



Repetitive behaviours and intense interests (Part II)

By CATHERINA LACELLE

In the previous issue, we included an article on the evolution of repetitive behaviours and intense interests (RBIs) in autism during childhood. At the time of publication, Mirko Uljarevic and his colleagues authored a very large-scale study on this topic, which we have decided to summarise as a Part II to our article in the [previous issue](#). Contrary to the methods used by the authors of the article in Part I (who singled out RBIs for study), the researchers of this study chose to group repetitive behaviours and intense interests into 3 factors often used in the scientific literature. They are described below:

Repetitive motor behaviours, which include finger, hand and body movements, and the repetitive use of objects to create certain sounds or to visually explore the environment. **Insistence on sameness**, which refers to all behaviours linked to difficulties with changes in routines or surroundings. **Intense interests**² refer to specific and/or very significant interest in objects or topics. The authors then added two further categories: **self-injurious behaviours** and **compulsions**, or obsessions which lead to repetitive behaviours, both of which are also frequently found in the literature.

Despite a lack of longitudinal studies (research on the same group of children over several years) certain tendencies have emerged in the scientific literature on how RBIs evolve over time. For example, repetitive motor behaviours seem to be more present in early childhood, subsequently decreasing with age. The other two factors are rarely observed in autistic children aged between 12 and 15 months, but seem to then increase rapidly during childhood, stabilising in late childhood/early adolescence.

How was this study designed?

The researchers used a large cohort to better understand the factors associated with changes in RBIs. More specifically, they used a cohort of **17,581 autistic children and adolescents** to determine how age, sex and severity of autism socio-communicative symptoms were linked to the increase and decrease of RBIs. This information was collected using parent-report questionnaires available online through the **SPARK** autism research cohort.

Article from the previous issue.

SPARK
Simons Foundation
Powering Autism
Research for
Knowledge project

¹ We use the more inclusive term "intense interests" but the study used the term "restricted interests"



A few results

Sex differences

The authors found that, in **boys**, **repetitive motor behaviours** and **intense interests** were more significant, whilst **self-injurious** behaviours and **compulsions** were more significant in **girls**. Insistence on sameness did not differ depending on sex.

Age-related changes

The results on how RBIs evolve over time were in line with the literature. Thus, **repetitive motor behaviours** tend to decrease with age no matter the child's sex.

For **intense interests** and **insistence on sameness**, results also confirmed previous research. These

behaviours seem to follow an inverted U curve, meaning that they increase gradually in childhood, reaching a maximum level between 8 and 10 years old, before gradually decreasing.

Link with severity of socio-communicative symptoms

Lastly, autism symptom severity in the sociocommunicative domain was linked to more RBIs across all categories, but this effect was quite weak. Therefore, increased symptomatology in one domain (sociocommunicative) was "slightly" associated with higher probability of also having more symptoms in the RBI domain.

Repetitive motor behaviours tend to decrease with age no matter the child's sex.

Original article:

Article original:

Uljarević, M., Frazier, T. W., Jo, B., Billingham, W. D., Cooper, M. N., Youngstrom, E. A., Scahill, L., & Hardan, A. Y. (2022). Big Data Approach to Characterize Restricted and Repetitive Behaviors in Autism. *Journal of the American Academy of Child & Adolescent Psychiatry*, 61(3), 446-457. <https://doi.org/10.1016/j.jaac.2021.08.006>

Conclusion

In conclusion, RBIs represent a wide range of very different behaviours, which each vary differently depending on age, sex, and intensity of social and communicative difficulties. These different factors also interact, making it very complex for researchers to study these behaviours. This study highlights the importance of combining several

data collection methods (objective and subjective) to better understand the role of RBIs in development. Together, the two studies summarised demonstrate the importance of studying RBIs separately and not just as a whole, and point out how misunderstood these behaviours remain within autistic development.



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