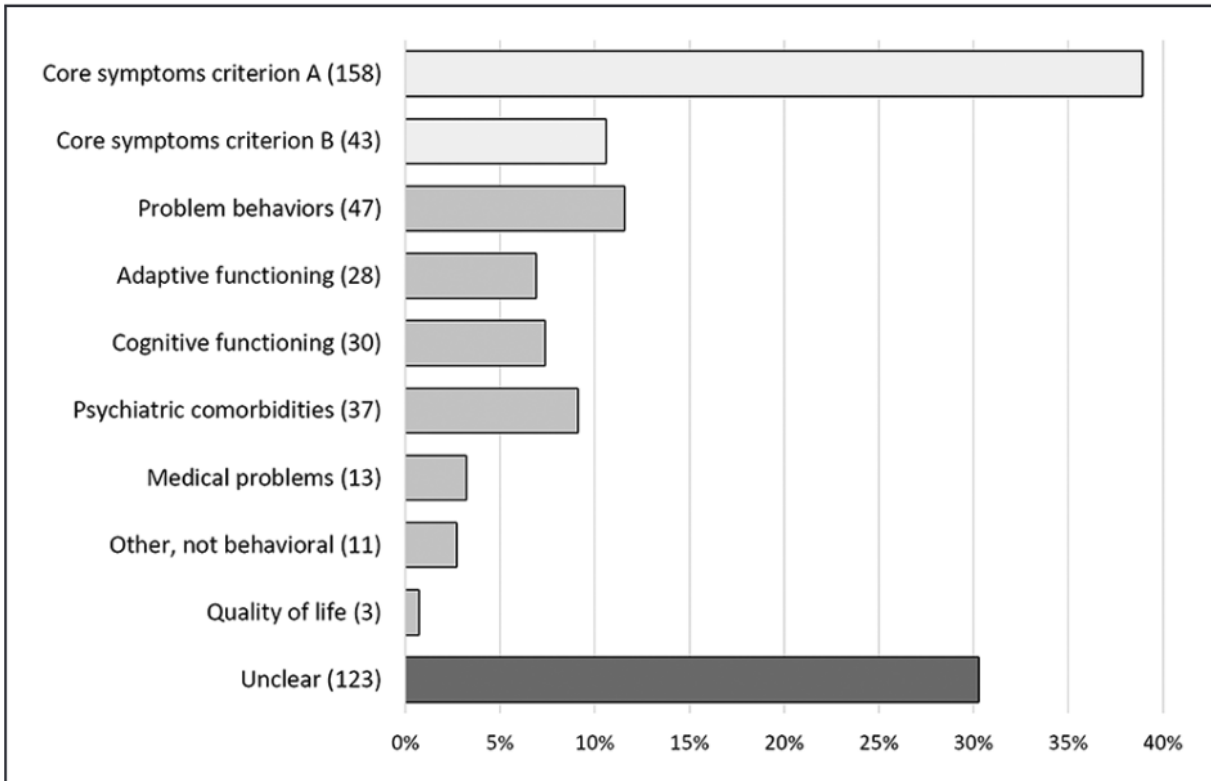


Non-Pharmacological Treatments for Adults with Autism

Samira Jamaloo

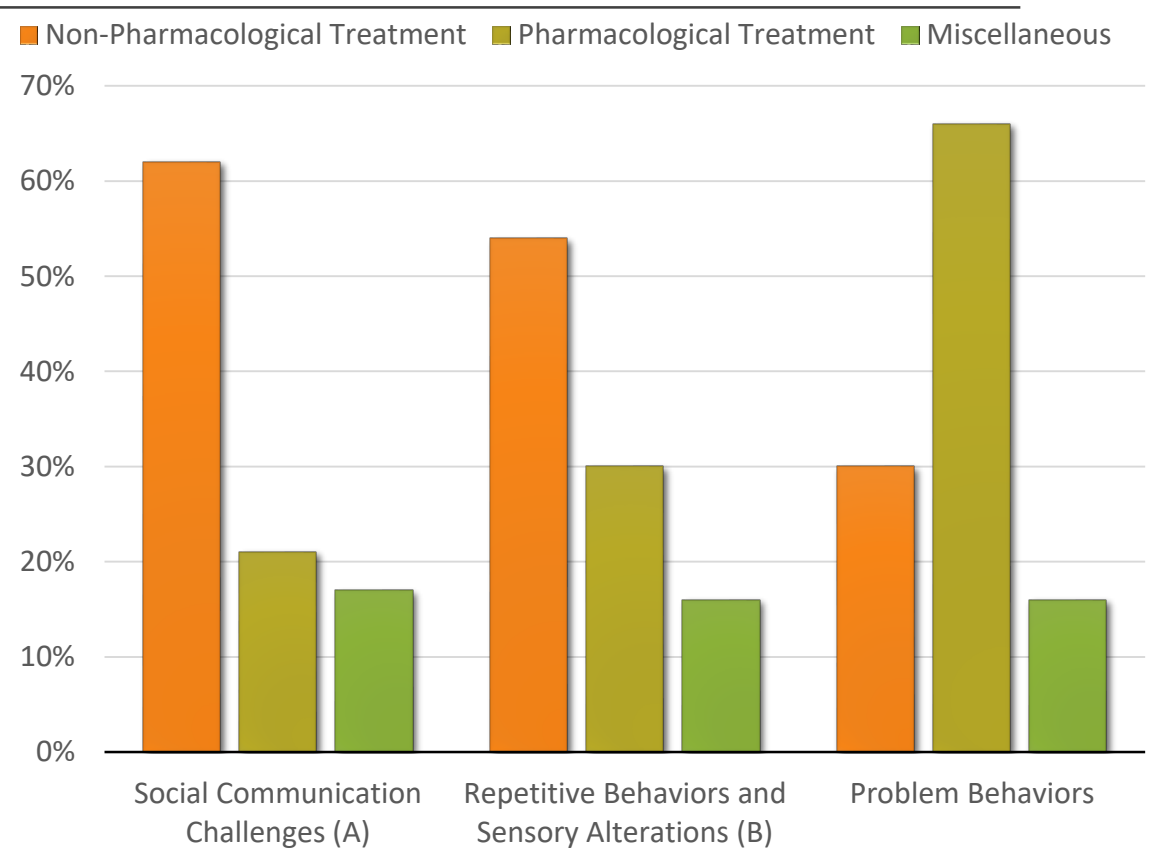
Clinical Psychologist

What are we targeting when we treat autism spectrum disorder?



Aims/Targets of Retrieved Studies

(Provenzani et al., 2019)



Psychosocial Interventions for Adults with Autism

Comprehensive strategies to improve social interaction and psychological well-being, targeting:

