv liter mere i dag. Giver det mening, så giver det også mening at indtaste noget her. Og som sagt, jo mere kontant jo bedre. Lad være med, at give alt for mange valgmuligheder. Hvis der er for meget så går det galt. Du kan altid uddybe.

I1: Så hellere bare små bitte spørgsmål, man lige hurtigt kan svare på?

E: Meget kort og

35:00: E: meget kontant og lad fagpersoner tolke det, det er deres opgave. Snakke om det og tolke. Hvis du vil forlange alt for mange svar og valgmuligheder, så får du aldrig svar.

I1: Tænker du den kan være brugbar i forhold til børn som endnu ikke er diagnosticeret?

E: Nej, det tror jeg ikke. Det er først og fremmest diagnose.

I1: og det gør i gennem samtaler? Det gør i ikke ved at der registreres noget?

E: Man skal have mange års uddannelse for at man kan finde frem til diagnosen. Man kan selvfølgelig stille diagnosen ved bare at google og

36:00: E: det er derfor man skal passe på hvor meget man lægger ud. Det er det samme når jeg begynder at lave diagnostiske interview med mit barn, så skal jeg stille spørgsmålene meget konkret og tydeligt og hvis han siger nej, eller jeg forstår det ikke, så siger jeg det er okay. Jeg skal ikke forklare og undervise ham i hvordan han skal svare. Det giver ikke mening. Det er det samme her, I skal ikke undervise forældrene. Det er sådan jeg forstår jeres mål.

I2: Nemlig. Ikke at undervise, men at støtte ja. Som at få informationen til jer.

E: Ja, og så derfra, så kommer den her aha oplevelse og man bliver klogere.

37:00: I2: der er mange forældre som ikke har overskud til skemaerne?

E: Ja, det er rigtig og mange forældre har selv ADHD og har ikke fået diagnosen.

I1: Det er selvfølgelig rigtig og det skal man også tage hensyn til.

E: Ja, og har man så to børn og den ene har ADHD, uha. Eller tre børn og to af dem har et handicap, så har de ikke mange ressourcer.

38:00: I1: Hvilke andre funktioner vil være nyttige i sådan en app? Du har lidt været inde på det her med at specificere adfærden mere.

E: Ja, ellers så er det bedre at lave en anden app. Jeg vil gøre jer opmærksomme på, at det her spørgeskema, det kræver, at det er en fagperson, som sidder og spørger en.

Appendix B

Medicine and observations [DA]

Dato	Morgen		Eftermiddag						Bemærkninger
	Methylfenidat givet kl.	Medikinet 2,5 mg. givet kl.	Medikinet 5 mg. givet kl.	virkning ophører	Uheld	Evt. Begrundelse for uheld:	Aftensmad: Fint Nogenlunde Skidt	Svært ved at falde i søvn:	
12/01/2019	07:30	07:30	14:45		2	Far var på arbejde da vi stod op. Vi fik besøg af onkel, kusine og fætter om eftermiddagen.			Forsøgte at sætte ham i køkkenet og spise, det hjalp en lille smule.
13/01/2019	07:30	07:30	glemt		0			Ja, oppe 2 gange	
14/01/2019	06:15	06:15	15:45		1	Pas, han havde lige været på wc, men øjeblikket efter havde han et uheld. (hjemme)		Oppe 1 gang	
15/01/2019	06:15	06:15	15:30		0				Koncentration til karate var god.
16/01/2019	06:15	06:15		15:45	1	Det er sket i BH, der har ikke umiddelbart været nogen grund til det			Vi kørte hjem til farmor og farfar efter børnehave for at hente noget, og opdager at han har lavet i bukserne og at det har siddet længe.
17/01/2019	06:15	06:15	15:30		1	Det er sket i BH, der har ikke umiddelbart været nogen grund til det			Han har afføring i bukserne da jeg henter ham i BH, det har siddet der et tykke tid.
18/01/2019	06:20	06:20	15:40		1	Det er sket i BH, der har ikke umiddelbart været nogen grund til det		Oppe 1 gang	Han har tisset i sengen i nat uden at vågne af det, han troede han svedte da vi vækkede ham. Uheldet fra BH har siddet længe uden at blive opdaget
19/01/2019	06:25	06:25	15:15		0				Spiste hos farmor
20/01/2019	06:55	06:55	15:10		0				
21/01/2019	06:15	06:15	15:45		0				
22/01/2019	06:15	06:15	15:45		1	Det er sket i BH, der har ikke umiddelbart været nogen grund til det			Starter ud med at spise uden brok, men kort efter starter "cirkusset" - han er meget urolig og ukoncentreret under maden og generelt urolig hele eftermiddagen.

Appendix C

Survey: Questions and Answers [DA]

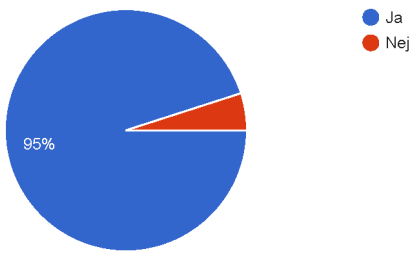
Dagbog til diagnosticerede børn

121 responses

Vi vil udvikle en prototype, af en app, til forældre som har børn med ADHD. App'en har til formål at fungere som en dagbog, hvori det er muligt at registrere barnets medicin, bivirkninger derved, adfærd, søvn og lignende. App'en er især tiltænkt som en støtte, i forbindelse med opstart af medicin eller ny medicin. Derudover vil den gøre det muligt at sende diverse informationer direkte til f.eks barnets læge.

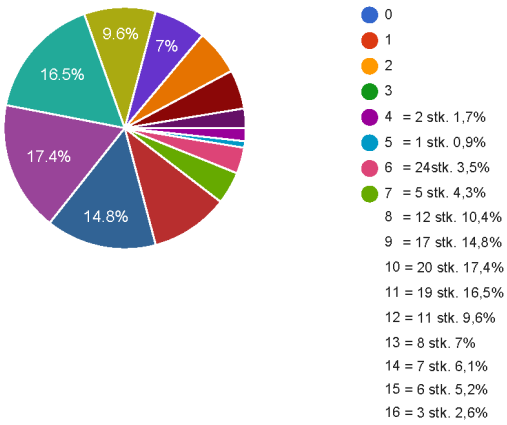
Er du forældre til et barn diagnosticeret med ADHD

121 responses

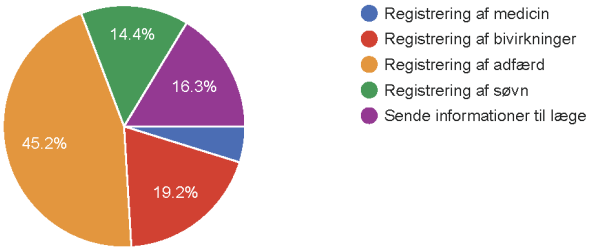


Hvor gammelt er barnet?

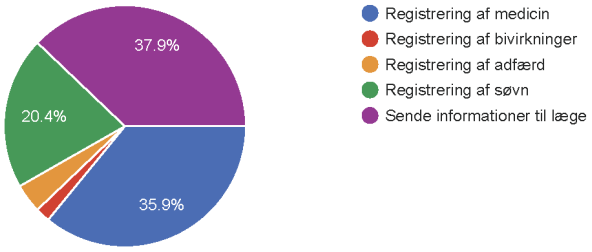
115 responses



Hvilke af appens funktioner tror du, at du vil bruge mest?
104 responses



Hvilke af appens funktioner tror du, at du vil bruge mindst?
103 responses



Har du eventuelt forslag til funktioner?

23 responses

Oplysningerne skal kunne deles mellem skilsmisse forældre og evt. Indeholde en reminder/opgaveliste til fx hvornår der skal tages medicin

Tænker der skal kunne samkøre med fx sikker mail VEDR medicin og kontakt til læge

Angang for flere forældre på samme barn

Jeg vil kunne benytte alle funktionerne, men kunne kun vælge en. jeg vil ligeledes til mig selv benytte sådan en app her, voksen.

Fraværsdage

Alarmfunktion så medicin huskes

Ratings af fx humør, reaktionsmønstre, og opsamling/analyse i grafer

Vægt kurver og evt noget med mad

Barnet har add og infantil autisme.

Kunne være godt hvisbåde forældre og skulle kunne registrere samme sted.

Mange adhd-børn får problemer med appetiten i forbindelse med medicinopstart, så det ville være praktisk med en funktion, hvor man kan registrere fødevareindtagelse.

Registrering af koncentration evt før og efter

Registrering af vægt/ madindtag da medicinen ofte medfører nedsat appetit

Synes alle 5 funktioner er relevante

Jeg har kun én svarnulighed i forhold til, hvad jeg ville bruge app'en til. Jeg tænker, jeg kan bruge den til flere ting

Det er ikke el der udskriver medicin til børn, men speciallæge/hospital. Så App'en skal kunne kommunikere med landets sygehuse (mange forskellige systemer). Ville være rart med en historik eller graf over de indtastede data. Melatonin skal registreres søvn (med og uden medicin) i 14 dage. Humør svingninger (deprimeret/glad) og madlede/overspilning ville også være godt at registrerer

Registrering af appetit og vægt samt blodtryk

Ville bruge alle 5 lige meget så kan desværre ikke svare på hvilken en jeg vil bruge mindst

Apetiten bliver ofte påvirket når et barn starter medicinsk behandling for adhd, så noget hvor man nemt kan registrere hvordan apetiten har været morgen, middag og aften.

Måske en ekstra funktion der hedder vægt eller noget omkring vægt og blodtryk da det er nogle informationer som man bruger meget, ifbm medicin.

Jeps, tonsvis ;-) kontakt mig på peter.vang@addspeaker.org, så kan vi lige få en snak. Smut forbi vores blog på http://addspeaker.org og se hvad vi står for og formidler af viden, så kan I jo se om det er noget for jer.

Registrering af højde og vægt plus fødeindtag (overordnet)

Mit barns oplevelse af effekt/påvirkning

Af hvilken grund finder du ikke den beskrevne app anvendelig? Hvilke mangler er der eventuelt?

11 responses

I opstarten med medicinprocessen, var det meningen at alt skulle være så simpelt som muligt og i samarbejde med lægen i præcise perioder. Jeg kan ikke se hvad appen skulle gøre, når vi alligevel skulle mødes med lægen imellem disse perioder og snakke omkring hvad vi har oplevet.

Da jeg ikke i har haft brug for det under medicin opstart det eneste jeg har brugt er at se hans søvnmønster men det kan jeg overse ved hans vivofit junior ur hvor jeg kan se hvordan han sover

Jeg kan ikke se formålet. Det virker som mere arbejde i en hektisk hverdag

Kommer jo meget an på udformning, men jeg tænker at hvis systemet ikke kan snakke sammen med børnepsykiatrisk så kunne man risikere at skulle dobbeltdokumentere

For sent for os

Ingen mangler tænker jeg, men ville ikke få den brugt

Ingen mangler, men ville ikke få den brugt

Jeg kan godt observere selv

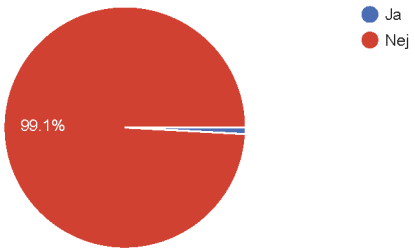
Ikke mangler som sådan. Har bare nok i at skulle holde skriftligt styr på alt hvad min søn skal. Så ville ikke orke at skulle fører en dagbog også

Mangler ikke sådan en app

Jeg ville glemme at bruge den 😟

Bruger du eller har du brugt en lignende app?

115 responses



Hvilke(n) app('s) bruger du/har du brugt?

1 response

Vivofit junior appen med søvn og aktivitetsanalyse

Bruger du andre redskaber i dagligdagen til at støtte dig og/eller dit barn diagnosticeret med ADHD?

79 responses

Nej

Ja

Piktogrammer

Tiimo app

Nej

Struktur og forudsigelighed og forberedelse

Skridttæller(garminur til barn), fysisk kalender (som barnet og far desværre ikke følger med i) kalender med alarmer i mobil (kun mor) ugeskema på papir til barn, SMS til far om at huske medicin, sovetider mv

Eget opfundet skema

Visuel guidning, adfærdsskemaer

Min kalender

pædagogiske redskaber. faglig viden, struktur , struktur skemaer til hverdagen.

