



SPARK SNAPSHOT

Report 1: UPDATED | Data from Dec 2015 - Dec 2025



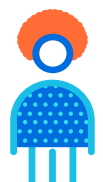
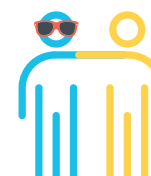
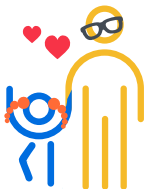
Did you know that

173,540 people with autism



are participating in SPARK?

Welcome to the **SPARK Snapshot** — a window into the autism journey of SPARK participants. We've compiled these interesting findings from information that families have provided.



Who Is Participating in SPARK?

Children

Adults

Number of Children
with Autism

137,643

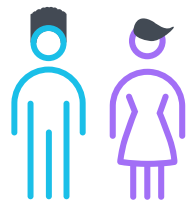
Number of
Autistic Adults

35,701

Many more children with autism have enrolled in SPARK than autistic adults. We need more adults to participate to better understand autism throughout the lifespan.



196 participants have no reported age data



1 to 1

Ratio of Males to Females
in Adults Over 18

There has been a significant increase in autistic adult women participating in SPARK over time. This could be due to the rise in awareness of autism in women.



3 to 1

Ratio of Males to Females
in Children Under 18

Boys with autism outnumber girls 3 to 1 in SPARK — a ratio similar to the one usually reported in other autism studies. This is one clue that SPARK is a good representation of families with autism in the U.S.

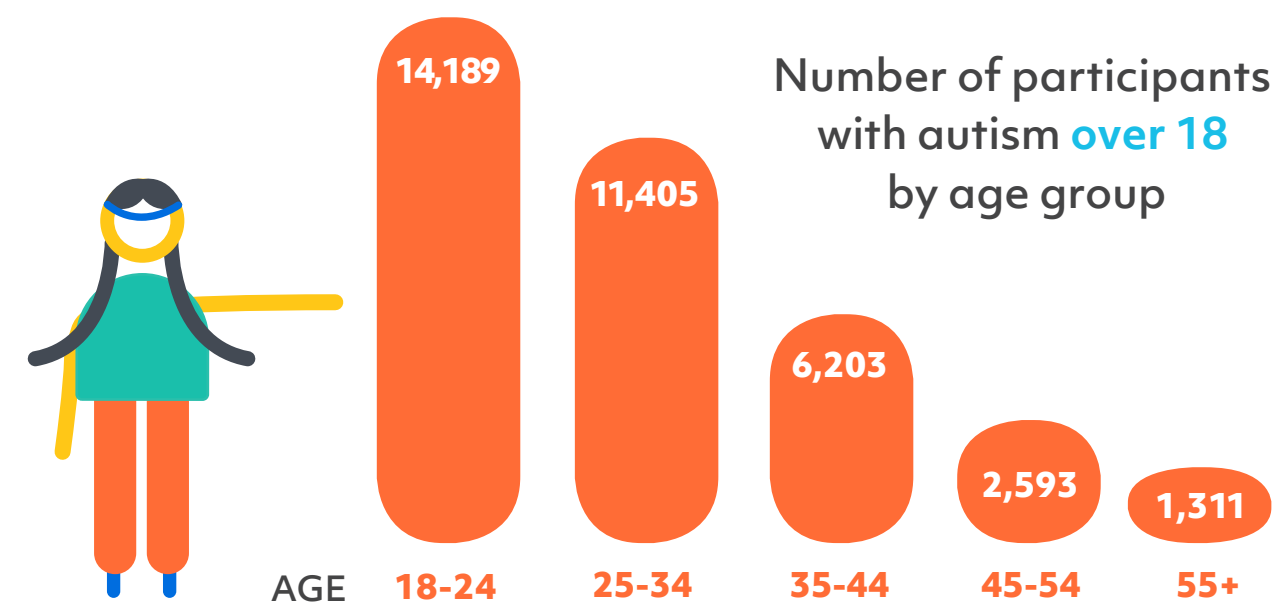
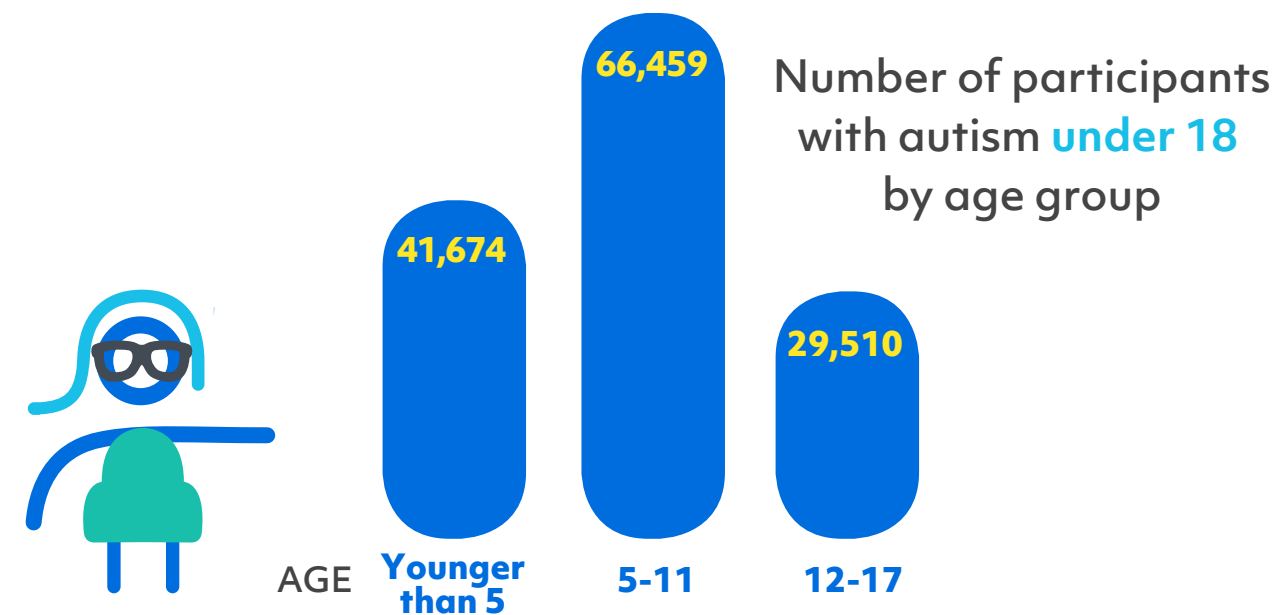


