THE CHANGING FACE OF AUTISM: NEW PERSPECTIVES ON OUTCOMES

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CONFLICTS OF INTEREST

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BOOKS AND JOURNALS
OVERVIEW

• SOME GOOD AND SOME LESS GOOD NEWS
• OVERVIEW OF OUTCOME IN AUTISM
  • IN RELATION TO VARIOUS ISSUES
• DEVELOPMENTAL IN SEVERAL SENSES
  • OF INDIVIDUALS AND OF THE FIELD
• WHAT DOES RESEARCH TELL US?
• CHALLENGES FOR ADOLESCENTS AND ADULTS
  • VOCATIONAL, DAILY LIVING, MENTAL HEALTH AND LEGAL CHALLENGES
• WHAT ARE THE GAPS IN KNOWLEDGE?
• PROSPECTS FOR THE FUTURE
ORIGINS OF INTEREST

• CASE REPORTS IN 1800’S
  • ITARD, US REPORTS, EUROPEAN REPORTS

• MAJOR LANDMARKS
  • KANNER (1943) “EARLY INFANTILE AUTISM”
  • ASPERGER (1944) “AUTISTIC PERSONALITY DISORDER”
  • COMMONALITY WAS THE AUTISM (DIFFICULTIES UNDERSTANDING SOCIAL INTERACTION)
  • FEATURES: AUTISM (SOCIAL), COMMUNICATION, UNUSUAL BEHAVIORS

• OFFICIAL RECOGNITION (1980)
  • ➔ EXPLOSION OF RESEARCH
DEVELOPMENT OF THE FIELD I

IMPORTANT EARLY ADVANCES

• AUTISM WAS BRAIN BASED
  • HIGH RATES OF EPILEPSY,
  • NEURODIVERSITY ISSUES

• AUTISM WAS STRONGLY GENETIC
  • FIRST TWIN STUDIES AND EARLY FAMILY STUDIES SHOWED STRONG GENETIC BASIS
  • GENETICS ARE COMPLEX ➔ BROADER RANGE THAN WE ONCE THOUGHT

• STRUCTURED EDUCATIONAL INTERVENTIONS BETTER THAN PSYCHOTHERAPY
EVOLUTION OF THE DIAGNOSTIC CONCEPT

CATEGORICAL DEFINITIONS

• From Kanner → Rutter to DSM-III: Infantile Autism
  • Development dealt with by “residual IA”
  • Not very satisfactory
• DSM-III-R (Lorna Wing) dealt with development → Autistic Disorder (polythetic approach 3 categories)
• DSM-IV (international field trial, convergence with ICD 10) → >2200 ways to get a diagnosis of AD
  • Included Asperger’s and PDD-NOS
• DSM-5 – based on data from dimensional instruments
  • (ADOS and ADI developed for research purposes)
  • Now 12 ways to get a diagnosis of Autism Spectrum Disorder
• Note issues of Broader Autism Phenotype

DIMENSIONAL APPROACHES

• Early efforts of Rimland and Ruttenberg
• Now over 40 or so -
• Diagnostic and screeners, various approaches
• Common ones: Cars-2, ADOs-2, ADI-R,
  • Gilliam, Ritvo, M-CHAT-R, SRS etc.
• Issues
  • Where did theses come from
  • Different purposes
• Issues of Gender, Ethnicity, age.
  • Cognitive ability, and Culture
DSM-5 ASD

- ASD + SCD
- NO SUBTYPES/SUBTHRESHOLD
- FOR ASD SEVERITY DIMENSIONS
  - CRITERIA
    - TWO RATHER THAN THREE CATEGORIES
    - MONOTECTIC IN PART
    - VASTLY REDUCED CRITERIA SET
      - MOVE FROM >2000 TO 12 COMBINATIONS
    - SOME NEW CRITERIA
      - SENSORY ISSUES

- REANALYSIS DATA FROM 933 CASES IN DSM-IV FIELD TRIAL
- 657 CLINICIAN DX’D ASD, 276 NON ASD
- CROSS WALKED CRITERIA FROM FIELD TRIAL TO DSM-5
- 60.6% ASD RETAINED DSM-5 DIAGNOSIS
- SPECIFICITY HIGH (94.9%)
- SE VARIED IN SEVERAL WAYS
  - BY DX: AUTISM =.76, ASP = .25, PDD-NOS = .28
  - AND BY IQ <70 SE=.70, >70=.46
CURRENT STATUS OF NOSOLOGY

