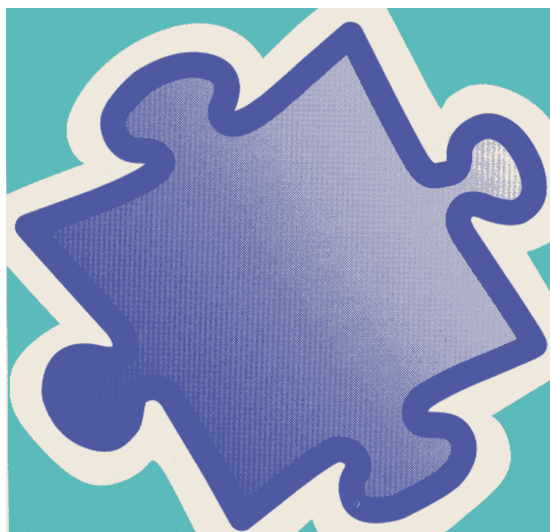


Autism Spectrum Disorder 2008 Research Forum Proceedings



ABN 15 600 724 949

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- Office Hours:** 9 am to 5 pm, Monday to Friday
- Location:** Our office is located near the corner of High Street and Glen Iris Road. Melways Reference Map 60 A9
- Car Parking:** Off Street car parking is available at the rear of our building, access is from Glen Iris Road.
- Public Transport:** **Glen Waverley** train or **No 6** tram to Glen Iris. 10 minute walk along High Street toward Ashburton. The **No 734** Ventura bus runs along High Street between Glen Waverley and Glen Iris Railway Stations.

About Autism Victoria

Autism Victoria Inc. is an independent not for profit association. Our mission is to provide support, guidance and information to persons in Victoria affected in some way by an Autism Spectrum Disorder – Autism, Asperger Syndrome and PDD-NOS – Pervasive Developmental Disorder Not Otherwise Specified. Autism Victoria also plays an important role in lobbying for a better service system for people affected by an autistic disorder, and in improving public awareness of Autism Spectrum Disorders.

Autism Victoria produces a quarterly information magazine – *The Spectrum* - and manages a member library specialising in materials about Autism Spectrum Disorder and related topics. They distribute detailed Autism and Asperger Syndrome information packages, as well as brochures, posters and specialist service information.

Autism Victoria also maintains a comprehensive web site. Of the many features, one to note is the section on the web site dedicated to Autism Spectrum Disorder Research. The site offers the opportunity for researchers to describe their work, for parents and others to nominate their interest in participating in research, and eventually the establishment of an Autism Spectrum Disorder Research Listserv. Josie Barbaro, a PhD student at La Trobe, is employed by Autism Victoria to maintain this section of our website. Why not bookmark this site and visit it from time to time – www.autismvictoria.org.au/research?

The Autism Victoria **Research Reference Group** is part of the Autism Victoria **Professional Panel**, chaired by Professor Margot Prior AO. This Panel provides an important link between professionals, service providers, the Autism Victoria State Council and the **Australian Advisory Board on Autism Spectrum Disorders**, of which Autism Victoria is a corporate member.

Autism Victoria has a staff of five and operates out of a small office in Glen Iris. Initial contact should be made by phone or email to ascertain how staff can best assist you – see below.

Membership is open to families, carers, professionals and students – anyone with an interest in Autism Spectrum Disorders. A membership form is available from the Autism Victoria office. There are several membership categories with fees ranging from \$22.00 to \$55.00 per annum.

Autism Victoria is funded by membership fees, fundraising efforts, grants and donations from the public, and recurrent funding from the Victorian Department of Human Services. The cost of staging today's research forum is partly covered by this funding.

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These proceedings are available as a .pdf document from the Autism Victoria office – please email your request to any of the staff above – or can be downloaded from the Autism Victoria website – see the Research menu item.

Contents

Message from Dr Cheryl Dissanayake, Convenor, Autism Victoria Research	
Reference Group	pages 4
2008 Research Forum Program	pages 5-9

Keynote Address – 9:00 to 10:10 – Chair Professor Margot Prior AO

Assoc. Prof. Robyn Young , School of Psychology, Flinders University.....	page 10
----------------------------------------------------------------------------------	---------

Session One – 10:30 to 11:10 - Biological/Brain – Chair Assoc Professor Sabine Hammond

Nicole Rinehart, Bruce Tonge, N. Bradshaw, J. McGinley, J. Murphy, A. Papadopoulos, N. Nayate, A. Brereton, R. Lansekl.....	page 11
Wah Chin Boon, Howard Florey Institute	page 12

Session Two – 11:10 to 11:50 - Language – Chair Assoc Prof Amanda Richdale

Diane Jacobs & Amanda Richdale, RMIT University.....	page 13
Kerrie Delves & Lesley Stirling, Linguistics & Applied Linguistics, University of Melbourne.....	page 14

Session Three – 11:50 to 12:30 - Cognition – Chair Assoc. Professor Mark Stokes

Franziska. Brenk, Sabine Hammond, Gill Terrett, & C Wagner, Australian Catholic University.....	page 15
Rucha Joshi, La Trobe University.....	page 16

Session Four – 1:30 to 2:10 - Diagnosis – Chair Dr Cheryl Dissanayake

Josephine Barbaro & Cheryl Dissanayake, , La Trobe University	page 17
Victoria Miller & Mark Stokes, Deakin University.....	page 18-19

Session Five – 2:10 to 3:10 - Families – Chair Dr David Hamilton

Avril Brereton, Bruce Tonge & Kerry Bull. Monash University	page 20
Rebecca Giallo, Laura Baldwin, Sarah Thompson & Sharynn Schuster Parenting Research Centre, RMIT University	page 21
Elizabeth Solum & Susana Gavidia-Payne, RMIT University	page 22

Session Six – 3:30 to 4:10 - Intervention – Chair Dr Angelika Anderson

Angelika Anderson Monash University.....	page 23
Jade Thomas, Angelika Anderson & Dennis Moore, Monash University.....	page 24

Poster Presentations – displayed in the Grevillea Room Annex

The time in brackets is when the poster presenter will be in attendance at their poster.

Intervention	1, 2, 3 & 4
Social/Cognition	5 & 6
Language	7
Biological/Brain	8 & 9
Families	10, 11, 12 & 13
Service Provision	14 & 5

1. Min Li & Brett Furlonger (12:30 – 1:00) Monash University	Page 25
2. Daphne Proiette (12:30 – 1:00) Presbyterian Ladies College	Page 26-27
3. Stacey Litras, Dennis Moore & Angelika Anderson (12:30 – 1:00) Monash University	Page 28
4. Melissa Di Pietro, Dennis Moore & Angelika Anderson (12:30 – 1:00) Monash University	Page 29
5. Jessica Mifsud & Cheryl Dissanayake (1:00 – 1:30) La Trobe University	Page 30
6. Cheryl Dissanayake & Rachel Kelly, (1:00 – 1:30) La Trobe University	Page 31
7. Heather Nuske & Edith L. Bavin, (1:00 – 1:30) Latrobe University	Page 32
8. Arian Dowd, Nicole Rinehart, Kylie Gray & Jennifer McGinley (1:00 – 1:30) Monash University	Page 33
9. Naomi Bishop (12:30 – 1:30) La Trobe University	Page 34
10. Amanda Richdale & Judy Chu, (1:00 – 1:30) RMIT University	Page 35
11. Dennis Crowley, (12:30-1:00) D M Crowley & Associates	Page 36-37
12. Belinda Minett, Susana Gavidia-Payne & Rebecca Giallo (1:00 – 1:30) RMIT University	Page 38
13. Angeline Ho & Sabine Hammond (1:00 – 1:30) ACU National.....	Page 39-42
14. Kerry Bull, Avril Brereton & Bruce Tonge (12:30 – 1:00) Monash University, Autism Secondary Consultation & Training Strategy (ACT-NOW).....	Page 43-44
15. Emma Donaldson, Deslea Konza & Wilma Vialle (12:30 – 1:00) Edith Cowan University	Page 45

ADDITIONAL INFORMATION

Autism Research in Victoria and Recruiting Research Subjects	pages 46-47
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Welcome from Dr Cheryl Dissanayake

Welcome once again to the annual Autism Spectrum Disorder Research Forum. It has been quite a year for autism, with the federal government roll out of the \$190 million Helping Children with Autism initiative, and the establishment in June this year of the Olga Tennison Autism Research Centre at La Trobe University, which is a joint initiative with Autism Victoria. These developments have served to keep autism in the spotlight this year, and as professionals and students working in the area of autism, we can only hope that these rays continue to shine on our field!

