Sur le spectre
Number 17
Spring 2024
The Montreal Cognitive Neuroscience Autism Research Group

02

Language development in autism with hyperlexia

The case of two identical twins

Sur le spectre

Number 17 – SPRING 2024

SUMMARY

Savoirs partagés
RECHERCHE CIUSSS NÎM

Université de Montréal
CHAIRE DE RECHERCHE MARCEL ET ROLANDE GOSSELIN EN NEUROSCIENCES COGNITIVES FONDAMENTALES ET APPLIQUÉES DU SPECTRE AUTISTIQUE

Official Magazine of the Montreal Center for Research, Evaluation and Intervention in Autism (CREIA).

CREIA is a center of expertise in autism, located at Rivière-des-Prairies Hospital in Montreal. In addition to providing autism assessment and intervention services, CRÉIA unites 6 university researchers, professors in 4 Quebec universities. The research conducted at CRÉIA ranges from understanding brain function and autistic perception, to mental health and intervention, to the strengths and interests of people with autism.

Graphic design and translation are made possible thanks to the financial support of the Marcel and Rolande Gosselin Research Chair in Fundamental and Applied Cognitive Neuroscience of the Autism Spectrum. The writing and editing of the texts is done on a voluntary basis by CREIA researchers, clinicians and students and their collaborators.

Sur le spectre:

We invite you to write to us!

Sur le spectre is now in its 17th issue, thanks to all the volunteer authors and members of the editorial board, who give so generously of their time and energy to this project. It's also thanks to their meticulous work that we're able to bring you quality articles on recent research findings in the field of autism.

We invite you to write to us if you have suggestions for topics to cover, articles you'd like to read in lay terms, or any other suggestions. We're doing this for you, our readers. We therefore hope that our articles will cover subjects that interest you and contribute to your interest in science and research.

Once again, I'd like to thank our partners: the Marcel and Rolande Gosselin Research Chair in Fundamental and Applied Cognitive Neuroscience of the Autism Spectrum at the Université de Montréal, as well as our wonderful graphic designers: Alibi Acapella, who are behind the magnificent visuals in Sur le spectre.

In this issue, you'll find an article on a study carried out by our collaborators in France on how to improve the quality of life of autistic youth. A study of hyperlexic twins, followed for several years by Alexia Ostrolenk and her team, one of the group's students who recently completed her doctorate, is also summarized in this 17th issue. You'll also find an overview of an article by Élizabeth Pellicano and Jacquiline den Houting, two renowned researchers, who look at what the neurodiversity approach can bring to autism research. Laurent Mottron also wrote a lay version of an article by his student Eya Mist Rødgaard on factors influencing clinicians' diagnostic certainty. Finally, you'll find an article comparing the results of two studies on emotional expression in autism, the first by Claudine Jacques, a researcher in our group and the second by Northrup and colleagues from Pittsburgh, USA.

Enjoy your reading!

Valérie Courchesne Ph.D.

Chief editor

We therefore hope that our articles will cover subjects that interest you and contribute to your interest in science and research.

A hyperlexic child will develop an excellent ability to decode words at a very early age but will have more difficulty understanding the meaning of the text.

Language development in autism with hyperlexia

The case of two identical twins

By AUDREY-ROSE TURGEON

What is hyperlexia?

Present in 6 to 21% of the autistic population, hyperlexia is characterised by an intense and precocious interest in written material. A hyperlexic child will develop an excellent ability to decode words at a very early age but will have more difficulty understanding the meaning of the text. Hyperlexia is a special ability linked to autism: 84% of hyperlexic people are on the autism spectrum. Often seen as an obstacle to language development, could this marked interest in letters reveal another way of developing language?

Paul and Luc* are identical twins with autism and hyperlexia who were seen 16 times between the ages of 4 and 8. Their social, communicative and language skills, as well as their strengths and interests, were assessed using questionnaires, interviews with the mother, adapted standardised tests, and observations with the children.