• **GOOD NEWS**
  - NAME CHANGES IS GOOD
    - ALTHOUGH SINGULAR RATHER THAN PLURAL
  - GOOD DIAGNOSTIC ASSESSMENT INSTRUMENTS
  - BETTER AWARENESS
  - BETTER SERVICES
  - INCREASED GLOBAL INTEREST

• **BAD NEWS**
  - OUR SCREENERS DO NOT WORK SO WELL FOR YOUNG CHILDREN
  - DSM-5 DOESN’T WORK WELL FOR MORE COGNITIVELY ABLE
  - ASPERGER’S DISORDER LEFT HANGING
  - BROADER SPECTRUM LEFT HANGING
RESEARCH PROGRESS: GENETICS

- FIRST TWIN STUDY IN LATE 1970S
- VAST INCREASE IN WORK
- MANY GENES INVOLVED,
- SOME SINGLE GENE DISORDERS
- BROADER SPECTRUM NOTION SUPPORTED
- MANY OF THE 50+ GENES FOUND INVOLVE NERVE-NERVE CONNECTIONS IN THE BRAIN

*“Common autism” (multiple genes, environment)*

Genome-wide Arrays

~8% diagnostic yield in ASD at EGL
RESEARCH PROGRESS: NEUROSCIENCE

• A RANGE OF METHODS USED
  • IMPORTANCE OF UNDERSTANDING THE SOCIAL BRAIN – AUTISM IS A MODEL!
  • VARIOUS METHODS – PROS & CONS
    • EEG, FMRI, EYE TRACKING
  • FINDINGS HELP US UNDERSTAND THE CONTRIBUTION OF BRAIN FUNCTIONS TO AUTISM
  • CONNECTING SPECIFIC RESEARCH FINDINGS TO BRAIN REGIONS

Understanding the Social Brain

- Prefrontal cortex
- Medial region
- Orbital-frontal region
- Amygdala
- Superior temporal sulcus
- Auditory cortex
- Primary visual cortex
- Fusiform face area
RESEARCH PROGRESS: EDUCATION

• INFLUENTIAL NRC REPORT 2001
  • REVIEWS 10 PROGRAMS WITH SOME EVIDENCE
    • AT LEAST ONE (1) PUBLISHED STUDY
    • WOULDN'T PASS MUSTER THESE DAYS!
  • MANY COMMONALITIES AND SOME DIFFERENCES'
  • STRUCTURED TEACHING IMPORTANT
    • AT LEAST 25 HOURS A WEEK!
    • MUCH MORE WORK ON TREATMENT
  • IMPORTANTLY THIS SET OFF A LARGE BODY OF WORK ON EVIDENCE-BASED TREATMENTS

• EVIDENCE-BASED RESEARCH
  • TYPES AND QUALITY OF EVIDENCE
    • RCTS, META-ANALYSES, REPLICATION
  • MODEL PROGRAMS
    • BEHAVIORAL
    • DEVELOPMENTAL
    • HYBRID
    • ECLECTIC
  • SPECIFIC INTERVENTIONS
    • ABA, SOCIAL SKILLS, PECS, ETC..
A LITERAL EXPLOSION OF RESEARCH

• OVER 246,000,000 HITS FOR AUTISM ON GOOGLE
• >40,000 SCIENTIFIC PAPERS
• MUCH GREAT STRINGENCY RELATIVE TO EVIDENCE-BASED TREATMENTS
  • NRC REPORT – ONLY 1 PEER REVIEWED STUDY REQUIRED
  • MUCH STRICter STANDARD: THESE INCLUDE
    • MULTIPLE RCT, META-ANALYSES, INDEPENDENT REPLICATION
    • COCHRANE AND CAMPBELL COLLABORATIVE REVIEWS
• BUT AND A BIG BUT!!!!!
  • RESEARCH IS VERY UNEVEN, BY AGE GROUP
  • PARTICULARLY SO FOR WORK WITH ADULTS AND ESP FOR TREATMENT STUDIES
DEARTH OF TREATMENT STUDIES IN ADULTHOOD

From: Steinbrenner, et al. 2020
PUTTING IT ALL TOGETHER – PSYCHOLOGICAL MODELS OF AUTISM

• THEORY OF MIND
• CENTRAL COHERENCE
• EXECUTIVE FUNCTIONING
• ENACTIVE MIND
WHAT DOES ALL THIS MEAN FOR OUTCOME?!