Nej det gør jeg ikke for man får ikke særlig meget informationen omkring hvor vigtigt det kan være.

Fører egen dagbog -

Skriver dagens oplevelser ned. Kædedyne. Kuglestol.

Masser!

Skema med faste spise/sengetider

Papir s dagbog

Struktur og forudsigelighed

Registrering af adfærd

nej

Ugeplan ellers ikke

Jeg bruger meget skemaer til at hjælpe ham med at beskrive sine tanker og følelser med da han specielt har problemer med at kunne komme ud med dem og derved går og samler dem sammen ind til hans hovede eksplodere med dem.
Derudover har jeg brugt meditation og vejrtræknings-øvelser meget til at styre hans følelser og få ham til at slappe af når han har svært ved at håndtere dem

Time-timer og piktogrammer

Ja, pædagogiske redskaber

Melatonin

Excel

mobilize me

Piktogram er og skrevne sedler

Piktogram

Ja, selvfølgelig. Piktogrammer og visuel understøttelse er en vigtig del af en hverdag med adhd-børn

Visuel støtte, og en struktureret hverdag

Ikke længere

Timer, tavle, forberedelse, de 8 H-ord

Time timer

Næh

Vi bruger tegn app, da vores søn også er udfordret på sprog

Struktur er alfa omega herhjemme

Alarmer. Kalenderfunktionen. Tøj der pakkes i hele sæt i poser til ferie. Samme rutiner hver dag!

Piktogrammer, struktur

Billedtavle og billeder hvor man kan sætte pile for at vise ens følelser (vred glad osv)

Kursus, piktogrammer, trygmassage, belønningssystem.

Ugeplaner for hele familien

Piktogram

Struktur og faste rutiner

Boardmaker, tiimo

Ja skemaer

Kædedyne

Skema på køleskabet

Jeg er uddannet ergoterapeut, så fast struktur og overblik er "mit arbejde" og mit redskab. Jeg benytter derudover indimellem et minutur

Nej, almen opdragelse

En tavle i køkkenet

Ja. Mobilize me

Hjemmehoser

Ikke teknologiske, kun kommunikations redskaber

Vi har selv lavet et skema i Excel hvor vi registrerer forskellige ting.

Struktur og støtte i skolen

Ja, alarmer på tlf, 'De Utrolige År', og Medicinkort-app.

En slags dagbog over adfærd dagen igennem ift de mål der arbejdes med hjemme

Ja tavler og skemaer

Almindelig kalender på mobil

Alt er forudsigeligt og planlagt ud i fremtiden.

Pintogrammer

Whiteboard i hjemmet

Kalender i fysisk form.

Er der digitale redskaber, som kan støtte dig og/eller dit barn, som du savner på markedet i dag? Giv gerne en kort beskrivelse.

46 responses

Nej

Ved ikke

Det ved jeg ikke

Tiimo app,

'En app der kan ovenstående og som kan "tale" sammen med en aktivitets-, puls- og søvn tracker. Den skal kunne deles/redigeres mellem far og mor og barnet skal kunne følge med og kunne tilføje beskeder på sin egen mobil/tablet

Et samlet redskab som i beskriver vil gøre tingene nemmere

En app hvor alt er samlet. Som man evt kan printe fra når man er til kontrol ved læge eller børne psyk

jeg tænker at denne ide i har lavet her, kunne være super god til at kunne registrere i stedet for på en lap papire som fx bliver væk mv.

En app hvor både lærer og forældre kunne skrive

Har ikke undersøgt det inu

Jeg kunne virkelig godt bruge en dagbog på telefonen

nej

Sikkert, men ved ikke hvad

Måder hvorpå han kan håndtere/samle sine tanker dem sådan at de ikke behøver at være i hans hovede men der skal være hjælp sådan at børn der har svært ved at beskrive deres tanker kan få dem formuleret.

Ved det ikke, det hele er meget nyt

En app der kan kommunikere med andre apps så som lærer

Vi kunne godt bruge noget til at styre tiden foran computeren.

Lette apps for børn hvor de kan registrerer deres eget humør, påvirkning af medicin osv.

Ja en traker app, til når de selv bevæger sig rundt, ku være i form af telefon eller ur, der også kunne fortælle f.eks. puls, da det ville vise i tilfælde af nedsmeltning, samt en pop up der kunne vise humøret, hvor man kunne trykke, samt en husker til hvad de ska huske f.eks i skolen, aflevere en mappe, tage medicin osv

Ja, men vi bruger det ikke endnu

Næh

Ja sådan en smart app, som I vil skabe 😀

Mere dynamisk programmer/apps a la tiimo, men med et bedre administrations Interface

Tiimo har måske lidt af funktionen, men en "dims", som informerer barnet om hvad det skal fx fungere som vækkeur, efter vækning informerer om næste aktivitet - dernæst næste aktivitet (eller delhandlinger) som kan støtte barnet i selvstændighed blandt andet

En app som denne til at holde styr på udviklingen

En app som jeres hvor informationerne er tilgængelige for lægerne og de bruger dem.. Som forældre ved vi ikke altid hvad information der er relevant at handle på.

Medicin app

App

Ja, en nem og overskuelig app hvor man hurtigt kan registrere de ting som i beskriver. Vores psykiater har haft stor glæde af vores Excel ark da hun hurtigt og nemt har kunnet få overblik over hvordan det går, men det er et stort arbejde at starte pc op hver dag og skal lave skemaer, det ville være fantastisk bare at registrere på en app, så kan man også gøre det løbende i løbet af dagen.

Bruger ikke rigtigt app skriver skema i hånden så er det hele samlet

Ved det ikke

Ja, en kombination af Forældre-Intra, Wunderlist, Medicinkort, Pro Medicin og Drug Interaction Checker som f.eks Medline eller WebMD. Et web-baseret forældermodul der sammenkørte data fra alle disse kilder med mulighed for at eksportere en 'statusrapport' til både egen læge og BUC via e-Boks ville være guld værd. Mit sidste store IT-projekt jeg var projektchef på, var ReceptServer og PharmaNet til Danmarks Apotekerforening på vegne af Novo Nordisk IT,så jeg kan sikkert give jer lidt inspiration, hvis I skulle have behov for det.

Noget fokuseret på de unge, næsten voksne

Nej

Styring af spilletid på Playstation inkl kill timer til husets wifi

Vil du deltage i vores interviews og brugertests?

115 responses

Eventuelle bemærkninger

3 responses

Mit barn skal til april udredes for adhd

Jeg har selv ADHD

Mit barn er diagnosticeret med GUA hvor mange symptomer minder om mine (jeg har ADHD), så jeg tænker at en sådan dagbog kunne gavne hende også. Hun er 10 år. Håber I får udviklet noget brugbart - det vil jeg se frem til.
Hvad med dagbog til voksne med ADHD?
Vh

Eventuelle bemærkninger

6 responses

God og spændende ide i har. Der mangler en app til netop dette så man ikke skriver i notater på telefonen hvor man også har meget andet til at stå eller på egen computer, men har let adgang. Håber den bliver lavet i kalenderform så det er nemt at gå tilbage "i tiden" eller nemt i et søgefelt at kunne søge på "dato", "adfærd", "bivirkninger" osv. Og direkte tilgang til læge skal gerne være et tilvalg. Nogle gange har man brug for at samle information og kigge det igennem inden det deles med læge.
Held og lykke.

Min søn har add og oppositionel adfærds forstyrrelse

Min søn er egentlig 17, men det kunne jeg ikke vælge.

Godt tænkt med App'en. Ser den som samme redskab som fx en menstruations App til kvinder.

Ville gerne have været behjælpelig med interviews men overskuddet er der ikke og har ikke været det længe

Go Get'Em!

Appendix D

User Study [DA]

D.1 Script

D.1.1 Introduction

Først vil jeg lige forklare hvad vores app kan. Den er påtænkt som en slags dagbog, hvor det er muligt at registrere dit barns medicin, bivirkninger ved medicinen, adfærd, søvn og lignende funktioner. App'en er især tiltænkt som en støtte i hverdagen, herunder f.eks. i forbindelse med opstart af medicin eller ved ny medicin.

Inden vi går i gang, skal jeg først og fremmest bede om din tilladelse til at optage vores samtale?

Tak, så vil jeg forklare lidt om vores test, inden vi går i gang.

Den første del af brugertesten består af tre opgaver og nogle opfølgende spørgsmål til hver opgave. Derefter vil vi vise dig nogle videoer af flere funktioner vi tænker app'en skal have og stille dig nogle spørgsmål til disse funktioner.

Ved de tre første opgaver får du en mobil med en prototype af app'en. Prototypen har noget allerede forudindstillet indhold, som f.eks. tekstbeskeder, da man ikke kan skrive i app'en, så det skal du ikke undre dig over. For hver af opgaverne læser jeg et scenarie for dig, og du skal så udføre opgaven på mobilen. Der er ikke noget der er rigtig eller forkert og det skal ikke foregå på tid. Du udføre opgaven i dit tempo og mens du gør det, vil vi bede dig om at tænke højt, forklare hvad du gør mens du gør det. Du må også rigtig gerne kommenterer på ting du synes er mærkelige, gode, ikke gode osv. Hvis du har brug for jeg læser scenariet igen, så siger du bare til. Nogen spørgsmål?

Godt, så får du den første opgave og du tænker som sagt bare højt om hvad du

gør og hvordan du oplever app'en.

D.1.2 Interactive Prototype

Så får du den første opgave og du snakker som sagt bare højt om hvad du gør og hvordan du oplever app'en.

Task 1: Medicine

I første opgave skal du registrerer et nyt medicin i app'en. Forestil dig, at dit barn tager 10 mg Medikinet 2 gang dagligt, kl.7 og kl.15. Hvordan vil du registrere det?

- Hvad synes du om funktionen medicin?
- Hvor godt passer denne funktion til dine behov? Hvorfor?
- Er der noget du synes skal være anderledes eller som mangler?
- Andre kommentarer?

Task 2: Side effects

I den næste opgave skal du registrerer en bivirkning, som du har opdaget ved medicinen. Forestil dig, at dit barn klager over en mild hovedpine efter indtagelsen af medicinen. Klokken er 9.41. Hvordan vil du registrere det?

- Hvad synes du om funktionen bivirkninger?
- Hvor godt passer denne funktion til dine behov? Hvorfor?
- Er der noget du synes skal være anderledes eller som mangler?
- Andre kommentarer?

Task 3: Behavior

I den tredje opgave skal du registrerer et udbrud, dit barn havde under frokosten. Forestil dig, at dit barn reagerede meget voldsomt på et stykke broccoli på tallerkenen. Hvordan vil du registrere det i appen?

- Hvad synes du om funktionen adfærd?
- Hvor godt passer denne funktion til dine behov? Hvorfor?
- Er der noget du synes skal være anderledes eller som mangler?
- Andre kommentarer?

Post-questions

- Hvordan vil du beskrive din oplevelse med at bruge app'en til at fuldføre disse opgaver?
- Hvad kunne du bedst lide? Hvorfor?
- Hvad kunne du mindst lide? Hvorfor?
- Synes du funktionerne er lette at forstå?
- Vil du kunne bruge app'en i din families dagligdag? Hvorfor?

D.1.3 Non-interactive Prototype

Så kommer vi til den anden del af vores brugerstudie, hvor vi vil vise dig nogle flere funktioner fra app'en. Efter hver funktion vil vi gerne stille dig nogle spørgsmål.

Function 1: Routines

Denne funktion giver dig mulighed for at oprette forskellige faste rutiner og holde et overblik over hvordan rutinerne er forløbet. Du kan nu trykke på se eksempel

- Hvad synes du om funktionen at kunne indstille forskellige faste rutiner?
- Ville en funktion som denne være nyttigt for dig? Hvorfor?
- Andre kommentarer? Forbedringer, ændringer, tilføjelser?

Function 2: Reminders

Denne funktion giver dig mulighed for at oprette påmindelser om f.eks medicin, aftaler og sengetid.