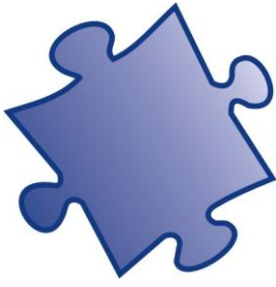
I would like to extend a special welcome to Assoc. Prof Robyn Young, who will present the Keynote this year. Robyn has been an active autism researcher, particularly focusing more recently on early identification and intervention, two areas close to my own heart. The program today presents a diverse and exciting body of research being undertaken across the State. As always, the majority of papers and posters to be presented today are based on research conducted by fourth year and post-graduate students working in the laboratories of key autism researchers in Victoria. Many of these key researchers are members of the Autism Victoria Research Reference Group, which is responsible for hosting this event. I would like to extend my thanks to them and, in particular, to Assoc. Professor Amanda Richdale, who was largely responsible for organizing today's program. I would also like to extend my thanks to Carol Barclay for all her help in organizing the forum.

You can find out more about research in Victoria and our Research Reference Group on the Autism Victoria website.

Thank you for attending and participating today. I hope you enjoy the forum, and invite you to return next year.

Cheryl Dissanayake, Ph.D, MAPS
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Autism Victoria

2008 Autism Spectrum Disorder Research Forum

**Grevillea Room, Darebin Arts & Entertainment Centre, Bell Street, Preston
Thursday 6th, 2008**

All sessions will be in the Grevillea Room, with Poster Presentations and refreshment breaks in the adjacent Annexe.

Time	Session Presenter & Title of Paper	Where
8:45 - 9:00	Registration	Grevillea Room Annexe
9:00 – 9:10	Opening: <u>Dr Cheryl Dissanayake</u> , Convenor, ASD Research Reference Group	Grevillea Room
9:10 - 10:10	Introduction of Keynote Speaker Chair: <u>Professor Margot Prior AO</u> , Patron, Autism Victoria, and Chair, Professional Panel Assoc. Professor Robyn Young – “Outcomes of behavioural intervention among children with autism”	Grevillea Room
10:10 – 10:30	Morning Tea & Poster Presentations	<u>Grevillea Room Annexe</u>
10:30 – 11:10	Biological/Brain Chair – <u>Assoc. Professor Sabine Hammond</u> 10:30 – Nicole Rinehart , Bruce Tonge, N. Bradshaw, J. McGinley, J. Murphy, A. Papadopoulos, N. Nayate, A. Brereton, R. Lansekl – “An examination of motor functioning in young people with autism and Asperger’s Disorder: Furthering current neurobehavioral and clinical definition” 10:50 – Wah Chin Boon , Evan Simpson, Bruce Tonge, Nicole Rinehart – “Aromatase knockout mice – an autism model?”	Grevillea Room

Time	Session Presenter & Title of Paper	Where
11:10 – 11:50	<p>Language</p> <p>Chair – <u>Assoc. Professor Amanda Richdale</u></p> <p>11:10 – Diane Jacobs & Amanda Richdale – “Language and literacy subtypes in high-functioning autism spectrum disorder”</p> <p>11:30 – Kerrie Delves & Lesley Stirling – “Repair in the conversation of high functioning children with autism and typically developing children”</p>	Grevillea Room
11:50 – 12:30	<p>Cognition</p> <p>Chair – <u>Assoc. Professor Mark Stokes</u></p> <p>11:50 – Franziska. Brenk, Sabine Hammond, Gill Terrett, & C Wagner – “Social skills and executive functions in preschool children with an Autism Spectrum Disorder”</p> <p>12.10 – Rucha Joshi – “Weak central coherence and social preferences in parents of children with autism spectrum disorders in India and the UK”</p>	Grevillea Room
12:30 – 1:30	Lunch & Poster Presentations	<u>Grevillea Room Annexe</u>
1:30 – 2:10	<p>Diagnosis</p> <p>Chair – <u>Dr Cheryl Dissanayake</u></p> <p>1.30 – Josephine Barbaro & Cheryl Dissanayake – “Development profiles of infants and toddlers on the Autism Spectrum from a community based sample”</p> <p>1.50 - Victoria Miller & Mark Stokes – “Investigating the female profile of autism”</p>	Grevillea Room

Time	Session Presenter & Title of Paper	Where
2:10 – 3:10	<p>Families</p> <p>Chair – <u>Dr David Hamilton</u></p> <p>2.10 – Avril Brereton, Bruce Tonge & Kerry Bull “Lifetransition problems: Young people with Autism Spectrum Disorder”</p> <p>2.30 - Rebecca Giallo, Laura Baldwin, Sarah Thompson & Sharynn Schuster– “Parenting siblings of children with an Autism Spectrum Disorder: Parent concerns, parental self-efficacy and sibling adjustment”</p> <p>2.50 – Elizabeth Solum & Susana Gavidia-Payne – “Behaviour of preschool children with an Autism Spectrum Disorder: Impact on parental well-being, competence, and social supports”</p>	Grevillea Room
3:10 – 3:30	Afternoon Tea & Poster Presentations	<u>Grevillea Room Annexe</u>
3:30 – 4:10	<p>Intervention</p> <p>Chair – <u>Dr Angelika Anderson</u></p> <p>3.30 – Angelika Anderson – “Non-targeted beneficial behaviour change as a result of contemporary behavioural interventions in young children with ASD”</p> <p>3.50 – Jade Thomas, Angelika Anderson & Dennis Moore – “Functional Assessment at a Distance: An application of Information Technology in assessment and intervention”</p>	Grevillea Room
4:10 – 4:30	Summing up, announcements & close – <u>Dr Cheryl Dissanayake</u>	Grevillea Room

Poster Presentations -displayed in the Grevillea Room Annexe

* The authors will be present at their posters at the times indicated to discuss their work and findings.

Intervention	1,2,3 & 4
Social/Cognition	5 & 6
Language	7
Biological/Brain	8 & 9
Families	10,11,12 & 13
Service Provision	14 & 5

Author	Time*	Institution	Title of Poster
1. Min Li & Brett Furlonger	12:30 – 1:00	Monash University	The effect of peer-initiation strategy and pivotal response training on the social interaction of a child with autism
2. Daphne Proiette	12:30 – 1:00	Presbyterian Ladies College	Effects of teaching piano to children with Autism Spectrum Disorder
3. Stacey Litras, Dennis Moore & Angelika Anderson	12:30 – 1:00	Monash University	Using video self-modelled social stories to teach initiations as pivotal response to a child with autism
4. Melissa Di Pietro, Dennis Moore & Angelika Anderson	12:30 – 1:00	Monash University	Teaching a child with Autistic Spectrum Disorder to self-manage tasks using Pivotal Response Training
5. Jessica Mifsud & Cheryl Dissanayake	1:00 – 1:30	La Trobe University	Symbolic play in high-functioning autism: An exploration of children's production and comprehension
6. Cheryl Dissanayake & Rachel Kelly	1:00 – 1:30	La Trobe University	Deficits in object substitutions in autism: In search of an explanation