We now have more autistic adult females than males

Who Is Participating in SPARK?

Age of Participants with Autism Enrolled in SPARK

SPARK represents the whole lifespan, from toddlers who received their diagnosis before 2 to some of the first diagnosed cases, now in their 80s. We also have babies with autism enrolled whom we can watch as they grow and change over time.



Diagnosis



Average Age
When Boys
Were Diagnosed

4.3
years



Average Age
When Girls
Were Diagnosed

4.9
years

Children Under 18

Boys and girls were diagnosed on average between ages 4 and 5.

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

Adults Over 18

26.2
years
Average age that
INDEPENDENT adult
females were diagnosed



22.3
years
Average age that
INDEPENDENT adult
males were diagnosed



6.1 years
Average age that
DEPENDENT adult
males were diagnosed



8 years
Average age that
DEPENDENT adult
females were diagnosed

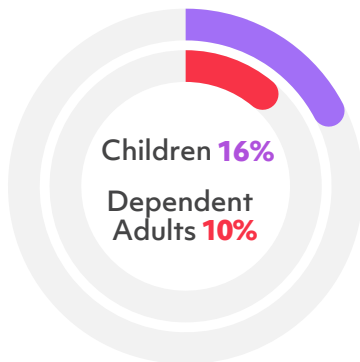
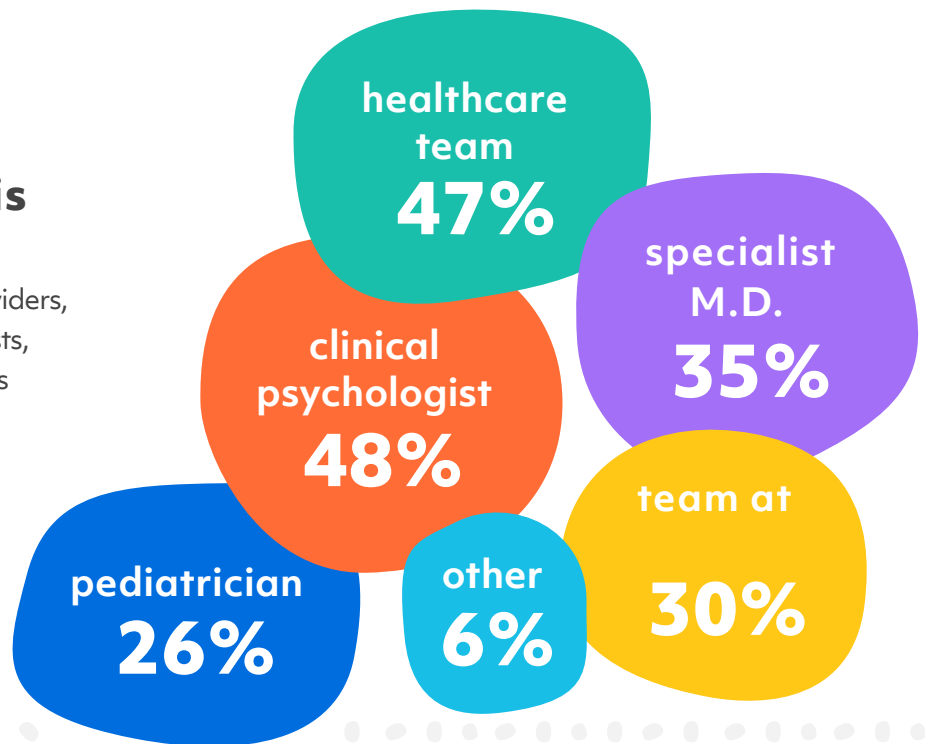


Diagnosis

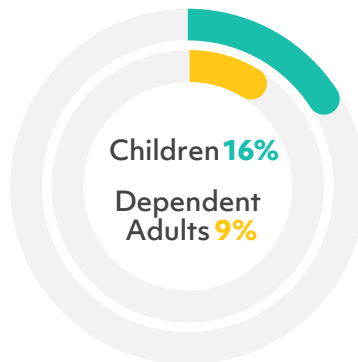
Professionals Who Made the Diagnosis

Families are receiving diagnostic evaluations from multiple care providers, most commonly clinical psychologists, medical specialists and entire teams of experts. The school also plays this role for many families.

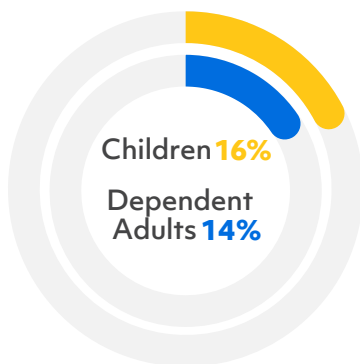
These percentages do not add up to 100% because participants were able to select more than one option.



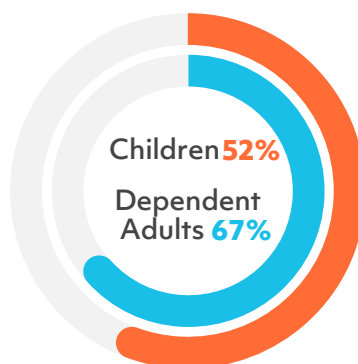
Do not speak



Are able to use single words to communicate



Use phrases



Use longer complex sentences

Language

Most children and dependent adults enrolled in SPARK are able to use full sentences to communicate.

Pregnancy, Birth History and Associated Conditions

Percent with Serious Birth Complications

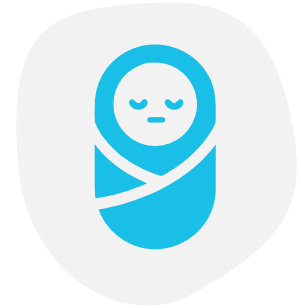
8%



SPARK families reported many concerns about pregnancy and birth for their children, but serious complications causing brain injury are no more likely than they are in the general population.

Percent Born Prematurely

12%



Preterm birth has been associated with autism. Birth complications such as prematurity are known to increase the risk for developmental disability, and some research says it increases the risk for autism.

