

Autism and Bilingualism

What's the Evidence?

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Cultural and Linguistic Diversity in Today's World

Monolingualism is now a minority situation (Tucker, 1999)

In Australia (ABS; 2006):

- 19% of population speaks language other than English
- Over 200 other languages spoken

Substantial research considers effects of bilingualism on child development

- Research with children with disabilities more recent
 - Research with children with ASD very recent

How I Became Interested in Bilingualism and Autism

2006 – 2010:

- Large early-intervention trial for preschoolers with autism
- Conducted in a highly multi-cultural region
- Parent-mediated intervention
 - Teaching parents new skills
 - Required parents to have good English and regular use of English with their child with ASD
- Therapist reflections on best-practice?

Leadbitter et al. (in progress):

- Comparison of bilingual- and monolingual-exposed children

How the Brain Deals with Language

Children gradually acquire language via social interaction

- First words ~ 1st birthday
 - First phrases ~ 18-24 months
 - Huge growth in vocabulary and complexity of speech across preschool years...
and beyond...

Specialized 'language areas' develop within the brain

The brain is 'plastic'... but within reason

- Difficult to ...
 - Develop language later in life
 - Learn a new language later in life

How the Brain Deals with **Two Languages**

Two types of bilingualism

- Simultaneous:
 - Two languages acquired together in infancy
 - Young brain must learn which is which
 - And how to switch appropriately/flexibly between

- Sequential (aka. Dual-language learning)
 - L1 acquired first (just as in monolingualism)
 - L2 learned later... childhood, adolescence, adulthood...
 - “Mapped on top” of L1
 - Brain uses existing L1 to learn later L2

What we Know:

From Studies with TD Children and NT Adults

Cognitive advantages from simultaneous bilingualism

- Better executive and social-cognitive skills in children
- More use of gestures (and adults) (e.g., Carlson et al., 2008)

In adults (simultaneous or sequential bilingualism)

- One language usually 'dominant' (e.g., Genesee et al., 1995)
 - Feels most comfortable and spoken most competently
 - Not necessarily the first or 'native' language
- Adult bilingualism confers slight negative impact
 - Slower to access vocabulary (e.g., naming pictures; 'finding' the right word, etc., e.g., Roberts et al., 2002)

Bilinguals unlikely to feel equally comfortable with L1 & L2

What we Know about Bilingualism and ASD:

From Surveys and Interviews with Parents and Professionals

Broad parent survey (Kay Raining-Bird et al., 2012):

- Professionals reportedly advise single-language exposure, for children with disabilities

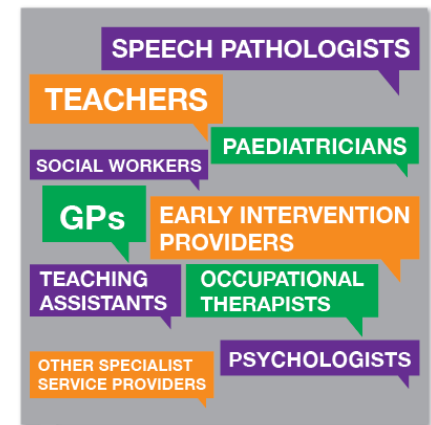
Interviews with bilingual parents (Wharton et al., 2000; Yu, 2013)

- Most advised to interact using non-native English
- But described feeling more effective in native language
 - Increased warmth, and comfort; fewer interruptions
 - Concerned about impact of own poor English for child

Interviews with Australian professionals (Hudry et al., in prep)

- ~ half had been consulted for advice about bilingualism

Confirmed the need for dedicated research



WE WANT TO HEAR FROM YOU!

Do you work with individuals/families with **AUTISM SPECTRUM DISORDERS?**
We are keen to hear about the experiences of a range of different professionals working with individuals with ASDs and/or their families, particularly regarding the topic of language. Participants would be interviewed for around 30 minutes, at a convenient time and location, or by phone. To find out more please contact:
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What we Know:

From Studies with Other Groups of Children at Risk

Children born preterm with very low birth weight (Walch et al. 2009)

(Chapman, 1995; Feltmate et al., 2008)

Children with Down syndrome (DS) and Specific Language Impairment (SLI)

- No apparent further language delays in bilinguals compared to mono.
 - So no clear detrimental effect of bilingual exposure...