Author	Time*	Institution	Title of Poster
7. Heather Nuske & Edith L. Bavin	1:00 – 1:30	Latrobe University	The communication skills of children with autism
8. Arian Dowd, Nicole Rinehart, Kylie Gray & Jennifer McGinley	1:00 – 1:30	Monash University	An examination of upper body movement in young children with autism
9. Naomi Bishop	12.30 - 1.30	La Trobe University	Characterisation of the DIAI gene product
10. Amanda Richdale & Judy Chu	1.00 - 1.30	RMIT University	Sleep quality in mothers of children with an Autism Spectrum Disorder (ASD)
11. Dennis Crowley	12.30-1.00	D M Crowley & Associates	Parent Survey – current ASD diagnosis, therapies and their perceived effectiveness
12. Belinda Minett, Susana Gavidia-Payne & Rebecca Giallo	1.00 - 1.30	RMIT University	Siblings of children with an Autism Spectrum Disorder: Hassles, uplifts and supports
13. Angeline Ho & Sabine Hammond	1.00 - 1.30	ACU National	Siblings of adults with autism or psychosis
14. Kerry Bull, Avril Brereton & Bruce Tonge	12.30 - 1.00	Monash University	Autism Secondary Consultation and Training Strategy (ACT-NOW)
15. Emma Donaldson, Deslea Konza & Wilma Vialle	12.30 - 1.00	Edith Cowan University	Listening to the Links – education experiences of Dual Labelled Students (Gifted and Aspergers)

Opening & Keynote Address

9:00 – 10:10 am

Chair – Professor Margot Prior

Seizing the moment: enhancing learning opportunities for children with autism

Assoc. Prof. Robyn Young

Robyn Young is an Associate Professor in the School of Psychology at Flinders University and has been involved in the field of autism since 1990. She completed her PhD at Adelaide University in 1995. Her earlier work in the area of savants was the subject of an ABC documentary titled *Uncommon Genius*. During much of her PhD she was based at the PDD unit at Stanford University and subsequently trained in the Autism Diagnostic Interview. She went on to develop a screening tool for Autistic Disorder suitable for use in children as young as 12 months. This tool is known as the Autism Detection in Early Childhood (ADEC; ACER, 2007). Together with colleagues at Flinders University she has developed an intervention program called StartRight (ACER, in press) and is actively involved in many research projects in the area of autism including the development of biological markers to diagnose and phenotype autism.

This paper will focus on the method and outcome of the Early Intervention Research Program (EIRP) for children with Autistic Disorder (AD) at the Flinders University of South Australia. Although based on traditional ABA programs, the EIRP differs in that each child's program is individualised and targets core deficit-linked behaviours (e.g., imitation & joint attention), rather than targeting dominant secondary behaviours (i.e., stereotypic rituals & routines). Children within the EIRP, undergo a 2 week 10x3 hour clinic-based intervention followed by an 18 week home-based intervention. It was hypothesised that by intensively targeting the core deficit-linked behaviours, these behaviours may be reduced or ameliorated to a point where one can minimise the onset of secondary behaviours. Eight-seven children (71 males and 16 females) with a mean age of 42 months participated. A within subjects quasi experimental staggered baseline repeated measures design was used (initial, pre- intervention, 2 week intervention and 20 week final). Analysis of test scores from initial to 20-week follow up assessments showed a general trend towards improvement of autistic symptom severity and an increase in adaptive functioning, beyond that which would have been predicted from baseline measures. The result of follow-up studies will also be discussed.

Contact : Robyn.Young@Flinders.edu.au

SESSION ONE

10:40 am to 11:10 pm

Biological/Brain

Chair– Assoc. Professor Sabine Hammond

10:30 am

An examination of motor functioning in young people with autism and Asperger's disorder: Furthering current neurobehavioural and clinical definition

Dr. Nicole Rinehart. School of Psychology, Psychiatry, and Psychological Medicine, Monash University. Clayton

Tonge, B., Bradshaw, J., McGinley, J., Murphy, A., Papadopoulos, N., Nayate, A., Brereton, A., Lansek, R.

Disordered movement constitutes a significant clinical feature of autism and Asperger's disorder (AD). Current clinical descriptions of motor dysfunction are imprecise and lack an empirical basis. Understanding whether the motor disorders associated with autism and AD are similar or different will help define if autism and AD are on a symptom continuum, or are distinct disorders as delineated in DSM-IV-TR, with separate neurobiological underpinnings. The elucidation of objective criteria which distinguish these disorder groups will improve current diagnostic methods that rely on subjective assessment. The purpose of this project is to build upon our previous research using a *three-dimensional motion analysis system* which is able to sensitively delineate basal ganglia cerebellar motor features in gait. The preliminary data set includes a matched group of normally intelligent children with autism (n=10), AD (n=10), and a comparison group (n=10). A 3D motion analysis system (Vicon 612,) recorded walking motion as each participant walked across a central 6 meter zone in a 10-metre walkway. This system incorporates 8 infrared video cameras that track movement trajectories of retroreflective markers attached to the participant's body. Small light-reflective markers are positioned with adhesive tape on the participant's head, trunk, upper limbs, pelvis, lower limbs and feet. Participants were required to perform various tasks of increasing difficulty to further tax the executive-motor system during walking, e.g, modulating gait speed, dual cognitive tasks and tandem walking. Our preliminary findings demonstrate that the 3D technology has the capability to dissociate the subtle neuromotor and clinical characteristics which define autism and AD. The data are consistent with our overarching hypothesis that individuals with autism exhibit a combination of cerebellar and basal-ganglia related movement disorders, while the movement disorder associated with AD is predominately associated with basal-ganglia disruption.

Contact: Nicole.Rinehart@med.monash.edu.au

SESSION ONE

10:40 am to 11:10 pm

Biological/Brain

Chair – Assoc. Professor Sabine Hammond

10:50 am

Aromtase Knockout Mice – An Autism Model

Wah Chin Boon^{1,2,3}, Jason Spencer^{1,2}, Evan Simpson³, Bruce Tonge⁴, Nicole Rinehart⁴

1. Howard Florey Institute, Parkville, Vic 3010, Australia
2. Dept of Anatomy and Developmental Biology, Monash University, Vic 3800
3. Prince Henry's Institute, Clayton, Vic 3168
4. Centre for Developmental Psychiatry & Psychology School of Psychology, Psychiatry, and Psychological Medicine. Vic 3168

There is an urgent need for animal models which reflect the core symptoms of autism, the predominantly male presentation, the neuropathology, the genetic contribution and epigenetic influences and the effects of environmental insults. Critically, there is currently no animal models of autism which cover the broad behavioural phenotype of autism (deficits in communication, social interaction and cognition, repetitive behaviours and motor abnormalities) observed predominantly in males.

We have pilot data to indicate that the aromatase knockout (ArKO, an estrogen-deficient model) mouse has behavioural phenotypes consistent with the spectrum of autistic symptoms. The male ArKO mice present a short-term spatial reference memory deficit in the Y-maze test; develop repetitive behaviour such as excessive water-spray triggered grooming and wheel-running activities; show an anomalous Prepulse Inhibition (PPI); significantly higher serum androgen levels than wild type (WT) mice. The ArKO phenotypes may be analogous to the reported characteristics of Autism Spectrum Disorder patients. More importantly, the young (6 week-old) male ArKO mice exhibited social interaction deficits but not the young female ArKO. Thus, oestrogen deficiency in the brain may lead to the presentation of autistic-like symptoms predominately in male mice.

Contact: wahchinb@florey.edu.au

SESSION TWO

11:10:11:50 am

Language

Chair – Assoc. Professor. Amanda Richdale

11:10 am

Language and literacy subtypes in high-functioning autism spectrum disorder

Diane Jacobs, Student, RMIT University

Supervisor: Associate Professor Amanda Richdale

Project

This study examined the language and literacy abilities of 42 young children with a high-functioning autism spectrum disorder (HFASD) aged between 6 years 5 months and 8 years 11 months ($M = 93.31$, $SD = 8.46$). The results from the HFASD group were compared with 42 same-aged children with specific language impairment (SLI), 42 with specific reading disorder (SRD), and with 42 children who were typically developing.

Methods

Participants completed measures of cognition, phonological processing, higher-level language, reading, and spelling. Ability groups were then formed on the basis of higher-level language and decoding scores regardless of diagnostic group.