Udover påmindelser for medicin osv. Kan app'en også indstilles til at minde dig om, at indtaste hvordan forskellige faste rutiner, aktiviteter og måltider er forløbet.

- Hvad synes du om at kunne indstille forskellige slags påmindelser for f.eks medicin, aftaler og rutiner?
- Ville en funktion som denne være nyttigt for dig? Hvorfor?
- Andre kommentarer? Forbedringer, ændringer, tilføjelser?

Function 3: Several Users

Du har mulighed for at oprette flere brugerkonti og tildele dem adgang til de funktioner du synes. Derudover kan du oprette påmindelser og skrive beskeder til brugeren.

- Hvad synes du om at kunne oprette flere brugere og administrere deres adgang?
- Ville en funktion som denne være nyttigt for dig? Hvorfor?
- Andre kommentarer? Forbedringer, ændringer, tilføjelser?

Function 4: Connect Smart Watch

Funktionen giver mulighed for at forbinde app'en med et aktivitetsur, som kan indsamle information om barnets søvnrytme og aktivitetsniveau.

- Hvad synes du om at kunne forbinde app'en med et aktivitetsur?
- Ville en funktion som denne være nyttigt for dig? Hvorfor?
- Andre kommentarer? Forbedringer, ændringer, tilføjelser?

Function 5: Export Data

Funktionen giver mulighed for at eksporter det indtastede til forskellige grafer og oversigter.

- Hvad synes du om at kunne eksporter dine informationer?
- Ville en funktion som denne være nyttigt for dig? Hvorfor?
- Andre kommentarer? Forbedringer, ændringer, tilføjelser?

D.1.4 Wrap Up

- Nu hvor du har set andre mulige funktioner i appen, hvad er så din overordnede mening om appen?
- Hvad synes du bedst om?
- Hvad synes du mindst om?
- Hvad kan være en fordel ved at bruge denne app?
- Hvilke ulemper kan der være ved at bruge app'en?
- Nogen sidste spørgsmål eller kommentarer?

D.2 Transcription of the moderated in situ sessions

Sarah

03:00: I1: Det er en prototype, så den fungerer ikke som en app. Det den gør at den viser lidt ligesom nogle screenshots på computeren og så er der kun nogle få ting du kan gøre. Du kan ikke lave noget af egen fri vilje, den er forprogrammeret. Så jeg giver dig en opgave og så ser vi hvordan klarer du det. Du skal snakke højt Og del dine tanker med os.

04:00: I2: Og så tager jeg nogle noter.

S: Ok

I1: I den 1. opgave skal du registreret ny medicin. Forestil dig at dit barn tager 10mg medikinet. Hvordan vil du register det i app'en?

S: Jeg tænker at jeg vil starte med T gå ind i den der hedder medicin. Der står så multivitamin her. Kan man så gå ind og ændre det? Hmm.. Medicinskab, måske? Kan man tilføj noget her? Plus, Tilføj medicin, Medikinet, dosis,

05:00: S: måske skal jeg trykke OK første? Ja. Frekvens: dagligt, tidspunkt, start dato og tilføj medicin. Sådan!

I1: Er der noget du synes det skal være anderledes

S: Nej Jeg synes det fungerer rigtig fint

I1: Og hvad med det her, er plusset forvirrende? Eller er det bare lige fordi man skal finde sig rund?

S: Nej det er ligesom de andre apps Jeg er sådan en der trykker på alt muligt indtil jeg finder ud af det.

06:00: S: Det eneste det skulle være, at man laver det om til tilføje medicin og så plus. Eller et eller andet. Det ville være smart hvis man kunne gentage det, fra dag til dag. Så at man skal ikke gå ind og søge efter noget. Altså vi giver den samme medicin hver eneste dag.

I1: Det er meningen at den dernede administrere medicinen barnet skal have. Den heroppe den viser på den pågældende dag, hvad har du taget og hvad mangler du at tage. Hvor godt passer den til jeres behov?

S: Jeg tænker at det passer rigtig godt, fordi vi er to forældre der giver medicin. Så nogen gange tænker man "har du givet?" "Har du husket at give?" og nogle gange overnatter han ved bedsteforældre, Det vil være rigtig fint at vi kunne gå ind og se, og de kunne gå ind og se. Jeg laver altid en lang sed med vejledning om hvad skal gives og hvornår. Når

der er flere hænder på barnet end bare en forældre, så synes jeg at det er relevant

I1: Noget andre ting i den her opgave?

S: Nej det tror jeg ikke

I1: I den næste opgave skal du registrerer en bivirkning, som du har opdaget i forbindelse med medicin. Forestille dig, at dit barn sveder mere efter indtagelse af medicinen.

08:00: I1: Hvordan vil du registrere det?

S: Jeg trykker bare på plus, tilføj bivirkning, han sveder, den er dårlig. Sådan.

I1: Det gik meget fint. Er der noget det tænker det skulle være anderledes?

S: Nej. Altså, det er jo ikke altid jeg ved om det er medicinen han sveder af

09:00: S: eller om det er Strateraen, så jeg tror bare den hedder bivirkninger og så et tidspunkt og hvilken bivirkning. Jeg ved det ikke om det er tanken, men det vil være rigtig fint at kunne kigge på en måned og så se hvor mange bivirkninger han har haft. Så man har et stort overblik. Vi bruger meget det at kigge på, om noget har været anderlede, for eksempel har der været vikar i børnehave eller noget. Så kan vi nogen gange kode tingene sammen.

I1: Vil det give mening at man kunne tilføje noter?

S: Ja især i opstarten af medicin eller hvis man forhøjere en dosis.

10:00: S: De vokser og skal have højere dosis og nogle gange holder medicin bare op med at virke. Så kan det ske at man har haft en god effekt i 2 år og lige pludselig er den ikke så god mere. Så det vil være rigtig fint med en note.

I1: Og hvor godt passer funktionen bivirkninger til jeres behov?

S: Det passer rigtig godt. Især fordi, nu har vi siden august fået medicin og vi stadigvæk ved at finde den rette dosis. Så vi har registreret i lang bane og er ved at kaste op over det. Så det passer mega godt. Jeg tænker, at der er mange forældre der ikke har haft overskud til at lave det skemaer som vi har, så man prøver at husk det, men det kan man ikke.

11:00: S: Det er også kommet bag på os når vi kigger på det vi har registreret, at vi kan se en sammenhæng mellem nogle af tingene. Og vores psykiater synes det er så fedt, for så har hun noget konkret at kigge på og arbejde ud fra.

12:00: I1: Opgave 3, i denne opgave registrere du dagens sengetid og soverutine for dit barn. Forestil dig, at dit barn tog omkring 20 minutter at bruge toilettet, børste tænder og tage nattøj på og gå i seng. Klokken var 19:45 da han var i seng. Hvordan vil du registrere det?

S: Rutiner.. Aftenrutine,

13:00: S: Tilføj, Tid.. sådan. Nu ved jeg hvordan, jeg har lavet det en gang, men det kunne være en god idé at have nogle tips eller en tutorial når man starter appen.

I1: Ok. Er der noget der skal være anderledes, noget der mangler?

14:00: S: Det er måske ikke så vigtigt med varigheden, det er i hvert fald ikke relevant for os, det er mere hvornår han gik i seng. Nu står der også "stod op igen" og så stod der 2 gange. Måske skulle det formuleres til vågnede i løbet af aftenen eller natten. Og så måske også hvis det er gået dårlige og frygtelig, så er det rart at kunne tilføje en note. For nogle gange er der en grund til det, måske var mormor her og så ville han ikke sove. Så det kunne være fint med en note.

15:00: S: Selv når det er gået godt, hvad har vi gjort anderledes end de andre dage. Hvis alt er gået godt vil jeg normalt ikke skrive noget, men hvis det er en dag hvor alt brænder sammen vil jeg gerne kunne skrive hvorfor.

I1: Ok. Er det noget I vil bruge i dag? Hvor godt passer det til jeres behov?

S: Lige nu ikke så meget, men vi har brugt det rigtig meget når vi har kørt medicin ind, for at se hvordan det påvirkede hans søvn. Vi har en meget streng aftenrutine, så der er ikke så meget at rafle om. Så lige nu går det godt, men jeg ved at for rigtig mange forældre er det en kamp. Derfor kunne det for dem, være rigtig godt

16:00: S: at registrere, så man også ser at en gang imellem går godt.

17:00: I1: Den næste opgave handler om at registrerer hvordan barnet har haft det den dag. Er det glad eller sur.

S: Er det så kun til aften man tænker, hvordan har dagen været eller har man muligheder for at det hedder morgen, formiddag, middag, eftermiddag? Fordi man kan godt have en god dag, men måske lige haft et sammenbrud inden middag fordi man er sulten. Og det kunne også være fedt med note her.

I1: Her på forsiden tænkte vi, i stedet for hvordan har din dag været, så står der i stedet, hvordan var din morgen,

18:00: I1: hvordan var skole eller din eftermiddag. Så alt efter tidspunktet på dagen, så spørger app'en hvordan var din morgen eller middag og så videre. Så kan man lave en vurdering på hvordan var det og måske lave en note også.

S: Jeg tænker at det kunne være rigtig fint.

19:00: I1: Den næste opgave har med tanker og følelser at gøre. Mange forældre er meget fokuseret på tanker og følelser.

S: Jeg ved ikke om man kan lave, så man selv kan tilføje. Jeg ved der er nogen børn som for eksempel har selvmordstanker og så videre. Men der er jo så mange tanker, man umuligt kan få dem alle med, så vil det være fint at kunne tilføje selv. Det er jo forskelligt fra person til person hvad man har brug for. Måske har man brug for app'en i en periode og så har man ikke brug for den et stykke tid

20:00: S: men så får man brug for den igen.

I1: Vi tænker at dele følelser og adfærd i to forskellige kategorier. Hvor adfærd er situationer som for eksempel udbrud

21:00: I1: og følelser er mere tanker og noter som barnet måske har.

S: i hvert fald super, hvis man selv kan lave en note. Det har mange brug for.

I1: Den næste funktion er om måltider, at man har mulighed for at registrere hvordan er måltidet forløbet, hvordan var appetitten, hvad er vægten.

S: Det kunne faktisk være fint

22:00: S: og så en kurve på hvor de ligger i forhold til gennemsnittet for deres alder, så man kan se om man er på vej den ene eller anden vej.

23:00: S: Og så blodtryk og puls, det er der også mange der bruger.

I1: Så har vi en funktion vedrørende aktiviteter. Hvor meget de bevæger sig og om nogle aktiviteter måske er mere udfordrende end andre. Så kan man lave en note på, i dag lavede vi det og det. Det gik ikke så godt fordi. Så kan man få et overblik over om det måske er specifikke aktiviteter, som udløser en bestemt adfærd.

24:00: S: Kan man lave så, det er muligt at vælge en måned ad gangen og så kan man for eksempel se, hvordan er det gået med aktiviteter, eller måltider og så videre. Så man kan registrere dagen, så alle de grønne er hverdage og de røde er weekend, ferie og så videre. Fordi, så giver det helt vildt hurtigt et overblik over om det har været ferie og det måske er derfor der har været nogle konflikter.

25:00: I1: Ja, det kunne være en ide. Hvordan synes du det var at bruge app'en?

S: Det vil være en stor hjælp og lettelse ikke enten at skulle have papirer liggende alle steder og et barn der tegner på dem eller at skulle finde computeren frem hver gang.

26:00: S: Jeg bruger ikke min computer hverdag, så det der med at skulle logge ind og så videre. Det virker måske som en lille ting, men det er det ikke når man er træt om aftenen og har smurt madpakker og puttet børn og alle de der ting. Hvor app'en, så kan du enten registrere løbende gennem dagen, eller når der er ro og man sidder i sofaen. Bare lige det at komme ned og sidde og slappe af, for det er ikke det at registrere, det tager bare lige ti sekunder.

I1: Hvad kunne du bedst lide?

S: For mig er det nok medicin og adfærd. Jeg tænker bivirkninger og sådan nogle ting. I perioder vil det også være søvn.

I1: I aften- og morgenrutiner, skulle man da tilføje

27:00: I1: noget med hvor mange timer barnet har sovet den nat?

