



SPARK 
SNAPSHOT
WOMEN and GIRLS

A Snapshot of women and girls in SPARK



Welcome!

SPARK is changing what we know about autism in women and girls.

There are over 30,000 women and girls with autism in SPARK! This makes SPARK the largest research study of autistic women and girls in the country.

Together, scientists and SPARK participants are making a big impact on autism research. Hopefully, this science will help to change the lives of women and girls with autism. This snapshot highlights research results from two publications from 2021 that focused on girls. If you'd like to read more, links to the full text of the papers are at the end of this report.



In this report, the terms “women” and “girls” include individuals assigned female sex at birth. SPARK recognizes that there is a difference between assigned sex at birth and gender identity. One of our aims is to be able to shine a light on research in the field of gender and autism as more studies emerge.

General Information

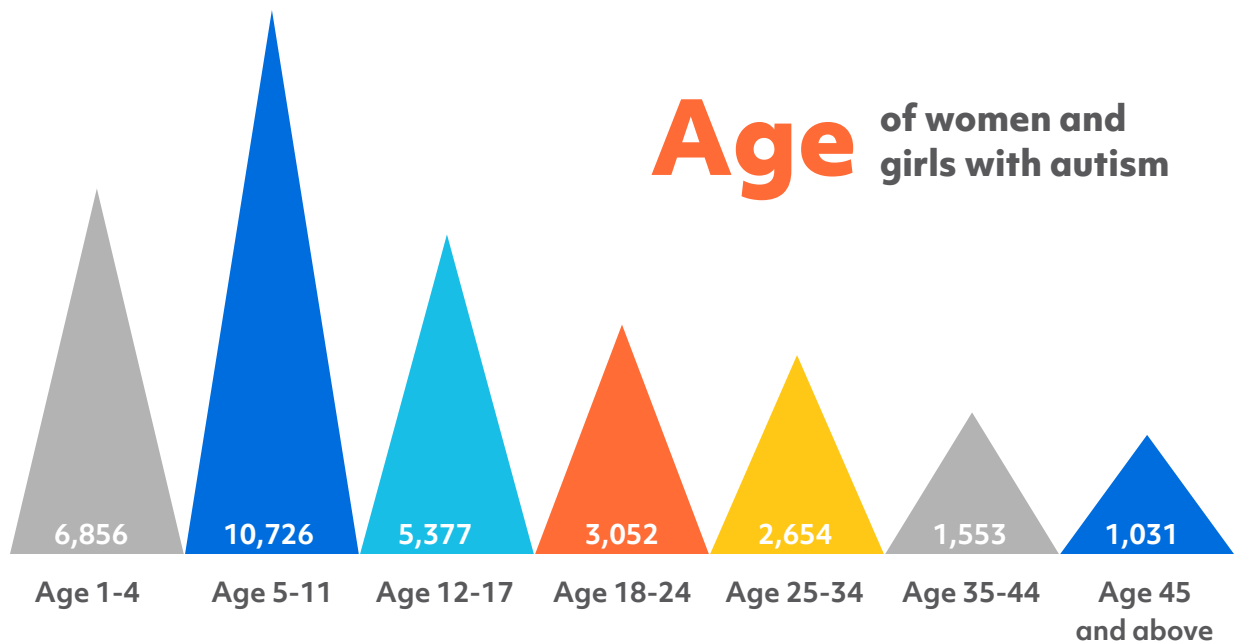
31,297



Number of women and girls with autism in SPARK



Age of women and girls with autism



These data do not include people with unknown ages.



Diagnosis Information

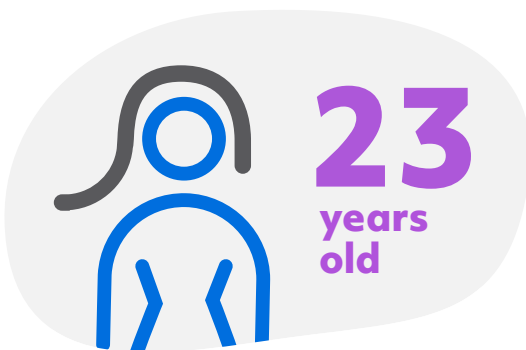
On average, girls were diagnosed at

4 years old

Average age at adult diagnosis

Independent autistic women were diagnosed later than dependent autistic women. Some adults were not diagnosed until their 60s or 70s. This likely reflects increased recognition of autism in more recent years.

Independent Autistic Women



Dependent Autistic Women



Diagnosis Differences in Children



Sex at birth is the strongest predictor of when a child will receive an autism diagnosis – more than repetitive behaviors, IQ, language delays, or age at the first signs of autism.

Autistic females without co-occurring conditions were diagnosed at

4 years old

Males were diagnosed

4 months earlier

than females – this is true even when their parents had their first concerns at the same time.

Females with a combination of autism, ADHD*, and anxiety were diagnosed the latest, at

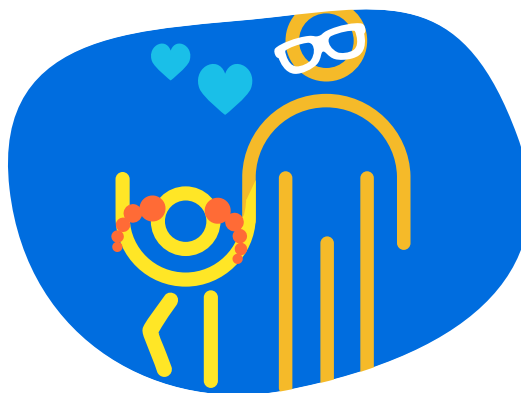
7 years old

* ADHD stands for Attention Deficit Hyperactivity Disorder

Differences in First Concerns

Parents of girls were more likely to report first concerns related to **motor development** such as **late walking**.