Findings

Children with a HFASD exhibited a wide range of language and literacy skill. Some participants demonstrated language and literacy outcomes as per typically developing peers whilst others had skills that paralleled those of children with SLI, or SRD, or combined SLI-SRD. It is concluded that HFASD comprises a heterogeneous group of individuals. Whilst pragmatic language impairment is mandatory deficits with formal language skill is not. Additionally, the stereotypic view of intact decoding combined with impaired reading comprehension in all children with a HFASD was not supported.

Contact: diane@melbpc.org.au

SESSION TWO

11:10:11:50 am

Language

Chair – Assoc. Professor Amanda Richdale

11:50

Repair in the conversation of high functioning children with autism and typically developing children.

Kerrie Delves & Lesley Stirling , Linguistics and Applied Linguistics, University of Melbourne.

When people engage in conversation they have a shared responsibility to establish common meaning so that successful communication can take place. However there are often instances in conversation where some form of miscommunication takes place, such as choosing an incorrect word, mishearings, and misunderstandings. In these instances interlocutors will usually attempt to correct the miscommunication by repeating or rephrasing the utterance. This act of correction is known as ‘repair’ in the Conversation Analysis (CA) literature.

The ability to successfully repair is therefore reliant on a range of cognitive and linguistic skills, and of particular importance are Theory of Mind (ToM) abilities. These are important in three stages of the repair process. Initially, if a speaker has a good grasp of their interlocutor’s perspective, then they can tailor their utterance to meet their conversational partner’s needs before they have spoken it, thus the need to repair should be less frequent. Additionally, if a speaker can understand social and linguistic cues that their interlocutor has not understood an utterance, such misunderstandings are more likely to be quickly resolved. And finally if a speaker can make an accurate judgement with regards to which part of the utterance needs to be modified to aid understanding, repair is more likely to be successful. Despite the importance of ToM in the ability to successfully repair, research into the development of repair abilities in both typically developing children and children with autism has been largely neglected.

This study draws on data collected in the Child Development Unit, La Trobe University by Cheryl Dissanayake and Rachel Kelly for research into the role of executive functions in symbolic play. The data consists of 20 children with high-functioning autism and 20 typically developing children matched on chronological age, overall mental age, verbal mental age, performance IQ, full-scale IQ, and basic information processing speed. Testing was done individually in a single, video-taped session which took approximately 90 minutes. During these the participants were administered the Test of Pretend Play (ToPP) and took part in a 20 minute free play session. During this time the researcher and child were engaged in spontaneous conversational speech, and in this current study I am listening and watching these parts of the data collection for instances of repair. All instances are transcribed and analysed in the Conversation Analysis (CA) tradition, which is a highly detailed form of discourse analysis. The overall aim of this project is to build a profile of repair use by both children with autism and typically developing children. In this paper I will present qualitative findings demonstrating the complexity of repair use in both children with autism and typically developing children’s conversational speech.

Contact: Kerrie Delves kdelves@unimelb.edu.au

SESSION THREE

11:50 TO 12:10

Cognition

Chair – Assoc Professor Mark Stokes

11:50

Social skills and executive functions in preschool children with an Autism Spectrum Disorder

Brenk F., Hammond S., Terrett G. & ,Wagner C., Australian Catholic University

Executive dysfunction has been shown to underlie many of the key characteristics of autism, both in the social and non-social domains. Empirical studies are needed to examine the association between executive dysfunction and the disorder's hallmark impairments in social skill. Participants in this study currently include 40 parents and teachers of typically developing preschool children and 20 parents and teachers of preschool children with an autism spectrum disorder. Parents completed the Early Childhood Questionnaire (ECQ) as a measure of developmental status and social functioning, the Social Skills Rating System (SSRS) and the preschool version of the Behaviour Rating Inventory of Executive Function (BRIEF-P). Teachers completed the SSRS. Preliminary results examining the association between executive dysfunction and social skill impairments in preschool children with an autism spectrum disorder will be discussed.

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SESSION THREE

11:50 TO 12:10

Cognition

Chair – Assoc Professor Mark Stokes

12:10 pm

Weak central coherence and social preferences in parents of children with autism spectrum disorders in India and the UK

Rucha Joshi, La Trobe University

The study investigated the performance of parents of individuals with autistic spectrum disorders (ASD) and parents of typically developing children from different cultural backgrounds on tests regarded as measuring central coherence (CC). Comparisons were made between 64 biological parents of children with a diagnosis of ASD and 62 parents of typically developing children. The measures included the Embedded Figures Test (EFT), The Real Life Skills' questionnaire, a self report measure of behavioural patterns related to the CC, and a novel CC test, the Civic Arms test. Parents, especially fathers of children with ASD, in both countries, had higher scores on the EFT, the Civic Arms tests and the Real Life Skills' Questionnaire. The study showed no significant effects for culture on the cognitive tests, but did show a culture effecting that mothers of children with autism in India had higher scores on the social aspects of the RLS questionnaire than fathers in India and mothers in the UK. It was also seen that parents of typically developing children scored lower than experimental parents on the social and non-social aspects of the RLS questionnaires. The findings suggest that weak CC is a cognitive phenotype of autism irrespective of cultural backgrounds and influences, but that some aspects of everyday activities generally thought to be associated with ASD are open to cultural influences. The results are discussed in terms of the independent-interdependent dimension of cultural differences.

Keywords: Autistic Spectrum Disorders, weak central coherence, cross-cultural comparison, phenotypes

Abbreviations: EFT: Embedded Figures Test; WCC: Weak Central Coherence; ASD: Autistic Spectrum Disorders.

Details of investigators:

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Contact : Rucha_28@hotmail.com

SESSION FOUR

1:30 to 2:10

Diagnosis

Chair – Dr Cheryl Dissanayake

1:30 am

Developmental profiles of infants and toddlers on the Autism Spectrum from a community based sample

Barbaro, J. & Dissanayake, C., Olga Tennison Autism Research Centre, School of Psychological Science, La Trobe University

Children with an Autism Spectrum Disorder (ASD) typically do not receive a diagnosis until 3-years, despite many parents suspecting a problem before 12-months. Although early markers of ASD have been found as early as 6-months, there is little research on the prospective identification of these children prior to 18-months.

The objective in this longitudinal study was to determine whether routine monitoring of social attention and communication behaviours, within the Victorian Maternal and Child Health (MCH) service, can prospectively identify infants who will receive a diagnosis of Autistic Disorder (AD)/ASD.

241 MCH nurses from 17 Local Government Areas in metropolitan Melbourne were trained on developmental markers of ASDs in infancy. 22,168 children were then monitored at regular intervals on key items during four routine check-ups (8-, 12-, 18-, 24-months) at their local MCH centre. All children deemed to be 'at risk' of an ASD were referred to the SACS for a thorough developmental and behavioural assessment. Children were followed up at 6-monthly intervals until 24-months when the ADOS-G and ADI-R were administered.

Currently, 122 referrals have been received. Of these, 105 children have been assessed at La Trobe, with 84 children showing signs of AD/ASD (ascertainment rate of 80%). Receptive language has been found to be the key ability within the cognitive profile that differentiates children with ASD and developmental/language delay at 24-months.

The results indicate that it is possible to prospectively identify children with AD/ASD as early as 12-months via routine monitoring by community service providers in a community based sample.

Contact : J.Barbaro@latrobe.edu.au

SESSION FOUR

1:30 to 2:10

Diagnosis

Chair – Dr Cheryl Dissanayake

1:50 pm

Investigating the Female Profile of Autism

Victoria Miller, Doctorate of Clinical Psychology candidate, Deakin University School of Psychology, Faculty of Health, Medicine, Nursing and Behavioural Sciences, Deakin University

Supervisor: Associate Professor Mark Stokes, PhD (La Trobe) BBSoc (La Trobe) CBS (RMIT), Deakin University

Research Project Summary

There has been a great deal of research conducted within the field of autism, however, very little of this research has been looking specifically at high functioning females. For a long time it has been accepted that there is only one female for every four males diagnosed with High Functioning Autism (HFA) or Asperger's syndrome (AS). Research to date has assumed that males and females with HFA and AS must be very similar in presentation and that the gender ratios must be correct even though there is very little genetic or neuroanatomical evidence in support of this.