Strengths and Interests

PAUL

From his very first months, Paul showed a keen interest in letters. By 6 months, he was already often reaching for toys with letters. By 18 months, he was writing words backwards and forwards, and correcting letters of the alphabet that had been inverted. His other interests are mainly related to visual and auditory perception. He enjoys lining up toy cars or placing them in the shape of a letter, writing words and drawing characters from his favourite TV programme, classifying objects according to their colour or shape, and building structures with toys to produce an image with their shadow. He also developed a particular interest in classical music at a very early age. When he was around 18 months old, his mother saw him writing the word "Beethoven" as he hummed Beethoven's 9th symphony.

LUC

Like Paul, Luc showed a marked interest in letters and numbers from the age of 12 months. By 18 months, he began to write words, name letters in French, English, and Spanish, correct the spelling of written words that he had never used orally, and correct alphabetical order forwards and backwards. He could accurately sing complex melodies that he has heard before, solve 48-piece puzzles, and build realistic Lego structures, such as cars and aeroplanes, without a model.

Language, social and communicative skills

Standardised tests were used to measure the language skills of the twins at ages 4, 5 and 7 years old. Their performances were irregular and underestimated their actual abilities. According to the tests, at 4 years of age, the twins' ability to produce and understand words was similar to that of a 16-month-old child. Instead, the test results reflected their mood and cooperation on that day. Children sometimes don't give answers, not because they can't, but because they don't seem to want to. Rather than responding to the instructions given, they spontaneously set about doing something that interests them, such as drawing and writing the names of characters from their favourite TV programme.

PAUL

Paul's first significant words, other than "mommy" or "daddy", were spoken at around 15 months. At 16 months, he suddenly stopped responding to his first name and his oral language skills stopped progressing. At age 4, Paul seems to show little interest in social interaction, not engaging in reciprocal exchanges and not interacting with other children his age, apart from his brother. However, Paul was able to express his basic needs using simple words, pointing, or directing the carer's hand towards what he wanted. He used many incomprehensible made-up words and did not use sentences to communicate. By the age of 7, this jargon had almost disappeared from his vocabulary, and he was able to form simple sentences without errors, in French and English. He was also able to name familiar objects from a picture, although he sometimes gave incorrect, but connected answers, such as "fire, water" when shown a picture of a fireman. According to his parents, he knows over 500 words, but cannot use them to communicate.

Although the intense interest in written material may seem invasive and restrictive at first, over time it can become more complex and constitute a gateway to new interests, thus contributing to the acquisition of new skills rather than detracting from them.

* Paul and Luc are fictitious names used to protect the children's anonymity.

Hyperlexia may therefore not be an additional barrier to language acquisition.

Original Article:

Ostrolenk, A., Courchesne, V., & Mottron, L. (2023). A longitudinal study on language acquisition in monozygotic twins concordant for autism and hyperlexia. *Brain and Cognition, 173*, 106099. https://doi.org/10.1016/j.bandc.2023.106099

LUC

Luc's development of language and social skills is similar to that of his brother. Before the age of 3 years old, his language consisted exclusively of letters, which he named as soon as they are present in his environment. At ages 4 and 5, Luc made occasional errors in pronouncing sounds and displayed echolalia, the repetition of words or phrases that have already been heard. Unlike Paul, he could make combinations of words and showed more advanced social communication skills than his brother, such as pretend play. He sometimes initiated interactions with his brother by joining in his games, but never with other children. At age 7, Luc's ability to produce words was like that of a 4-year-old, while his ability to understand words corresponds to that of a 5-year-old. Also, the transformation of sounds had completely disappeared, and echolalia had diminished considerably. He is now able to form complete sentences of increasing complexity, to recite and manipulate sequences of letters and numbers, to have short, simple conversations, to respect turn-taking, and he takes the initiative in asking questions.

Evolution and importance of interests

According to their mother, by the age of 5 both children were devoting around 90% of their time to their various intense interests, mainly linked to the same sources. Both children's interests evolved and became more complex. Their interest in letters developed into a passion for books at the age of 6. At the age of 8, new interests associated with social situations, such as playing cards, role-playing and playing with other children, emerged, whereas the twins showed no interest in these activities at the age of 6. Although the intense interest in written material may seem invasive and restrictive at first, over time it can become more complex and constitute a gateway to new interests, thus contributing to the acquisition of new skills rather than detracting from them.