Seizures

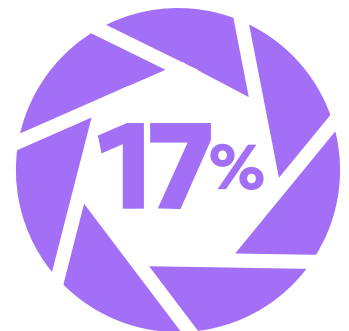
Percent of all SPARK participants with a seizure disorder



The rate of seizure disorders in SPARK is higher than it is in the general population. But SPARK's reported rate is much lower than the rates reported by other autism studies. We need everyone in SPARK to finish their basic medical screening survey to give us a complete picture.

Cognitive Impairment

Percent of ASD children and dependent adults in SPARK who report a diagnosis of intellectual disability or cognitive impairment



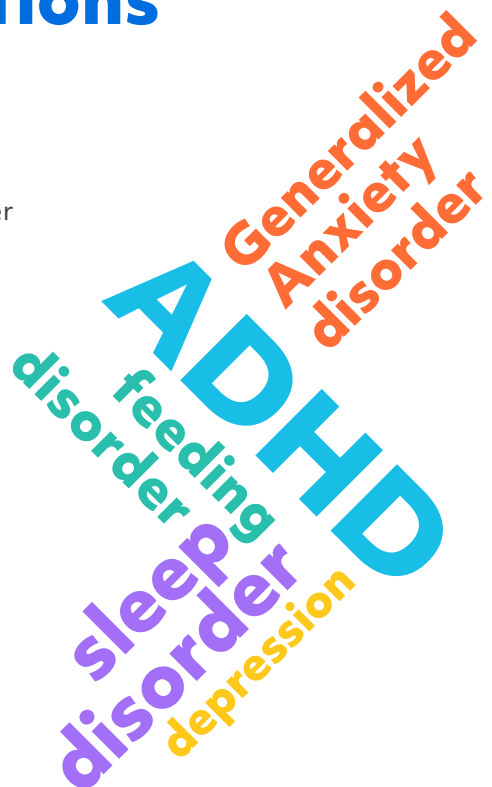
Intellectual disability is characterized by challenges in cognitive/intellectual functioning (such as reasoning, learning, processing, and/or memory), as well as challenges in adaptive functioning (such as conceptual reasoning, interpersonal social skills, and/or practical daily living skills).

Pregnancy, Birth History and Associated Conditions

The rate of attention deficit (ADHD) in SPARK is over 3 times higher than it is in the general population. Diagnoses of conditions like ADHD and anxiety may rise now that the new diagnostic system used by doctors encourages all other conditions to be documented.

Conditions Diagnosed in Children with Autism

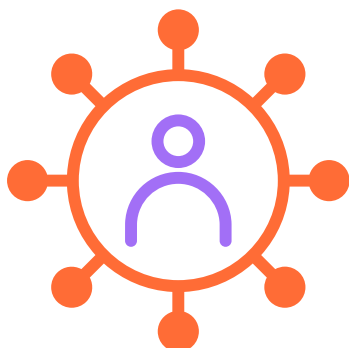
- 36% have ADHD
- 20% have a sleep disorder*
- 19% have Generalized Anxiety disorder
- 17% have a feeding disorder**
- 7% have depression



* While 20% of children have a diagnosed sleep disorder, 40% reported a sleep problem (undiagnosed). This statistic includes diagnosed and undiagnosed sleep problems.

** While 17% of children have a diagnosed feeding disorder, 42% reported a feeding problem. This statistic includes both diagnosed and undiagnosed feeding problems.

Autistic adults also struggle with depression and anxiety. Independent adults with autism report anxiety and depression at rates 2 and 3 times higher than the general population, respectively.