But ASD is different to these other conditions... (and highly variable)

- Expressive language is often delayed/impaired
- Social skills, including communication, is a core diagnostic feature
- Executive functions, social-cognition are ongoing difficulties
- Interaction can be difficult for parents and their children with ASD

What we Know:

The First Study of Bilingualism in a Child with Autism

Single case study (Seung et al., 2006)

- Successful incorporation of Korean and English into early intervention for one boy with ASD

2011-current: A handful of between-group studies

- Leadbitter et al., (in preparation)
- Hambly & Fombonne (2012; 2014)
- Ohashi et al. (2012)
- Valicenti-McDermott et al. (2013)
- Peterson et al. (2012)
- **Australian Study of Bilingualism and Autism**

Very Recent Findings: Australian Study of Bilingualism and Autism

18 BIL and 20 MON exposed preschoolers with ASD

- Similar levels of ASD severity and functioning
- Tests of child language & Interviews with parents
- Observation of parent-child free play
 - In English and in BIL parents' native languages
- Most BIL parents had decided to use English with child
- Similar assessed English language across MON and BIL
 - But not when tested by *parent-report* or when language *observed* during in free-play
- Very few BIL exposed children were functionally bilingual

Do you have a child with Autism Spectrum Disorder who you are raising bilingually?

您在双语的状况培养有自闭症的孩子吗？

Ever wondered how language exposure affects development when children have ASD?

We need the help of parents and their young child with ASD!

WHO CAN PARTICIPATE?

Chinese families (where parent has English as second language)

With child with **ASD** aged **7-9 years**, exposed to English and Chinese.



ABOUT YOUR CHILD

It does not matter how much language your child has. They just need to be exposed to Chinese (any dialect) regularly at home.

WHAT'S INVOLVED?

A 2-3 hour session including standardised language games, assessments looking at behaviour and thinking, and free-play for you with your child. This can happen at school, at the OTARC lab or at your home. We can provide a report on your child's skills.



For more information or to get involved, please contact:

Rebecca Kam or Alexandra Woollacott

Olga Tennison Autism Research Centre
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Very Recent Findings: Australian Study of Bilingualism and Autism

18 BIL and 20 MON preschoolers with ASD

- Parent interaction during free-play with the child
 - Tested BIL and MON parents' the English-language skills
 - BIL parents (non native speakers) had poorer English
 - But BIL parents reported more comfort using English
 - Also tended to speak more when using English
 - ... but... most had decided to use English with child
 - BIL parents were more directive than MON parents
 - And used less expansion of child speech
- BIL** children used more gestures when parents interacted using their native languages vs. English



What we Know:

Studies of Bilingualism in Children with Autism

Single case study (Seung et al., 2006)

- Successful incorporation of Korean and English into early intervention for one boy with ASD

2011-current: A handful of between-group studies

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Suggest no further language delays in BIL compared to MON preschoolers with ASD
No clear negative effect of early bilingual exposure...

Handful of parent-report studies on the experience of bilingualism and ASD

So... Autism and Bilingualism: What's the Evidence?

(Until now) Professionals and parents have had use 'common sense'

Common sense is often contradictory and **Common sense is usually wrong**

- The idea that early bilingualism = negative is not supported by evidence...
- May be unhelpful to advise parents to use non-native (i.e., community) language

Current best advice: Work individually with the family

- If the child has early bilingual exposure, so be it! 😊
- Support parents to use the language which feels right
 - If a parent has already switched to English and that feels right, stick with it
- If child with ASD has language delays, it's probably the ASD (not the BIL exposure)
 - Work on communication... whatever the language

Still Recruiting... Australian Study of Bilingualism and Autism

We still don't know...


- Impact of functional bilingualism (vs. exposure)?
- How skills present at school-age (and change)?
- How skills present in broader domains:
 - Language and communication?
 - Executive function & social-cognition?
- Any *benefits* of early bilingualism/exposure?
- Any long-term impacts from parent non-native language use?

Do you have a child with an Autism Spectrum Disorder who you are raising bilingually?

Hello **γειά σου** **你好** **Ciao**

Ever wondered how language exposure effects development when children have ASD? We are undertaking postgraduate studies in clinical psychology, and need the help of parents and their young child with ASD!

WHO CAN PARTICIPATE?
Bilingual families
(Parents with English as second language)
with a child with ASD aged 2 to 5 years



ABOUT YOUR CHILD
Your child needs to go to an **English-speaking** playgroup/kindergarten, etc. It does not matter how much language your child has.

WHAT'S INVOLVED?
A 2-3 hour session including standardised language games, behavioural assessments, and free-play for you with your child. We can provide a report on your child's current skills.



For more information or to get involved, please contact:

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LA TROBE UNIVERSITY
UIMEC Approval no. 11-064

<http://www.latrobe.edu.au/otarc/participate>

Currently recruiting 2 – 5 (ish) year olds with ASD: Bilingual and Monolingual

Thank you

Lisa Rumney & Nicole Porter
Rebecca Kam

Josephine Barbaro Suzana Cunha
Lindsay Pamment David Trembath
Giacomo Vivanti Alexandra Woollacott

Kathy Leadbitter Pat Mirenda
Catherine Hambly

Participant children
and their parents
Staff at referring
centres



Thank you

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