Although the autistic interest in written material does not initially appear to have a social function, the twins' common interests have enabled them to develop relationships, as they now spend most of their time playing together and sharing their activities. The twins have used their ability with letters to communicate and to compensate for their difficulty in communicating orally. To ask their mother for something, they can now write a word to describe what they wanted.

Their interests were also associated with soothing properties and contributed to their well-being. Singing the alphabet could help to calm them. In tests, the twins were considerably more motivated and focused on the task when their interests were included. This illustrates the importance of taking the interests of autistic children into account when formulating interventions designed to build a picture of their abilities.

Hyperlexia: an alternative route to language acquisition?

At the end of the study, the twins' language development was still markedly delayed in relation to their age. Their trajectory was characteristic of what is generally observed in autistic children: a significant delay, but a late recovery. Hyperlexia may therefore not be an additional barrier to language acquisition. Several studies suggest that hyperlexia may reflect the superior functioning of certain autistic visual processes, such as shape recognition. This would explain their interest in complex visual forms such as letters. This interest in written material could then be used to stimulate the development of oral language. Fluent language may then appear suddenly following the development of reading skills in hyperlexic children.

What are autistic signs that give a clinician the sense of certainty

that they are dealing with an autistic child?

By LAURENT MOTTRON

Introduction

When clinicians diagnose an autistic child, they use tools and criteria acquired during their professional training. Over time, their clinical experience, forged by encountering many similar cases, enriches their mastery of these tools. This expertise, although elusive directly, enables them to form a diagnostic opinion even in the presence of incomplete presentations or missing signs. The clinician's expertise cannot be replaced by laboratory tests, as there are no biological markers for diagnosing autism. Similarly, diagnostic instruments, which aim to establish whether a person has enough signs to be considered autistic, are based on thresholds, and do not always match clinical expertise. In the study that we are presenting, the researchers examined the relationship between the signs detected by an instrument widely used to diagnose autism throughout the world: the ADOS (Autism Diagnostic Observation Schedule), the clinician's certainty of a person being autistic, and other certain markers such as head circumference.

Methodology

The researchers used a database of 1,511 autistic individuals aged 4 to 18 years old and analysed separately the factors contributing to clinician certainty.

The clinician's expertise cannot be replaced by laboratory tests, as there are no biological markers for diagnosing autism.

This suggests that new diagnostic instruments should give more weight to certain signs, or the combination of signs, rather than putting them all on an equal footing, as is currently the case with instruments such as the ADOS.

Results

The signs most related to clinician certainty varied according to the child's profile and age. In non-verbal children, the most significant signs included the absence of demonstration or direction of facial expressions towards others, repetitive interests or stereotyped behaviours, abnormal intonation, and lack of imitation. For children beginning to talk, it was the absence of joint attention, shared joy, social overtures, and facial expressions directed towards others which became the most associated with clinical certainty. However, the total score of the diagnostic instrument, in other words, the sum of all the signs observed in the child, is only modestly correlated with the clinician's certainty. Moreover, the signs associated with clinical certainty vary according to the child's language level. In non-verbal children, the symptoms producing this certainty belong to the social and repetitive behaviour domains. When children began to speak and become slightly older, the five signs most associated with certainty belong to the social and communicative domains.

Another significant finding in this research is that having a larger head circumference than expected based on the child's height is associated with autistic signs, which are in turn associated with greater clinical certainty. Finally, the greater the gap in performance between a child's non-verbal skills (what an autistic child can do without using language) and verbal skills, the greater the presence of these same signs and the greater the chance that the child will be recognised as autistic with certainty by the clinician.

Discussion

The association between clinical certainty and a larger head circumference than most non-autistic people of the same height and age was observed by the doctor who discovered autism, Leo Kanner. The reason why having a larger head predisposes an individual to autism remains unknown. The study also confirms that the discrepancy between non-verbal and verbal skills is truly characteristic of autism, or at least of autism recognised with certainty (also known as prototypical autism).