S: Det kunne være fedt hvis den selv kunne regne det ud. Måske også hvis man kunne registrere, om barnet fik medicin til at sove på eller ej.

28:00: I1: Hvad kunne du mindst lide?

S: Jamen ikke noget tror jeg. Jeg synes jo bare det er fantastisk. Det er nok også lidt nemmere at snakke ændringer, hvis man havde afprøvet den daglig over en uges tid. Så lige nu synes jeg det ser mega godt ud.

I1: Er den let at forstå?

29:00: S: Ja, da jeg lige fandt plusset.

I1: Er det noget i vil kunne bruge i jeres familie?

S: Ja, især hvis dataen kan overføres til egen læge, psykiater.

I1: Hvad nu hvis den funktion ikke var automatisk, men var at eksporter til pdf eller excel og så kan man så sende den?

S: Fint nok. Pdf, så det ikke kan ændres i. Så kan man selv e-maile det eller tage det med til psykiateren. Det synes jeg er helt fint.

31:00: I1: Så kommer vi til den anden del. Hvor vi gerne vil vise dig nogle flere funktioner, som vi tænker app'en skal have. Den første funktion er påmindelser, som minder om for eksempel medicin, rutiner eller aftaler. Så kan man ticke af, det har jeg gjort eller ikke gjort.

S: Jeg tænker det er en god ide, især hvis man har et lidt større barn. Nu ved ved jeg godt den er lavet til forældrene, men hvis man har et lidt større barn, der selv skal sørge for at tage medicin i skolen eller lærerne der nogen gange skal give børnene medicin, at der simpelthen er en alarm.

33:00: S: Det kan sagtens være relevant. Vi er ret struktureret herhjemme, det er ikke alle forældre der er det og så er der delebørn og så videre. Så der kunne det måske være fint at få en påmindelse om at det er tid til aftenrutine. Der er helt sikkert

34:00: S: nogle familier, som har brug for hjælpen til at strukturere tingene mere.

I1: Så har vi en funktion der hedder flere brugere, hvor man kan administrere hvad funktioner de forskellige skal have adgang til. Dette eksempel er en lære, som kan registrere, hvis der for eksempel er sket noget i skolen. Tror du det er noget de vil bruge?

S: Jeg vil ønske jeg kunne sige ja. Jeg synes konceptet er skide godt, men som alting ser ud lige nu, så mangler der jo hænder på de børn. På den anden side,

35:00: S: så sidder de alligevel og skriver ned i en bog i vores børnehave og de har ipads. Så jeg tænker hvis de havde en app, hvor de kan vælge det individuelle barn og så skrive hvis der har været noget. Og man som forældre kan vælge, de for eksempel kun skal have adgang til medicinskemaet, eller der måske kun er en der hedder noter fra børnehaven eller skole.

37:00: S: Jeg tænker også, at selvom den er lavet med henblik på børn der har ADHD, så vil den jo også være fin, hvis man har et barn som for eksempel får penicillin en periode. Generelt

38:00: S: vil den være en hjælp til alt muligt andet også.

I1: Så har vi en funktion, som automatisk forbinder app'en med et aktivitetsur og registrere søvnrytme, aktivitet og så videre.

S: Mega fint. Mit barn har allerede sådan et.

I1: Ja, og det har vi på fornemmelsen at mange har.

S: Ja, for de er de eneste som har lavet et til børn og de har lavet så man kan udføre forskellige opgaver, så man kan optjene point til et spil.

39:00: S: Det kan for eksempel være tandbørstning eller en skridt udfordring. Man kan også udfordre sine forældre eller andre børn.

40:00: I1: Vi tænkte den kunne hjælpe med at se mønstre, for eksempel dage hvor han har bevæget sig meget, opfører han sig måske anderledes.

S: Ja, for det er jo tit det der sker, at kroppen den bliver træt og så bliver de mere rolige.

I1: Den sidste funktion er muligheden for at kunne eksportere rapporter og statistikker.

41:00: I1: Hvor man for eksempel kan vælge hvad man gerne vil have vist på en kurve eller graf.

S: mega god ide.

I1: Er der umiddelbart nogle ting, du synes mangler?

42:00: S: Jeg tænker lidt på sådan en time timer, et ur. Det skal ikke sige lyde eller noget, det skal bare være helt plain. Vi har et fysisk ur, men tit når vi er ude, kunne det være rart at bruge det også. For eksempel, nu er der ti minutter til

43:00: S: vi kører hjem. Så er han forberedt og han kan se det visuelt, og det ville han også kunne på telefonen. Men den må ikke sige lyde eller noget. Jeg har en, som er gratis, og det er det der er. Men jeg vil kun have uret, for på den kan solen køre rundt og sneglen skifte farve. Mine børn leger jo bare med den i stedet for og så gider de ikke at slutte alligevel. Det gode er, at man kan give app'en skylden. Det er uret der ringer, det betyder du skal stoppe med at spille ipad. Det er ikke mig, det er uret.

44:00: S: På den måde er man ikke bussemanden. Det kunne være smart, at det var i app'en.

46:00: S: Jeg ved ikke om man også kunne lave noget der hedder piktogrammer, men så begynder det selvfølgelig at blive kompliceret.

I1: Ja, men det kunne måske være til videreudvikling, at man under for eksempel morgenrutine, kan vise piktogrammer til barnet over hvad det skal.

47:00: S: Nogle børn har brug for fysisk at have billeder med et toilet på, for nu skal jeg gå ud på toilet. Ellers bliver de distraheret på vejen. Det kunne være fint til når man er ude

48:00: S: jeg tænker ikke det er noget, man kommer til at bruge så meget herhjemme, men når man er ude, kunne det være fint ikke at skulle pakke alle de her forskellige kort. Så mest til når man er på farten.

51:00: I1: Hvad tror du den største fordel ved app'en kunne være?

S: daglige registreringer af trivsel og adfærd. Alt det andet er bare en bonus, der gør app'en endnu bedre.

I1: Hvad kunne være en udfordring ved app'en eller en ulempe?

52:00: S: Nej, tænker jeg ikke. Det er jo valgfrit. Jeg tænker, hvis der er noget der er besværligt, så bruger man det jo bare ikke.

I1: Andre spørgsmål, kommentarer eller kritik?

S: nej ikke lige nu. Jeg synes i gør det mega godt. I er mega seje. Det er et mega godt

53:00: S: tiltag, at der er nogen der gør noget mere. Tit kan man downloade et eller andet gratis, som bare ikke fungere. Og så er der nogle af funktionerne man skal betale for og så bliver det alligevel lidt halvdyrt. Det kunne være rart, at det var samlet et sted. Men jeg tænker også i har fået mange gode inputs fra spørgeskemaet?

I1: Ja, overraskende mange, men det tyder jo så også bare på det er noget der mangler.

S: ja.

John

00:00: I1: Først vil jeg forklare hvad app'en kan. Den er påtænkt som en slags dagbog, hvor det er muligt, at registrere dit barns medicin, bivirkninger ved medicinen, adfærd, søvn og sådan nogle lignende funktioner. Den er især tiltænkt som en støtte i hverdagen, herunder for eksempel i forbindelse med opstart af medicin eller ved ny medicin eller dosis ændring eller sådan noget. Inden vi går i gang så skal jeg bede dig om din tilladelse til at optage dig?

J: Ja

01:00: I1: Første del af testen den består af tre opgaver og nogle opfølgende spørgsmål til hver opgave. Og så vil vi vise dig nogle videoer af nogen flere funktioner, som vi tænker app'en den skal have. Og så stiller nogle spørgsmål til det. Ved de første 3 opgaver, der får du mobilen og så læser jeg et scenarie op og så skal du udføre denne her opgave. Det er kun en prototype så den har noget allerede forudindstillet indhold som du ikke kan gøre så meget ved. Så du skal ikke undre dig over, hvis der dukker noget besked op eller tekst eller en af de ting som du ikke selv har indtastet. Der er ikke noget der er rigtigt eller forkert.

02:00: I1: Det skal ikke foregå på tid. Du udfører opgaverne i dit eget tempo og mens du gør det, vil vi bede dig tænke højt og forklare hvad du gør. Du må også rigtig gerne kommentere hvis der er noget du synes er mærkeligt eller godt eller ikke så godt. Hvis du har brug for jeg læser scenariet igen, så siger du bare til. Nogen spørgsmål?

J: Nej

I1: Jamen, så tager vi den første opgave.

J: Yes, jeg trykker start. Jeg har læst opgaven her. 10mg klokken syv og klokken femten. Så siger vi rutiner... medicin, den klikker jeg på. Jeg ser at der allerede er noget multivitamin og jeg ser et plu nede i bunden. Så jeg tænker jeg trykker på plusset i bunden, da jeg vil oprette noget nyt. Og jeg kan se tilføj bivirkning og medicin. Jeg siger tilføj medicin. Så skriver jeg medikinet

03:00: J: Og den kommer op som førstevalg, når jeg trykker m. Jeg vælger 10mg . Så vælger jeg frekvensen. Jeg ville egentlig gerne have scrollet ned til to gange om dagen, men jeg kan se der heroppe står flere gange om dagen. Så jeg siger hver dag i denne dropdown og så vælger jeg to gange dagligt bagefter. Så foreslår den allerede de to rigtige tidspunkter. Og... skal jeg tilføje en slutdato... nej det skal jeg nok ikke. Jeg er færdig, så jeg trykker tilføj medicin. Yes, så er vi i gang med et nyt medicinforløb og så kan jeg se den ligger inde i listen.

I1: Hvad synes du om funktionen medicin?

J: Jeg synes den fungere rigtig fin, det eneste der undre mig en lille smule, der er adskillelsen mellem frekvens og flere gange om dagen, at det er en separat dropdown. Det er kun relevant hvis man er på daglig

04:00: J: Og det kunne ligeså godt være håndteret via en funktion og man så kunne vælge, en gang daglig, to gange daglig, tre gange daglig og så videre.

I1: Hvor godt passer denne funktion til dine behov?

J: Det tænker jeg faktisk passer rigtig godt til mine behov, hvis man tænker på, at min søn han skulle til og i gang med at teste for eksempel medikinet, så tror jeg det her vil passe rigtig godt, i stedet for at notere ned på papir hvad det var han fik.

I1: Er der noget du synes skal være anderledes eller som mangler?

J: Nej, det var kun lige det med den daglige dosis. Det virkede opdelt på en underlig måde og virker mere som det er sådan programmet tænker over det, end mig som bruger.

05:00: I1: I den næste opgave skal du registrere en bivirkning, du har opdaget ved medicinen. Forestil dig at dit barn klager over en mild hovedpine, efter indtagelse af medicinen. Klokken er 9.41. Hvordan vil du registrere det.

J: Så går jeg ind på medicin igen, fordi jeg så jeg kunne trykke på plus derinde og vælge bivirkning. Tilføj bivirkning. Så siger jeg tidspunkt, det er klokken 9.41, det vælger jeg. Og det var en mild hovedpine? Han havde ikke kvalme eller noget? Nej. Graden af bivirkningen, så vil jeg sige dårlig i stedet for frygtelig, nej okay. Tilføj bemærkning. Forsvandt ved en tår vand. Så trykker jeg tilføj bivirkning. Og så tænker jeg at min feedback til funktionaliteten her er, at den der hedder okay, ikke skal hedde okay.

06:00: J: I skal have et mildt men dårligt ord. Lidt måske, eller lille

I1: Eller mild?

J: Ja, mild, alvorlig og frygtelig.

I1: Hvor godt passer den til dine behov?

J: Nu så jeg ikke der var noget med noget nedsmeltning eller humørsvingning, men det kunne der selvfølgelig komme. For jeg tænker egentlig det passer rigtig godt med det her med man hurtigt kan registrere hvornår det er sket.

I1: I den tredje opgave skal du registrere et udbrud dit barn havde under frokosten. Forestil dig at dit barn reagerede meget voldsomt på et stykke

07:00: I1: broccoli på tallerknen. Hvordan vil du registrere det i app'en?

