



Autism and language: delay, regression, catch-up, what does science say?

By DAVID GAGNON

The first signs of autism are rarely noticed by parents before children reach two years of age. Language delays or loss of previously acquired language are typically the first symptoms leading parents to consult a professional.

Generally, predicting the developmental trajectory of language in an autistic child is difficult, as is determining the level of language they'll ultimately develop. Some will remain mostly non-verbal, others will have a delayed development and others will never show language difficulties. Non-verbal intelligence is currently the best predictor of future language level for children.

Initial language development in children that ultimately receive an autism diagnostic is often characterized by one of these three situations: (1) a language delay, (2) a typical language development, or (3) a language regression. The latter is defined by a more or less sudden loss of previously acquired language. This typically happens when the child is between 2 and 3 years of age, following an initially typical language development.

Language regression, when it presents itself, can be experienced by parents as an alarming event. It can be common for parents to look for external causes to this event. It is important to mention that language regression is in fact a phenomenon that is specific to autism, without any environmental triggers, that is not associated to vaccination, nor any infectious or inflammatory

disturbance. Language regression is rarely seen in other neurodevelopmental conditions and is generally associated with a "frank" presentation of autism.

The language regression phenomenon has been reported since the first and earlier descriptions of autism and has been associated for a long time with an unfavourable prognostic of language development. However, this prognostic was based on speculations and lacked scientific evidence.

A recent article published by Gagnon et al. (2021) in the *Molecular Autism* journal, contributed to the understanding of language developmental trajectories and the regression phenomenon in autism. The study used data from the *Simons Simplex Collection*, a database with more than 2000 autistic children from the ages of 4 to 18.

Main results:

The study confirmed that children experiencing language regressions produce their first words, even their first sentence in some cases, at the same age as do typically developing children. They don't show language delays before the regression occurs. However, after the regression, the language level stagnates (doesn't improve), and it takes about 21 months before language comes back to the level at which it was before the regression. During this period, children accumulate a

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Original article:

Gagnon, D., Zeribi, A., Douard, É., Courchesne, V., Rodríguez-Herreros, B., Huguet, G., Jacquemont, S., et al. (2021). Bayonet-shaped language development in autism with regression : A retrospective study. *Molecular Autism*, 12(1), 35.pnppb.2019.02.012. Epub 2019 Feb 20. PMID:30797015.28545751.



It is also interesting to note that, during the period in which language stagnates in the case of a language regression, autistic children can experience more social difficulties compared to other autistic children their age who did not have a language regression.

delay in the development of language. There's a 50-month period between the production of the first sentence and the ability to produce fluent and flexible language, which corresponds to twice the amount of time needed for other autistic children who didn't have a regression. A language regression therefore delays the age at which a child with autism is expected to produce fluent and flexible language, although it doesn't affect a child's chances of developing fluent language before the age of 18.

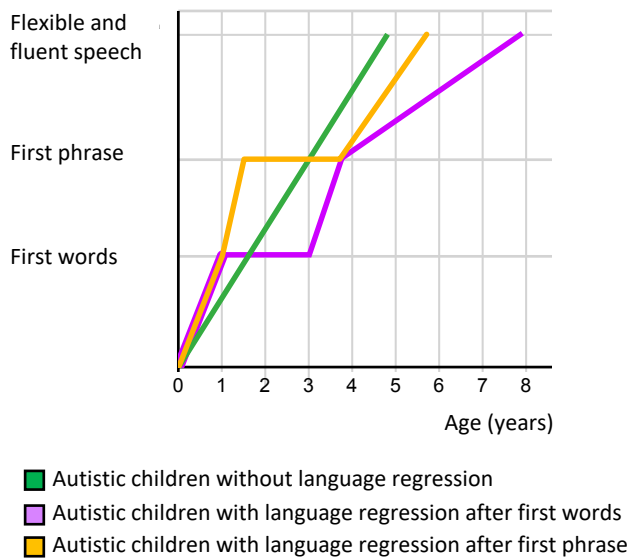
Moreover, once a fluent and flexible language is acquired, the child's communication level is not lower compared to other autistic children the same age. Essentially, a language regression does not predict an unfavourable prognostic for language development, although it can bring on a delayed language development. Cognitive evaluations remain a better tool for predicting the chances of fluent and flexible language, whether a

regression occurs or not. It is also interesting to note that, during the period in which language stagnates in the case of a language regression, autistic children can experience more social difficulties compared to other autistic children their age who did not have a language regression.

The takeaway:

In conclusion, autistics that experience language regression when growing up have a three-step language development: (1) first words are learned at an early or typical age; (2) a break, or a plateau, of a few years during language development doubles the expected time between first phrase production and fluent and flexible language; and (3) a catch-up in expressive and receptive language level, to reach the same level as their autistic peers who did not experience language regression.

"Bayonet-shaped" language development



Further reflection:

The study showed that despite a delayed/plateaued language development and more social interaction difficulties, autistics that experienced a language regression succeed in acquiring a fluent and flexible language. Their atypical language development and greater social difficulties suggest that autistics experiencing language regression use compensatory strategies to develop language. More research conducted by our research team focuses on better understanding these strategies to eventually integrate them to language interventions in autism.