SESSION VI: Understanding Psychiatric Comorbidities in Autism Spectrum Disorder

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Course Materials
The purpose of these materials is to help provide an introduction to the Summer Institute session on modifying methods and treatments to address heterogeneity in Autism Spectrum Disorder (ASD). The materials were designed to prepare trainees who are unfamiliar with this research with the general background to get the most educational benefit from the session. Toward this objective, we have prepared the following: (1) learning objectives for this session; (2) some key terms and concepts; (3) a selection of recommended resources. These materials could be considered “prerequisites” in preparing for this session.

In collaboration with Dr. Kerns and Dr. Vasa, these materials were developed by Jiedi Lei (doctoral student at the University of Bath; j.lei@bath.ac.uk), Michelle Hunsche (doctoral student at the University of British Columbia; michelle.hunsche@psych.ubc.ca), and Marika Coffman (clinical psychology doctoral student at Virginia Polytechnic Institute and State University and predoctoral psychology intern at Nationwide Children’s Hospital; marika@vt.edu). Feel free to contact us with questions/comments. Register for this course and other sessions in this series at https://www.autism-insar.org/general/custom.asp?page=SLanding.

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Learning Objectives
The INSAR Institute for Autism Research was established in direct response to requests from early career researchers (graduate students, postdocs, etc.), with training opportunities in multidisciplinary areas. The INSAR Institute team is now working to engage stakeholders as well. INSAR Institute priorities are to provide: (1) freely available; (2) multidisciplinary training platform for young scientists and others from various backgrounds that (3) allows for international participation. The INSAR Institute covers broad topics and is meant for people who are not expert in the topic area. It is offered over a free web platform, and it allows researchers from around the world to connect with the presenter(s). The overarching goal of the INSAR Institute is to expose junior scientists to topics they are not currently engaged in, with the hope that basic scientists and clinical scientists may learn from each other to ultimately advance the understanding of autism.

The current session, Understanding Psychiatric Comorbidities in Autism Spectrum Disorder, is led by Dr. Kerns and Dr. Vasa and a team of trainees who worked in tandem to prepare these materials and the web presentation. The session consists of two parts. *Over the course of these two parts, participants will:*

Part 1: Explore the impact and potential promise of better understanding and treating psychiatric comorbidity in autism

1. **Understand** the impact of psychiatric comorbidities on functioning and public health
2. **Explore** how to improve understanding, prevention, and intervention for autistic individuals with comorbid psychiatric conditions

Part 2: Uncover the challenges of studying psychiatric comorbidity in autism

3. **How** to address diagnostic parsimony versus diagnostic overshadowing
4. **Identify** overlapping symptoms between psychiatric conditions and autism, what are their distinct presentations?
5. **Discuss** measurement challenges

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Key Terms

**Anxiety Disorders:** The most recent (5th) edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM) describes anxiety disorders as all sharing features of excessive fear and anxiety and related behavioural disturbances. Anxiety disorders include (list is not exhaustive): Separation anxiety disorder, selective mutism, specific phobia, social anxiety disorder (social phobia), panic disorder, generalised anxiety disorder (GAD).

**Comorbidity:** True comorbidity is when there are two separable conditions that co-occur in the same individual. Comorbidity can be related to:

- Shared or associated environmental or biological risk factors;
- A unique syndrome with potentially different etiology, and outcome than either disorder in its ‘pure’ form;
- The case in which one disorder increases the risk of developing the second disorder

**Differential diagnosis:** Refers to distinguishing between two (or more) conditions that show similar symptoms.

**Diagnostic overshadowing:** Refers to situations where in the presence of an intellectual disability or developmental condition (e.g., ASD), accompanying mental health problems become less salient and significant. This can lead to two outcomes: 1) clinicians might misattribute some behaviours or emotional difficulties to the intellectual disability or developmental condition; 2) clinicians might overlook the behaviours or emotional difficulties when compared to the effects of having autism or intellectual disability, and hence result in overlooking the condition.

**Evidence-based:** relying on scientific evidence for guidance and decision-making.
In contrast, non-evidence-based practices rely e.g. on beliefs, traditions, and/or other unproven and unscientific methods.

**Externalizing disorders:** Externalizing disorders are characterized by maladaptive behaviors that are shown externally, through behaviors. Externalizing behaviors often include symptoms of impulsivity and involve emotion dysregulation. Attention-Deficit/Hyperactivity Disorder (ADHD), Oppositional Defiant Disorder (ODD) and Conduct Disorder are externalizing disorders.

**Heterogeneity in ASD:** ASD has been associated with a wealth of environmental and genetic risk factors. For instance, ASD has been associated with more than 500 genetic risk factors. Similarly, there is a wide range of clinical phenotypes. This converges in a significant heterogeneity across the autism spectrum. Several researchers suggest that, to address this heterogeneity, biomarker approaches that stratify the ASD population into clinically and biologically meaningful subgroups may be helpful.

**Internalizing disorders:** Internalizing disorders are characterized by maladaptive thoughts and behaviors that are directed inwardly. Anxiety disorders (e.g., social anxiety, separation anxiety, specific phobias, generalized anxiety) and depression are internalizing disorders.
Recommended Readings & Resources

Anxiety disorder in ASD:


Mental health crises in ASD: