Sur le spectre

Number 21
Spring 2026

Magazine of the Collective for Research, Evaluation and Intervention in Autism of Montreal

06

“Invisible” autism does not exist

09

How is calendar calculation possible in autism?

13

Understanding adaptive behavior and its influence on the functioning of autistic individuals

16

Difficult times: when autistic individuals use psychiatric emergency services

02

A woman and autistic,

but not “female autism”

Sur le spectre

Number 21 – **SPRING 2026**

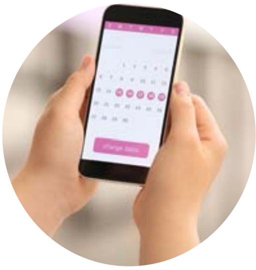
SUMMARY

CREIA
Collective of Research, Evaluation and Intervention in Autism of Montreal

Savoirs partagés
RECHERCHE CIUSSS NÎM

FONDATION
HÔPITAL DU
SACRÉ-CŒUR
DE MONTRÉAL
Innover. Soigner. Aimer.

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



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

CREIA is a Collective 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.

The graphic design was made possible thanks to the financial support of the Sacré-Coeur Foundation.

The writing and editing of the texts were done on a volunteer basis by researchers, clinicians, and students from CRÉIA and their collaborators.

Editorial Committee

Sur le spectre:

Sur le spectre magazine is celebrating its 10th anniversary this year

Sur le spectre magazine is celebrating its 10th anniversary this year. Founded in 2016 by Dr. Valérie Courchesne during her doctoral studies, its mission is to make scientific knowledge about autism accessible to the general public. Ten years later, the magazine reaches more than 4,600 subscribers from diverse backgrounds, reflecting a growing interest in rigorous and accessible science communication.

This issue opens with two articles by Lucila Guerrero and Mathieu Giroux, autistic individuals and co-researchers, who offer a critical reflection on the concepts of "female autism" and "invisible autism." They highlight the potential risks associated with these concepts, particularly regarding the recognition of diagnoses by professionals and the construction of self-identity.

The third article, written by Béatrice Laramée, an Honors student in Dr. Valérie Courchesne's laboratory, explores the fascinating phenomenon of calendar calculation in autism. What cognitive mechanisms can explain this remarkable ability? This question is highlighted in a systematic review conducted by Jade Desrosiers, a doctoral student in Dr. Laurent Mottron's laboratory.

The fourth article, by Emma Bigot, also a student in Dr. Valérie Courchesne's laboratory, focuses on adaptive behavior. Beyond intellectual quotient, this concept provides a more accurate understanding of a person's ability to function independently in daily life.

Finally, the last article, co-authored by Allyson Bastien (Dr. Claudine Jacques' laboratory) and Audrey-Rose Turgeon (Dr. Isabelle Soulières' laboratory), examines the use of psychiatric emergency services by autistic individuals. This recent study outlines the profile of individuals using these services, with the aim of improving mental health care for autistic people.

You will also find in this issue several calls for participation in ongoing research projects.

We extend our sincere thanks to all contributors, as well as to our loyal financial partners: the Marcel and Rolande Gosselin Research Chair in Fundamental and Applied Cognitive Neuroscience of Autism Spectrum at the Université de Montréal, and the Fondation de l'Hôpital du Sacré-Cœur de Montréal.

Enjoy your reading,

Daphné Silvestre, Editor-in-Chief

Daphné Silvestre

Editor-in-Chief

> The magazine reaches more than 4,600 subscribers from diverse backgrounds, reflecting a growing interest in rigorous and accessible science communication.

Knowledge about autism is shaped by scientific research and by the reflections of researchers and clinicians on various issues, including assessment. However, it is not limited to these experts. Because medical assessment also has social implications and directly affects the lives of many people, autistic individuals themselves also reflect on these concepts. Here, we present two texts by Lucila Guerrero and Mathieu Giroux—two autistic individuals and co-researchers for over 10 years—who share their perspectives on the concepts of "female autism" and "invisible autism."

ARTICLE 1

By LUCILA GUERRERO, peer support worker and research collaborator

A woman and autistic,

but not "female autism"

> I believe it would be more accurate to discuss the experiences of autistic individuals by exploring other identities, their intersections, and their living conditions, rather than creating subcategories based on gender.

For some time, I avoided addressing this topic because I lacked the words and feared creating misunderstandings. In short, I am a woman and an autistic person without identifying with the ideas conveyed by the term "female autism"(1). Reading two recent scientific articles(2,3) that resonate with many of my personal reflections inspired me to write this text, mainly because they helped me validate and articulate some of my thoughts. In particular, I realized that the term "female autism" excludes some autistic women, like me, who are not proficient in communication or socialization, who do not fit a certain model of womanhood, or who do not resemble neurotypical individuals.

In my case, I often tried to imitate others in order to be accepted: using the "right" social expressions, speaking quickly to appear fluent, copying an accent, laughing even when I did not understand why. But I never managed to do it well. My attempts at imitation were noticeable, and worse, I was ridiculed, which caused me shame. For a long time, this led me to believe I was "bad" at interacting, when in reality, I was simply trying to force myself to adopt socially valued behaviors and forms of expression.

In 2010, when I was recognized as autistic, I felt freed from the shame and guilt associated with my "failures" to act like others. It opened a door for me to meet other people from "my planet," regardless of gender identity. Meeting them gave me a sense of belonging. Finally! But later, when the term "female autism" began to circulate, bringing with it descriptions focused on a specific subgroup of autistic people, it affected my identity. If I am an autistic person and a woman who does not fit this image of "female autism," then who am I? Am I still a woman? Still autistic? What is "my planet"? I feel it has now been divided and, unfortunately, sometimes hierarchized.

This is why I criticize the term "female autism," while still recognizing the right of women (and every individual) to have an explanation for how they function that can improve their well-being. It seems to me that this concept often emphasizes women who succeed in masking their differences and conforming to social norms, sometimes even to the point of appearing neurotypical. Yet little is said about those who, like me, cannot or no longer wish to do so, and/or who simply assert themselves. Moreover,

the concept suggests that there is a "typical" way of being an autistic woman, which feels reductive.

Indeed, this discourse sometimes associates femininity with performance, as though it were a kind of learned mask. For example, in my youth, I was taught the proper ways to behave in society: how to dress, sit, laugh or remain silent, how to plan my life as a wife, how to choose "female" activities, and even, at times, to tolerate the intolerable. When "female autism" is described through these lenses, it does not reflect my experience as a woman. Despite my efforts to follow these norms, I did not succeed in adopting them well, and I was criticized for it. Moreover, I became a computer scientist in the 1980s, at a time when computing was widely perceived as a male profession by many people in my social circle. Finally, some claims surrounding "female autism" suggest that expressions of femininity are part of the diagnosis. In such cases, the social pressure autistic women may experience to conform to these norms is masked. If an autistic woman adopts masking behaviors at the cost of discomfort and distress, it is likely a strategy to be accepted, recognized, or to find a place in society. This social pressure may be stronger for women, which could explain why masking appears more frequently among autistic women than autistic men, and why diagnosis in women is sometimes more difficult. When masking is considered a defining trait of "female autism," this social dimension risks being overlooked.

I agree that research still needs to further explore the needs and realities of autistic women and examine the many dimensions of diversity. I am not opposed to creating a subcategory if it proves necessary. But please, do not construct a category called "female autism" that excludes autistic women who do not fit this profile. As I write this, I am thinking of many autistic individuals I have met who do not recognize themselves in this framework.

I believe it would be more accurate to discuss the experiences of autistic individuals by exploring other identities, their intersections, and their living conditions, rather than creating subcategories based on gender. The experiences of autistic people are diverse, complex, and deserve to be taken seriously. I stand in solidarity with those who experience distress upon discovering they are autistic after a long journey in which their needs went unrecognized. For this reason, what seems most important to me is acknowledging the diversity of realities, strategies, needs, and identities, without hierarchizing or fixing differences into a single model.

What is "female autism"?

Some scientific articles (e.g., Allely, 2019) use the term "female autism" to describe autistic women who more easily imitate expected social behaviors, mask their differences, and whose distress often goes unrecognized.

Reference:

(1) Allely, C. S. (2019). Understanding and recognising the female phenotype of autism spectrum disorder and the "camouflage" hypothesis: a systematic PRISMA review. *Advances in Autism*, 5(1), 14 37.

(2) Moore, I., Morgan, G. et Howard, C. (2025). Constructions of "female autism" in professional practices: A Foucauldian discourse analysis. *Feminism & Psychology*, 35(2), 206 227. https://doi. org/10.1177/09593535 24 1283325

(3) Russell, G., Moore, I., Norman, S. et Harrington, J. (2025). Diagnosis and Diversity: Feminism, Autistic Identity, and the Possibilities for Neurodiversity. *Neurodiversity*, *3*, 27546330251348554. https://doi. «org/10.1177/27546330251348554

Soutenir les parents dans leur recherche d’informations durant la trajectoire diagnostique de leur enfant

VOTRE EXPÉRIENCE EST PRÉCIEUSE!

Vous êtes invité·e à partager votre point de vue sur les besoins informationnels des parents au cours de la trajectoire diagnostique, en cours ou complétée, d’un·e enfant présentant une condition neurodéveloppementale (p. ex. autisme, déficience intellectuelle, trouble de l’attention/hyperactivité, etc.).

QUOI ?

Participer à un groupe de discussion avec d’autres parents

QUAND ?

Printemps et été 2026

COMMENT ?

Rencontre de 90 minutes en vidéoconférence sur TEAMS

CRITÈRES DE PARTICIPATION :

- Résider au Québec ;
- Avoir un·e enfant de 7 ans et moins lors de l’obtention du diagnostic ;
- Ayant reçu ou en attente d’un diagnostic de condition neurodéveloppementale entre 2019 et 2026 ;
- Comprendre et parler le français.

RENSEIGNEMENTS & INSCRIPTION

Courriel : ludica@uqo.ca
Téléphone : 819-771-7761 poste 348485

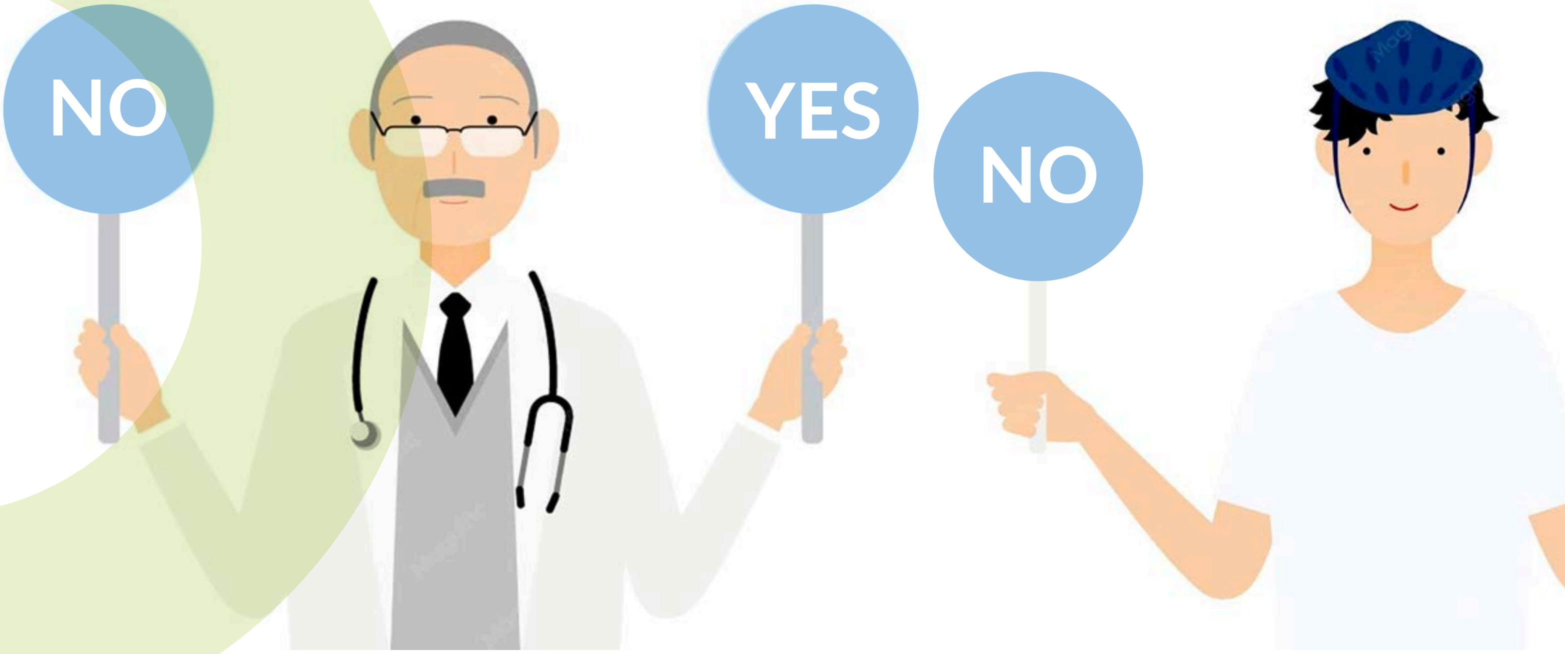
TIRAGE DE 2 CARTES-CADEAUX (50 $)

Centre intégré de santé et de services sociaux de l’Outaouais Québec

UQO UNIVERSITÉ DU QUÉBEC EN OUTAOUAIS

Ce projet est mené par :
Geneviève Saulnier, chercheuse en établissement, CISSS de l’Outaouais
Claudine Jacques, professeure, Université du Québec en Outaouais (UQO)

Approuvé par le comité éthique du CISSS de l’Outaouais : CER #2026-211 et de l’UQO : CER #2026-4258



ARTICLE 2

By MATHIEU GIROUX

“Invisible” autism

does not exist

By definition, if behaviors are observable, they cannot be invisible. Therefore, autism is visible.

Parents, autistic individuals, organizations or institutions, and professionals sometimes claim that autism is an “invisible” disability—in other words, something that cannot be perceived visually.

If that were truly the case, it would contradict three elements that are unanimously recognized in autism:(1) diagnosis is based on the observation of behaviors,(2) autistic individuals engage in social camouflaging, and(3) first impressions of autistic people tend to be perceived as more negative.

A medical evaluation for autism consists of professionals analyzing a person’s observable behaviors across different contexts. By definition, if behaviors are observable, they cannot be invisible. Therefore, autism is visible.

Social camouflaging is defined as behaviors—voluntary or involuntary—intended to hide autistic traits in order to make a person appear “less visibly” autistic. It serves to conceal, from view, the characteristics that allow others to identify someone as autistic (Giroux et al., 2024). In other words, if autism were truly “invisible,” there would be nothing to hide because it would already be concealed. Thus, the concept of social camouflaging could not exist if autism were invisible.

In addition, the literature consistently shows that first impressions of autistic individuals are more negative than those of neurotypical individuals. This holds across various situations (job interviews, 10-second video clips, brief face-to-face exchanges, etc.), even when the diagnosis is unknown. The only exception is written communication, where no difference is observed (Wanigasekera et al., 2025). This suggests that when autistic individuals are seen, the first impression tends to be more negative, whereas when only written words are available, impressions are not affected. In other words, certain observable behaviors influence first

In conclusion, the “visibility” or rather the recognition of an autism diagnosis is a matter of medical assessment, not simply self-perception or others’ perceptions.

impressions negatively, making autism effectively “visible,” even when the observer is unaware of the diagnosis.

Why should we avoid calling autism “invisible”?

First, describing autism as “invisible” at minimum implies a minimization or even a denial of the difficulties experienced by autistic individuals. This is paradoxical, since an autism diagnosis requires significant impacts on daily functioning; these impacts are part of the diagnostic criteria.

Second, referring to autism as “invisible” can be used to discredit professional expertise and clinical assessments when a diagnosis is not confirmed. If autism is considered invisible, one could argue that a professional simply failed to perceive it, suggesting incompetence. This places personal belief above professional expertise.

But why should a parent’s or individual’s belief outweigh a professional evaluation? The common argument is self-knowledge and self-perception. However, if this argument were applied consistently, it would extend to all medical evaluations. For example, in legal cases involving criminal responsibility and mental health, an individual could claim self-assessment as sufficient evidence. This illustrates the limitations of self-evaluation as a medical standard.

Third, the notion of “invisible autism” weakens the value of the right to self-identification. From a neuroaffirmative perspective, rather than a strictly medical one, autism can be viewed as a social identity, similar to gender identity or sexual orientation. Identity is based on personal self-perception and should not be determined by a physician. However, using a medical term like “autism” while also claiming it is invisible reinforces the idea that health professionals must define and validate that identity, thereby undermining self-identification.

Fourth, failing to recognize autistic traits in someone, whether by another person or a professional, does not mean autism is invisible. The general population, and even many healthcare professionals, often lack expertise in identifying autism and its manifestations. It is therefore not surprising that traits may go unnoticed or be misinterpreted. The issue is not the visibility of behaviors, but rather their recognition and correct attribution to a specific diagnosis.

In conclusion, the “visibility” or rather the recognition of an autism diagnosis is a matter of medical assessment, not simply self-perception or others’ perceptions. We should stop referring to autism as an “invisible” disability. Doing so is counterproductive for both medical and neuroaffirmative perspectives.

References:

Giroux, M. Courcy, I. & Nadig, A. (2024). Social Camouflage in Autism: An Analysis of Decision Making. *Autism in Adulthood*.doi:10.1089/aut.2023.0077

Wanigasekera, L. C., Maybery, M. T., Palermo, R., Whitehouse, A. J. O., & Tan, D. W. (2025). First Impressions Towards Autistic People: A Systematic Review and Meta-Analysis. *Autism research: official journal of the International Society for Autism Research, 18*(5), 983–1010. https://doi.org/10.1002/aur.70019

Jeunes enfants de 2 à 5 ans recherchés !

Cette étude vise à documenter les expressions émotionnelles et le partage émotionnel chez les enfants autistes et non autistes d'âge préscolaire dans une situation contenant plusieurs jeux.