Finally, it is important not to confuse the presence of distinctive signs with the severity of autism. An expert clinician will more easily identify someone as autistic if they show highly characteristic signs, especially when they are combined. This suggests that new diagnostic instruments should give more weight to certain signs, or the combination of signs, rather than putting them all on an equal footing, as is currently the case with instruments such as the ADOS. Our research group is working with experts on five continents to determine precisely how much weight the different signs of autism should be given, when they become visible, and when they are at their clearest. The aim of this ongoing research is to develop instruments that take into account the importance of each sign for diagnosis, but also take into account the other signs that are present (or absent), and the child's age.

Original Article:
Rødgaard, E.M., Rodríguez-Herreros, B., Zeribi, A., Jensen, K., Courchesne, V., Douard, E., Gagnon, D., Huguet, G., Jacquemont, S. and Mottron, L., 2024. Clinical correlates of diagnostic certainty in children and youths with Autistic Disorder. *Molecular Autism*, 15(1), p.15.

Neurodiversity,

a Better Pair of Glasses for Studying Autism?

By FLORENCE LAJEUNESSE

Research into autism has historically followed a medical approach, studying it as a developmental disorder of the brain, an undesirable deviation from the norm. In a literature review published in 2022, Elizabeth Pellicano and Jacquiline den Houting raise three important issues concerning the conception of autism in traditional medicine.

Autism in Traditional Medicine

Traditional medicine views autism as a disability; in other words, as a series of "persistent deficits" in communication and social interaction.

1- Focus on deficits

The conventional medical approach tends to focus on the impairments and deficits of autistic people, and thus often shifts the focus away from autistic strengths. This strategy emphasizes what autistic people can't do and leaves out what they can do, despite many studies showing that autistic people outperform non-autistic people in many tasks. Unfortunately, these strengths are still rarely recorded and very often interpreted as the consequences of a deficit or deficiency. This negative interpretation of results demonstrates the superiority of autistic people which has harmful consequences that go beyond research: the stigmatization of autistic people being the most worrying.

2- An individualistic model

The conventional, deficit-based approach focuses on the individual autistic person and takes little into account of the context in which these difficulties arise. The individual with autism therefore bears the sole burden of correcting their deficits. Interventions are thus designed to modify, diminish, or modulate their behaviors, without even questioning the environment in which these people find themselves. This is particularly true of stimming behaviors, where interventions persist despite their regulating and soothing function.

Original article:
Article original: Pellicano, E., & den Houting, J. (2022). Annual Research Review: Shifting from 'normal science' to neurodiversity in autism science. Journal of Child Psychology and Psychiatry, 63(4), 381-396. https://doi.org/10.1111/jcpp.13534

3- Excluded voices

The emphasis on deficits and the scant consideration of the effect of the environment on autistic behaviours might not be so common if autistic people had a say in the research carried out on their condition. Autism is mainly studied from the outside, via a neurotypical view based on external observations, and rarely from the inside, questioning the very experience of autistic people, and of how they feel. What's more, the latter rarely have a say in what autism research is about, whether it's the "how" or the "why". Autism research thus focuses on questions of identification, treatment, and even prevention, on a genetic and biological scale. This approach contrasts sharply with the wishes of the autism community, their relatives, and professionals, who want research to focus more on areas of more immediate practical interest.

Changing Vision: The Hope of Neurodiversity

These three major drawbacks emanating from traditional medicine have been causing a stir for some time. The response from the autism community and its allies is unequivocal: a new paradigm embracing the concept of neurodiversity is needed, and this is what the authors discuss in their article.

Diversity, not deficits

The term "neurodiversity" refers to the multiple ways in which the human brain and mind develop. Neurodiversity is a broad spectrum that includes both "typical" and "divergent" development. Two key ideas flow from this paradigm: Firstly, typical development is neither superior nor inferior to neurodivergent development. Neurotypicality doesn't have to be "the right" developmental trajectory, and neurodiversity, in itself, is valuable and contributes to the richness of a society. Secondly, everyone deserves to be treated with dignity and respect, no matter how far they deviate from the presupposed norm. In fact, seeing autism as an integral part of a person's identity is linked to better mental health, both for autistic people and their parents!