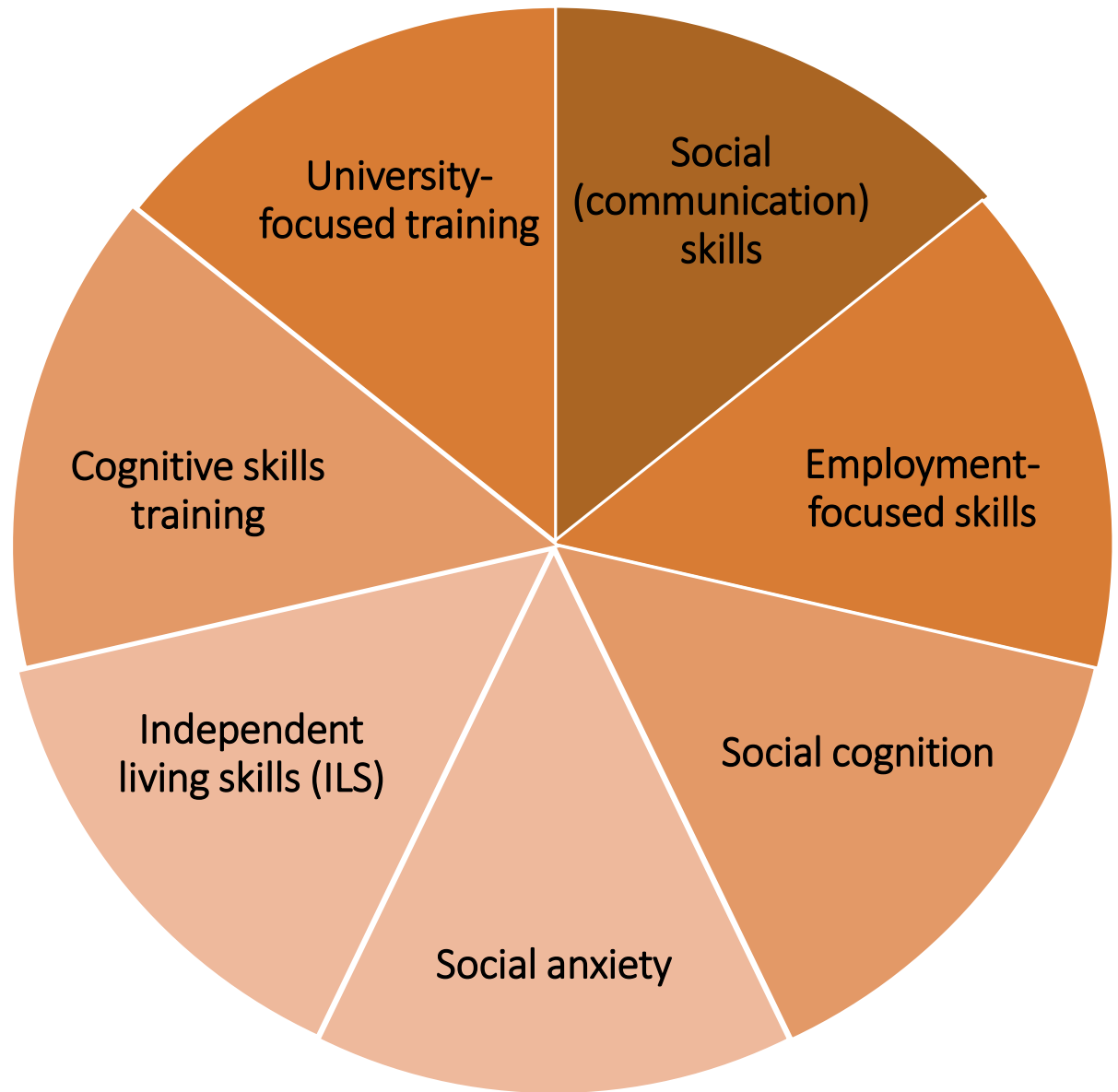
- Social cognition (e.g. face recognition, emotion recognition, perspective taking),
- Social anxiety,
- Social skills

They can include various strategies such as:

- **Cognitive Behavioral Therapy (CBT):** Aims to change negative thought patterns and behaviors.
- **Mindfulness-Based Interventions (MBIs):** Focuses on present thoughts, emotions, and perceptions with acceptance and without evaluation, aiming to increase psychological flexibility and potentially reduce anxiety, depressiveness, and rumination.
- **Dialectical Behavior Therapy Skills Training (DBT-ST):** Focuses on teaching skills to help manage emotions, reduce problematic behaviors, and improve social functioning through four components: mindfulness, distress tolerance, emotion regulation, and interpersonal effectiveness

(Schweizer et al., 2024; 2022; Spek et al., 2013)

Psychosocial Interventions for Adults with Autism



Social Cognition and Social Anxiety Interventions

- **Social Cognition and Interaction Training for Adults (SCIT-A):**

Group-based cognitive behavioral intervention to improve social cognition in adults with ASD, focusing on three aspects of social cognition: emotion recognition, directing attention in social interactions, and perspective taking.