Critères d'inclusion :

- Être âgé de 31 à 60 mois
- Sans retard de développement

Participation attendue :

- 1 séance d'une heure avec des jeux qui sera filmée

Lieu :

- Hôpital Rivière-des-Prairies (Montréal)

Compensation :

- 25$ pour l'étude

Pour participer, contactez Noémie Cusson :

cusson.noemie@courrier.uqam.ca

Étude menée par :
Dre Isabelle Soulières (Ph.D.), UQAM
Dr Laurent Mottron (M.D., Ph.D.), UdeM

Cette étude a été approuvée par le comité d'éthique de la recherche du CIUSSS-NIM, # 2024-2726

How is calendar calculation

possible in autism?

By BÉATRICE LARAMÉE et JADE DESROSIERS

Calendar calculation (CC) refers to the ability to associate a day of the week with a given date, past or future, within seconds. This capacity to quickly and accurately determine calendar information (date, day, month, etc.) without using external aids or visible calculation is often, though not exclusively, reported in autistic individuals, sometimes as early as childhood.

Calendar calculation is the ability to quickly and accurately determine calendar information (date, day, month, etc.).

This topic has fascinated researchers for many years, yet the mechanisms underlying the acquisition and development of this ability remain poorly understood. This is highlighted in a systematic review conducted by Jade Desrosiers, a doctoral student in neuropsychology at the Université de Montréal, and her colleagues. In total, 76 articles covering 105 calendar calculators were compiled to provide a comprehensive overview of the development and mastery of CC.

Understanding calendar calculation

Several hypotheses attempt to explain how calendar calculation works through different mechanisms:

- **Detection of calendar rules:** Calendars contain regularities, such as seven-day cycles, leap years, and repetitions every 28 years. Calendar calculators may identify these patterns and infer rules from them.
- **Arithmetic:** Some calendar calculators may intentionally use complex mathematical algorithms. However, this is not the case for most autistic individuals, as their speed of response and inability to report their method argue against the use of explicit mathematical procedures.
- **Memory:** Memory may play a role through associations between a date and general or personal knowledge, such as a movie release or a loved one's birthday (episodic and semantic memory), unconscious learning (implicit memory), or mental visualization of calendars (visual memory). The latter is often a relative strength in autistic individuals. However, some calendar calculators can identify dates that have no personal or experiential reference, suggesting that memory alone cannot fully explain this ability.
- **Synesthesia:** This phenomenon, in which stimulation of one sense automatically triggers another associated element, can be illustrated, for example, by perceiving a color linked to a specific day of the week. Autism is often associated with a wide range of atypical perceptions and learning patterns of this kind.
- **Hybrid models:** These combine multiple mental mechanisms to explain CC. One such model proposes the use of reference dates (current year, birthdays, significant events) to derive the correct answer.

Characteristics that may support calendar calculation

Many researchers have tried to determine why CC appears more frequently in autistic individuals. Their theoretical models highlight certain behavioral and cognitive characteristics that may facilitate learning the structure of calendars. However, no single model fully explains the acquisition and functioning of CC.

An innovative model

Some studies have emphasized similarities between calendar calculation and language. Typically, language

Calendar calculation is the ability to quickly and accurately determine calendar information (date, day, month, etc.).

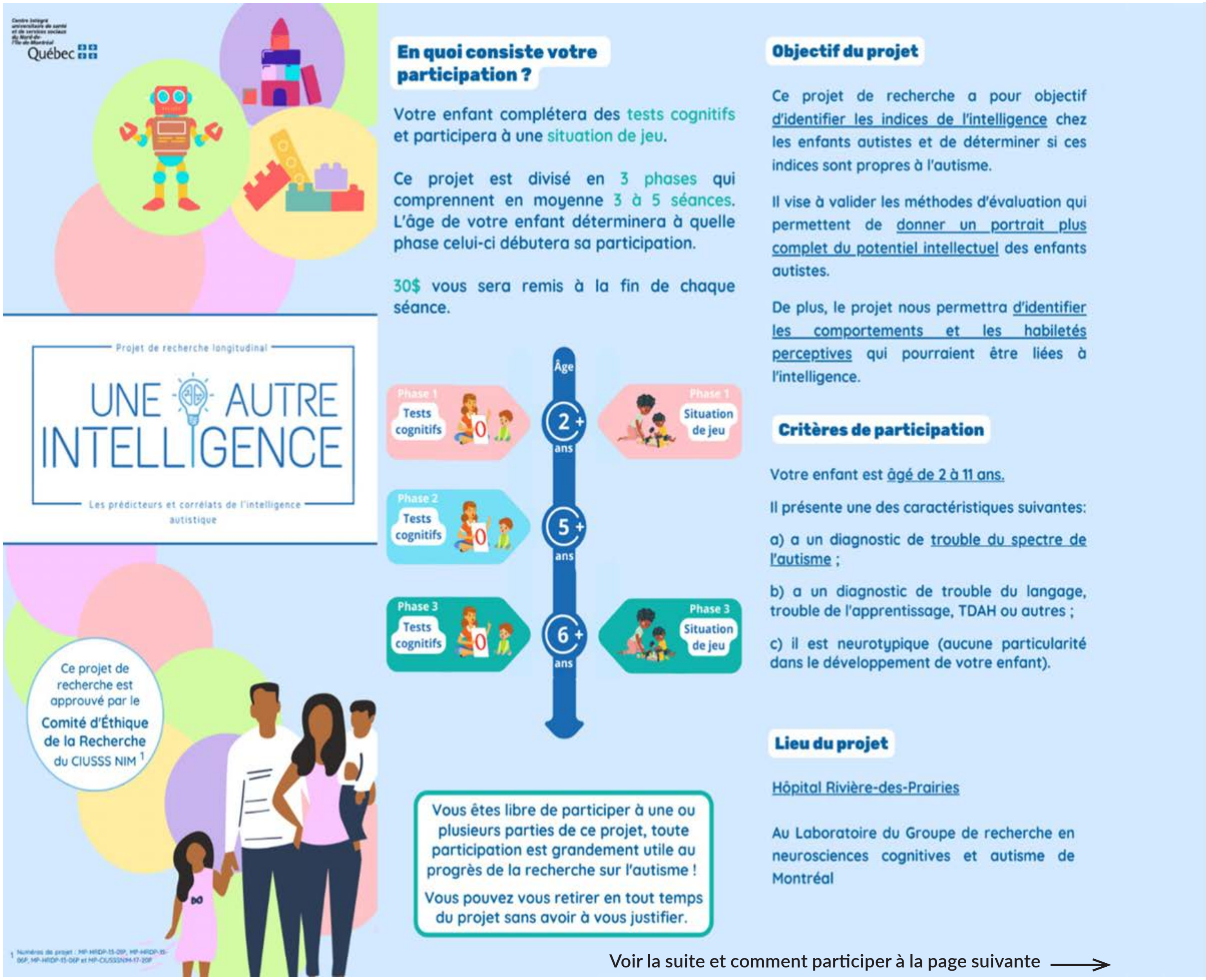
is learned through social communication, which may be less spontaneous for autistic individuals whose brains do not prioritize social interaction. As a result, the brain mechanisms usually involved in learning spoken language may instead be redirected toward written symbols, and subsequently toward calendars.