The need for social responses

Recognizing neurodiversity as an inherent feature of society, rather than a burden, can also help us understand the nature of the obstacles faced by many autistic people. In this sense, the notion of disability becomes the result of an environment poorly adapted to needs, rather than an abnormal condition that needs to be corrected. The environments in which we live are generally designed to meet the needs of the neurotypical population. Yet these same environments are often sub-optimal, and even hostile, for neurodivergent people. It is essential to reimagine the adaptation of our conventional environments for people with autism, and to question the social factors that encourage exclusion from schools, victimization, and unemployment, and more, among this population.

Autistic people have their say!

Even today, people with autism are rarely consulted or involved in research. The neurodiversity paradigm responds to this observation by emphasizing the importance of self-determination and autonomy for people with autism. According to this approach, people with autism should be involved in all decisions likely to affect them, whether through, but not limited to, greater participation in a project or even the co-construction of a research project. Community involvement in research has already proved its worth; for example, in the study of HIV in gay communities, or the numerous studies carried out in First Peoples communities. This type of approach increases the relevance of scientific discoveries by making them better adapted to the reality of the people concerned, as well as being consistent with their values. This research is more complicated, yes, because, to work properly, this approach requires not only a greater mobilization of researchers, but also mobilization of major institutions, such as universities and funding agencies.

In conclusion, we are living in an era of significant change in which the vision of autism is being rethought. While it is undeniable that conventional medicine has been a key tool in demystifying autism, its strict focus on the autistic individual and their deficits is also a hindrance to its flourishing. Considering neurodiversity would mean both changing the way we train the next generation of scientists and demanding substantial changes in the real world, so that it better serves autistic people. In short, it's high time to rethink the framework with which we want to study autism, and many, like Pellicano and den Houting, believe that the neurodiversity paradigm is promising.

Recognizing neurodiversity as an inherent feature of society, rather than a burden, can also help us understand the nature of the obstacles faced by many autistic people.

SCHOOL-AGED AUTISTIC AND TYPICAL CHILDREN SOUGHT FOR A STUDY AT RIVIERE-DES-PRAIRIES HOSPITAL!

Centre intégré universitaire de santé et de services sociaux du Nord-de-l'Île-de-Montréal
Québec
UQO
UQÀM
Université de Sherbrooke
Université de Montréal

This study aims to document the trajectory of **special interests**, **repetitive behaviors**, and **facial expressions**, using the newly adapted Montreal Stimulation Play Situation (MSPS) for school-aged children

* **MSPS-2** is an observational setting where children are exposed to play materials (e.g., electronic games, books, logic games, sensory objects such as teddies, piano) for approximately one hour.

To be eligible, your child must:

Be between 6 and 12 years old

To participate, please contact:
projet.intelligence.cnmtl@ssss.gouv.qc.ca

This study is conducted by:
Claudine Jacques, UQO • *Valérie Courchesne, UDeM* • *Laurent Mottron, UdeM* • *Mélanie Couture, UdeS* • *Isabelle Soulières, UQAM* • *Ghitza Thermidor*

CRSH SSHRC
Conseil de recherches en sciences humaines
Social Sciences and Humanities Research Council

Article of number 13 spring 2022 page 6.

Does the Emotional Expression of Young Autistic Children Differ from that of Neurotypical Children?

The Importance of Context: The Sequel!

By ALLYSON BASTIEN and CATHERINA LACELLE

In a previous issue, we presented an article highlighting the importance of context in the study of emotional expression in young children with autism. In this study, conducted by Claudine Jacques and her colleagues, autistic and neurotypical children aged 2 to 5 were exposed to the Montreal Stimulation Situation (MSS), a natural context adapted to the particular characteristics of autistic children. The frequency and duration of the children's emotional expressions, and the number of children who displayed each emotional expression were then recorded. According to the results obtained, there was no difference between autistic and neurotypical children in terms of expressing positive, negative, and neutral emotions, but autistic children expressed more unknown emotions (i.e., emotions that were difficult to interpret).