J: Så vil jeg trykke på ... måltider eller adfærd. Tror jeg vil trykke adfærd. Adfærd eller følelser... Så vil jeg klikke på plusset ved adfærd. Ja okay, så giver den mig stadig muligheden igen for at vælge adfærd. Der tænker jeg, at når jeg har klikket på det lille plus, så skulle den måske allerede vide jeg havde valgt, men det er nok fordi det er en prototype. Så vælger jeg et tidspunkt, det er 12.41, vi var i gang med at spise frokost. Det er et raserianfald og en bemærkning om at frokosten endte i et raserianfald fordi der var broccoli på tallerkenen og så siger jeg tilføj adfærd. Det synes jeg egentlig også gik rigtig hurtigt.

08:00: J: Jeg tænker, at hvis jeg nu selv skulle have tastet tingene, så er der ikke særlig mange klik fra, at jeg har besluttet mig for at ville taste noget. Så er der tre klik ind og så kan jeg skrive min fritekst. Og der har jeg valgt tidspunktet, så hvis tidsvælgeren i den rigtige udgave, viser tiden nu, så kan det være jeg lige skal køre ti minutter tilbage, fordi det er ti minutter siden. Men det virker ret let, at komme til der hvor man rent faktisk kan skrive, det man gerne vil skrive ind.

I1: Så det har et hurtigt forløb?

J: Ja.

I1: Hvor godt passer funktionen til dine behov?

J: Det tror jeg passer meget fint.

I1: Er der noget du synes skal være anderledes eller mangler?

09:00: J: Nej. Og jeg tænker egentlig det er meget godt der er forskel på følelser og adfærd, i forhold til at... Det er ikke fordi man ikke skal kunne se det i samme graf, for det har noget med hinanden at gøre, men det er rart at have, har jeg observeret noget konkret adfærd eller har jeg tolket på mit barn følelser når jeg taster ind.

I1: Så har jeg nogle spørgsmål til de første tre opgaver. Hvordan synes du det var at bruge app'en?

J: Jeg synes det var let. Jeg har kun haft de der få ændringer, hvor jeg tænkte, her er der noget og plus, så guided den mig rigtig meget og så er der nogle steder den skal reagere anderledes. Men der er ikke nogle ting,

10:00: J: hvor jeg tænker, hvorfor gemmer det sig her.

I1: Hvad kunne du bedst lide?

J: Det er et godt spørgsmål. Den er meget bred. Men jeg tænker, at det der er den største fordel, det er at man registrere alle de forskellige ting, det samme sted og man har den med i lommen. Men det er jo en grundvilkår ved at i gør den til en app. Men jeg synes i kan registrere mange forskellige typer af ting og man skal kun tre klik ind, før man kan beskrive tingene sådan mere grundigt. Så jeg tror sådan set det jeg bedst kan lide, det er at den samler alle data et sted.

I1: Hvad kunne du mindst lide?

11:00: J: Jeg sidder lige og tænker på en ting. Du har også spurgt hvad den mangler og jeg kom lige i tanke om en ting. Noget med, at den ved hvor man er henne. Sådan at den også bruger telefonens geolokalitet. Så kan man tagge alle de begivenheder der sker hjemme eller hos bedsteforældre eller på mcdonalds og så videre. Så gemmer den de rigtige gps koordinater og måske en tekst label og så man selv kan kode ind, det her er hos bedsteforældrene for så vil man kunne kigge på sine data over det senere . For det vil man måske ellers ikke tracke ind.

12:00: I1: Så kommer vi til den anden del, hvor vi vil vise dig nogle flere funktioner. Funktionerne de kører automatisk, som en video. Og så stiller vi nogle spørgsmål efter hver funktion.

J: Se eksempel, skal jeg trykke det?

I1: Ja

J: Her trykker jeg så på tilføj aftenrutine. Varighed, det tog 19 minutter. Barnet var i seng klokken 19.45. Vågnede to gang, okay på den måde.

13:00: J: Og det er gået godt. Og så er aftenrutinen markeret.

I1: Hvad synes du om funktionen at kunne indstille forskellige faste rutiner?

J: Det synes jeg rigtig godt om, det der med at man med få klik kan gentage den samme begivenhed. Fordi, at de her familier arbejder meget med faste rutiner i forvejen, så det tror jeg matcher meget godt til vores behov.

I1: Nogle forbedringer, ændringer, kommentarer?

14:00: J: Den der vågnende, der tænkte jeg til at starte med, at det hentydede til morgenen efter- Det giver selvfølgelig ikke mening, når man taster ind og det vænner man sig nok hurtig til, men det var det eneste jeg lige tænkte ved, at det måske var lidt tvetydigt og jeg var lidt i tvivl. Jeg ved ikke om man kan indsætte en anden beskrivelsestekst, for jeg tror det er det helt rigtige at spørge om, for der er mange af børnene der har problemer med at falde i søvn, så måske vil man gerne vide hvornår... Nu sover det. Eller måske skal der være flere muligheder, så forældrene kan vælge hvad de gerne vil have ind.

I1: Funktionen nummer to, det er påmindelser. Den

15:00: I1: funktion giver dig mulighed for at oprette påmindelser, om for eksempel medicin, aftaler eller sengetid og så videre.

J: Har du husket din medicin? Så går jeg ind og så klikker jeg den af, jeps det har vi. Udover påmindelser for.... Kan app'en også indstilles til at minde dig om at indtaste hvordan forskellige faste rutiner, aktiviter og måltider er forløbet. Hvordan er din morgen? Så klikker jeg på den og siger den var god. Så den spørger mig hver morgen, vil du indtaste morgenrutinen nu, ja tak. Det virker super godt i forhold til, man rent faktisk får den brugt.

16:00: I1: Hvad synes du om at kunne indstille forskellige slags påmindelser?

J: Det synes jeg rigtig godt om , det eneste jeg tænker, det er at jeg tænker sådan nogle tekniske ting, om i så er sikker på at app'en altid kører. Eller skal i bruge kalendersystemet nedenunder og så videre, men der er garanteret nogle funktioner, der sørger for de popper op på nogle bestemte tidspunkter, alt efter platform. Det er ikke relevant, jeg er

bruger lige nu, det skal jeg lade være med. Jeg synes det virker rigtig godt at den kommer og spørger mig, på nogle forskellige tidspunkter. Og det der er godt i forhold til almindelige kalenderpåmindelser, det er at jeg skal ind og sige ja til at jeg har gjort det. Var der en funktion til at sige påmind mig senere?

I1: Nej det var der ikke, men det kunne være en god ide.

J: Ja, for hvis man nu ikke vil sige ja nu, men gerne vil huske det, så du bliver nødt til at minde mig om det og så fem, ti, en halv time og så videre, for vi kan ikke lige nu, for han er i bad. Men jeg skal have påmindelsen igen om en halv time, så jeg husker det.

17:00: I1: Så er der en funktion, som hedder flere brugere, hvor du har mulighed for at oprette flere brugerkonti og tildele dem adgang til de funktioner som du synes. Derudover kan den oprette påmindelser og vise beskeder til brugeren.

J: Der står hej mormor i toppen her og der er maks 30 minutter på ipad. Det var da en forfærdelig streng restriktion.

I1: Hvad synes du om at kunne oprette flere brugere?

J: Hvis det er fordi folk bruger hver deres telefon til at registrere, så ja, sådan skal det være. For i det mindste skal de to forældre have adgang, man skal ikke have en ekstra registreringstelefon med rundt.

18:00: I1: Næste funktion, det er et aktivitetsur, som giver dig mulighed for at indsamle information, om barnets søvnrytme og aktivitetsniveau.

J: Jeg klikker på se eksempel og det har gået 4000 ud af 8000 skridt. Nu scrollede jeg lidt ned og så kan jeg se søvnmønstret på en super sej graf.

I1: Hvad synes du om at kunne forbinde et aktivitetsur?

J: Det tror jeg også kan være rigtig godt, for at man rent faktisk kan få noget mere kvalificeret data. Så kan man måske begynde at se sådan noget med, efter han sover dårligt, så får han altid en nedsmeltning dagen efter. Så må vi til at finde ud af hvorfor han sover dårligt.

I1: Nogle forbedringer, ændringer eller kommentarer?

J: Nej, lav den færdig. Sælg konceptet eller lav en startup virksomhed.

I1: Sidste funktion. Eksporter, at du kan eksporter det du har indtastet til grafer og oversigter.

J: Det skal i selvfølgelig. Jeg klikker på den 28. Marts og så vælger jeg medicin oppe i toppen og skifter til aktiviteter. Så kan jeg se antal skridt nede i bunden og klikke på en burgermenu og så kan jeg eksporter til excel eller pdf. Der tænker jeg straks, det var da et meget restriktivt

sæt af formater. I skal have excel og pdf, men i skal også have et kommasepareret filformat som csv, som alle mulige andre programmer også bruger.

I1: Så det kunne måske også være mail eller send mail?

J: Det skal den kunne under alle omstændigheder, men den skal også kunne eksporter til csv format.

21:00: I1: Nu har du så set app'en. Hvad er så din overordnet mening?

J: Det ser rigtig interessant ud. For jeg tror det som den gør godt, det er at den er utrolig simpel i indtastningsfasen. Alt det andet det kan man gøre godt bagefter, men det der det skal man... Hvis ikke den er det, hvis den ikke er ultra simpel i indtastningsfasen, så får folk det ikke gjort. Og jeg tror påmindelser og det med at der er tre, fire klik, til at registrere de daglige ting når den lige brummer i lommen, det gør at man rent faktisk kan gøre det, selvom man er sammen med barnet. Man skal ikke hen til noget og man skal ikke finde en lommebog frem og skrive noget ned. Det tror jeg det virker.

I1: Hvad er så ikke så godt?

J: At den ikke er færdig. Der er nogle meget små ting rundt omkring og noget der kunne lægge sammen, men der er ikke noget hvor jeg tænker, det her det er forkert.

I1: Hvad kan være en fordel ved at bruge app'en?

J: Det er det med at det giver overblik.

I1: Kunne der være nogle ulemper?

J: Jeg tænker, måske skulle app'en sørge for at hjælpe brugerne med at huske og registrere de positive begivenheder, at man ikke kun skal registrere de negative ting. For som forældre til et autistisk eller ADHD barn, så finder man ud af, at er der noget der er utrolig vigtig, så er det at snakke positivt om tingene. Fordi man skaber selv den mentale stemning og det billeder man er og man skal fokuser på det positive for at få det til at ske noget mere. Så det tænker jeg måske, at man ikke kun skal tænke på problemerne og registrere dem, men også tænke på hvad der er ad positive ting. Det var der måske også under humør tror jeg og følelser. Der er jo masser af muligheder for det, men det kan godt være den lige skal spørge på en positiv måde nogen gange, for eksempel hvad har været det bedste i dag?

Thomas

00:00: I1: Først og fremmest skal jeg bede om din tilladelse til at vi må optage dig?

T: Ja, selvfølgelig

I1: Så vil jeg lige forklare lidt om hvad app'en den kan. Den er påtænkt at fungere lidt som en dagbog, hvor det er muligt at registrere dit barns medicin, bivirkninger ved medicin, adfærd, søvnrytme og så videre. Den er tiltænkt som en støtte i hverdagen, specielt i forbindelse med opstart af medicin, eller ændring af medicin. Testen den foregår sådan at der i den første del er tre opgaver

01:00: I1: Og så stiller vi nogle opfølgende spørgsmål. Bagefter vil vi gerne vise dig fem små videoer af nogle flere funktioner til app'en, som vi også stiller nogle spørgsmål til.

I2: Vi tester ikke dig, vi tester app'en.

I1: Ja, du udføre opgaverne i dit eget tempo og det skal ikke foregå på tid. Er der noget du ikke kan finde ud af, så siger du bare til. Hvis du har nogle spørgsmål, så siger du også bare til. Skal jeg læse opgaven op igen, så siger du bare til. Mens du udføre opgaverne, så vil vi meget gerne at du tænker højt. Nu gør jeg det her, fordi jeg tror at sådan og sådan.

T: Ja, okay. Vi tager det som det kommer.

02:00: I1: I første opgave, der skal du registrere et nyt medicin i app'en. Forestil dig, at dit barn tager 10mg medikinet, 2 gange om dagen, klokken 7 og klokken 15. Hvordan vil du registrere det?