Recently, some anecdotal clinical evidence has suggested that there are more females with HFA and AS than reflected in the literature. Further, it appears that while these young women present with the core deficits found in Autism, they mask them to some degree. It appears that these girls are presenting for clinical assessments in their late childhood or adolescence because they have developed mood disorders such as anxiety or depression, or because they are continuing to struggle with peer relationships or are developing academic difficulties at school. Subsequent assessment reveals they have the core deficits characteristic of HFA and AS which contributes to the development of these difficulties and impacts on their quality of life.

Preliminary investigations have indicated that females may be protected from developing the severity of key symptoms characteristic of males with HFA due to their innate, biological and genetic affinity for communication, socialisation and empathy. They may also have the capacity to hide their deficits from others and not draw attention to themselves; often they simply appear as shy, quiet and somewhat odd young girls. As such, the female profile is falling into a grey area not yet understood whereby they have a unique profile not captured by the current clinical conceptualisation of autism and they may be being overlooked and /or misdiagnosed.

The purpose of my research within this area was to begin the process of clarifying how females with HFA or AS are both the same and/or different from their male counterparts with the aim of aiding their diagnosis and allowing the same opportunity for early interventions.

Research Methodology

The aim of the research was: 1) to explore the current theoretical conceptualisation of high functioning autism in both males and females amongst practitioners in Australia involved in the

assessment and diagnosis of autism; 2) to identify if clinicians have observed any differences in the clinical presentation of males and females with HFA; and 3) to explore current views about the utility of current diagnostic criteria and assessment process for HFA in males and females. Questionnaire packages were sent to psychiatrists, psychologists, paediatricians and speech pathologists working within the field of Autism in Australia inviting them to participate.

The questionnaire explored areas such as appearance and social networks, communication abilities (utilising the Adult Asperger Assessment; Baron-Cohen et al., 2005), obsessive interests and the utility of the DSM-IV-TR to assess and diagnose females and males with autism spectrum disorders.

The analysis included an exploratory factor analysis to investigate underlying constructs within each of the investigated domains for males and females, followed by structural equation modelling utilising the Tau Equivalency Model and completed with a Discriminant Function Analysis.

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DRAFT

SESSION FIVE

2:10 to 3:10

Families

Chair – Dr David Hamilton

2:10 pm

Life Transition Problems: Young People with Autism Spectrum Disorders

Brereton, A.V., Tonge, B. J & Bull, K.J., Monash University, School for Psychology, Psychiatry & Psychological medicine, Centre for Developmental Psychiatry and Psychology

The Victorian State Government is developing an Autism State Plan. The Department of Human Services Strategic Projects Branch identified Adolescents with Autism Spectrum Disorders (ASDs) in transition as a priority area for research.

Autism Spectrum Disorders (Pervasive Developmental Disorders) are serious neurodevelopmental disorders affecting up to 1 in 160 Victorians. Although the presenting symptoms change with maturation, they continue to be a major source of distress, disability and handicap and are a significant burden on carers and cost to the community. Individuals with ASDs experience high levels of stress at times of change. The most salient times of change are at key life transition points, particularly the move from preschool to school, from primary school to secondary education and from secondary education into further education, adult programmes or the workforce and more independent living. The major reason for increased demand on services such as respite care and exclusion from school and workplace is the increase in emotional and behavioural problems associated with these times of stress and change.

Therefore the aim of this project was to research the issues, experiences and service related needs of young people aged 12 to 25 years and their families as they move through the critical transition periods of primary to secondary education and from secondary education into young adult life.

The above project was structured to deliver a comprehensive review of the literature linked to quantitative and qualitative findings of a multi method data collection process that gathered information from broadly representative young people (12-25 years) with ASDs and their families. The findings and conclusions describe service pathways, service gaps and service delivery and continuity issues particularly at the key periods of transition into adolescence and again into young adulthood. Potential bio-psychosocial factors influencing care pathways, service utilisation and costs are modelled. Informal family support is also described. The project identifies best practice pathways as well as areas for further research and flags potential issues that might be faced by young people with ASDs as they move into adult life.

Contact : Avril.Brereton@med.monash.edu.au

SESSION FIVE

2:10 to 3:10

Families

Chair – Dr David Hamilton

2:30 pm

Parenting siblings of children with an Autism Spectrum Disorder: Parent concerns, parental self-efficacy and sibling adjustment

Rebecca Giallo, Parenting Research Centre

Laura Baldwin (4th year Psychology student), RMIT University

Sarah Thompson (4th year Psychology student), RMIT University

Sharynn Schuster, Division of Psychology, RMIT University

Parenting within a family where there is a child with an Autism Spectrum Disorder (ASD) can be challenging. The aim of this study was to gain a better understanding of the specific issues parents face in parenting and supporting their children without autism (referred to as siblings) in the family. A second aim of the study was to examine the relationship between the frequency and intensity of sibling-related concerns as reported by parents, parental self-efficacy, and sibling adjustment. Participants were 29 parents of children with an ASD and at least one other child aged 4 to 17 years without an ASD. Results revealed that 64% of parents were very concerned about the impact of disability in the family on siblings. Parents were most concerned about not giving siblings enough attention, difficulties meeting the needs of siblings, and not being able to do things other families do. Results also revealed that parents who reported more sibling related concerns were less efficacious and less satisfied in their parenting role than parents who reported fewer sibling related concerns. Finally, sibling emotional difficulties and severity of disability were associated with more sibling related parenting concerns. This research is an important step towards understanding how parents can be supported to manage sibling issues. Implications for future research will also be discussed.

Contact : RGiallo@parentingrc.org.au

SESSION FIVE

2:10 to 3:10

Families

Chair – Dr David Hamilton

2:50 pm

Behaviour of Preschool Children in the Autism Spectrum Disorder: Impact of Parental Well-being, Competence, and Social Supports

Elizabeth Solum, Ba Social Work, Psychology Honours Student

Supervisor: Associate Professor Susana Gavidia-Payne

Background: Research suggests that there is a significant negative relationship between parental well-being and child behaviour problems that appears to be particularly strong in families of children with ASD. This relationship is complex, and it is moderated by parental resource factors, such as socioeconomic advantage, social supports, parental efficacy and satisfaction. However, research findings have been inconsistent in identifying the various factors affecting the parent child relationship, specifically in families of children with ASD. The aim of the current study was to evaluate the relationships between child behaviour and parental resources (including efficacy, satisfaction, social supports and wellbeing), with a specific focus on how these parental resources may predict child behaviour outcomes for pre-school aged children with ASDs.

Method: Two hundred and sixty parents (27 fathers and 233 mothers) of pre-school aged children with an ASD were included in the study and completed a series of parent and child behaviour measures as part of the evaluation of a parenting intervention program.

Results: Significant weak to moderate correlations were found between most measures of parental well-being and child behaviour. However, limited support was found for the relationship between measures of social supports and child behaviour outcomes. Importantly, significant correlations were revealed between measures of socioeconomic advantage and child behaviour outcomes. Subsequent regression analyses indicated that parental well-being accounted for a small but significant proportion of variance of child behaviour problems, over and above both SES and child age variables.

Implications: The current findings indicate that the relationship between parental well-being and child behaviour is complex. Given the high levels of stress and child behaviour problems in this particular cohort of children, further research is needed to identify the support needs of parents of pre-school aged children with ASDs.

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SESSION SIX

3:30 to 4:10

Intervention

Chair – Dr Angelika Anderson

3:30 pm

Non-targeted beneficial behaviour change as a result of contemporary behavioural interventions in young children with ASD

Angelika Anderson, Krongold Centre, Faculty of Education, Monash University

The effectiveness of psychoeducational approaches such as applied behaviour analysis is well supported. However, these approaches have been criticised for leading to prompt dependence, temporary effects, and learnt behaviours which are not used appropriately or spontaneously. Contemporary behavioural programs address many of these shortcomings by focussing on teaching in natural environments, child initiations, working with the child's own interests, and involving significant people in the child's environment (parents, siblings, regular teachers) in the training program. Examples of such contemporary behavioural approaches with some support for their effectiveness include Pivotal response training (Koegel, Koegel, & McNerney, 2001), Modelling (including video modelling, and video self modelling) (e.g. Dowrick, 1999; Dowrick & Biggs, 1983; Zihini & Zihini, 1998), and Peer mediated instruction (e.g. Odom et al., 2003). Some of these approaches arguably lead to more widespread behaviour change, beyond the specific behaviour targeted for intervention.

