

Social media changed ASD

Tiktok ~ Facebook ~ lemon8 ~ Instagram ~ reddit ~ etc.

Autism Spectrum Disorder

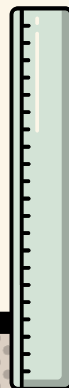
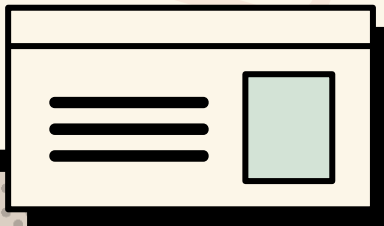
21°

Kayla Vaccaro

Why does this matter?



Social media provides a platform for us to share stories and experiences. One person's perspective on their ASD journey starts a conversation. This allows other people to relate and ask questions and share their own stories. There is this massive network that has offered a whole new POV on ASD, especially for women, people of color, and younger generations.



Example:

I started watching videos about mom's and their autistic children.

Interacting with this caused the algorithm to push more ASD related content.

I started relating more and more to the content being pushed until I realized a lot of women with autism are just like me.

01

Autism

'#autism', '#autismawareness', '#autismacceptance', '#asd',
'#adhd', '#specialneeds', '#autistic', '#autismmom',
'#autismfamily', '#autismo', '#autismlove', '#memes',
'#autismlife', '#autismspectrum', '#autismsupport'

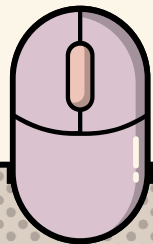


.....

Trends in diagnosis



- Taking a dive into cognitive disorders:
 - Disabilities and Health Data System DHDS
 - “Cognitive disabilities are classified as clinical or functional. Clinical diagnoses include dementia, traumatic brain injury, Down syndrome, and autism. Less severe conditions are learning disabilities, such as problems with math, referred to as dyscalculia, difficulty reading, referred to as dyslexia, and attention deficit disorder.”
- Looking at Census NSCH data 2016-2023
- Pulling in an Autism Prevalence Study

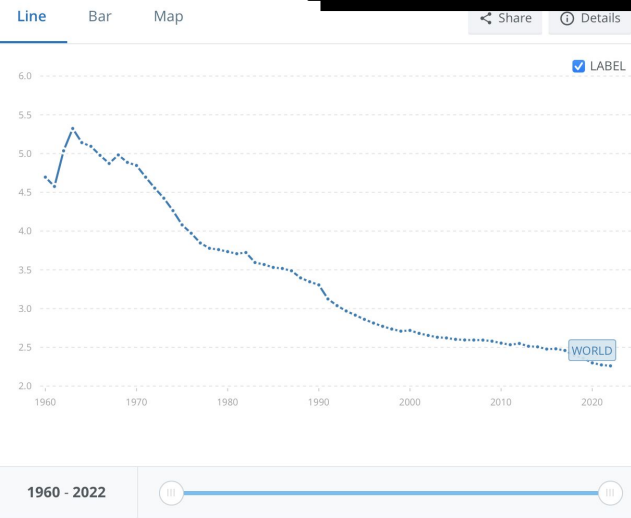


Fertility rates

Fertility rate, total (births p

(1) United Nations Population Division, World Po
databases and publications from national statisti

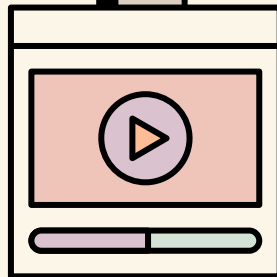
License : CC BY-4.0



The fertility rate has dramatically decreased from 5.3 births in 1963 to 2.3 in 2022. The increase in autism diagnosis cannot be correlated to the growth of population.



Analytical Findings



codes

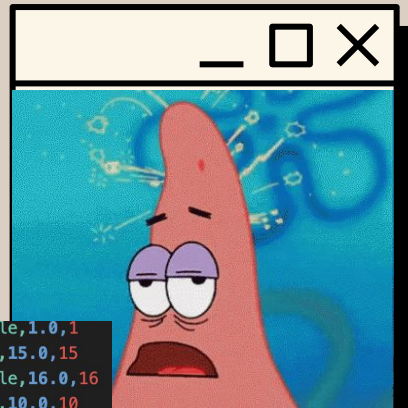
- C_CSHCN="Special Health Care Needs Status of Child"
- C_K2Q23="Child Treatment for Chronic Emotion Develop Behave"
- C_K2Q22="Child Needs Treatment for Emotion Develop Behave"
- C_K2Q21="Child Special Therapy for Health Condition for 12 Months"
- C_K2Q20="Child Special Therapy for Health Condition"
- C_K2Q19="Child Special Therapy"
- C_SEX="Child Sex"
- C_AGE_YEARS="Child Age - Years"