Two years later, in 2024, Northrup and his colleagues published a study in the journal Autism that also looked at the emotional experience of young autistic children in a natural context. Below is a summary of Northrup's study and a comparison with Jacques' 2022 article.

How does the Northrup's study examine emotional expressions in young autistic children?

This study uses the Lab-TAB task with 17 children with autism and 20 children without autism aged 2 years old (22 to 28 months). This task, consisting of nine short activities simulating everyday situations, aims to elicit three emotions: joy, frustration, and discomfort. It is important to note that the tasks that elicit unpleasant emotions are followed by a pleasant moment.

The children are filmed during the situations; the videos are then divided into 10-second intervals for analysis. These intervals are then manually coded by two research assistants who characterise the valence (positive, negative, neutral) and intensity of the emotion expressed during each interval on a scale of -3 to +3.

Afterwards, the positive, negative, and neutral emotions are then analysed according to three indicators:

1) **Proportion** of time spent in positive, negative, and neutral emotional valence
2) **Intensity** of the emotions
3) **Range** of emotions: distance between maximum intensity and minimum intensity

What results did they obtain?

1) **Proportion** of intervals spent in positive, negative and neutral affect:

Positive emotions: autistic < non-autistic

Negative emotions: autistic = non-autistic

Neutrality: autistic > non-autistic

2) **Intensity** of emotions:

Positive emotions were more intense in the joy task and negative emotions were more intense in the frustration and discomfort tasks in both groups.

The authors revealed the following results concerning the intensity of positive and negative emotions. However, these differences between the groups were not significant.

Positive emotions: autistic < non-autistic

Negative emotions: autistic > non-autistic

A non-significant difference means that the difference between two groups is not large enough to be considered.

3) **Range** of emotions:

Positive emotions: autistic = non-autistic

Negative emotions: autistic = non-autistic

Neutrality: autistic = non-autistic

Let's compare these two studies!

In summary, in both studies, children with autism expressed as many negative emotions as the comparison group.

However, Northrup and his colleagues found that autistic children expressed fewer positive emotions and more neutral emotions than non-autistic children, whereas Jacques and her colleagues suggested that autistic children expressed as many positive and neutral emotions as neurotypical children.

Why do the results differ?

The discrepancy in the results can be explained by a multitude of factors. The two studies sought to assess whether the valence of the emotions expressed differed in autistic children compared with neurotypical or non-autistic children. Although both methodologies allow emotions to be expressed in a natural context, the nature of these contexts differs. The task used by Northrup was originally created to assess neurotypical children in a structured context, whereas the situation used by Jacques was specifically designed to assess the behaviour of autistic children in a free play context.

In addition, these two studies share the same coding process involving two human observers who interpret the children's emotional expressions according to positive, negative and neutral valences. The two methods are also similar when it comes to analysing the duration of emotions. Nevertheless, several differences were identified which could also help to explain the divergence in results:

The importance of considering the context when interpreting emotional expressions.

Methodological Differences	Northrup et al. (2024)	Jacques et al. (2022)
Sample: Participants' age	22 to 28 months	27 to 56 months
Sample: Comparison group	**Non-autistic:** potential developmental concerns	**Neurotypicals:** no developmental concerns
Coding process	10 second intervals	Continuous
Analysis process	Intensity and range	Frequency

What we can learn

- These two studies highlight the importance of using natural situations to represent the wide range of emotional expressions of young children with autism.
- The results of both studies underline the relevance of taking context into account to better capture the emotional expressions of children with autism.
- In both studies, many similarities were found in the emotional expression of children with and without autism. The differences observed between the groups could therefore be explained by the context rather than by a fundamental difference in the expression of emotions.
- It should be kept in mind that the analysis and interpretation of the emotional expressions were carried out by neurotypical individuals, which may also have had an impact on the results. It is possible, for example, that autistic children express positive emotions differently, and that this is not as well captured by neurotypical observers.
- Although both studies focus solely on exploring facial expressions, the authors stress the value of considering other modalities of emotional expression such as body language, tone of voice, verbal expressions, and behaviours in future research.