In this view, the autistic brain implicitly learns symbolic, structured, and regular calendar information through exposure, much like a neurotypical child learns their native language. Supporting this hypothesis, many autistic children show early interest in letters, numbers, and other written codes, but much less in spoken language. Their learning often occurs through visual exposure rather than social interaction.

> **The autistic brain implicitly learns symbolic, structured, and regular calendar information through exposure, much like a neurotypical child learns their native language.**

The similarities are striking. Just as exposure to language supports the acquisition of spoken language, exposure to letters, numbers, and calendars supports the development of CC. In both cases, learning occurs implicitly, making it difficult to explain how rules and knowledge are acquired beyond repeated exposure.

The structure of language and that of the calendar are also comparable. Just as a sentence is made up



Projet de recherche longitudinal

UNE AUTRE INTELLIGENCE

Les prédicteurs et corrélats de l'intelligence autistique

En quoi consiste votre participation ?

Votre enfant complétera des tests cognitifs et participera à une situation de jeu.

Ce projet est divisé en 3 phases qui comprennent en moyenne 3 à 5 séances. L'âge de votre enfant déterminera à quelle phase celui-ci débutera sa participation.

30$ vous sera remis à la fin de chaque séance.

Vous êtes libre de participer à une ou plusieurs parties de ce projet, toute participation est grandement utile au progrès de la recherche sur l'autisme !

Vous pouvez vous retirer en tout temps du projet sans avoir à vous justifier.

Ce projet de recherche est approuvé par le Comité d'Éthique de la Recherche du CIUSSS NIM [1]

Objectif du projet

Ce projet de recherche a pour objectif d'identifier les indices de l'intelligence chez les enfants autistes et de déterminer si ces indices sont propres à l'autisme.

Il vise à valider les méthodes d'évaluation qui permettent de donner un portrait plus complet du potentiel intellectuel des enfants autistes.

De plus, le projet nous permettra d'identifier les comportements et les habiletés perceptives qui pourraient être liées à l'intelligence.

Critères de participation

Votre enfant est âgé de 2 à 11 ans.

Il présente une des caractéristiques suivantes:

a) a un diagnostic de trouble du spectre de l'autisme ;

b) a un diagnostic de trouble du langage, trouble de l'apprentissage, TDAH ou autres ;

c) il est neurotypique (aucune particularité dans le développement de votre enfant).

Lieu du projet

Hôpital Rivière-des-Prairies

Au Laboratoire du Groupe de recherche en neurosciences cognitives et autisme de Montréal

[1] Numéros de projet : MP-HRDP-15-09P, MP-HRDP-15-06P, MP-HRDP-15-06P et MP-CIUSSSNIM-17-20P

Voir la suite et comment participer à la page suivante →

of words composed of letters, a calendar is made up of years, months, weeks, and days, composed of letters and numbers. Similarly, just as a word can belong to multiple categories, calendar attributes are interconnected within a broad network of knowledge. In both systems, access to information is multidirectional.

Additionally, identifying a date through its association with a meaningful event resembles the way a word is linked to its meaning or to a mental image in spoken language. Finally, grammatical rules allow for the creation of new sentences, just as the structural rules of the calendar allow for the identification of past or future dates.

In summary, the research team proposes that calendar calculation represents an alternative form of language acquisition applied to a highly structured written system. This ability remains unique in its precision and speed.

Reference:

Desrosiers, J., Gagnon, D., Ostrolenk, A., Boutros, A., Bernhardt, B. C., Courchesne, V., & Mottron, L. (2025). Calendar calculation: A systematic review of 100 years of research. *Neuroscience & Biobehavioral Reviews*, 106376.

Desrosiers. J., Gagnon, D., Ostrolenk, A., Boutros, A., Courchesne. V., & Mottron, L. (September 18, 2025). How Is Calendar Calculation in Autism Possible? A Language Model. *Psychological Review*. Advance online publication. https://dx.doi.org/10.1037/rev0000590

Notre étude longitudinale vise à suivre le développement des compétences et intérêts des enfants, à mesure qu'ils grandissent.

Qu'est-ce qu'une étude longitudinale ?

Cette méthode consiste à étudier plusieurs fois les mêmes enfants à des âges successifs.

Situation de jeu

Votre enfant sera exposé à des jeux avec lesquels il pourra jouer. Vous pourrez l'observer derrière un miroir sans tain. La situation de jeu sera filmée.

Tests cognitifs

Votre enfant sera amené à accomplir différentes tâches cognitives (avec ou sans matériel) présenté sur une table par une membre de l'équipe.

À noter que toutes les évaluatrices ont une expertise auprès des enfants autistes ou à besoins particuliers d'âge préscolaire et scolaire.

Les données sont confidentielles. Elles seront conservées de façon sécuritaire. Elles seront uniquement accessibles aux membres de l'équipe de recherche. Aucune information permettant de vous identifier ou d'identifier votre enfant ne sera partagée.

