Can an app help make life easier for children with ADHD?

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We have tended to associate welfare technology with support for the elderly. Now researchers are looking at whether technology such as digital calendars and smartwatches can also provide support for children with autism and ADHD.

Being able to function well in the morning is a challenge for parents of children with cognitive problems. Small details such as putting their leggings on inside out, or an adult saying something 'the wrong way' can trigger a temper tantrum and ruin the entire day. Children can become unruly, and some even become aggressive when something prevents them from following their routines and habits.

This is one of many insights that researchers from SINTEF have learned from interviews with mothers of children who have autism or ADHD. "Being able to function well on a day-to-day basis is a big problem for these children – and for their families", say Lisbet Grut and Øystein Dale of SINTEF.

Technology that can help

Previous studies have shown that ordinary aids such as mobile phones and MP3 players can help young people with Asberger's and autism to plan time and activities. Smartwatches may be able to help remind sufferers about appointments and tasks, and various software on smartphones and tablets can help them visualise sequences and structures

in activities. The researchers believe that by developing aids such as this, they could help provide support in everyday situations. Now they want to test out their theories.

Find solutions and allocate responsibility

A survey has already been carried out, in which researchers interviewed staff from NAV, Centres for Assistive Technology, service providers to the municipalities, assistive technology suppliers and selected families.

Lisbet Grut explains that the aim has been to find out where the problems lie, and what the essential factors are in finding a solution. "ADHD is a group that is easily neglected, and it is difficult to help sufferers, because their problems are varied and complex", she says. "But we believe that the work we are doing now will help us to find some good solutions, and provide clearer distinctions between the roles and responsibilities of the various support service organisations".

Service mechanism for rule-governed behaviour?

The interviews with the mothers and the support services revealed that assistive technology tends to be provided more on the basis of a diagnosis than on functional problems and needs. This means that many families are not getting the opportunity to try out technology that may be able to help them.

The families said that they would like NAV to focus on their needs instead of basing treatment on a diagnosis and on the technology NAV had approved as an aid. Interviews with organisations involved in providing assistive technology revealed the same thing. Current regulations and practice in NAV mean that solutions are limited to a few aids, and solutions that are regarded as everyday technology are not

taken into consideration.

Support services floundering

"We hope that this work will clarify some issues, but we freely admit that it is complicated and that there are no easy solutions", says Øystein Dale. "Many of the problems are caused by the fact that the various support bodies are not sure what their responsibilities are. Each expects that others will take responsibility for many of the tasks. A lack of resources and expertise in the municipalities and the Centres for Assistive Technology are other reasons why families feel that they are not getting enough support", adds Lisbet Grut.

Tests on three families

The interview process was the start of more comprehensive work in which the researchers, together with three families in Vestfold who have children with ADHD or autism, will begin trying out welfare technology. With the help of the researchers, these families will try out mobile apps, smartwatches and other technology that could help the children to keep track of their daily activities such as getting dressed, cleaning their teeth, etc.

The tests will take place in the spring, and a draft of the report should be ready by the summer. The Centre for Assistive Technology in Vestfold is involved in the project, and the lessons learned will be discussed with them at every stage.

The preliminary project and the project to test the welfare technology on children with ADHD and autism will be carried out by researchers from SINTEF Technology and Society.

More information: The report from the preliminary project can be downloaded at www.sintef.no/publikasjoner-SI … ?pubid=SINTEF+A25853

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