T: Ja, det vil jeg jo nok gå ind i medicin, det virker mest logisk. Bivirkninger. Medicinskab, der kan man i hvert fald se hvad vi får, ja der står også hvor meget. Skal man så trykke plus, det skal man. Tilføj medicin. Hov, det kom af sig selv. Dosis, den får den der. Man kan ikke rulle op og ned?

I1: nej det kan man ikke

T: Godt, tilføj medicin.

03:00: I1: Hvad synes du om funktionen medicin?

T: Altså når man lige ved hvordan den fungere, så er den fin. Den er lige som den skal være.

I1: Og selve funktionen. Tænker du det er noget...

T: Altså vil alt medicinen ligge derinde, eller kan man tilføje?

I1: Du kan tilføje alt det du har lyst til.

T: Okay, for der er jo tusindvis af forskellige slags.

I1: Så alt hvad der passer til jer, det vil i kunne tilføje.Tænker du det er noget der kunne passe til jeres behov?

T: Det ville have været en stor hjælp i starten, fordi vi er to om det og nogen gange er det meget rart.. nu går jeg udfra vi kan koordinerer det her og så vil det være fantastisk hvis man også kan se hvad den anden har skrevet ned. Nogen gange så tænker man lige nogle ting og så vil det være meget rart at kunne skrive dem ned. Især når man kommer ind til psykiateren, som har haft med det her at gøre

04:00: T: Fordi det er svært at blive ved med at huske på det hele, så jeg synes det virker meget smart.

I1: Er der noget du tænker skal være anderledes eller som mangler?

T: Ikke med at tilføje medicin, det tænker jeg ikke kan gøres anderledes.

I1: I den næste opgave der skal du registrere en bivirkning, som du har opdaget ved medicinen. Forestil dig at dit barn klager over en mild hovedpine efter indtagelse af medicinen, Klokken er 9.41. Hvordan vil du registrere det i app'en?

T: Så tænker jeg adfærd. Nå man kan også se dem dernede. Det må jo være under adfærd så. Eller? Nu trykker jeg på medicin igen. Nå okay, inde i medicin selvfølgelig. Ja ja hvis man lige ved det, så er det nemt nok. Bivirkninger, det står også lige her. Så tilføjer vi en bivirkning.

05:00: T: Okay. Tidspunktet på først her og han har haft hovedpine og mild grad det er vel okay og så skriver man bare her. Forsvandt ved en tår vand. Ja, okay, så kan man lige lave en lille notits om hvad der er sket. Tilføj bivirkning og så kommer den ind der.

I1: Hvad synes du om funktionen bivirkninger?

T: Det fungere skide godt. Man skal bare lige vide det er inde i medicin, men det har selvfølgelig noget med medicinen at gøre, så det giver jo god mening.

I1: Hvor godt vil det passe til jeres behov?

06:00: T: Det er lidt svært, for vores han er ikke så gammel, bivirkningen kan også være på grund af vand som her, så det er ikke sikkert det er medicinen der giver bivirkningen. Men når man tydeligt kan se det er bivirkninger, så vil det være en rigtig god ide at gøre det. Helt sikkert, det er smart.

I1: I den tredje opgave, der skal du registrere et udbrud dit barn havde under frokosten. Forestil dig at dit barn reagere meget voldsomt på et stykke broccoli på tallerknen. Hvordan vil du registrere det i app'en?

T: Det må så være under adfærd. Så, er der en adfærd der, plus. Tilføj adfærd.

07:00: T: Raserianfald. Nå tidspunkt først selvfølgelig. Kan man lave om, så det er lige meget hvordan?

I1: Ja, det er kun fordi det er en prototype, at det skal gøres i en bestemt rækkefølge.

T: Ja, smukt, så er den tilføjet.

I1: Hvad tænker du om funktionen?

T: Det er rigtig godt, fordi det glemmer vi meget hurtigt. Det er meget positivt, man kan skrive det op og man kan gøre det med det samme, fordi der er en telefon. Vi startede også med at skrive alt op i et excel ark på computeren, men så skal du lige åbne computeren og alt det der og det dur ikke. Jeg synes det er godt, skide godt, den kan registrere det på den måde. Ellers kan man ikke huske det. Vi havde det også med bivirkninger, men udfyldte det først om aftenen og så blev det ikke lige ført ordentlig på,

08:00: T: så jeg synes det er dejligt, man har det lige ved hånden.

I1: I2: VI er også blevet vist en masse forskellige papirsskemaer, får i dem brugt?

T: Nej, det gør man ikke. Vi printede dem ud og sendte dem til psykiateren. Hvis det her det kan være så smart, at man kan sende det som en fil til psykiateren, så de kan se det.

09:00: T: For psykiateren havde meget ud af det excel ark vi havde lavet, for at fortæle hvilke bivirkninger der var, har der været uheld i børnehaven eller et anfald, noget adfærd eller udbrud. Det er meget vigtigt for dem at vide, så de kan se et mønster i det. Og så måtte vi bruge det der excel ark, men det er drænende for forældrene at udfylde. Også fordi man lige skal huske hver gang og så er det altså nemmere når man lige har telefonen i lommen.

I1: Så kommer vi til den anden del hvor vi viser dig de her videoer og så stiller vi nogle spørgsmål. Så nu når du trykker se eksempel, så kører den helt automatisk. Den første funktionen, den giver dig mulighed for at oprette forskellige faste rutiner og holde et overblik over hvordan rutinerne de er forløbet.

10:00: T: Ny rutine. Morgen og aften. Ny rutine, det er så for eksempel midt dag eller?

I1: Det kan det være ja. Det er meningen man skal kunne oprette sin egen rutine.

T: Ja, okay. Og så kan man lige taste ind hver dag, bare på ansigterne. Det er smart, så man ikke skal til og skrive en hel masse, hvis det har været en god dag. Det synes jeg.

I1: Tænker du det er noget, der passer til jeres behov?

T: Ja, helt sikkert. Det gode er, at man kan tracke det, i stedet for det her med vi går og husker, jamen så havde han to gode dage sidste uge eller havde han nu også det. Var det en god dag den der dag. Det kan vi jo ikke huske. Så kan man lige gå ind og se, nå men det har faktisk været en

11:00: T: Rigtig god uge. Nogen gange så drukner man lidt i de dårlige og tænker, det har bare været fire dumme uger, men det var det sådan set ikke hvis man lige går tilbage og kigger. Så har man måske haft en dårlig dag hver uge eller to og resten var godt. Det er meget drænende som forældre og man tænker altid på det negative og det er godt man kan gå tilbage og kigge lidt. For man glemmer det.

I1: Den næste funktion, den giver dig mulighed for at oprette påmindelser om for eksempel medicin, aftaler, sengetider og så videre.

T: Har du sket medicin? Ej, hvor er det godt. Er det så lavet så smart, at hvis jeg siger ja, så kan min kone se det?

I1: Ja

T: Godt! For der har vi snakket om at lave sådan en lille tjekliste, man kan hakke af på, nu har du givet sådan og sådan, for han får jo ikke bare medicin.

12:00: T: Han får også fiskeolie og vitaminpiller og så videre og pludselig, så glemmer man en af dem. Lige nu, er der en han ikke får, så skal vi lige huske han ikke får den. Det der med at huske og snakke sammen, det er... Det her er smart, så behøver vi ikke snakke sammen. Så kører vi bare det hele over telefonen.

I2: I2: Men så kan i få tid til at være sammen i stedet?

T: Nemlig ja. Det er meget hurtigere, end at skulle printe alt muligt ud og huske at krydse af, for igen, vi har altid telefonen på os. Den er jo en del af vores liv efterhånden.

I1: Ud over påmindelser for medicin, så kan den også indstilles til at minde dig om de faste rutiner, eller aktiviteter og måltider.

T: Så man lige kan huske, at gå ind og skrive hvordan det er gået, ja.

13:00: I1: Så kan man i realiteten sådan set bare sige nej, hvis man nu har skrevet det var en god morgen, men du har stadig dit smiley face på hvordan den morgen var.

T: Ja, så kan man bare lige se det. Det er rigtig fint, for har det været en god morgen, så er det ikke nødvendigt at skrive en helt masse om det. Den er god, puktum. Så er det fint bare med sådan et smiley face, men har man lyst kan man lige skrive et eller andet.

I1: Du svarer jo på det hele undervejs, så jeg tror bare vi går videre. Funktion 3, der har du mulighed for at oprette flere bruger og tildele dem adgang til de funktioner du synes de skal have og du kan oprette påmindelser til de andre bruger eller skrive en besked.

14:00: T: Hej mormor, okay så man kan også give dem adgang ja. Det er jo lidt smart, til når de lige skal være der. For det er tit sådan der er, ikke fordi alle behøver adgang, men lige sådan nogen som er så tæt på og de har dem, så er det også meget rart de lige kan skrive ind, at det er gået godt. Så kan vi måske også se et adfærdsmønster. Vi hører jo kun fra dem når vi kommer, at det er gået godt, lige indtil forældrene kommer ind ad døren. Det er smart man kan oprette flere brugere, så de også kan få adgang.

I2: Og de andre behøver ikke nødvendigvis have adgang til det hele, de har kun adgang til det i synes. For eksempel mormor skal kun kunne indskrive noget adfærd og ellers ikke kunne se noget.

T: Okay, det er jo smart, for så kan hun også lige, for selvom man ikke er sammen med dem, er det meget rart der bliver fulgt op på det.

15:00: I1: Funktion 4 giver dig mulighed for at forbinde app'en med et aktivitetsur, som kan indsamle informationer om søvnrytme og aktivitetsniveau.

T: Altså, sådan et garmin vivofit junior?

I1: Ja det kunne det for eksempel være.

T: Okay, så det er lige meget hvilket ur det er?

I1: Vi håber på vi kan tilbyde så bredt et udvalg så muligt, så der er noget for alle prisklasser.

T: Selvfølgelig, så dem der ikke lige har råd til et garmin også kan bruge det. Ja, men det ligner sådan set deres egen app, det er bare ført ind i den her, så det er samlet. Det er jo smart.

I1: Vil det være noget i kan bruge?

T: Ja, vi har brugt det. Vi bruger det ikke så meget lige nu, fordi nogen gange bliver han lidt for overgearet af det. Men ellers så holder vi styr på hvordan han sover og

16:00: T: kigger lidt på... Altså i starten var det mest for at finde ud af om det havde en effekt på hvordan hans dag i børnehaven var. Så var det meget rart at vide om han havde sovet dårligt den nat.

I1: Og det er et vivofit ur?

T: Ja, det er sådan et vivofit junior.

I1: Der hører også en app til?

T: Jo, der er sådan en garmin app, som connecter til telefonen og så kommer det hele derover.

I1: Kan man eksporter fra den?

T: Pas. Jeg tror man kan. Kunne forestille mig man kan sende det videre.

I1: Den sidste funktion ér muligheden for at eksporterer til forskellige grafer og oversigter.

T: Det er jo rigtig smart, så man kan sende det videre til psykiater eller hvem der har med medicinen at gøre. Så går man ind og vælger de forskellige adfærd, måltider, rutiner, aktiviteter ja. Og så er graferne der. Eksporter til pdf eller excel, ej men hvor er det smart. Det er godt lavet. Det er jo sådan noget vi alle sammen gerne vil have. Noget der fungere helt simpelt.

I1: Og det er ikke noget som i har kunnet finde andre steder?

T: Ikke sådan her og slet ikke på dansk. Så er det sådan noget piktogrammer og sådan noget, men det skal jeg jo ikke have på min telefon, det skal vi jo have så han kan se. Jeg har ikke set det før. Jeg synes det er smart.

18:00: T: Det er helt klart noget vi skal have når det er færdigt.

I1: Så du tænker, som jeg kan forstå det, at det er noget der er brugbart?

T: Positivt. Helt klart.

I1: Hvad synes du bedst om?

T: Det er svært. Når man er i starten af forløbet, er det medicinen man gerne vil vide noget om. Når det kører, så vil man gerne se hvad andet der er, der gør at han for eksempel får et udbrud selvom han er på medicin. Så vil man gerne kigge på aktiviteter og adfærd og sådan noget, så man kan gå ind og kigge om det er på grund af medicinen eller det er på grund af hvad der sket. Har han sovet dårligt.