- **Mindfulness-Based Therapy in Adults with an Autism Spectrum Disorder (MBT-AS):**

A group-based intervention to reduce anxiety. MBT-AS is effective in reducing psychological (i.e. anxiety, depression, agoraphobia, rumination, inadequacy in thinking and acting, distrust and interpersonal sensitivity) and physical (i.e. somatization and sleeping problems) symptoms and increasing general psychological and physical well-being and keeping them stable over the longer term.

(Pallathra et al., 2019; Spek et al., 2013)

Social Skills Interventions:

Program for the Education and Enrichment of Relational Skills (PEERS)

- To date, the best evaluated and effective CBT-based intervention to improve social skills.
(Schweizer et al., 2024, Speyer et al., 2021)
- A caregiver-assisted social skills program for adolescents with autism but adapted for young adults.

Some key differences:

- **Social Focus:** The adolescent program often focuses on school-based social skills, while the young adult program may include skills relevant to the workplace, college, and romantic relationships
- **Age-Appropriate Content:** The adolescent program is tailored for middle and high school students, while the young adult program is designed for those who are in college or working.



**PEERS® for Young Adults
Social Skills Group**

NOW ENROLLING ADULTS 18-35 YEARS OLD

- PEERS® for Young Adults is an evidence-based social skills intervention for adults who are interested in making and keeping friends and/or developing romantic relationships.
- Young adults and social coaches (typically parents or other caregivers) attend 16 weekly group sessions for 90 minutes per week.
- Participants are taught social skills through didactic lessons and role-play demonstrations, and practice these skills during group socialization activities.
- Social coaches attend separate sessions simultaneously and are taught how to assist adults in making and keeping friends and/or dating.

Participants will learn about:

- Developing and maintaining friendships
- Conversational skills
- Entering and exiting conversations
- Appropriate use of humor
- Handling direct and indirect bullying
- Electronic communication
- Dating skills
- Organizing get-togethers
- Handling disagreements
- Handling dating pressure

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Social Skills Interventions:

Acquiring Career, Coping, Executive Control, Social Skills (ACCESS)

A CBT-based social functioning intervention, aiming to increase skills and beliefs for adult functioning., including three main modules:

- (1) stress and anxiety coping skills,
- (2) self-determination skills,
- (3) adaptive and social skills (regarding friendships and social etiquette at work).

The program involves:

- Psychoeducation,
- Learning to detect and change negative emotional states (e.g., through cognitive restructuring and reappraisal),
- Modeling of behavior (e.g., through role plays),
- Training of social skills,
- Self-talk strategies related to self-determination (e.g., goal setting, planning and execution, decision-making, problem-solving, self-advocacy)
- Psychoeducation and didactic instructions for caregivers to support the participants in applying skills in daily life and increasing their autonomy

Social Skills Interventions

- **Leisure or Recreational Therapy:**

Aimed to improve quality of life and well-being and increase executive functions, social skills, and adaptive behaviors.

- **Relationship Enhancement (RE) Protocol entitled “Ready for Love”:**

Focused on improving social skills useful for navigating romantic relationships.

(Garcia-Villamizar et al., 2016; Cunningham et al., 2016)

University-Focused Interventions:

Why and How?

University students with autism often face difficulties:

- Coping with the lack of structure and predictability of university activities,
- Engaging in academia-related work (e.g. presentations),
- Interacting with peers and university staff due to social and communication impairments,
- keeping up with assignments and deadlines due to Impairments in executive functioning (EF)

Therefore, these programs tend to target college-specific needs (such as academic success, adjusting to college daily living, and accessing disability support services)

University-Focused Interventions:

Peer Mentorship Programs

- **“Horizons” college preparation program:**

- With parent involvement, aiming to improve students’ understanding and preparedness for college, motivation to attend college, and confidence through familiarity.
- This program has been in effect since 2009, and since Spring 2018 has been offered both in-person and online.

