SESSION II: Early Intervention

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Course Materials

The purpose of these materials is to help provide an introduction to the Summer Institute session on early intervention. The materials were designed to prepare trainees who are unfamiliar with early intervention research with the general background to get the most educational benefit from Dr. Koegel’s presentation. Toward this objective, we have prepared the following: (1) learning objectives for this session; (2) some key terms and concepts; (3) some broad review articles that are recommended reading; (3) additional articles and resources for future reading.

In collaboration with Dr. Koegel, these materials were developed by the trainee group for this session: Amy Barrett (graduate student at UCSB, amybarrett414@gmail.com); Kristen Ashbaugh (graduate student at UCSB, kristenashbaugh@gmail.com); Jessica Bradshaw (graduate student at UCSB, jbradshaw@education.ucsb.edu); Lacey Chetcuti (undergraduate student at La Trobe University; lchecut@gmail.com); Carolyn McCormick (post-doc at Brown University; carolyn_mccormick@brown.edu). Feel free to contact us with questions/comments.

Register for this course and other sessions in this series at http://sfari.org/summer
Learning Objectives
The Summer Institute for Autism Research was established in direct response to requests from early career researchers (graduate students, postdocs, etc), who asked INSAR and SFARI for greater training opportunities in multidisciplinary topics. In designing the Summer Institute, the priorities were: (1) to provide a multidisciplinary training platform for young scientists from various backgrounds; (2) allow international participation; and (3) make it freely available. Thus, the inaugural Summer Institute covers broad topics (which are geared toward researchers outside the respective topic areas), is offered over a free web platform, and allows researchers from around the world to connect with the presenter. The overarching goal of the Summer Institute is to expose junior scientists to topics they are not currently engaged in, with the hope that basic scientists and clinical scientists could learn from each other to ultimately advance the understanding of autism spectrum disorders.

The current session, Early Intervention, is led by Lynn Koegel and a team of trainees who worked in tandem to prepare these materials, focusing on the presenter’s a specific technique of expertise: Pivotal Response Treatment (PRT). Dr. Koegel will provide an overview of the social and communicative characteristics that are common of children on the autism spectrum. Information will then be presented on common naturalistic treatment interventions used to target first words for children with ASD. Furthermore, Dr. Koegel will discuss adaptations of PRT for working with infants displaying social impairments. Lastly, this presentation will discuss the importance of targeting initiations as a social communicative skill, and provide information on teaching beginning question-asking for children on the spectrum. Specific learning objectives include the following:

1. Understanding communicative characteristics of children with ASD.
2. Understanding common naturalistic treatment interventions for targeting first words for children with ASD.
3. Understanding adaptations of Pivotal Response Treatment for infants.
4. Understanding the importance of initiations and how to teach beginning question-asking for children with ASD.
**Glossary of Terms / Key Concepts**

**Echolalia** – Repeating, or “echoing” utterances, words, or phrases said by another person. Two types include immediate or delayed echolalia. Immediate echolalia is the echoing of words that someone has just said (e.g. adult asks, “Is the car blue or green?” and the child responds, “blue or green”). Delayed echolalia is the echoing of words or phrases previously heard from TV shows, movies, books, or family/friends.

**Pivotal Response Treatment or Pivotal Behavior** – Pivotal Response Treatment (PRT) is a comprehensive, empirically supported, and naturalistic behavioral intervention for autism spectrum disorders developed by Drs. Robert and Lynn Koegel at the Koegel Autism Center at the University of California Santa Barbara. Derived from applied behavior analysis (ABA), it targets “pivotal” areas of a child’s development, including motivation, responding to multiple cues, self-management, and social initiations. Using the motivational strategies of child choice, direct and natural reinforcers, reinforcing attempts, task variation, and interspersing maintenance tasks has been shown to lead to widespread and effective improvements. As a result, PRT intervention produces broad improvements across areas of communication, behavior, and social skills.

**Learned Helplessness** – Condition that occurs when an individual becomes overly dependent on others to complete tasks because they have not been expected to do so for themselves. This may present in various ways, such as giving up due to fear of failure, weaker attempts due to lack of confidence or motivation, or failure to try at all due to past failures or overdependence.

**Maintenance** – Maintenance tasks are tasks that the child has already mastered. Interspersing maintenance tasks within new and more challenging tasks increases the child’s motivation and allows them to attempt novel tasks while still being highly successful overall.

**Generalization** – The process whereby a learned response is made to a stimulus similar to but not identical with the conditioned stimulus. Alternatively, if a skill emerges that was not directly taught but is related to the original skill. Many children with autism learn a skill in one setting but cannot demonstrate that skill in a different setting. Intervention that utilized natural reinforcers in a natural environment has been demonstrated to promote generalization of skills to other contexts and settings.

**Multiple Baseline Design** – A study design that allows for the evaluation of intervention effects across clients, settings, or behavior. To begin, data is gathered during a baseline period in order to assess responding prior to implementation of the treatment. Treatment conditions are then staggered to begin at alternate times across participants/settings/behaviors (e.g. at 3, 5, and 7 weeks after baseline). By staggering treatments to begin at different times, it can be concluded that treatment effects are not due to development effects, extraneous variables, or chance. If a significant change occurs across participants/settings/behaviors following the implementation of intervention, the researcher may conclude that the change in behavior is due to the intervention.

**Randomized Clinical Trial** – A study design used to test the efficacy and effectiveness of an intervention. The design entails the random assignment of participants to two (or more) treatment groups. Randomization of participants into groups is important to eliminate allocation bias.

**Joint attention** – The ability to share common focus on something (i.e. object, person, event)
with another person. Additionally there is understanding between the two people that there is shared interest in the same object or event. Impairments in joint attention are one of the earliest signs of autism spectrum disorder.

**Recommended Background Reading**


**Additional Readings and Resources**


SFARI Wiki http://sfari.org/resources/sfari-wiki/

Autism Speaks Resource Library https://www.autismspeaks.org/family-services/resource-library

The Autism Blog http://theautismblog.seattlechildrens.org/

Interacting with Autism http://www.interactingwithautism.com/

Koegel Autism Center, UCSB www.education.ucsb.edu/autism

Koegel Autism Consultants www.autismprthelp.com
Get Engaged

Continue the conversation and connect with peers currently working or interested in autism.

- Join SFARI’s private autism research discussion group on Facebook: http://on.fb.me/1yWVOoO
- Become an INSAR member: http://www.autism-insar.org/membership
- Contact the INSAR Student & Trainee Committee: studentcommittee@autism-insar.org