Conditions Diagnosed in Dependent Autistic Adults

- 22% have depression
- 36% have Generalized Anxiety disorder
- 41% have ADHD

Conditions Diagnosed in Independent Autistic Adults

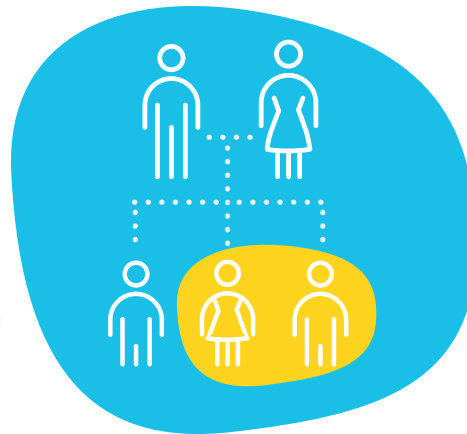
- 61% have depression
- 66% have anxiety disorder
- 55% have ADHD

Multiplex Families Enrolled in SPARK

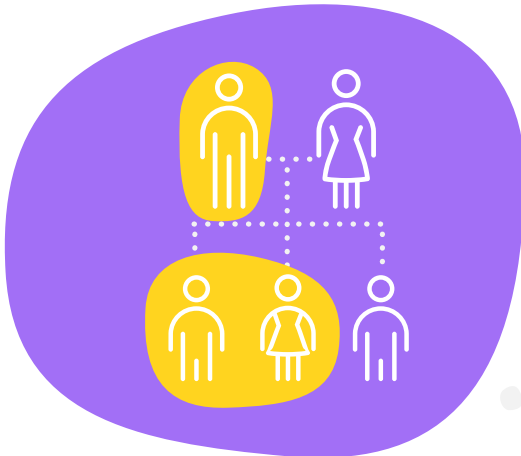
19% of SPARK families have more than 1 autistic family member enrolled in the study.

When we say **multiplex**, we mean families with more than one member who has a professional diagnosis of ASD.

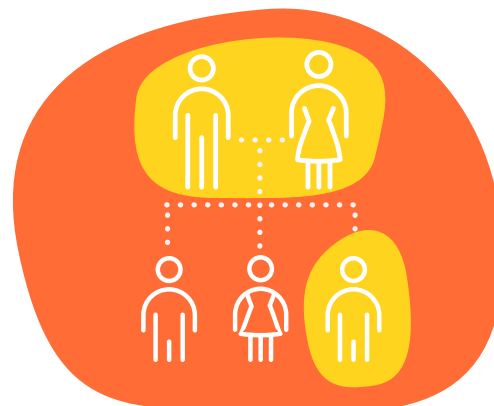
13% of families have **more than 1 child** with ASD enrolled in SPARK



2% of families have **more than 1 child and at least 1 parent** with ASD enrolled in SPARK



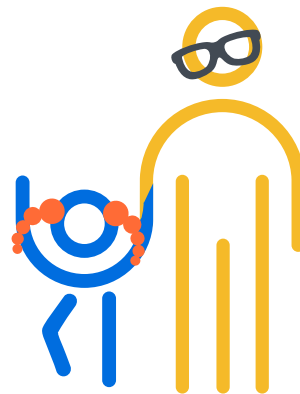
4% of families have **at least 1 parent and only 1 child** - with ASD enrolled in SPARK



Development Milestones



Average age of first words
Children **1.7 years**
Dependent Adults **1.8 years**



Average age of first steps
Children **1.2 years**
Dependent Adults **1.3 years**



**Average age of the child when
parents had their first concern**
Children **1.8 years**
Dependent Adults **2.1 years**

Development

First thing that caused parents concern about their child's development

Late speech

Children **28%**
Dependent Adults **22%**



Interaction with others (such as poor eye contact, no response, or not joining in)

Children **19%**
Dependent Adults **23%**



Mood or temperament

Children **10%**
Dependent Adults **7%**



A change or loss in abilities

Children **8%**
Dependent Adults **11%**



Unusual habits (such as getting stuck on doing things over and over)

Children **9%**
Dependent Adults **8%**



Unusual speech (such as saying things over and over)

Children **3%**
Dependent Adults **2%**



Late walking or other motor milestones

Children **12%**
Dependent Adults **13%**



Something else

Children **12%**
Dependent Adults **14%**



Development

Regression

- Dependent Adults



Percent who experienced a **regression in language abilities 32%**

Percent of those whose **language returned** after the regression **61%**

Average age of language regression **2.4 years**

Other types of regression

- Dependent Adults



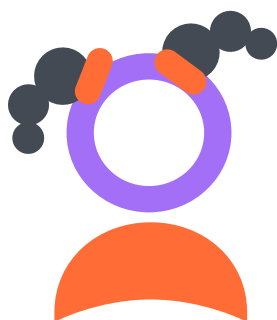
- Average age of non-language regression **3.8 years**
- Skills returned **31%**

The percentages shown are from the caregivers who responded to **SPARK's Background History Survey**. Of the dependent adults, 20% experienced a regression in their social skills. On average, some types of changes that cause parents concern, such as potty training, might happen later than regression in language. Of those who experienced a regression in language, 61% regained their skills, whereas only 31% of those experiencing another type of regression regained their lost skills. This is likely because decreased social engagement is a common feature of autism throughout the lifespan.