Original article:

Articles originaux: Northrup, J. B., Cortez, K. B., Mazefsky, C. A., & Iverson, J. M. (2024). Expression and co-regulation of negative emotion in 18-month-olds at increased likelihood for autism with diverse developmental outcomes. Autism, 13623613241233664.

Jacques, C., Courchesne, V., Mineau, S., Dawson, M., & Mottron, L. (2022). Positive, negative, neutral—or unknown? The perceived valence of emotions expressed by young autistic children in a novel context suited to autism. Autism, 26(7), 1833-1848.

How can the quality of life

of autistic children be improved?

By JÉRÔME LICHTLÉ

Well-being of autistic children is intimately linked to the parent's stress management skills.

Contributing to the quality of life (QoL) of autistic children is the aim of our clinical interventions. Assessing QoL is complex because it is both subjective and multidimensional. Moreover, the QoL of an autistic child depends on factors that are not necessarily the same as those of a typical child. Finally, obtaining an autistic child's assessment of their own QoL is a challenge compared to that of an adult due to the child's age and the fact that they often speak little or not at all.

In a study published in 2023, a team of researchers met this challenge by constructing a questionnaire to assess the QoL of young children with autism. The researchers asked parents of autistic children to assess their child's QoL using this questionnaire, while gathering a larger range of information such as the child's temperament, the parent's state of health, and the presence of other autistic children within the siblings. The researchers' aim was to gain a better understanding of what might influence the QoL of autistic children.

The results of this research showed that the more emotional difficulties a child had, the poorer their QOoL was. The child's QoL also increased as the parent's psychological flexibility increased. Psychological flexibility is the parent's ability to accept their emotions in the 'here and now' in order to deal with them more effectively, if this is in the child's best interests. Some parents of autistic children, for example, may not allow themselves to go out to the park for fear of how others will look at them if their child displays inappropriate behaviour. In this example, a flexible parent will not stop themselves from going to the park, even though they are afraid. The flexible parent no longer tries to hide from their emotions for the sake of their child's well-being. Another example of flexibility is this: faced with a child's incessant demands, the parent can either give in or refuse the child's request by getting angry. These two attitudes do nothing to help the child learn to regulate their own emotions.

The challenge for parents is thus to learn how to react less to their own emotions. They will have to behave in a way that seems fairest to their child and themselves. They must focus on their own behaviour before trying to change their child's behaviour, thereby helping to improve their feeling of parental competence.

To help parents achieve this, they will be offered psychoeducation on autistic functioning and criteria on their child's specific well-being. To develop psychological flexibility, a particular type of cognitive behavioural therapy, Acceptance and Commitment Therapy, or Mindfulness Meditation, are used. The authors of this study not only found a relationship between mindfulness meditation and the reduction in parental stress, but also a reduction in their child's behavioural problems linked to uncontrollable emotions.

Clinical and research data has already identified that the well-being of autistic children is intimately linked to the parent's stress management skills. This new data adds to these findings, and suggests that parents could contribute to improving their child's well-being by helping them to regulate their emotions. Leo Kanner, looking back 30 years later at the 11 children he had diagnosed in 1943, had already noted that the most successful people were those whose parents had been “gently firm”.

Original article:

Lichtlé, J., Devouche, E., Dialahy, I.Z., de Gaulmyn, A., Monestès, JL., Mottron, L., ... Cappe, E. (2023). Development, Psychometric Evaluation, and Factor Analysis of an Instrument Measuring Quality of Life in Autistic Preschoolers. *International Journal of Methods in Psychiatric Research*. DOI: 10.1002/mpr.2002

Lichtlé, J., Sperduti, M., Monestès, J.L. & Cappe, E. (soumis). Mindfulness meditation-based interventions in parents of autistic children: A systematic review of effects on children. *Review Journal of Autism and Developmental Disorders*.