In this presentation I will outline a program of research focussing on these contemporary interventions, targeting behaviours thought to be 'pivotal'. Data of several intervention studies undertaken in a within-subjects research paradigm will be reported, focussing on the concomitant changes in non-targeted behaviours. The results will be discussed in terms of promise and challenges.

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SESSION SIX

3:30 to 4:10

Intervention

Chair – Dr Angelika Anderson

3:50 pm

Functional Assessment at a Distance; An application of Information Technology in assessment and intervention.

Jade Thomas, Student

Supervisors: Angelika Anderson & Dennis Moore, Krongold Centre, Faculty of Education, Monash University

There is ample evidence of the value of functional assessment in the design of interventions to reduce problem behaviours in children with autism. Our capacity to obtain reliable and valid functional assessments, whether in homes or educational settings, can be limited when families of children with autism live at a distance from a centre providing such services. Emerging information technology may provide a partial solution to this problem. *BI Capture*, a computer-based video recording program, allows families, with limited access to a psychologist, to record incidents of problem behaviour and the antecedents to and consequences of that behaviour. The program can be operated by remote control and, when triggered at the onset of a behaviour incident, captures a predetermined period of time before and after the button press, allowing subsequent review of the antecedents and consequences to the target behaviour. The resulting video images can then be uploaded onto a secure website and made available for viewing to specified recipients, including for example researchers and behaviour consultants, obviating travel and associated costs. The present study is the first in Australia to use this technology to conduct a functional assessment of problem behaviour in a child with autism. The BI-capture videos showed a clear pattern in the participant's inappropriate behaviour. An intervention package was then designed based on the findings of the functional assessment. Though clearly a limited trial (N=1) the results add to a small but growing body of research supporting the use of this technology as a practical and ecologically valid way of conducting a functional assessment at a distance.

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Poster Presentations

1. *The effect of peer-initiation strategy and pivotal response training on the social interaction of a child with autism*

Min Li, Monash University

Supervisor: Dr. Brett Furlonger, Krongold Centre, Faculty of Education, Monash University

Attendance time at Poster – 12:30 to 1:00

For children with autism, improved levels of spontaneous initiations and increased rates of positive responses to peers' initiations are intimately associated with the development of age appropriate behaviours, hence it is important to assist these children in achieving the behavioural changes aforementioned. The present study aims to examine the effect of peer-initiation strategy and the motivational variable of PVT on the target child's social communicative interaction. It is predicted that the combination of these two interventions will produce increases in the target child's initiations and responses to peer's initiations. It is also predicted that the treatments will reduce the frequency of disruptive behaviours, and behaviour changes can be generalised to interaction with sibling at home.

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2. *Effects of Teaching Piano to Children with Autism Spectrum Disorder*

Daphne Proietto, Music Teacher, Presbyterian Ladies College

Attendance time at Poster – 12:30 – 1:00

There is evidence that music, as opposed to other activities, can enhance brain function by altering brain structure. This effect is so striking, that the musician's brain is now used as "a model of neuroplasticity" (Munte TF et al 2002).

Does music training improve the outcomes of autistic children? Such studies are very difficult to conduct in a rigorous scientific way. Some published data suggests that children with autism may benefit from auditory training (Bettison S 1996) (this is different from learning to play an instrument) but clearly more work is needed.

AIM

To investigate the perception of the parents on the outcomes of music training (piano playing) on their autistic children.

METHODS

Eight children with diagnosed autism and ranging in age from 6 to 16 years when they started to learn piano, were taught using the Suzuki approach (Suzuki S. 1969). All children had been diagnosed with autism by specialist paediatricians. At the time of the survey, they had been learning piano for an average of 3 years (range 1 to 9 years). Parents were asked to fill in a questionnaire (see below). Parameters were considered to have improved if more than 75% of parents thought that there had been an improvement.

RESULTS

All students developed enough skills to enable them to perform in public on the keyboard. The range of musical ability was the same as is seen in non-autistic children. According to the parents, concentration, co-ordination, memory, confidence, ability to listen, dexterity, ability to adapt to change and speech improved, while there was no clear improvement in communication, repetitive or routine behaviour, literal interpretation, social relationships or inappropriate behaviour. It appears therefore that music training may not improve autistic characteristics, however, autistic children are capable of improving other aspects of their functioning.

CONCLUSION

It is concluded that autistic children can learn to play piano and may derive additional developmental benefits from learning to play a music instrument.

Bettison S. The long-term effects of auditory training on children with autism. *J. Autism Dev Disord* 26:347-348 1996

Munte TF., Altenmuller E., Janke L. The musician's brain as a model of neuroplasticity. *Nature Rev Neurosci.* 3:473-8 2002

Suzuki S. Nurtured by Love. Centre Publications St Kilda Melbourne (ISBN 0 909698)

Table 1: Summary of positive changes in 8 autism spectrum disorder children.

Skill	Percent of children who improved
Concentration	100%
Co-ordination	100%
Memory	100%
Confidence	87%
Ability to listen and follow instructions	87%
Dexterity	75%
Ability to adapt to change	75%
Speech	75%
Communication	63%
Repetition	50%
Routine behaviour	50%
Social relationships	50%
Inappropriate Behaviour	50%
Literal interpretation	25%

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3. *Using video self-modelled social stories to teach social initiations as pivotal response to a child with autism.*

Stacey Litras, Monash University

Supervisors: Dennis Moore & Angelika Anderson

Attendance time at Poster – 12:30 to 1:00

The social difficulties associated with autism present a particular challenge to families and practitioners. The present study investigated the effectiveness of combining Social Stories, an individualised short story describing the salient aspects of a social situation; and Video Self-Modelling (VSM), specifically made videotapes of one-self engaging in a behaviour being taught, to create a self sufficient video package, embedded with reinforcements and explicit rules, to teach social initiations to a 3 year old child with autism. A multiple-baseline across behaviours design revealed that video modelled social stories were effective at improving all three target behaviours: 'greeting', 'inviting to play' and 'contingent responding'. In addition these behaviours successfully generalised across settings, toys and communication partners. Increases in concomitant behaviour changes namely, levels of communicative behaviour and levels of social engagement were also observed. The present study provides preliminary support for the effectiveness of video modelled

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4. *Teaching a Child with Autistic Spectrum Disorder to Self-Manage Tasks using Pivotal Response Training*

Melissa Di Pietro, Student, Monash University

Supervisors: Dennis Moore & Angelika Anderson

Attendance time at Poster – 12:30 – 1:00

A pre-school-aged child diagnosed with Asperger's syndrome was unable to independently complete complex tasks consisting of several steps. Under such demands he exhibited a high rate of disruptive behaviour, and required prompts at every step of the task. The present study combined the motivational principles of pivotal response training with a self-management procedure to train a four year old child with Asperger's syndrome to independently complete complex tasks which had been broken down into steps. A multiple baseline across tasks design revealed that the procedure was effective in teaching the child the self-management procedure, and that this procedure enabled the child to complete complex tasks more independently. This improvement maintained when self-management training was faded and additionally generalised across settings. Decreases in problem behaviour were also observed. Implications for teaching children with Asperger's syndrome to self-manage tasks in combination with the application of motivating variables from pivotal response training in the classroom setting are discussed.