1='Yes'
2='No'

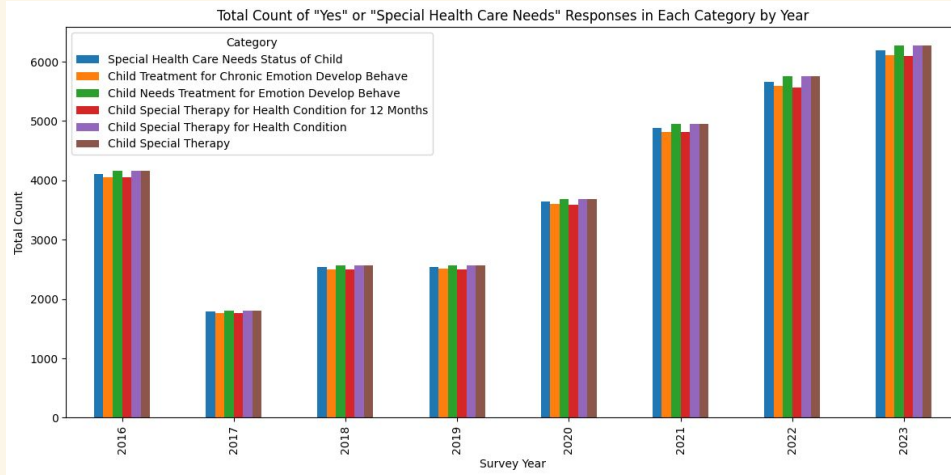
1='Special Health Care
Needs'
2='No Special Health
Care Needs'

1='Male'
2='Female'

```
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Female,1.0,1
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Male,15.0,15
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Female,16.0,16
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Male,10.0,10
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Female,8.0,8
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Male,16.0,16
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Male,16.0,16
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Male,8.0,8
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Male,8.0,8
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Male,5.0,5
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Female,7.0,7
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Male,9.0,9
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Male,11.0,11
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Male,11.0,11
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Female,10.0,10
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Female,16.0,16
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Male,13.0,13
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Female,12.0,12
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Male,8.0,8
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Female,17.0,17
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Female,5.0,5
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Female,14.0,14
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Male,8.0,8
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Male,4.0,4
2016,Special Health Care Needs,Yes,Yes,Yes,Yes,Yes,Male,7.0,7
```



Analytical Findings



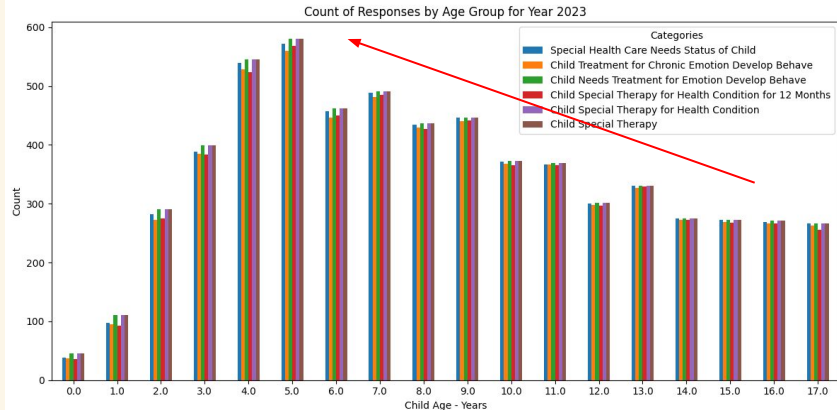
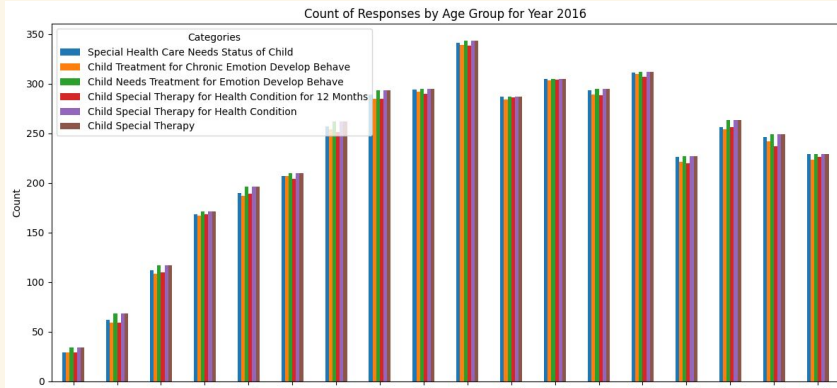
Category	Age Group	Max Increase
Special Health Care Needs Status of Child	0	0.0
Child Treatment for Chronic Emotion Develop Behave	5	353.0
Child Needs Treatment for Emotion Develop Behave	5	370.0
Child Special Therapy for Health Condition for ...	5	364.0
Child Special Therapy for Health Condition	5	370.0
Child Special Therapy	5	370.0

Max % increase from 16-23

Child Treatment for Chronic Emotion Develop Behave	4
Child Needs Treatment for Emotion Develop Behave	4
Child Special Therapy for Health Condition for ...	5
Child Special Therapy for Health Condition	4
Child Special Therapy	4
Child Treatment for Chronic Emotion DB	182.352941
Child Needs Treatment for Emotion DB	178.061224
Child Special Therapy for Health Condition for ...	178.431373
Child Special Therapy for Health Condition	178.061224
Child Special Therapy	178.061224

NSCH
Data

Analytical Findings



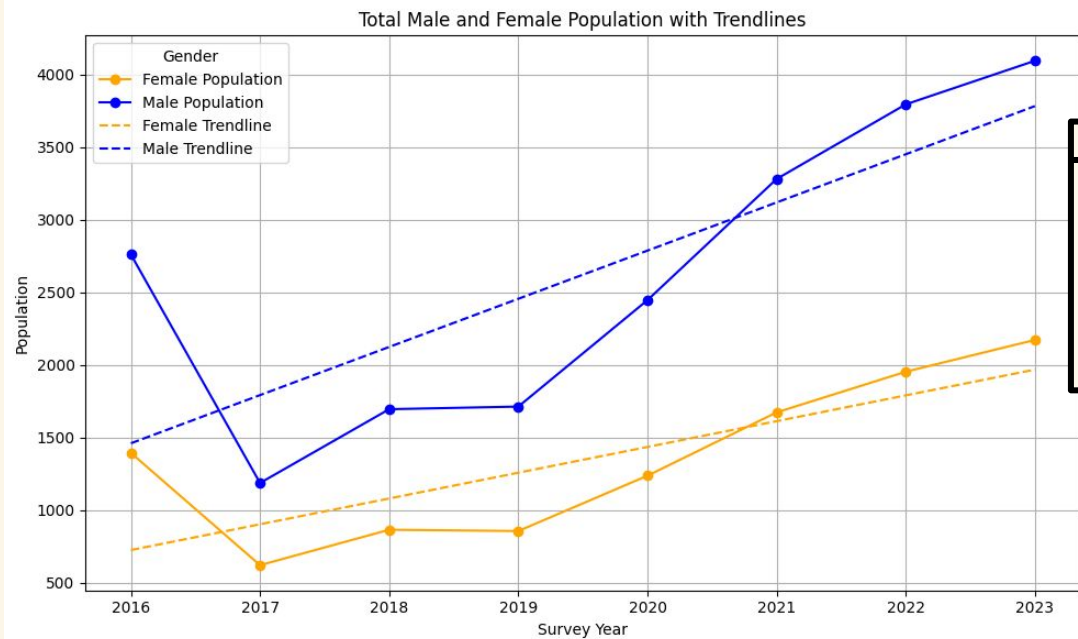
What age group is the largest? _

Year	Largest Age Group	Count
0 2016	9.0	343
1 2017	11.0	141
2 2018	10.0	206
3 2019	9.0	208
4 2020	9.0	287
5 2021	5.0	429
6 2022	5.0	435
7 2023	5.0	580

There is a major shift of children being diagnosed at younger and younger ages. Hypothesis: people are more educated on the signs and can spot them sooner in their children.