19:00: T: Så det fungere sådan i forskellige stadier, hvor man har brug for forskellige ting. Så jeg synes det er mere som en helhed, at det fungere.

I1: Hvad synes du mindst om? Er der noget hvor du tænker, det er ikke så brugbart?

T: Nej, for det er jo som med alting, man skal lige lære den at kende. Når man kender den, så tænker jeg det er helt perfekt. Første gang folk brugte facebook, vidste de jo heller ikke hvor de skulle trykke. Det virker meget overskueligt.

I1: Hvad kan være en fordel ved at bruge app'en?

T: At man kan tracke det. Det hele det er gemt. Man skal ikke tilbage og læse i en kalender eller ind i sit excel ark, hvor man har glemt at skrive lige den aften, fordi det gad man ikke lige at starte computeren for og så kunne man ikke lige huske hvordan den dag var gået. Så er det nemt når man alligevel lige sidder der, lige så hurtigt som at skrive en sms.

20:00: T: og det gør man jo hver dag.

I1: Hvilke ulemper kan der være?

T: Som det ser ud lige nu, kan jeg ikke se nogen ulemper. Jeg kan kun se noget positivt. Jeg kan ikke se hvad der skulle være negativt eller hvilke ulemper der skulle være. Det er altid positivt at tracke sådan noget der, fordi du bliver stillet så mange spørgsmål. Så er det meget rart man kan gå tilbage og se. Så det synes jeg er rigtig godt. Jeg kan ikke rigtig noget negativt.

I1: Nogen sidste spørgsmål eller kommentarer? Gode ideer?

T: Nej, det ved jeg ikke rigtig. Jeg synes det er smart.

D.3 Transcription of the unmoderated remote sessions

Matthew

00:00: Hvad er det for noget? Hvordan var det nu?

01:00: Okay. Adfærd. Rutiner. Jamen jeg kan jo ikke rigtig trykke på noget. Hov, der var noget der. Smart. Medicinkab., multivitamin. Det er et meget flot design, men det virker som om, den ikke virker her på min iphone 5. Adfærd, hvad skal jeg gøre her. Hvordan var din morgen? Den var okay og det har jeg trykket, hvad så?

02:00: Så kan jeg ikke rigtig komme videre. Det eneste jeg kan trykke på det er medicinskab. Nå, det kunne være jeg skulle tilføje medicin, var det det jeg skulle. Okay, så prøver vi det. Nå det er fordi jeg ikke læste ordentlig okay. Hvor mange gange om dagen, 2 gange okay. Tilføj medicin. Hvad så, så kan jeg komme videre eller hvad. Hvad synes du om medicin funktionen, hvor godt passer den til dit behov?

03:00: Er der noget du synes der skulle være anderledes eller som mangler? Andre kommentarer? Nej, ikke andet end at jeg begik den klassiske ADHD fejl med bare at trykke næste uden at læse hvad opgaven gik ud på. Nå, nu må jeg hellere læse højt. I opgave 2 skal du indtaste en bivirkning du oplevede ved

medicinen. Forestil dig, at dit barn klager over en mild hovedpine efter indtagelsen kl. 9.41. Okay. Husk at tænke højt. Ja ja jeg tænker højt. Medicin. Bivirkning, plus. Tilføj bivirkninger, der. Hovedpine. Hov, ja. Beskriv graden. Den må være okay.

04:00: Hvorfor kan jeg ikke? Nå, det må være fordi jeg ikke har indtastet tidspunkt selvfølgelig. Færdig. Okay. Hovedpine, ok. Bivirkning, mild. Forsvandt ved en tår vand, okay. Godt nok. Tilføj bivirkning. Så var det vel det. Hvad så. Har jeg ikke gemt det eller hvad? Nå sådan. Det med plusset til sidst, det var jeg altså ikke.

05:00: Det var ikke skide godt. Jo, den er fin. Det er en okay funktion. Det er lidt svært, at man skal trykke på plusset til sidst. Det er lidt ulogisk, at den ikke bare kommer op og spørger om, når man har indtastet alle de ting man skal bruge, at den ikke bare gemmer det automatisk. Nej, jeg synes det er en meget fin funktion, men igen det der med, alle funktioner hvor man har indtastet noget, der er det vigtigt den kommer op og siger, når man har indtastet det der kræves, vil du gemme nu eller det er okay. Fordi ellers så sidder man og tænker, hvad så?

06:00: For der er ret mange muligheder på skærmen. I opgave 3 skal du registrere et udbrud dit barn havde under frokosten. Forestil dig, at dit barn reagere meget voldsomt mod et stykke broccoli på tallerknen. Altså nu kommer.. I skal passe på med at bruge stærke ord som udbrud, fordi det er lidt stigmatiserende. Det er bedre med en voldsom reaktion, dit barn havde under frokosten. I skal passe på med de der ord, fordi vi er så vant til folk de stigmatisere med enten manglende indsigt eller utilsigtet.

07:00: Sådan noget som udbrud, det er et ret voldsomt ord, at bruge på en reaktion, som et barn ikke bevidst har gjort, men noget som sker rent fysiologisk, neurofysiologisk, hvis man kan sige det sådan. Ja, jeg tænker højt. Adfærd. Plus, adfærd. Tilføj adfærd. Beskriv bivirkningen. Er det et raserianfald i vil have, nå okay. Hvad så?

08:00: Tilføj bemærkning. Det her det fatter jeg ikke. Tilføj ny. Nå, okay. Det der med... Frokosten endte i et raserianfald, da der var broccoli på tallerknen, okay. Tilføj adfærd. Ja, okay. Hvad så, er jeg så færdig eller hvad? Det var vel det. Jeg ved altså ikke rigtig hvad jeg så skal. Nå der.

09:00: Hvad synes du om funktionen adfærd. Nu var jeg lidt farvet af, jeg gik så meget op i det ord der. Umiddelbart er ideen jo god nok. Jeg tror faktisk den er meget god. Ikke andet end, nu ved jeg godt det er en testversion, men for en person der selv har ADHD,

10:00: som de fleste af forældrene jo også har, så er den meget busy skærmen. Der er mange ting på skærmen ad gangen. Det kunne være fint, hvis den ligesom

saniterede skærmen sådan at der kun var de ting man skulle indtaste. Altså, så man kun skal fokusere på det man svarer på, frem for alle de muligheder man har. Det handler om hele tiden at præsentere noget som er meget enkelt og overskueligt og præcist, i forhold til, at når man er ADHD, så bliver man jo afledt at alt muligt lort hele tiden. Så lige så snart der er mere end en ting at tage stilling til, så har vi balladen, fordi så begynder man og tænke, nå hvad fanden gør den der tilføj bivirkning når man er i gang med noget andet. Så mit råd er, at gøre det keep it simpel stupid tror jeg.

11:00: Men ellers så synes jeg det er en god applikation og jeg synes i har fået meget godt styr på det, så tillykke med det. Altså, jeg kan meget godt lide designet, må jeg sige.

12:00: Ja det ville det. Det ville typisk være sådan noget med, at pakke din taske eller husk at tage den der sportstaske med om tirsdagen eller sådan noget. Ja, altså det der også er genialt med påmindelser, nu når det er på iphone i hvert fald, det er at i skal husk at bruge

13:00: geo-lokalitet, sådan så at man kan lave en rutine som siger når du kommer hjem fra skole, så siger den pling påmindelse. Husk at tømme tasken for madpakke og sæt den på plads i skabet eller hvad det nu er. Men det er vigtigt at den følger ens geo-lokalitet. Det ville være genialt, fordi det er det der er så pisse irriterende med alle de unger der, det er at de... så ligger deres taske ude i gangen med sur madpakke i hver dag ikke. Hvis man ikke laver påmindelse på dem.

14:00: Hvis i nu er rigtig smarte... I skal tænke på, at et barn med ADHD ikke kan huske hvordan var din morgen, fordi der er sket 57 tusind ting siden. De kan ikke engang huske hvad der skete for et kvarter siden, fordi de er optaget af nuet. Og så prøv at kigge på et program der hedder icopaint i stedet for. icopaint er et program hvor man kan tegne ind med farver hvordan man følte det i kroppen. Det er meget videnskabeligt. Det går ud på de grundfølelser vi har. Syv grundfølelser, plus neutral. Så kan man male på en figur af en krop, hvor man har følelsen. Det tror jeg

15:00: er nemmere for de her børn. Hvordan har du det nu. Så lav en påmindelse når det er morgen, lad os sige, hvis i ved at ungen skal være i skole kl. 8, så fem minutter i 8, så plinger den lige op og så skal man indtegne hvor på kroppen, hvordan man har det. Det tror jeg de har ti gange nemmere ved, end sådan noget abstract noget, for så trykker de bare et eller andet, fordi der kommer noget op. Væk, næste. Men her der bliver de tvunget til at tegne og mærke efter, plus at de også bliver mindet om at de har en krop. Det glemmer de jo også tit. Det tror jeg altså er bedre, men det hedder icopaint, ligesom i c o paint. Så i kan lige skrive til mig hvis det er i mangler nogle links til videnskaben bagved. Jeg tror opsummeringen på det er en mindre

busy skærm, saniter funktionerne så det kommer op

16:00: med kun det man skal svare på og så de her påmindelser med geo-lokalitet og den med icopaint i forhold til, at afrapporter på hvordan man har det. Men ellers flot arbejde, jeg glæder mig til at se næste skridt. Have det godt. Det er ikke kun nyttigt, det er nødvendigt. Og i bliver nødt til at lave det som et familieabonnement, hvis i vil have penge for det. Altså, lad nu være med at gå helt abe og tage mere end 99,- om måneden i hvert fald, det er maks. 69,- tror jeg er bedre.

17:00: Det er den eneste måde i kan få succes på. Altså det er volumen, det er ikke høj pris, det nytter ikke noget. Fordi så har folk ikke råd til det. I skal regne med at jeres målgruppe, det er folk der for 90% vedkommende er på overførselsindkomst. 69,- om måneden, det svarer nogenlunde til et Netflix abonnement, så ikke meget mere end det. Og ja, det skal være et familieabonnement, så alle i familien... I skal regen med at folk med ADHD, enten har de ingen børn eller de har mange børn, så husk på det. Og så er det genialt hvis, bedsteforældre, venner eller hvem der nu ellers er i familieenheden, kan være med. Jeg tror jeg har kommenteret det.

18:00: Ja, det er genialt. Så selvfølgelig, ja det er nødvendigt. Genialt, selvfølgelig, det havde jeg ikke tænkt over, men ja. Ja, uh ja, nu er vi jo nogen der er autister, så vi vil jo elske det hvis man kunne tage alle dataene fra alle børnene og igen, kunne holde styr på det. Plus, at det selvfølgelig også vil være genialt for ens sundheds... fagprofessionelle, at kunne give dem data. Ja, og især hvis man kunne emaile det direkte direkte fra appen, at den først laver pdf'en og så emailer den til ens sygeplejerske på psykiatrien. Det ville være genialt.

Claudia

00:00:

01:00: Jeg skal indtaste medicin. Så skal jeg lige se her. Så finder jeg medicin app'en. Skal man tilføje den først eller hvad? Eller... Medicinskab. Nåå, tilføj medicin. Nåå okay, sådan, men så må man vel have mulighed for at vælge det sådan fremover eller hvad. Ja okay, så der er kun en valgmulighed. Kl. 7 og 15 ja,

02:00: start d. 28/3. Nåå der er også multivitamin, det er faktisk ret smart. Hvad synes du om medicin funktionen? Jamen, jeg tænker faktisk det er ret praktisk, at man kan tilføje medicin og hvor tit man skal tage dem og så går jeg udfra man kan vinge dem af efterhånden, når de er taget i løbet af dagen. Jeg synes det er lidt svært, når man ikke lige kan få lov at se hvordan det fungere i praktisk når man skal vinge den af og registrere medicinen den er taget.

03:00: Bivirkningerne, det må vel være medicin igen. Ja, tilføj bivirkning. Så siger vi et tidspunkt. 9.41, det var i hvert fald hvad i skrev. En hovedpine. Beskriv graden og i sagde det var en mild, så der tænker jeg, at så skriver man okay. Så skriver vi barnet... Forsvandt ved en tår vand.