Projet de recherche longitudinal

UNE AUTRE INTELLIGENCE

Les prédicteurs et corrélats de l'intelligence autistique

Pour participer au projet
ou pour toutes autres questions :

(514) 323-7260 #4572

projet.intelligence.cnmtl@ssss.gouv.qc.ca

Sous la direction de

Isabelle Soulières, Ph.D.
Professeure-chercheure et neuropsychologue
Université du Québec à Montréal
Hôpital en santé mentale Rivière-des-Prairies

Claudine Jacques, Ph.D.
Professeure-chercheure et psychoéducatrice
Université du Québec en Outaouais
Hôpital en santé mentale Rivière-des-Prairies

Laurent Mottron, M.D., Ph.D.
Psychiatre et chercheur
Université de Montréal
Hôpital en santé mentale Rivière-des-Prairies

Laboratoire de Laurent Mottron

UQO UQÀM

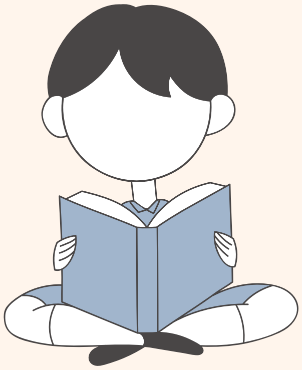
Précision : Le projet Une autre Intelligence présente un grand besoin de filles autistes âgées entre 6-12 ans.

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

UQÀM

ÉLÈVES AUTISTES D'ÂGE SCOLAIRE RECHERCHÉS POUR UNE ÉTUDE!

Cette étude vise à documenter les profils d'habiletés scolaires des élèves autistes.



Critères d'égibilité :

★ Être âgé entre 6 et 12 ans
★ Diagnostic d'autisme

Participation attendue :

★ 2 séances de 1h30

Compensation :

★ 30$ par séance (total 60$)

Lieu :

★ Hôpital Rivière-des-Prairies **ou** Pavillon Adrien-Pinard, UQÀM

Pour participer, contactez Ève Picard au :

☎

(514)-323-7260 #4572

✉

projet.intelligence.cnmtl@ssss.gouv.qc.ca

Étude menée par :

Isabelle Soulières, UQÀM
Claudine Jacques, UQO
Valérie Courchesne, CAMH

Approuvé par le comité éthique du CIUSSS NIM, #2023-2639.

Understanding adaptive behavior and its influence

on the functioning of autistic individuals

By EMMA BIGOT

In autistic individuals, it is not uncommon to observe a discrepancy between intellectual abilities measured through cognitive tests and everyday functioning, something much less frequent in non-autistic individuals[1]. Some autistic people may have cognitive abilities within or even above the average range, yet demonstrate everyday skills that are below what would be expected for their age and cognitive level[2]. There are therefore two ways of assessing what a person can do.

The intellectual quotient (IQ) reflects a person's cognitive potential and measures abilities such as language comprehension, problem-solving, and memory. However, it provides limited information about how a person functions in daily life[3]. To understand what a person can actually do in everyday situations and meet environmental demands, we must look at the concept of adaptive behavior.

What is adaptive behavior?

Adaptive behavior refers to the set of skills that allow a person to function independently in various aspects of daily life. It is typically divided into three main domains: conceptual, social, and practical.

The conceptual domain includes skills related to language, reading, writing, math abilities, and the understanding of abstract concepts such as time or quantity[3].

- In young children, expected skills include knowing their age, recognizing colors, shapes, numbers, and letters, and understanding simple instructions (e.g., "give me the ball") as well as two-step instructions (e.g., "give me the ball and then put on your shoes"). They can name common objects and understand concepts such as "tomorrow," "after," or "a lot."
- In preadolescents and adolescents, expectations include reading and writing fluently, solving simple math problems, organizing schedules, and understanding money. For example, they may manage a school agenda, calculate how much money they have left to buy a book, or plan an outing with friends.
- In adults, expectations include managing long-term projects such as saving for a car or planning a vacation, handling a budget, and understanding administrative documents such as contracts.

The social domain refers to skills involved in interacting with others, understanding implicit social rules, initiating and maintaining relationships, and socio-emotional reciprocity[3].

- In children, expected abilities include playing with others while following rules, taking turns, sharing toys, and expressing basic emotions (joy, sadness, fear, anger). They should also be able to initiate interactions (e.g., "Do you want to play with me?"), respond to social conventions ("please," "thank you," "sorry," "hello"), and exchange socio-emotional gestures (e.g., returning a smile).
- In preadolescents and adolescents, skills include managing conflicts with peers, understanding that rules vary by context (e.g., raising a hand in class but not at home), developing empathy, making compromises, and recognizing implicit communication (e.g., understanding that a tone of voice or a look can signal discomfort or disagreement).
- In adults, expectations include distinguishing between professional and personal relationships, maintaining a social network, and communicating via email or phone. They should sustain regular

> In autistic individuals, it is not uncommon to observe a discrepancy between intellectual abilities measured through cognitive tests and everyday functioning.

social contact, such as checking in on loved ones, visiting friends, or hosting others.

The practical domain involves skills required for daily living activities (e.g., personal hygiene, dressing, eating), personal safety, transportation use, household tasks, and administrative responsibilities[3].

- In children, expectations include dressing independently, fastening simple clothing, eating with utensils, drinking without spilling, and recognizing dangerous situations (e.g., hot objects, road safety).
- In preadolescents and adolescents, skills include choosing appropriate clothing based on weather or occasion, preparing simple meals, making grocery lists, managing a small budget, using public transportation, making their bed, cleaning their room, and helping with household chores.
- In adults, expectations include managing health (taking medication, scheduling medical appointments), maintaining hygiene, caring for their home, grocery shopping, preparing varied meals, and completing routine administrative tasks (e.g., paying bills).

Adaptive behavior and intellectual disability

In the Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR)[4], adaptive behavior is part of the diagnostic criteria for intellectual disability (ID). Since the DSM-III[5], diagnosis has required both below-average intellectual functioning (IQ < 70) and deficits in adaptive behavior[4]. Furthermore, the severity of ID (mild, moderate, severe, profound) is based on the level of impairment in adaptive behavior rather than IQ score[4].

This shift is important because it recognizes that the level of daily support a person needs is often more relevant for planning accommodations than their performance on cognitive tests.

How is adaptive behavior measured?

