

Cross-Cutting Objectives

The IACC has identified two topics that span across the seven Questions of the *Strategic Plan* and warrant special attention: understanding the influence of gender and sex in autism, as well as reducing disparities and promoting equity. The goal of these "cross-cutting" objectives is to encompass the numerous research and services priorities identified by the Committee throughout the *Strategic Plan* and allow for this area to be identified as a priority for funders. Individual projects assigned to these objectives will be coded to different questions of the *Strategic Plan* depending on which aspect of autism is being studied. This will ensure the funding associated with those projects will be counted toward the totals of their respective questions, but also allows the projects to be added together into a single objective.

The Influence of Sex and Gender in Autism

The topic of sex and gender differences in autism is mentioned in several chapters of the *Strategic Plan*, indicating the Committee's strong interest in this area. In the past, many inferences about the development and trajectory of autism and its co-occurring conditions have been made based on research studies where the participants were predominantly male. Thus, it will be critical in the future to understand and better serve the needs of girls, women, and/or LGBTQ+ individuals on the autism spectrum.

Girls and women on the autism spectrum are often more difficult to identify using existing screening and diagnostic instruments. This is due, in part, to the fact that the core features of autism often present differently in girls/women than in boys/men. For example, restricted interests in young girls are less likely to be viewed outside of the range of normal than in boys. Girls and women are also more likely to mask or camouflage their features. It is therefore important for clinicians to be trained to recognize more subtle signs of autism that may appear in girls and women, and to understand masking behaviors.

Differences in underlying biology may account for some of the differences in autism phenotypes based on sex. For example, the differential effects of exposure to prenatal testosterone, maternal immune activation, endocrine-disrupting chemicals may all influence the presentation of autism and its co-occurring conditions^{1,2}. These biological differences, as well as genetic differences, may influence how autistic girls and women respond to their environments³. Understanding how these processes contribute to the development of autism and its co-occurring conditions may help to develop personalized interventions for individuals on the autism spectrum.

Individuals on the autism spectrum are more likely to identify as LGBTQ+ than neurotypical individuals^{4,5,6}. This often results in increased fears of stigma and bias in daily life, such as at medical appointments, at school, or on the job. In order to address this issue, additional research is needed to better understand the unique needs of this population^{7,8}. It is also important to properly train medical practitioners and other service personnel on ways to properly interact with autistic individuals who identify as LGBTQ+.

Services and supports needs may also differ based on gender and sex. Many autistic women have difficulty accessing appropriate medical care, including routine gynecological care and prenatal care. Needs for educational or employment supports may also vary. It is important for service providers to be

made aware of the potential differences in need, and carefully listening and making adjustments to ensure that they are responding to the stated needs of all individuals on the autism spectrum.

CC1. Support research to understand sex and gender differences in autism.

Examples:

- Understand differences in the presentation of autistic traits in girls and women to enhance screening and diagnosis.
- Conduct research exploring the influence of sex and gender on the underlying biology of autism (differences in brain structure, function, physiology) and how this may create differences in phenotype.
- Identify genetic and environmental factors that contribute to differences in phenotype.
- Develop strategies to better meet the intervention, service, and support needs of girls and women with autism.
- Explore the intersectionality between autism and LGBTQ+ identity to improve services and supports for these individuals.

References

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