- DEVELOPMENT OF EFFECTIVE EVIDENCE BASED TREATMENTS
  - A RANGE OF MODELS/TYPES OF PROGRAMS, & METHODS
  - NOTE SOME LIMITATIONS IN TERMS OF AGE AND LEVEL OF ABILITY OF THOSE STUDIES
  - SOME THINGS MORE DIFFICULT TO STUDY WITH USUAL MODELS

- INCREASED AWARENESS ➔ EARLIER DIAGNOSIS ➔ BETTER OUTCOMES (MOSTLY – NOT ALWAYS)

- INTEGRATION OF CLINICAL WORK AND RESEARCH, E.G., WE ARE NOW SEEING BRAIN CHANGES (EEG, MRI) IN RESPONSE TO TREATMENT! E.G., VOOS ET AL 2013
As we implement better interventions we see better outcome!

**Issues**
- Public Law 94-142
- Evidence based teaching informed by research
- Outcome research
  - Good - Independent
  - Fair – Semi-Independent
  - Pair – Need 24/7 Care

**Understanding Outcome**
- Optimal outcome
  - What is this?
  - How often do you see it and when?
- Challenges for prediction
- Note very little on needs of older adults (past young adulthood)
- Also need to take into account the wishes of those with ASD
GOOD NEWS!

• OVERALL OUTCOME IS IMPROVING
• 1980
  • ABOUT 90% OF ADULTS IN 24/7 CARE
  • ABOUT 75% NEVER TALKED
  • FEW WENT TO COLLEGE OR WERE EMPLOYED
• NOW (CAVEAT!!)
  • ABOUT 25% LIVING INDEPENDENTLY,
  • <20% REMAIN MUTE
  • MANY GOING TO COLLEGE
  • MANY SEEKING EMPLOYMENT

• WHY IS OUTCOME BETTER
• WE THINK
  • EARLY DIAGNOSIS
  • EARLIER INTERVENTION
  • A RANGE OF EVIDENCE BASED PROGRAMS AND INTERVENTIONS
  • MORE INCLUSION AND FOCUS ON SOCIAL SKILLS
• WHERE IS THE BEST PLACE TO LIVE?
OUTCOME STUDIES TWO SNAPSHOTS
• 41 INDIVIDUALS WITH AUTISM (MEAN AGE 31 YEARS)

• OUTCOME DATA
  • MEAN IQ 89
  • INDEPENDENT: 48%,
  • SEMI-INDEPENDENT: 33%
  • EMPLOYED: 66%
  • LONG TERM RELATIONSHIP: 20%
  • NOTE GEOGRAPHIC LOCATION
  • ALSO LIMITATIONS OF EARLY PREDICTORS
“OPTIMAL OUTCOME”


• STUDIED CASES OF OPTIMAL OUTCOME, HIGH FUNCTION AUTISM AND TD
• MATCHED ON AGE, SEX, NONVERBAL IQ
• RESULTS:
  • OO AND TD GROUPS GENERALLY MINIMAL DIFFERENCES
  • THE OO GROUP HAD HAD MILDERSYMPTOMS IN SOCIAL DOMAIN EARLIER IN LIFE
• IMPORTANT TO NOTE A WHOLE SERIES OF SUBSEQUENT HAVE STUDIES SHOW SUBTLE DIFFERENCES IN AREAS OF SOCIAL- COMMUNICATION, ETC.
ECONOMIC ISSUES!

• COST OF AUTISM FOR ADULTS CAN BE HIGH
• GANZ (2006)
  • IN US CAN BE $3.2 MILLION (LIFE TIME)
  • ABOUT $35 BILLION (MIN) ANNUALLY
• KNAPP E AL. (2009)
  • IN UK TOTAL FOR ADULTS £25 BILLION/YEAR
• INCREASING FUNCTIONAL OUTCOME HAS IMPORTANT ECONOMIC AS WELL AS SOCIAL POLICY/ETHICAL IMPLICATIONS
WHY CHANGES IN OUTCOME

• REFLECT SEVERAL FACTORS
  • EARLY DIAGNOSIS AND INTERVENTION ➔ BETTER OUTCOME (VARIABLE METRICS)
  • CHANGES IN DIAGNOSTIC PRACTICE (BROADER DEFINITION) (SOME, BUT SMALL CONTRIBUTION)
  • MORE AND BETTER SUPPORTS