- **Curtin Specialist Mentoring Program (CSMP):**

For university students with ASD aimed at improving self-reported well-being, academic success and retention in university studies.

- **Autism Mentorship Initiative (AMI):**

For autistic undergraduates to improve social, emotional, and academic adjustment to college.

(Trevisan et al., 2021; Hillier et al., 2019; Siew et al., 2017)

Employment-Focused Interventions:

Why and How?

Individuals with autism often face pre-employment and employment retention difficulties due to:

- Poor performance during job interviews,
- Struggling with co-workers because of using less nonverbal communication (e.g., eye contact, facial expressions, gestures, and body language), misreading the emotion of others, and failing to follow social norms,
- Misunderstanding instructions.

Therefore, employment-focused interventions aim to improve interview skills and employment performance and outcomes through:

- Restructuring the interview process,
 - Supportive job services and job coaching,
 - Education on learning differences,
 - Manager training.
- Training provided to employees includes soft skills, work ethics, understanding expectations, and assisting with communication.
 - Some programs are also developed to foster staff-awareness training and better support for individual self-assessment.

(Weber et al. 2022; Wehman et al., 2020; Kumazaki et al., 2019)

Employment-Focused Interventions

- **Project SEARCH plus ASD (PS_ASD):**

An evidence-based support intervention. It aims to address the high rates of unemployment among individuals with autism by providing vocational instruction and preparation in community-based work environments.

Some key aspects of the program are: intensive training, internship rotation, personalized goal, and support services.

(Wehman et al., 2014, Wehman et al., 2017)

- **Supported Employment (SE) Intervention:**

designed to help individuals with autism and other disabilities find and maintain meaningful employment, including the following components: job development, job coaching, long-term support, workplace accommodation, and collaboration with employers.

- **Vocational Rehabilitation (VR) Services:**

Specialized programs designed to assist individuals with autism and other disabilities in preparing for obtaining, maintaining, or regaining employment. VR Services typically include eligibility determination, assessment of vocational needs, development of an individual plan for employment, coordination of services, and post-employment services.

Independent Living Skills (ILS)

- Teaching skills necessary for living independently, such as managing finances, household tasks, and personal care.
- The most common types of ILS taught to autistic individuals are cooking and cleaning.
- Technology is the most frequent modality used to deliver interventions.

A Virtual Reality Driving Simulation Training (VRDST) program to improve driving performance.

(Taconet et.al., 2024; Cox et al., 2017).