Unlike IQ tests, which involve standardized tasks administered directly to the individual, adaptive behavior is assessed through interviews with parents, relatives, or professionals who regularly interact with the person (e.g., specialized educators)[6,7]. These interviews rely on standardized tools such as the Vineland Adaptive Behavior Scales[6] or the Adaptive Behavior Assessment System (ABAS)[7]. Professionals focus not on whether a person can perform a task in theory, but whether they do so independently and consistently[2]. For example, the question is not whether someone can dress themselves, but whether they do so every morning without assistance or reminders[6].

Levels of difficulty in adaptive behavior vary by age and are classified as mild, moderate, or severe[3]. A mild deficit indicates relative independence with limited support needs, while a severe deficit implies constant assistance in daily life[3]. These skills evolve with age and can improve with appropriate support, but may also decline in unfavorable environments[3].

Adaptive behavior in autism

Adaptive behavior in autistic individuals is most often impacted in the social domain[1]. This is due to difficulties related to repetitive behaviors as well as communication challenges, particularly in receptive language (understanding others) and conversational reciprocity (the ability to engage in back-and-forth exchanges)[1,4,8]. The gap between cognitive and adaptive functioning may widen with age, as societal expectations increase more rapidly than gains in independence[2]. In addition, co-occurring psychiatric conditions such as anxiety, ADHD, or depression can further widen this gap by limiting engagement in daily activities[2]. As a result, autistic individuals without intellectual disability may still require significant daily support.

In conclusion, focusing on adaptive behavior is not about minimizing intelligence, but rather about highlighting strengths and challenges in daily life activities. This approach makes it possible to develop personalized intervention plans tailored to individual needs, ultimately improving everyday functioning and quality of life.

Reference:

1. Kraper CK, Kenworthy L, Popal H, Martin A, Wallace GL. The Gap Between Adaptive Behavior and Intelligence in Autism Persists into Young Adulthood and is Linked to Psychiatric Co-morbidities. *J Autism Dev Disord*. 2017;47(10):3007-3017. doi:10.1007/s10803-017-3213-2
2. Saulnier CA, Klaiman C, McQueen E. Adaptive Behavior Profiles in Autism Spectrum Disorder. *Curr Psychiatry Rep*. 2022;24(12):749-756. doi:10.1007/s11920-022-01381-w
3. Tassé MJ, Balboni G, Navas P, et al. Developing behavioural indicators for intellectual functioning and adaptive behaviour for ICD -11 disorders of intellectual development. *J intellect Disabil Res*. 2019;63(5):386-407. doi:10.1111/jir.12582
4. American psychiatric association. *Diagnostic and Statistical Manual of Mental Disorders*. Fifth Edition Text Revision. 2022.
5. American psychiatric association. *Diagnostic and Statistical Manual of Mental Disorders*. DSM-III-R. American Psychiatric Publishing; 1987.
6. Sparrow SS. Vineland adaptive behavior scales. In: *In Encyclopedia of Clinical Neuropsychology*. Springer; 2011:2618-2621.
7. Harrison PattiL and Thomas Oakland. Adaptive behavior assessment system. In: *Encyclopedia of Clinical Neuropsychology*. Springer, Cham; 2017:1-4.
8. World Health Organization. *International Statistical Classification of Diseases and Related Health Problems*. 11th ed. 2019.

CHU
Sainte-Justine
Le centre hospitalier
universitaire mère-enfant

Université
de Montréal

Projet SCAALE

PARTICIPER AU

PREMIER PROJET DE RECHERCHE SUR LES INTERACTIONS SOCIALES EN AUTISME*

Votre enfant est âgé de 6 à 16 ans ?

VOUS SOUHAITEZ

AIDER À L'AVANCÉE DE LA RECHERCHE ?

MIEUX COMPRENDRE VOS INTERACTIONS AVEC VOTRE ENFANT AUTISTE ?

****PARTICIPANTS NEUROTYPIQUES RECHERCHÉS****

*Compensation financière

60$ Transport

Difficult times:

when autistic individuals use psychiatric emergency services

By ALLYSON BASTIEN and AUDREY-ROSE TURGEON

In addition, they face several barriers in accessing appropriate mental health care, such as a lack of professionals with dual expertise in autism and mental health, as well as repeated negative experiences with the healthcare system.

Compared to the general population, autistic individuals use psychiatric **emergency services (PES) more frequently**, as well as general emergency services for mental health reasons. Why is there such an overrepresentation? First, autistic individuals are more likely to experience mental health challenges because they are more often exposed to:

- Physical health problems (e.g., epilepsy)
- Stress related to discrimination and social exclusion (minority stress)
- Social inequalities (e.g., barriers to employment or lower pay for the same level of education)

In addition, they face several **barriers in accessing appropriate mental health care**, such as a lack of professionals with dual expertise in autism and mental health, as well as repeated negative experiences with the healthcare system.

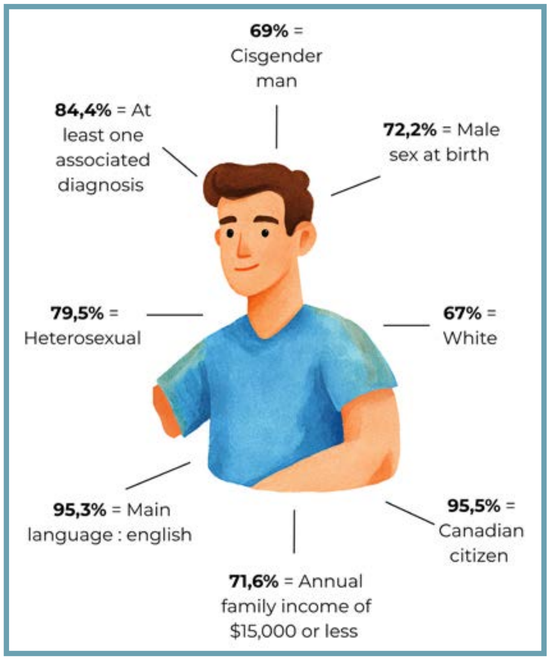
When mental health needs are not adequately addressed, this can lead to increased use of PES. It is therefore essential to understand who the autistic individuals presenting to PES are and why they seek these services, in order to improve the mental health care available to them. This is the question explored by researcher Valérie Courchesne and her colleagues[1].

How was the study conducted?

The research team reviewed the medical records of all autistic individuals who visited the PES at the Centre for Addiction and Mental Health (CAMH), which serves an adult population (16 years and older). The researchers analyzed the records of 345 individuals who made a total of 1,027 visits over a three-year period.

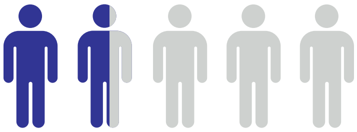
Who are the autistic adults presenting to psychiatric emergency services?

From a **sociodemographic and socioeconomic** perspective, there is a diversity of profiles among individuals presenting to PES. However, a typical profile emerges, as illustrated by the most frequently identified characteristics.

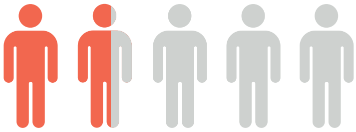


Clinically, about 20% had a diagnosis of attention-deficit/hyperactivity disorder (ADHD) and/or intellectual disability. **54.8%** had at least two co-occurring mental health diagnoses, with some individuals having up to six. The most common co-occurring conditions were:

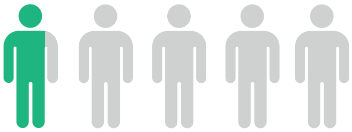
Depression : 32.8%



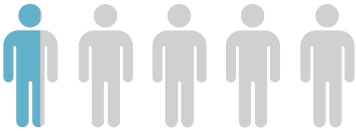
Anxiety: 31.3%



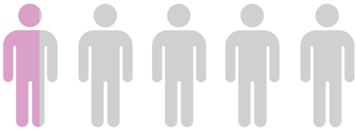
Schizophrenia spectrum disorders: 16.8%



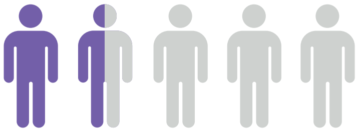
Schizophrenia spectrum disorders: 15.7%



Obsessive-compulsive disorder: 13.9%



Other: 30.4%

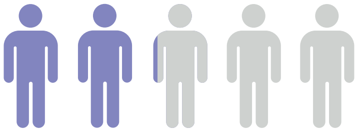


When mental health needs are not adequately addressed, this can lead to increased use of PES.

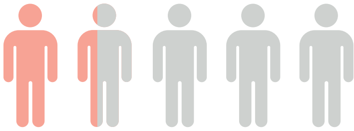
Why do these individuals visit psychiatric emergency services?

The authors identified several reasons for PES visits, grouped into 11 categories. The most frequent reasons include:

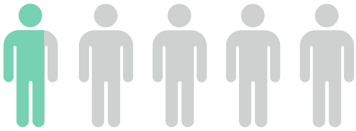
Suicidal ideation/behaviors: 42.9%



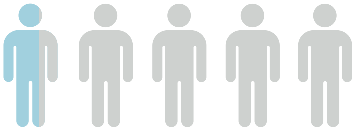
Aggression: 24.6%



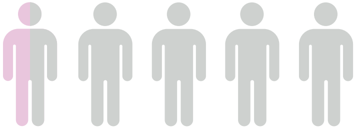
Mood-related symptoms: 16.1%



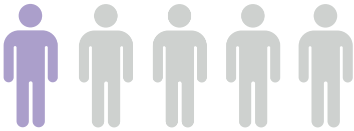
Psychotic symptoms : 14%



Obsessive-compulsive symptoms : 10.3%



Other: 20.2%



This study highlights the importance of upstream interventions to prevent mental health challenges in autistic individuals, including promoting greater inclusion in employment and society, and reducing discrimination and stigma.

Why do some individuals have recurrent visits?

The authors found that **40.3%** of patients visited PES more than once during the three-year period. In fact, 6.1% of individuals accounted for **44% of all visits**. Importantly, no sociodemographic characteristics (sex, gender, sexual orientation, socioeconomic status, ethnicity, or first language) were associated with more frequent visits. However, as in the general population, there appears to be a link between reasons for consultation, specific diagnoses, and visit frequency.

Single visit

Reasons

↑ Anxiety disorders
Mood-related symptoms

Recurrent visits

Reasons

↑ Suicidal ideation/behaviors
Intoxication
Withdrawal symptoms

Diagnoses

↑ Substance use disorder
Borderline personality disorder
Post-traumatic stress disorder

Why is this important?

This study highlights several concerning issues. First, it underscores the impact of social determinants of health on the mental health of autistic individuals. For example, most participants reported a household income well below the poverty line, which increases vulnerability to mental health problems, limits access to appropriate care, and raises the likelihood of using psychiatric services. Second, the high prevalence of suicidal ideation among autistic individuals is emphasized. Minority stress, loneliness, and co-occurring psychiatric conditions are key risk factors. Overall, **this study highlights the importance of upstream interventions to prevent mental health challenges in autistic individuals**, including promoting greater inclusion in employment and society, and reducing discrimination and stigma.

Key takeaways

- Autistic individuals are at **a much higher risk** of experiencing mental health challenges than the general population.
- They face **significant barriers** to accessing appropriate mental health care, which can lead to increased use of PES.
- Profiles of autistic patients in PES are diverse, but most have at least two mental health diagnoses, mainly **depressive and anxiety disorders**.
- Reasons for consultation are varied, but most commonly include **suicidal ideation**.
- The **clinical profile** of recurrent patients **differs** from those with a single visit.
- Reducing **social inequalities** and **stigma** is essential to **prevent** mental health issues among autistic individuals.

Resources

- 988
  - Mental health and suicide prevention helpline
  - Call or text: 988
- Autisme Soutien
  - Organization by and for autistic adults
  - https://autismesoutien.ca/
- Info-Social
  - Telephone consultation service for psychosocial issues
  - Phone: 811

Psychiatric emergency services (PES): Hospital-based services intended for crisis situations requiring immediate mental health support (e.g., suicidal ideation, acute distress). Unlike other services that provide ongoing, planned care (such as psychologists), these services intervene quickly to stabilize the situation in the short term.

Reference:

1- V. Courchesne et al. (2026) In Times of Need: Psychiatric Emergency Department Presentations in Autistic Adults. Autism in Adulthood, 25739581251415125