• ISSUES
  • NOT EVERY CHILD GETS DRAMATICALLY BETTER
  • ISSUES IN MATCHING CHILD TO TREATMENT
  • DEARTH OF STUDIES ON OLDER INDIVIDUALS

• HOW TO UNDERSTAND THIS?
WHAT IS A “GOOD OUTCOME”
THE PERSPECTIVES OF ADULTS WITH ASD

• TYPICALLY ASSUMED TO BE LIVING INDEPENDENTLY, SELF-SUPPORTING, & HAVING RELATIONSHIPS
  • BUT THESE MAY BE MUCH LESS APPROPRIATE FOR MORE IMPAIRED INDIVIDUALS
  • EVEN FOR MOST COGNITIVELY ABLE INDEPENDENCE CAN BE ONE THAT IS SOCIALLY ISOLATED AND UNINTERESTING
  • INAPPROPRIATE EMPLOYMENT CAN STRESS
  • MANY WISH FOR A RANGE OF OPTIONS PROVIDING SPACE, SECURITY, STIMULATION
VOCATIONAL PLANNING

• MORE AND MORE FREQUENTLY ADULTS WITH ASD ENTERING WORK FORCE

• RANGE OF SUPPORTS
  • SHELTERED EMPLOYMENT ➔ SUPPORTED EMPLOYMENT ➔ INDEPENDENCE
  • FOCUS IS NOW ON PERSONAL AND VOCATIONAL INDEPENDENCE AND COLLEGE FOR SOME

• NEED TO CONSIDER
  • STRENGTHS AND WEAKNESSES
  • INTERESTS AND CHALLENGES
  • EXAMPLES
CHALLENGES FOR EMPLOYMENT

• SOCIAL AND COMMUNICATION PROBLEMS
• EXECUTIVE FUNCTION DIFFICULTIES
• GREAT COSTS FOR REHABILITATION SERVICES
• ALTHOUGH MUCH INTEREST IN SUPPORTED EMPLOYMENT PROGRAMS 16 PAPERS FROM 2000-2010 RELATED TO WORK
• JOBS OBTAINED TEND TO BE UNSKILLED, POORLY PAID AND SOMETIMES STRESSFUL
EMPLOYMENT

• EVEN IN ADULTS WITH NORMAL IQ THERE ARE HIGHER RATES OF ECONOMIC AND SOCIAL DISADVANTAGE (BRUGHA, ET AL. 2011)

• LIMITED DATA
  • HOWLIN & MOSS(2012) ONLY 33% IN SCHOOL OR WORK
  • ISSUES RE: USE OF SERVICES DESIGNED FOR ID
  • JOB ISSUES: STRESS AND FIT
  • SMALL NUMBER OF PAPERS AVAILABLE
EMPLOYMENT

- More students with ASD going to work
- Challenges
  - Social and communication problems
  - Executive function difficulties
  - Great costs for rehabilitation services
  - Although much interest in supported employment programs 16 papers from 2000-2010 related to work
  - Jobs obtained tend to be unskilled, poorly paid and sometimes stressful
  - Need transition planning!!!!!
- Even in adults with normal IQ there are higher rates of economic and social disadvantage (Brugha, et al. 2011)
- Limited data
  - Howlin & Moss (2012) only 33% in school or work
  - Issues re: use of services designed for ID
  - Job issues: stress and fit
  - Small number of papers available
CHALLENGES FOR ADOLESCENTS AND YOUNG ADULTS – FALLING OFF THE CLIFF!

- Adolescence as a challenge as is transition to adulthood!!!!!
- Medical care issues, behavioral/psychiatric care
- Need for additional supports
  - Adaptive skills, vocational organization
  - Social skills & communication
  - Living support, bullying, sexuality
- Lack of supports as students transition out of high school
  - IDEA no longer applies in US, ADA does
  - Need to include students in transition planning as early as possible
  - Give them internships and actual experience in a thoughtful way
• ABOUT HALF OF ADULTS UNEMPLOYED
• UP TO 1/3RD WITH COLLEGE DEGREES MAY BE UNEMPLOYED OR UNDER EMPLOYED
• COMPLEXITIES FOR THE LESS COGNITIVELY ABLE
  • LIMITED OPPORTUNITIES, EARN BELOW MINIMUM WAGE
• GOOD NEWS
  • EMPLOYERS OFTEN REPORT – STRENGTHS FOR MEMORY IN DETAIL, ABILITY TO FOCUS EVEN WE. WORK IS REPETITIVE
  • FOLLOW RULES AND PROCEDURES
  • INCREASE NUMBER OF PROGRAMS AVAILABLE