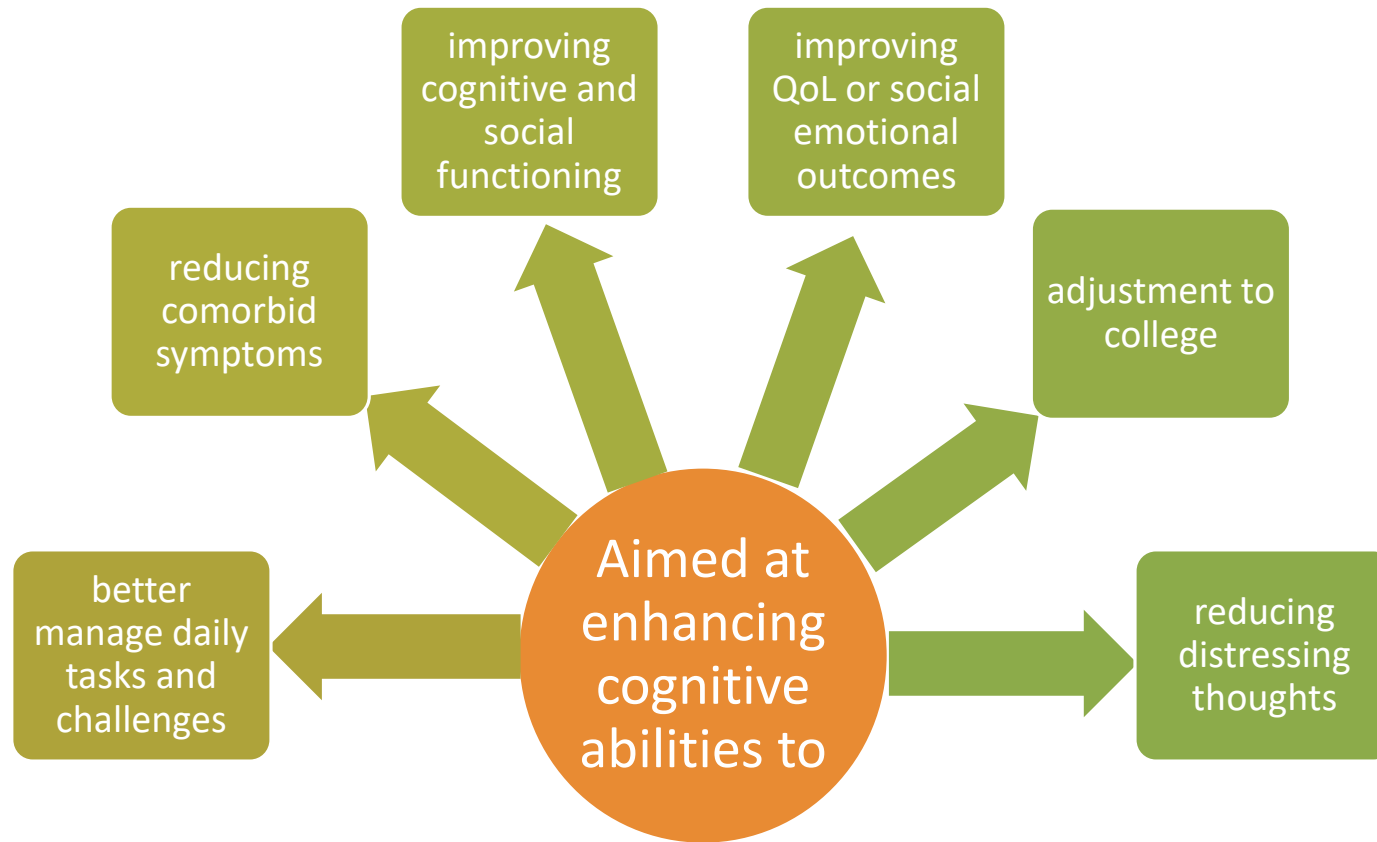
Language Skills Interventions

Several intervention studies that aimed at improving the comprehension of figurative language in ASD have been conducted, focusing on idioms, metaphors, and sarcasm.

- **Intervention of irony comprehension in adults with ASD:**

A specialized intervention including video clips, short stories, and comic strips to teach the recognition of ironic expression.

(Saban-Bezalel & Mashal, 2015; Whyte et al., 2013)



Cognitive Skills Training

Cognitive enhancement therapy (CET)

- Cognitive enhancement therapy (CET) is a non-pharmacological treatment for adults with autism to treat general impairments in social and non-social information processing and problem solving.
- CET combines computer-based neurocognitive training on improving cognition (e.g., processing speed, sustaining attention, increasing cognitive flexibility, managing frustration, etc.) with a structured social-cognitive group curriculum focused on perspective taking, and managing emotion.
- Participants demonstrated significant levels of improvement in composite indices of all four cognitive and behavioral domains assessed (i.e., neurocognition, cognitive style, social cognition, and social adjustment) and employment outcomes over an 18-month period.

(Eack et al., 2018)

Complementary Therapies

Complementary and alternative therapies that are most commonly used in autism spectrum disorders, including nutritional interventions, acupuncture, massage therapy, and mind-body interventions.

- No conclusive evidence currently supports the use of complementary and alternative medicine in autism.

(Guiot et al., 2022)



Neurodiversity

Who can say what form of wiring will prove best at any given moment?