This was different from boys, who more often experienced delayed first words, repetitive behaviors, and loss of speech or other skills.



Sex Ratios

For every 4 boys diagnosed with autism in the US, only 1 girl is diagnosed.



SPARK researchers found that sex ratios differed when looking at more specific groups of children.

Autism alone



Autism & Anxiety



Autism & ADHD



● Boys ● Girls

These data show that when diagnosing autism, anxiety is a more common co-occurring condition in girls, whereas ADHD is a more common co-occurring condition in boys.

Autism with Anxiety & ADHD

Girls with autism who have **co-occurring anxiety or ADHD** showed more autistic traits, such as repeating phrases or difficulties with eye contact.

Girls with autism who have **ADHD** had more severe **motor delays**.

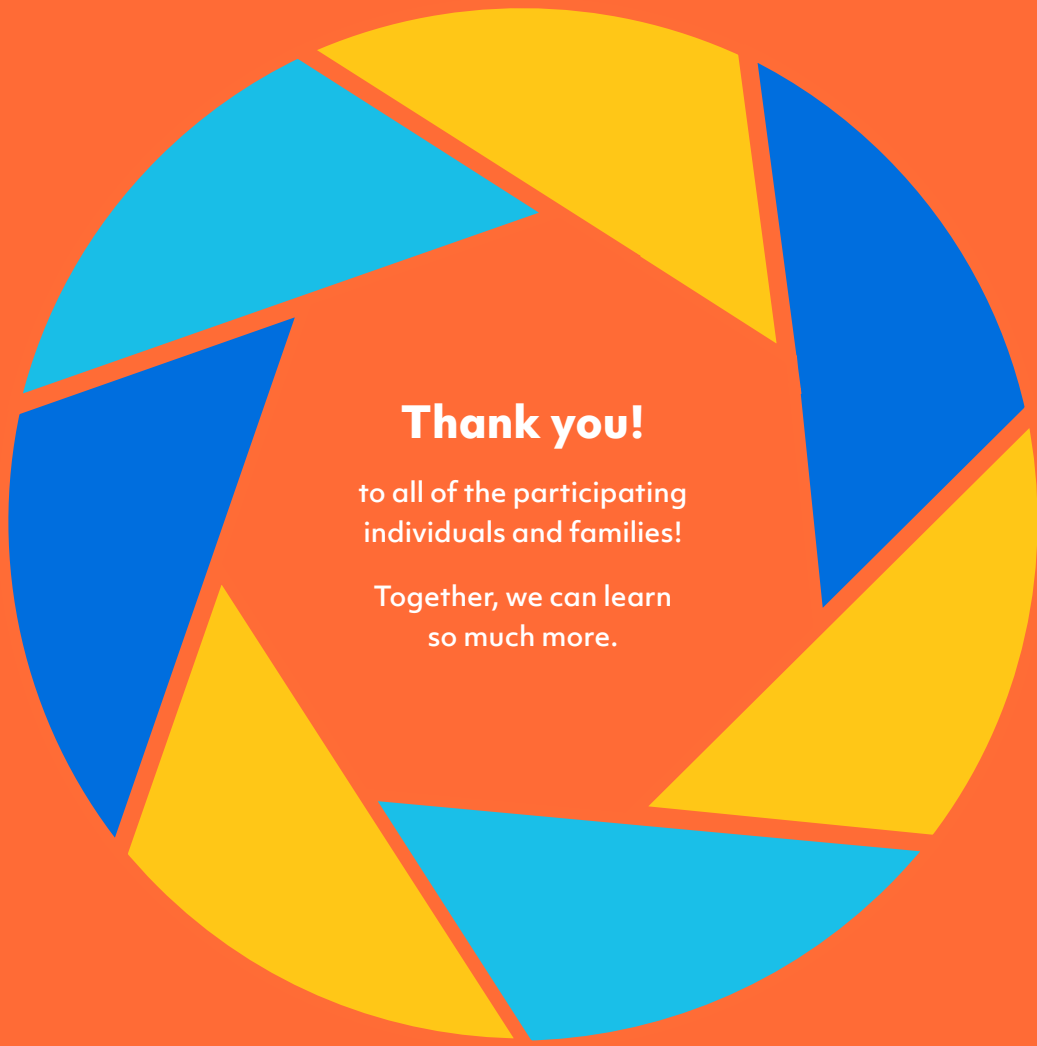


Girls with autism who have **co-occurring anxiety and ADHD** had more **repetitive behaviors** than autistic females with only one co-occurring condition.



References

- Dillon, et al. 2021. Sex Differences in Autism: Examining Intrinsic and Extrinsic Factors in Children and Adolescents Enrolled in a National ASD Cohort. *Journal of Autism and Developmental Disorders*
doi.org/10.1007/s10803-021-05385-y
- Wodka, et al. 2021. Co-occurring Attention-Deficit/Hyperactivity Disorder and Anxiety Disorders Differentially Affect Males and Females with Autism. *The Clinical Neuropsychologist*
doi.org/10.1080/13854046.2021.1942554



Thank you!

to all of the participating individuals and families!

Together, we can learn so much more.