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LIVING ARRANGEMENTS & RELATIONSHIPS

• LIVING - RANGE OF POSSIBILITIES
  • GROUP HOME ➔ SUPPORTED LIVING ➔ INDEPENDENT LIVING
  • PROS/CONS OF RESIDENTIAL PROGRAMS
  • INTEGRATION OF DAY AND RESIDENTIAL SETTINGS
  • TRANSITIONAL PROGRAMS AVAILABLE

• RELATIONSHIPS
  • SOME FRIENDSHIPS (10-20%)
  • SOME MARRY (3-20%)(LIMITED INFO)
    • NO INFO ON CHILDREN
COLLEGE AND VOCATIONAL SCHOOLS

• More and more students
  • New challenges for supports
  • College is not a right in US
    • ADA and supports, self-identification
  • Use of peers/therapists
  • Academic vs. nonacademic challenges
  • Adaptive skills can loom large
  • Pros/cons of various alternatives
  • A range of transitional programs now available
COLLEGE ISSUES

• DIFFERENT LAW APPLIES
  • STUDENTS MUST ON THEIR OWN IDENTIFY
  • SUPPORTS – OFTEN LIMITED TO WHAT IS USED FOR ADD- E.G. EXTRA TIME, ETC.
  • STUDENTS WITH ASD NEED SUPPORT
    • SOCIAL RELATIONSHIPS
    • ORGANIZATIONAL SKILLS
    • ADAPTIVE SKILLS
  • NOTE DEMANDS IN COLLEGE VERY DIFFERENT THAN PREVIOUSLY
COLLEGES GREW OUT OF MONASTERIES!

- PROVIDE ORDER AND STRUCTURE
  - RULES & ROUTINES
  - ROUTINES
- MANY THINGS AVAILABLE
  - FOOD, BOOKS, ENTERTAINMENT
- YOU CAN MINIMIZE SOCIAL INTERACTION! BUT NOT TOTALLY
- CLASSROOM ETIQUETTE AND INDEPENDENT STUDYING CRITICAL
- SOME FIELDS MORE EASILY ACCOMMODATE!
MENTAL HEALTH SUPPORTS

• NEED FOR NEW MODELS
  • USE OF SERVICES AS NEEDED
  • “LONG HAUL” VISION
  • LIFE COACHING MODEL
    • MUCH MORE PROACTIVE/INTERACTIVE
    • HOMEWORK, ROLE PLAY, ETC.
    • COLLABORATION WITH OTHER CARE PROVIDERS
    • LIMITATIONS IN INSURANCE REIMBURSEMENT/COVERAGE
COUNSELING/THERAPY APPROACHES

• A RANGE OF EVIDENCE BASED
  • MODEL PROGRAMS
  • SPECIFIC TECHNIQUES

• BE FLEXIBLE IN APPROACH

• BE AWARE OF SPECIAL ISSUES RELATED TO AUTISM
  • SOUND OR OTHER SENSITIVITIES
  • POTENTIAL FOR EASY DISTRACTION

• MOTIVATION IS CRITICAL!

• NEW RESOURCES FOR CBT!
MORE CHALLENGES!

- Social-Communication Skills
- Various Approaches Used
  - Peer, Hybrid, Adult Instruction
  - Most of research has been done with younger children
  - Very limited research with older individuals
    - Who often need it the most!
- How Significant is the Social Skills Gap?
  - Effect Size Social Skills about .4
  - Eye Tracking Differences 3.8!

- Sexuality
- Changes in body and increased sexual interest but limited ways of learning

- Importance for Both Sexes of
  - Basic Education (Adapt to Understanding)
  - Awareness of privacy issues/vulnerability
- For More Able Students
  - What can and can’t be discussed
  - What can and can’t be done and where
- Range of Resources Available
LEGAL ISSUES AND BULLYING!