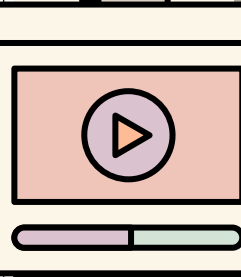
NSCH
Data

Analytical Findings

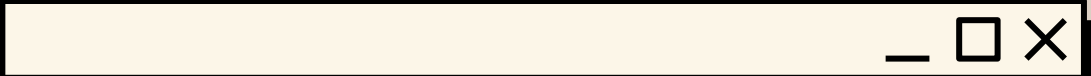
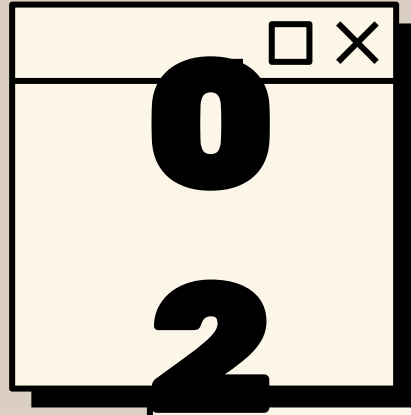


Total increase rate for females: 55.77%

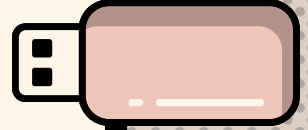
Total increase rate for males: 48.32%



Most autism studies have only been done on young white boys, but with the spread of information, we are seeing a higher rate of diagnosis and therapeutic care for girls and women.



.....

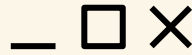


Social Media



#WomensVoices, #WomenEmpowerment, #SheSpeaks, #HerStory,
#WomenSupportingWomen, #GirlPower, #Feminist, #StrongWomen, #WomenInspire
#Sisterhood, #WomenHelpingWomen, #BreakingBarriers, #FemaleEmpowerment,
#SheDidIt, #RiseUpWomen, #EmpoweredWomen, #WomenInLeadership,
#WomenWhoLead, #WomenWhoInspire, #WomensRights, #WomenWarriors,
#BodyPositivity, #MentalHealthMatters, #ASDWomen

Machine Learning

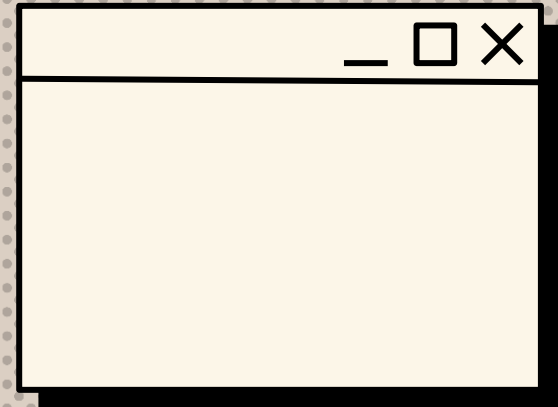
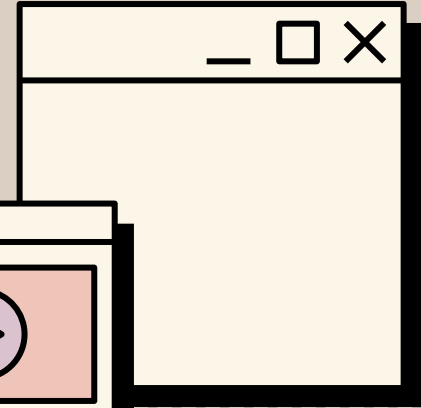
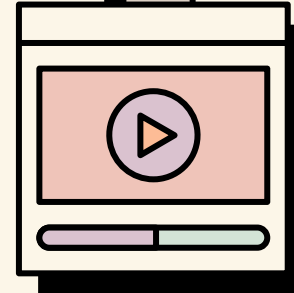