Blume (1998)

Neurodiversity Movement

Home > Books > Autism Spectrum Disorders - Recent Advances and New Perspectives

OPEN ACCESS PEER-REVIEWED CHAPTER

Perspective Chapter: Rethinking Autism Assessment, Diagnosis, and Intervention within a Neurodevelopmental Pathway Framework

WRITTEN BY

Marion Rutherford and Lorna Johnston

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Editorial Perspective: Neurodiversity – a revolutionary concept for autism and psychiatry

Simon Baron-Cohen

Department of Psychiatry, Autism Research Centre, University of Cambridge, Cambridge, UK

Annual Research Review: Shifting from ‘normal science’ to neurodiversity in autism science

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Viewpoint

July 11, 2022

At a Crossroads—Reconsidering the Goals of Autism Early Behavioral Intervention From a Neurodiversity Perspective

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[» Author Affiliations](#)

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Neurodiversity Paradigm

- Neurological differences should be recognized and respected as a social category on par with ethnicity, gender, or sexual orientation.
- The concept of neurodiversity, alternatively known as the "neurodiversity paradigm" in certain research and the "neurodiversity approach" in others, entails a shift in perspective from regarding autism as a disability to recognizing and valuing the distinct abilities and difficulties faced by individuals with autism.
- This approach is consistent with the social model of disability, which suggests that disability arises from social barriers rather than individual differences.

(Baron-Cohen, 2017; Singer, 1999; Oliver 1996)

Implications for Autism Intervention

1- Interventions for neurodiversity groups like autistic adults focus on autonomy, communication support, and respecting individual differences without aiming to cure or normalize autism.

2- Neurodiversity-informed interventions may involve people around the autistic person making changes rather than “fixing” the person.

3- Interventions encompass various approaches aimed at enhancing well-being and addressing mental health challenges.

Although the neurodiversity movement has advocated for a shift away from the medical model’s foundation for autism intervention, many neurodiversity advocates are still in favor of intervention when it is

- (a) provided in a respectful manner,
- (b) focused on teaching useful skills,
- (c) improves subjective quality of life

(Leadbitter et al., 2021; Lai and Szatmari, 2019)

Neurodiversity Interventions

“There has been considerable criticism of contemporary behavioral interventions (e.g., Chapman & Bovell, 2020; Dawson, 2004; Wilkenfield & McCarthy, 2020).

Autistic individuals and neurodiversity advocates sometimes describing them as traumatic, particularly with regards to use of aversive and the suppression of autistic traits/regulatory mechanisms (Bascom, 2015; Cumming et al., 2020; Gardner, 2017; Kupferstein, 2018; Sequenzia, 2016; Stop ABA, Support Autistics, 2019).

Unfortunately, adverse events are seldom considered in research on non-pharmacological autism interventions (Bottema-Beutel et al., 2021a; Dawson & Fletcher-Watson, 2021), making it difficult to assess even immediate harmful impacts of ABA.”

(Schuck et al., 2022)

Neurodiversity-Informed Interventions

Healthy Relationships on the Autism Spectrum (HEARTS) intervention:

- Group-based psychoeducational program, designed to support autistic adults in strengthening their friendships and dating relationships, delivered as an online class comprising six sessions.
- It has demonstrated improvements in areas such as reduced sensitivity to rejection, increased positive thinking skills, and a greater interest in social interactions.
- The program is unique in that it was collaboratively designed with autistic individuals and is co-taught by a team consisting of one autistic and one non-autistic teacher.

Neurodiversity-informed interventions emphasize strengths-based approaches, social skills development, and support services tailored to the specific needs of autistic individuals, promoting overall well-being and healthy relationships within the neurodiverse community.

(Rothman et al., 2022)

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“The notion of neurodiversity is highly compatible with the civil rights plea for minorities to be accepted with respect and dignity, and not be pathologized.”

BARON-COHEN (2017)