• ARISE IN VARIOUS CONTEXTS
  • GUARDIANSHIP, INVOLVEMENT IN CRIMINAL JUSTICE, LONG TERM ESTATE PLANNING
  • INCREASED RISK (7X) INVOLVEMENT IN CRIMINAL JUSTICE SYSTEM
    • POOR JUDGMENT, SOCIAL ISOLATION, ETC. INCREASE RISK
  • ASPERGER’S – CASE REPORTS OF VIOLENCE BUT
    • NOT GOOD SYSTEMATIC DATA TO SHOW THIS
• BULLYING
  • 40% IF ONLY ASD/75% IF ASD + SOMETHING ELSE
PLANNING FOR THE MORE COGNITIVELY IMPAIRED: GUARDIANSHIP & ESTATE PLANNING

• A GUARDIAN HAS LEGAL RIGHTS (FULLY OR PARTIALLY) TO MAKE DECISIONS ABOUT HOUSING, MEDICAL CARE, AND SO FORTH, FOR A PERSON.

• A CONSERVATOR HAS SPECIAL RESPONSIBILITIES FOR CONTROLLING FINANCES FOR A PERSON WHO IS INCAPABLE, OR ONLY PARTIALLY CAPABLE, OF MANAGING HIS OR HER OWN. FUNDS AND PROPERTY.

• TERMS AND RESPONSIBILITIES CAN VARY A BIT FROM STATE TO STATE. OFTEN, THE TWO POSITIONS ARE COMBINED.
CASE EXAMPLE

• PLEASE TAKE A GUESS AS TO WHAT THE NEXT PAGE OF EQUATIONS IS ABOUT!
THE RETURN OF PSYCHOTHERAPY IN ASD!

• GROWING BODY OF WORK ON (MODIFIED) CBT
  • RESPECTS THEIR STYLE OF LEARNING
  • USES HOMEWORK, INVOLVEMENT OF CLIENTS

• MODIFICATION FOR ASD

• BOOK BY WHITE AND ATWOOD JUST COMING OUT
GENERAL PRINCIPLES:

• THE INTERACTION OF RESEARCH WITH CLINICAL WORK:
  • FEB. BLIZZARD
  • MY PATIENT’S TEXT
CAN YOU GUESS THIS MAN’S SPECIAL INTEREST?
CAN YOU GUESS THIS MAN’S SPECIAL INTEREST?
POLICY NEEDS IN RESEARCH AND SERVICE

• EMPHASIS ON EVIDENCE BASED TREATMENTS
• TRANSLATING RESULTS FROM RESEARCH STUDIES INTO PRACTICAL APPLICATIONS

• RESEARCH NEEDS
  • PARTICULARLY IN INTERVENTION

• SERVICE
  • EVALUATION OF MODELS OF CARE
  • DOER’S BOOK – AUTISM CROSS AMERICA

• PUBLIC POLICY
  • DISSEMINATION OF INFORMATION TO PARENTS, SCHOOLS, PUBLIC, AND STUDENTS
  • HOW MANY HITS DO YOU GET FOR AUTISM’ IN GOOGLE?
SOCIAL POLICY ISSUES

• LITTLE WORK ON THE 50 STATE WIDE EXPERIMENTS!
• TRANSLATING RESULTS FROM RESEARCH STUDIES INTO PRACTICAL APPLICATIONS
• CHALLENGES OF GETTING QUALITY INFO TO PARENTS
  • AS OF LAST WEEK TYPE AUTISM INTO GOOGLE:
    • >235,000,000 HITS
  • WE HAVE ONLINE COURSE – UTUBE YAAE AUTISM
  • SCSU WEB SITE – SERIES OF TALKS ON LINE

Internet use over 24 hours ➔
A QUICK STORY TO (NEARLY) END!

- UNDERGRAD CLASS
  - 30 YEARS (ABOUT 1000 STUDENTS)
  - VARIOUS CO-TEACHERS
- FORMAT
  - LECTURE
  - EXPERIENCE
- LECTURES NOW ON WEB
  - FEATURED ON ITUNES
  - >200,000S VIEW ON LINE!
- QUICK STORY (TESTAMENT TO PROGRESS IN THE FIELD!)
THANKS!
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THANK YOU FOR ATTENDING TODAY’S PRESENTATION. TO REGISTER FOR FUTURE SCIENCE OF AUTISM EVENTS PLEASE GO TO HTTP://BIT.LY/SCIENCE-OF-AUTISM

WE WELCOME YOUR SUPPORT! CONTRIBUTIONS CAN BE MADE AT HTTPS://WWW.SOUTHERNCT.EDU/ASD-CENTER