



Adolescence, autism and calendar calculation:

a case study.

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Special abilities and strengths in autistic individuals have been the subject of research for almost a hundred years now. For a long time, it was thought that special abilities were limited to only a handful of exceptional individuals with autism. We now know that a majority of autistic people show heightened abilities – a relative ability peak¹ – in one domain or more. These special abilities, along with intense interests, have been regarded as unimportant or detrimental to autistic individuals' functioning and well-being. The last 20 years have been marked with a change of perspective in research, where special abilities are now considered as useful and essential for their well-being.

Media portrayal of autistic abilities in different movies or television series have shaped the public's opinion and views on autism. These portrayals – based on real but rare cases of exceptionally talented individuals – positively modified views on autism, while creating unrealistically high expectations of autistic strengths and abilities.

It can be tempting to draw conclusions concerning a person's learning abilities, daily functioning or general intelligence based on the presence of a special ability. As a majority of cognitive tests have been known to underestimate the abilities of autistic individuals, the idea that one particular ability could imply underlying preserved intellectual abilities is appealing. Navigating expectations relating to special abilities and their meaning in autism can therefore be difficult.

To better understand the specific challenges faced by individuals with autism that have special abilities, a team of researchers and clinicians studied C.A.'s abilities. Researchers were also interested in his family's expectations and hopes for his future, as relating to his special ability. C.A. was a 13-year-old teenager with a special ability for calendar calculations. Specifically, he was able to easily identify the correct day of the week when given a date on a calendar.



These portrayals – based on real but rare cases of exceptionally talented individuals

1. We invite you to read the article *Autism Explained* in 10 numbers in the last issue of *Sur le spectre* for more information about absolute and relative peaks of abilities.

In that respect, abilities and strengths can be developed but general cognitive profile must be taken into account to set realistic expectations and goals and ensure the experience is a positive one for the individual.

Original article:

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Evaluation

A multidisciplinary evaluation was initially conducted with C.A. This included documenting his developmental history, evaluating his intelligence, language, autonomy, social life at school and at home, performing a psychiatric examination and documenting his strengths and interests.

His parents counted on C.A.'s special ability and its underlying strengths to facilitate his school participation, and eventually, his workplace inclusion. His parents had high expectations and thought his general potential and abilities were just waiting to be developed. These high expectations were associated with signs of anxiety and depressive moods for C.A. His evaluation revealed he had a relative ability peak in non-verbal reasoning, as commonly reported in autism. Namely, he was better at a task requiring him to complete a logical sequence of images, compared to tasks measuring his working memory, visuospatial abilities or his information processing speed. Whereas his performance in non-verbal reasoning was in the average range for his age, his performance on other abilities were lower than expected at his age. CA had important language difficulties :speaking as well as understanding oral and written language. These difficulties were substantial enough to warrant the need for a language disorder diagnosis. His language difficulties caused problems for evaluating his general abilities, as well as for his educational learning in school. He also had a low level of autonomy compared to other boys his age.

His evaluation showed that in addition to being interested in video games, watching humor or rap videos on YouTube, and Lego, he also had an interest in music, geography and biographical and movie release dates.

Identifying melodies and movies after hearing the first notes or sounds of the soundtrack, spatial orientation, calendar calculations and date memorizations were C.A.'s strengths as reported by his parents and himself. His calendar calculation abilities were tested systematically using past and future calendar dates. His score showed he performed better than average on this test, as most individuals are not able to calculate calendar days. C.A. mentioned that his strategy for his calendar calculations was based on prior movie release dates (Fridays in Québec). However, when compared to worldwide calendar experts, his abilities were considered modest.

Intervention

Following C.A.'s multidisciplinary evaluation, the team determined several intervention objectives: develop

emotion regulation skills, make adjustments to his daily activities so they are in line with his strengths and interests, develop autonomy, and align his perception and his parents' perceptions concerning his abilities with his actual strengths and weaknesses. C.A. and his family had access to a year of clinical follow ups. These included psychiatric consultations, as well as an individual psychotherapy combined with parental coaching with a psychoeducator.

Although it may not lead to C.A obtaining his high school degree or to developing a career path, the school adaptations and the multidisciplinary follow ups allowed him to continue his education at his own pace. Having a better understanding of his particular challenges helped C.A. and his parents shape new and realistic expectations. For C.A., pursuing his own academic goals corresponded well with his interest in knowledge acquisition and contributed to fostering positive self-esteem.

What can we learn from this study?

Special abilities (strengths) can present themselves regardless of the level of intellectual functioning. That being said, a person's achievements in their area of expertise are often related to, or limited to, their general functioning. In that respect, abilities and strengths can be developed but general cognitive profile must be taken into account to set realistic expectations and goals and ensure the experience is a positive one for the individual.

This study also demonstrated how high expectations based on a special ability can trigger anxiety, frustration, low self-esteem or tensed relationships (at home or at school), and general disappointment towards different services. Special abilities may not lead to better academic performance or career opportunities but can contribute to a person's well-being and quality of life, are they are associated with positive emotions and can also bolster self-esteem.

Conclusion

Autistic strengths or interests appear to be independent of their direct utility in everyday life, whether in the present or in the future. Engaging in activities that a person enjoys and that allow a person to feel competent and valued can be beneficial for the person's self-esteem. Encouraging someone in the pursuit of their interest should therefore be done without any particular expectation, other than for the well-being or the sense of pride it provides, which is beneficial to their mental health. 