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5. *Symbolic Play in High-Functioning Autism: An Exploration of Children's Production and Comprehension*

Jessica Mifsud & Cheryl Dissanayake Olga Tennison Autism Research Centre, School of Psychological Science, La Trobe University

La Trobe University

Attendance time at Poster - 1:00 – 1:30

The main objective in this study is to investigate the differences in the *comprehension* of different forms of symbolic play, in children with high-functioning (HFA) autism and typically developing (TD) children. A further objective is to explore the differences in children's abilities to substitute one object for another, in addition to their ability to comprehend object substitutions made by another person. Both functional and non-functional objects will be employed. Previous research has suggested that the production of children's symbolic play does not significantly differ in terms of either the mechanics (Prescott, 2003; Kelly, 2007) or the quality of play (Mifsud, 2007). One exception to this is children's production of object substitutions (Kelly), hence the particular focus of this form of play in the current study. The sample will comprise 20 children with HFA and 20 TD children aged between 4 and 7 years. The groups will be matched on chronological age, mental age, full scale IQ, performance IQ and information processing speed. Children will attend the Olga Tennison Autism Research Centre (OTARC) at La Trobe University for a single testing session. Children's cognitive abilities will be assessed using the Wechsler Preschool and Primary Scale of Intelligence-III (WPPSI-III) and parents will be asked to complete a demographic questionnaire. Parents of children with HFA will also be asked to complete the Social Communication Questionnaire (SCQ) to confirm diagnoses. Play measures will include an Elicited Object Substitution Task, an Instructed Object Substitution Task with a forced-choice and free-choice condition, and a scripted 'Birthday Cake Play Scenario.' These measures were developed for the purpose of this study by the current investigator. Proposed data analyses will involve MANOVAs or MANCOVAs to compare groups on the play measures. Relationships between each of the measures will be explored, for each group separately, using correlational analyses.

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6. *Deficits in object substitutions in autism: In search of an explanation*

Cheryl Dissanayake & Rachel Kelly, Olga Tennison Autism Research Centre, School of Psychological Science, La Trobe University

Attendance time at Poster – 1:00 to 1:30

Background: The study on symbolic play in children with high-functioning autism (HFA) to be reported here builds on the results from an earlier study in which we found a specific, and not general, impairment in the symbolic or pretend play of young children with high functioning autism (HFA).

Objectives: The aim in this study was to explore whether either of two executive functioning hypotheses - the generativity and inhibition impairment hypotheses - can account for the difficulty children with autism have in engaging in object substitutions.

Methods: A group of 20 children with HFA and 20 typically developing (TD) children were matched on chronological age, verbal and overall mental age, performance IQ, full-scale IQ, and basic information processing speed. The groups were compared on their executive functioning abilities and symbolic play abilities, and the relationship between these abilities were also examined in order to explore the role of executive functions in their pretend play.

Results: The results indicated that the children with HFA displayed few symbolic play impairments relative to the TD children under both structured and unstructured conditions. However, they were specifically impaired in their ability to substitute objects in play. No significant group differences were found on the experimental measures of executive functioning, although parents reported inhibition difficulties amongst the children with autism. Although the results indicated that the executive functioning abilities of the children with HFA were associated with their symbolic play skills, the research findings did not support the generative or the inhibition impairment hypotheses.

Conclusion: While the results confirm our previous finding of a specific deficit in object substitution in autism, none of the current theoretical accounts of pretence can explain this finding.

Performance on the book form of the Raven's Coloured Progressive Matrices (RCPM), a non-verbal measure of reasoning ability, has been suggested to underestimate the performance of children with severe intellectual disability (ID) due to the reduced ability of the task to maintain their interest.

Thus a manual puzzle version of the RCPM was devised to appeal to the attentional and sensory preferences as well as language limitations of children with ID. The first aim of the study was to assess the validity of this puzzle form of the RCPM for typically developing children. Comparable performance was found between the puzzle and book forms in 76 typically developing school-aged children, suggesting that both RCPM forms measure the same constructs.

A second study demonstrated a significantly higher performance and completion rate for the puzzle form compared to the book form in a sample of 164 children with ID.

The findings suggest that because the puzzle form does not demand more cognitive ability but maintains the attention of children with ID, it is a better measure of the non-verbal mentation of children with severe ID.

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7. *The communication skills of children with autism*

Heather Nuske & Edith L. Bavin , School of Psychological Science, La Trobe University

Attendance time at Poster – 1:00 – 1:30

Although children with high functioning autism may develop good language skills reports in the literature suggest they are likely to be less proficient than typically developing children in some areas of communication. For example, it has been argued that children with autism have particular difficulties in making inferences. However, because of idiosyncrasies in their language development it is also likely that they would have difficulties with semantic categorization and referencing. The study compared the performance of a group of 14 children with a documented formal diagnosis of autism (confirmed by their parents), aged 4:1 to 7:11 (mean age 6:4), and a group of 14 children with typical development, aged 4:1 to 5:3 (mean age 4:10), matched on verbal and non verbal tasks from the Wechsler Preschool and Primary Scale of Intelligence-3 (WPPSI-3, Wechsler, 2002).

The children were tested with a referential identification task from the Listening Skills Test (LIST, Lloyd, Peers, & Foster, 2001), a semantic classification task from the Clinical Evaluation of Language Fundamentals- Preschool 2 (CELF-P2, Wiig, Secord, & Semel, 2004) and two tasks testing comprehension and inferencing skills. The first of these was the Understanding Spoken Paragraphs subtest (USP) from the Clinical Evaluation of Language Fundamentals-4 Australian edition (CELF-4, Semel, Wiig, & Secord, 2003), in which children listen to 3 short paragraphs and answer a set of five questions on each (Main Idea, Detail, Sequence, Inference and Prediction). The second task, based on Slackman and Hudson (1984), was a customized task comprising 6 short texts based on 6 familiar scenarios. After listening to each passage, the children answered three different types of inference questions: one factual question, one script-based question and one question involving propositional logic.

It was hypothesized that the children with autism would perform less well than the comparison group on the measures. The data is currently being analyzed using multivariate analyses and, where appropriate, frequency analyses. The results of the study will be reported and the implications of the findings discussed.

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8. *Project Title: An Examination of Upper Body Movement in Young Children with Autism*

Attendance time at Poster - 1:00 – 1:30

Ariane Dowd, DPsych (Clin Neuro) Candidate, Monash University

Supervisors: Nicole Rinehart, Kylie Gray and Jennifer McGinley

The DSM-IV diagnostic criteria for Autism state that behavioural, social and communicative aspects are key features for diagnosis. Although not forming part of the key diagnostic criteria, movement features such as stereotyped motor activity and more recently abnormal gait have also been recognised in the literature as significant to the disorder. The potential utility of neuromotor features in the diagnosis of autism as an early indicator of neurobiological changes has only recently become apparent. The benefit of motor signs is that they may be observable long before the core language and social features of Autism emerge, leading to opportunities for earlier, more objective diagnosis and interventions. The aim of the present study is to investigate the upper body movement of young (3-7 year old) children with high- and low- functioning autism, using both ecologically valid and clinically useful tools. Issues to be addressed by the study include the identification of features of upper body movement that are clinically specific to autism, the relationship between imitation difficulties and motor deficits and the underlying neurobiology of movement deficits in autism. The study will employ a simple point to point movement task using a touchscreen to investigate the quantitative kinematic characteristics of upper limb movement. Within this simple task design, aspects of distraction and motivation as well as unilateral and contra-body movements have been included for investigation into their impact on motor kinematics. In addition, motor coordination will be observed in a 'rising from the supine' task. These movement features will be related back to sensory sensitivities and imitation in order to better understand the way in which movement is associated with the pervasive social features of autism. Discussion will also centre around the relationship between the characteristics of movement in Autism and the various neuroanatomical correlates which may be implicated in the disorder.

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9. *Characterisation of the DIA1 gene product*

Dr. Naomi E. Bishop, Department of Microbiology, La Trobe University

Attendance time at Poster - 12:30 – 1:00

Autism spectrum disorder (ASD) is among the most heritable of all neurological conditions. Current evidence implicates multiple genes and multiple genotypes in development of an ASD phenotype. Deleted In Autism 1 (*DIA1*) was recently identified in a study designed to identify recessive autism genes. The normal cellular function of the *DIA1* gene product is unknown. Prior to cell culture studies a thorough analysis of *DIA1* gene product is required. The results of detailed bioinformatics-based analyses of *DIA1* will be presented. Characterising the role of genes involved in ASD will lead to a better understanding of the biological basis of ASD and may contribute to improved diagnosis and therapy for those with ASD.