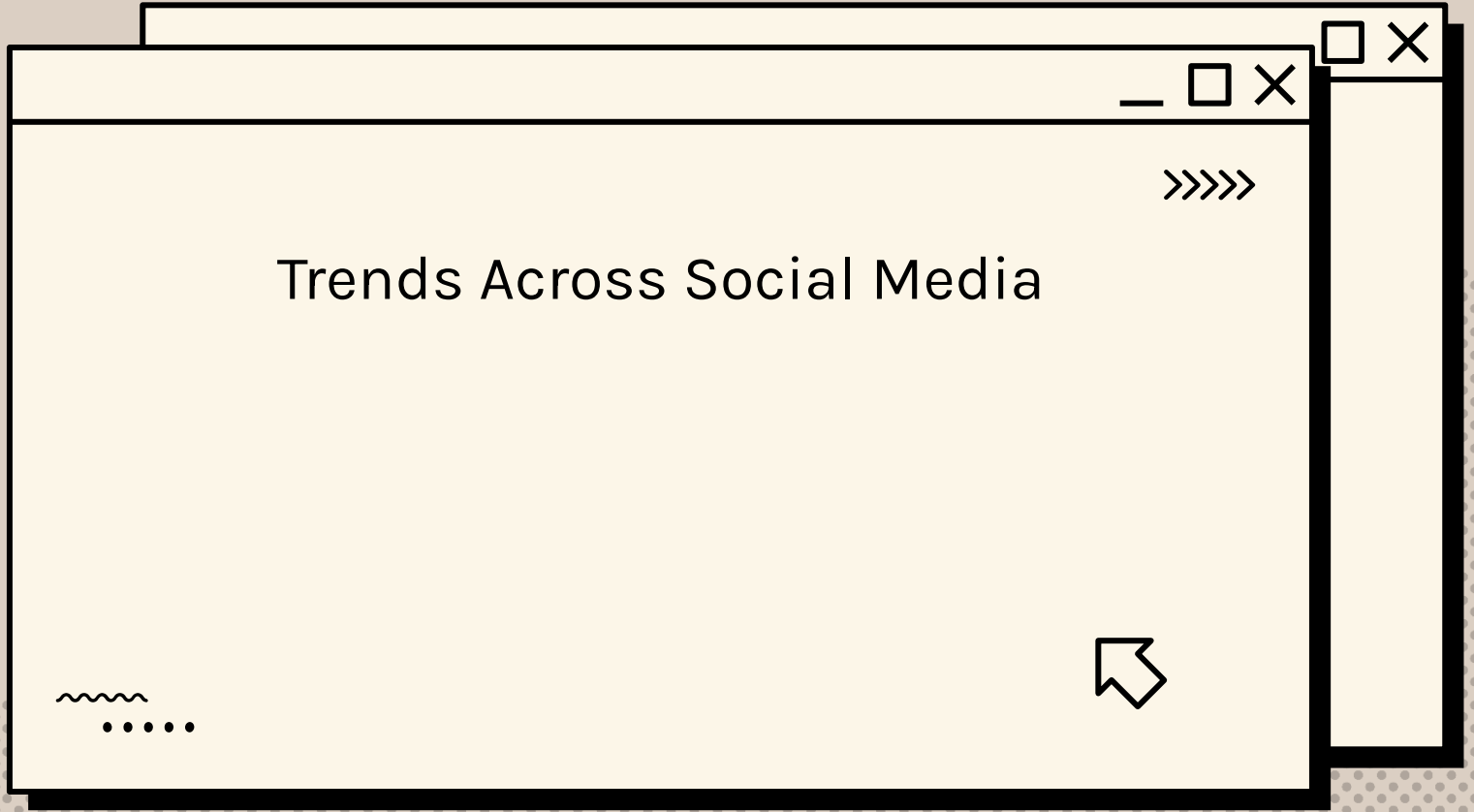
Key Components:

- **Agent:** The recommendation algorithm.
- **Environment:** The users interacting with videos.
- **Action:** The choice of a video to recommend.
- **Reward:** The feedback from users (like = 1, dislike = 0).
- **State:** The current context of the user (e.g., age, previously liked videos).
- **Policy:** The strategy the agent follows to choose actions (videos to recommend).
- **Q-value (Quality):** Measures how good an action is given a certain state.

NOT COMPLETE

I want to add in information about the analytics happening on platforms such as TikTok, Instagram, Lemon8, YouTube, etc. Look at how people have increased their conversations around special needs and ASD.







Thanks!

Does anyone have any questions?

kaybid98@gmail.com

www.linkedin.com/in/kayla-vaccaro-1577281a9

<https://github.com/biddlebird>

CREDITS: This presentation template was created by **Slidesgo**, including icons by **Flaticon**, and infographics & images by **Freepik**

Please keep this slide for attribution

Need to make citations

<https://data.worldbank.org/indicator/SP.DYN.TFRT.IN>

https://en.wikipedia.org/wiki/History_of_autism

<https://data.worldbank.org/indicator/SP.DYN.TFRT.IN>

<https://acamh.onlinelibrary.wiley.com/doi/full/10.1111/jcpp.13505>

https://www.cdc.gov/mmwr/volumes/72/ss/ss7202a1.htm?s_cid=ss7202a1_w

Centers for Disease Control and Prevention (U.S.) "Prevalence and Characteristics of Autism Spectrum Disorder Among Children Aged 8 Years – Autism and Developmental Disabilities Monitoring Network, 11 Sites, United States, 2020" vol. 72, 2023

Maenner, Matthew J. et al. "Prevalence and Characteristics of Autism Spectrum Disorder Among Children Aged 8 Years — Autism and Developmental Disabilities Monitoring Network, 11 Sites, United States, 2020" vol. 72, no. 2, 2023