Development

Regression

- Children



Percent who experienced a regression in language abilities **32%**

Percent of those whose language returned after the regression **64%**

Average age of language regression **1.9 years**

Other types of regression

- Children



- Average age of non-language regression **2.9 years**
- Skills returned **32%**

The percentages shown are from the caregivers who responded to **SPARK's Background History Survey**. Of the children, 16% experienced a regression in their social skills. On average, some types of changes that cause parents concern, such as potty training, might happen later than regression in language. Of those who experienced a regression in language, 64% regained their skills, whereas only 32% of those experiencing another type of regression regained their lost skills. This is likely because decreased social engagement is a common feature of autism throughout the lifespan.

Development

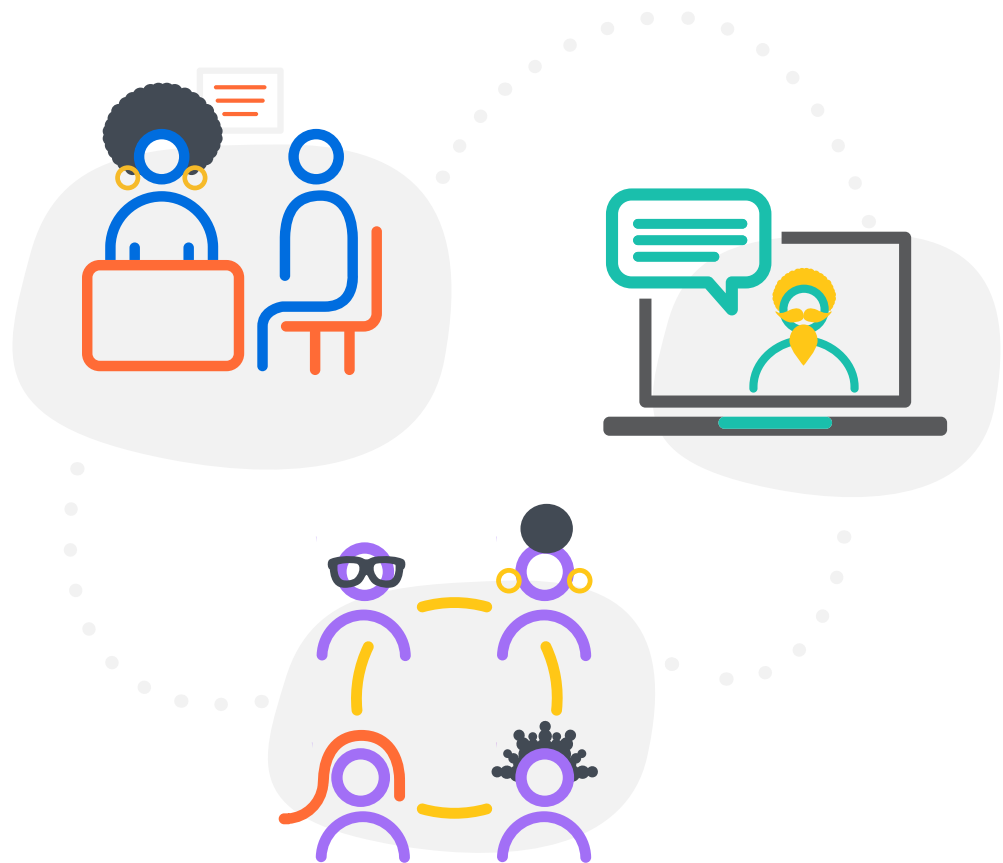
Support Required for Dependent Adults

Minimal to no support **11%**

Some support **39%**

Substantial support **34%**

Very substantial support **16%**





to all of the participating families!
Together, we can learn so much more.

Stay Up-to-Date on all things SPARK:



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