04:00: Nå sådan. Jeg tænker der skal være noget mere, at man skal have mulighed for at skrive helt præcis hvad der er for en bivirkning. Især hvis der er noget adfærdsmæssigt bivirkning, der skal man have mulighed for at skrive. Og så skal man selvfølgelig have mulighed for at hente det frem i forbindelse med, at man for eksempel skal til medicin kontrol eller have ændret i medicinen, dosis eller et eller andet i den retning. Jamen, lige det jeg sagde, at man skal kunne skrive de ændringer der er, hvad der er man observere og så især at man kan hente det frem

05:00: så man ikke skal gå og huske på det til næste medicinsamtale. Det må vel ligge under adfærd. Adfærd. Vi skal lave et plus på adfærd. Vælg tidspukt, nåå under frokosten ja. Og så skal man... skal det være et raserianfald.

06:00: Så, så ligger den der. Jeg tænker at der skal være flere muligheder at vælge imellem eller i hvert fald måske beskrive hvad det er der sker. Jeg synes de fire valgte muligheder er helt dækkende. Jeg b la. der mangler at man bliver ulykkelig, Men umiddelbart så tænker jeg at det er nemt at bruge den.

07:00: Jeg synes den er meget nem og gå til og finde ud af hvor man skal sætte ting ind. Nå det er hvordan det er forløbet i løbet af natten. Jeg kunne godt tænke mig, at man kunne beskrive noget mere, da det godt kan være enkelte episoder der er gået godt igennem dagen. Jeg tænker især i forbindelse

08:00: med registrering af adfærd i forbindelse med medicin opstart, så kan det være rart med den her logbog, hvis man altså igen kan gå baglæns og finde det hele. Måske endda på en eller anden måde få det via computer eller på en eller anden måde få det printet ud, så man kan tage det med sig. Jamen igen jeg har lige svaret på det, med at kunne beskrive mere specifikt hvad der gik galt eller hvad der var godt. Kan man slå notifikationerne fra, sådan at den ikke forstyrre. Jeg tænker

09:00: hvis det er en forældre app, så for eksempel mens børnene er i skole eller børnehave og sådan noget. Det vil faktisk være rigtig nyttigt, så man husker at få indtaste for eksempel hvordan morgenen den er gået. Men igen kun hvis man kan hive det ud bagefter. Det vil også give mulighed

10:00: for at se om der er nogle mønstre i adfærden. Nogle bestemte dage der er noget eller tidspunkter. Det synes jeg faktisk er væsentlig, for nu for eksempel min søn er i aflastning og det kunne da også være meget rart, hun også kunne bruge den, så vi har en eller anden fælles

11:00: som jeg kan gå ind og hente fra når det er vi skal til nogle samtaler, så det

tænker jeg det generelt er virkelig godt. Ja igen at man skal huske at man skal kunne hente det ud. Er det så alle aktivitetsture eller er det kun visse mærker eller hvordan og hvorledes. Altså jeg tænker i hvert fald det skal være så bredt et udvalg så muligt, så man ikke er så fastlåst i hvilket mærke produktet har, så der også er lidt i alle

12:00: priskategorier. Jamen som tidligere nævnt, så vil det være rigtig godt og ligesom kunne få informationerne ud. Ikke kun i grafer, men også det tekst skrevne, for eksempel hvis man kan komme til at formulere noget mere tekst i forhold til observationer og registreringer.

Betty and Jonathan

00:00: B: Så, nu prøver vi en gang til. Start. Husk at tænke højt, ja vi tænker og vi tænker og vi tænker. Medicin.

J: Plus

B: Jeg vil gerne tilføje medicin, så jeg trykker plus.

J: Det er tilføj medicin

B: Tilføj medicin. Her kan jeg trykke tilføj medicin. Her kan jeg skrive Medikinet

J: Prøv at skrive j

B: Nej det kan jeg ikke- Dosis, hver dag, 2 gange. Sådan og skal jeg så nu, nu kan jeg ingenting gøre.

J: Nu skal du.

B: Hvad så hvis jeg går tilbage? Hvad tror du hvis jeg går tilbage? Hvad sker der så?

J: Så tror jeg den glemmer det.

B: Det tror jeg også

J: Ja

B: Så prøv lige at trykke på plus igen. Jeg kommer faktisk ikke rigtig videre på det her.

01:00: J: Så prøver jeg at skrive j

B: Det var Medikinet. Det er vores sidste gang, ellers så må vi... Hver dag. 2 gange om dagen. Og så. . . . ja.

J: Tiden

B: Den er ligesom. . . Vi kan ikke ændre

J: Jo prøv at se. Det var jo bare fordi, det eneste vi skulle have gjort, det var bare at skrive det der, fordi der stod noget forkert. Der stod 7 og 7.

B: Okay. Godt så har vi gjort det. Hvad skal vi så nu?

J: Det må være nu vi skal svare på spørgsmål.

B: Men hvor? Nu har jeg tilføjet medicinen. Hov. Hvad synes du om medicin funktionen. Hvor godt passer den til dine behov. Husk at tænke højt. Er der noget du synes skal være anderledes eller som mangler? Andre kommentarer.

02:00: B: Næh, for os ville det være rigtig dejligt at have sådan en, fordi vi tit i weekenden, når vi ikke har lige som vi plejer, så kan vi godt komme til at glemme den der eftermiddags medicin. Bivirkninger. I opgave 2 skal du indtaste en bivirkning du har opdaget ved medicinen. Forestil dig, at dit barn klager over en mild hovedpine efter indtagelse af medicinen. Klokken er 9.41. Husk at tænke højt.

J: Så skal vi vel vælge medicin igen.

B: Skal vi ind på medicin igen? Medicin. Ingen bivirkninger i dag. Plus.

J: Tilføj bivirkning

B: Hvad var det de sagde, hovedpine?

J: Ja, mild hovedpine

B: Okay, tidspunkt først. Kl. 9.41. Hovedpine. Beskriv graden af bivirkningen. Det var sådan dårlig måske.

J: Den var okay.

B: Tilføj kommentar

03:00: B: forsvandt ved en tår vand. Okay, og hvad skal jeg så nu?

J: Nu...

B: Så trykkede du plus igen eller hvad? Opgave 3, adfærd.

J: Hej, jeg ved faktisk noget mor...

B: Ja, jeg kan simpelthen stadig ikke nå at se hvad det er du gør. I opgave 3 skal du registrerer et udbrud, dit barn havde under frokosten. Forestil dig, at dit barn reagerede meget voldsomt på et stykke broccoli på tallerknen.

J: Det er jo ikke mig. Jeg kan godt lide broccoli.

B: Så er det måltider måske? Eller hvad? Hvad skal jeg så? Adfærd! Og så skal vi trykke på plus.

04:00: B: Tilføj adfærd. Tidspunkt, 12.41. Og hvad det nu, raserianfald. Og sådan der og så skriver du broccoli. Frokosten endte i et raserianfald, da der var broccoli på tallerknen. Tilføj adfærd. Og hvad gjorde du så?

J: Tryk på plus.

B: Sådan der, men nu kom den jo igen. Så spørger den om det samme en gang til. Nå, du har nu gennemført første del af brugertesten. Anden del består af nogle eksempler på flere funktioner til app'en. Funktionerne vil

blive vist som en video, hvor du ikke skal trykke på noget. Efter hver video, bliver du stillet nogle spørgsmål. Husk at tænke højt og tage dig god tid. Se gerne eksemplerne flere gange hvis du har brug for det.

J: Funktion 1. Rutiner.

05:00: B: Denne funktion giver dig mulighed for at oprette forskellige faste rutiner og holde et overblik over hvordan rutinerne er forløbet. Se eksempel.

J: Nu kan du ikke gøre noget.

B: Nå på den måde video. Det er faktisk meget smart det her. Prøv at se, så kan den sige til os hvordan vi skal huske at få dig i gang lidt tidligere, så vi har dig i seng til den tid vi gerne vil have dig i seng. Så kan vi bare skrive her, hvordan og hvorledes. Hvordan vi får dig til at have en god aften. Det er smart. Den vil helt klart være nyttig, fordi så kunne vi lære bedre, og far kunne også lære bedre, hvordan man får en hyggelig morgen.

06:00: B: Det er faktisk rigtig smart. Næste funktion. Påmindelser. Denne funktion giver dig mulighed for at oprette påmindelser om f.eks medicin, aftaler og sengetid. Det er også smart. Har du husket din medicin? Så kommer der sådan en op til dig for eksempel, på din telefon. Har du husket din medicin nede i skolen. Så kan man sige ja, jeg har husket den.

J: Den er smart.

B: ...indtaste hvordan forskellige faste rutiner, aktiviteter og måltider er forløbet. Yes, den er også smart. Hvordan var din morgen? Det er fint det der med, du kan huske om det var en god morgen. Hvad synes du. . . . Det er en rigtig god ide, det kan barnet også bruge her ved os.

07:00: B: Flere brugere. Du har mulighed for at oprette. . . Ja, det er rigtig smart, for så kan både du have den og jeg kan og far kan have den, så kan vi alle sammen have den og få beskederne. Hej mormor, ja super smart, så kan mormor også huske det. Der er ekstra tøj i skoletasken og ipad'en for eksempel. Ligesom dengang, hvor far han skulle have fat i dig og han skrev på ipad'en. Det er rigtig rigtig smart, vi alle sammen omkring Jonathan kan hjælpe ham. Forbind aktivitetsur. Det er sådan et jeg har på, det er faktisk også meget smart. Funktionen giver mulighed for at forbinde app'en med et aktivitetsur, som kan indsamle information om barnets søvnrytme og aktivitetsniveau. Det er smart. Så kan man se her hvor mange skridt barnet har gået

08:00: B: og hvordan barnet har sovet. Hvis du har det på om natten altså. Ja, og det kunne være rigtig smart, især hvis sådan et ur, så også får de der forskellige, har du husket din medicin og nu skal du i seng om ti

minutter, så nu skal du tage dine briller af og lægge dem på øen. Sådan nogle ting.

J: Det tror jeg ikke den kan.

B: Den kan det hele. Funktionen giver dig mulighed for at eksporter.... Det er måske ikke så vigtigt for os her i huset, fordi du er så langt. Så kan man lave...

J: Lave hvad?

B: Jeg tror det er for, at man kan printe det. Så kan man skrive alle mulige ting ind i kalenderen og så kan vi se hvordan dagene har været.

J: Det er lækkert.

B: Og så kan man eksporter det.

09:00: B: Så kan man skrive det ud, hvis man har brug for det, men jeg tænker, det er ikke så vigtigt for os, fordi Jonathan er så velfungerende. Tak for din deltagelse. Brugertesten er nu slut og du kan afslutte ved at trykke på den gule hånd og uploade. Så må du trykke på den gule hånd.

J: Juhuuu

Appendix E

Unmoderated Remote Evaluation [DA]

E.1 Instruction shared in Facebook groups

"Kære forældre,

Hjælp to specialestuderende med at realisere app til familier med børn med ADHD. Vi mangler brugertesterer. Brugertesten kan udføres hvor og hvornår det passer dig - det eneste du skal gøre, er at downloade en app og snakke om hvad du gør og tænker. Det hele tager maks. 15 min.

Alle som deltager vil modtage en 20% rabatkode til vicca.dk

Se video for mere info: youtu.be/I9TF8o-Fbqo

Setup instruktioner: 1. Åbn dette link på din mobil: http://bit.do/adhd-app[1] 2. Følg instruktionerne for at installere app'en Participate 3. Klik på ovenstående link igen 4. Klik "I already have Participate". App'en vil nu åbne brugertesten 5. Skriv dit navn og e-mail 6. Tillad optagelse af lyd og skærm (kameraet behøves ikke) 7. Når du har gennemført testen, uploader du den

Har du spørgsmål eller problemer, så skriv meget gerne en PM.

På forhånd tak for hjælpen!"

[1]The link through the lookback.io platform is not available anymore. You can try the unmoderated remote evaluation directly through the Adobe Xd link bit.do/logmeremote