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DRAFT

10. *Sleep Quality in Mothers of Children with an Autism Spectrum Disorder (ASD).*

Amanda Richdale & Judy Chu, RMIT University.

Attendance time at Poster - 1:00 – 1:30

Background:

Children with a developmental disability (DD) have behavioural and sleep difficulties, and their mothers may have poor psychological well-being. However the impact of these factors on mothers' sleep quality has not been explored.

Objectives:

To explore relationships between children's sleep and behaviour and mothers' psychological well-being and sleep quality in children with an ASD and or a DD.

Methods:

Mothers of children with an ASD or other DD returned demographic information, a children's sleep questionnaire, the Strengths and Difficulties Questionnaire, the Pittsburgh Sleep Quality Index (PSQI), the Parenting Hassles Scale (PHS), and the DASS-21 depression and anxiety scales by mail. Data were analysed using *t*-tests, Chi-square and correlations as appropriate.

Results:

Forty-six mothers returned questionnaires. Twenty-seven children had an ASD (6.9 ± 2.1 yrs) and 19 children had another DD (8.0 ± 2.8 yrs); their mothers' mean ages were 39.1 ± 6.0 yrs and 41.8 ± 6.2 years respectively. Age differences were not significant. There were no significant group differences for total scores for any parent measures, but children with an ASD had poorer behaviour and more settling problems. Both groups of mothers' PSQI scores indicated poor sleep quality. Nevertheless differences between the ASD and DD groups emerged. No ASD child variable was significantly associated with the PSQI, but both DD children's sleep and behaviour were significantly associated with the PSQI. While depression, anxiety were associated with poor sleep quality for both groups of mothers, associations with stress (PHS) largely differed; total stress and child-related issues were important in the ASD group and siblings featured for the comparison group.

Conclusions:

Mothers of children with developmental disabilities have poor sleep quality, but factors contributing to this are not consistent across disabilities. In particular, child-related stress appears to contribute to ASD mothers' poor sleep quality but not DD mothers' sleep quality.

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11. Parent Survey - Current ASD Diagnosis, Therapies, and their Perceived Effectiveness

Dennis Crowley

Attendance time at Poster -12:30 – 1:00

This is an internet based survey which all parents (primarily based in Australia and New Zealand) with ASD children are invited to complete.

Background

As far as the author is aware, there has never been an internet parent survey regarding the perceived effectiveness of various therapies carried out in Australia/New Zealand.

In the USA a parent survey was carried out by the Dept of Psychology, University of Texas at Austin in 2004 [V A Green et al; Research in Developmental Disabilities 27 (2006) 70-84] A total of 552 parents submitted usable returns speech therapy was the most commonly reported intervention. 53% of parents were using at least one medication to treat their child, 27% were using special diets, and 43% were using vitamin supplements. 17% of the children had Aspergers, 61% were said to have mild/high functioning autism, and the remaining 22% were described as having severe autism, as indicated by lack of speech.

Objectives

A key objective of the present survey is to obtain a statistical snapshot of the different types of treatments being used in (primarily) Australia/New Zealand with a view to obtaining parent perspectives on their effectiveness.

Other objectives include:

1. A statistical indication of the delay between the parents first suspicions of autism and diagnosis, and the reasons for the delay. This is an essential piece of information in that all delays have a significant impact on the speed of eventual “recovery” of the child.
2. A statistical indication of the effectiveness or otherwise of biomedical treatment. Parent Ratings of Behavioural Effects of Biomedical Interventions (ARI Publ.34 August 2004) found that a Gluten Free/Casein Free (GF/CF) diet resulted in a significant improvement in child behaviour.
3. An indication of which factors, relating to government policy, parents anticipate will make a difference to the autism community now and in the future.

Methodology

According to the ABS in 2006/7 64% of Australian households had home internet access and 73% had access to a home computer. It is likely that similar percentages apply in New Zealand. Thus an internet survey should provide data from a good cross section of the population in each country.

Two General Practitioners (one in Australia, the other in New Zealand) have been consulted regarding the questionnaire.

The questionnaire covers the following topics

1. Demographics
2. Diagnosis
3. Behavioural characteristics before intervention and now
4. Non-biomedical treatments
5. Biomedical treatments
6. Diets
7. Supplements and/or biomedical treatments
8. Pathology testing
9. Improvements sought from government

The URL address will be provided during the poster session.

All national, state, and territory autism related organisations are being approached with a view to announcing the existence of the survey, and it is hoped that as many people as possible will respond, so that a good statistical picture will emerge.

Results

It is anticipated that the results will be released for public consumption around mid-2009.

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12 *Siblings of Children with an Autism Spectrum Disorder: Hassles, Uplifts and Supports*

Belinda Minett (B.SW, B.SS, Grad. Dip. Psych. Student), RMIT University

Supervisors: Associate Professor Susana Gavidia-Payne, RMIT University & Dr. Rebecca Giallo Parenting Research Centre

Attendance time at Poster -1:00 – 1:30

The sibling relationship is recognised as the most important and enduring familial relationship of a person's life. This relationship will be considerably different if one of the children in the sibling dyad is diagnosed with an autism spectrum disorder (ASD). The purpose of the current study was to examine the daily hassles, uplifts (frequency and intensity) and supports of siblings of children with an ASD. Thirty-five siblings aged 10 to 18 years old ($M = 13.56$ years) completed the Sibling Daily Hassles and Uplifts Scale and the Social Support Scale measure. Parents were required to provide demographic information such as socio-economic status and nature of disability only. Analyses revealed strong and significant positive relationships between the frequency and intensity of daily hassles and daily uplifts, and between social supports and the intensity of daily uplifts. However, no significant relationship was found between social supports and daily hassles. Given the limited number of studies focusing on the daily experiences and social supports of siblings, this research is an important step towards understanding siblings' well-being in families of children with an ASD.

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13. *Siblings of adults with autism or psychosis*

Angeline Ho, ACU National

Supervisor: Assoc. Professor Sabine Hammond

Attendance time at Poster -1:00 – 1:30

Outline and literature review

Siblings play an integral role in most children's social world by providing companionship and emotional support. Sibling relationships often continue to be important throughout the lifetime. In families where one sibling is diagnosed with a pervasive developmental disorder such as autism or a severe mental illness such as psychosis, the role of the sibling without autism or psychosis will be changed to involve more of a care-giving role. It has been estimated that there are 125,000 people with autism spectrum disorder in Australia (Australian Advisory Board on Autism Spectrum Disorders, 2007). Furthermore, eighteen percent of the Australian population have been reported to suffer from a mental illness and around 30% of adults with psychosis have daily contact with their siblings (Department of Health and Aged Care, 1999). Siblings, therefore, play a significant role.

Research examining the effects of having a sibling with a disability is growing. A review of the literature revealed that much of the research has focused on younger siblings and much less is known about the adult siblings (Orsmond & Seltzer, 2007). The literature has shown that having a sibling with autism or psychosis has impacted on their sibling's lives (Gold, 1993; Hodapp & Urbano, 2007; Stalberg, Ekerwald, & Hultman, 2004). One study found that the number of behaviour problems displayed by the adults with schizophrenia predicted poorer psychological well being in their siblings (Seltzer, Greenberg, Krauss, Gordon, & Judge, 1997). When the adults with schizophrenia had more behaviour problems, siblings reported experiencing greater subjective burden especially when they viewed that the behaviour problems were within the control of their sibling with schizophrenia (Greenberg, Kim, & Greenley, 1997). Siblings of adults with schizophrenia were found to have elevated levels of sadness, helplessness and worry (Barak & Solomon, 2005). There are few studies which studied siblings of adults with autism exclusively. One study found that 15% of siblings of adults with autism had received treatment for depression or mania which was comparatively higher than the rate of 3% reported in epidemiology studies (Piven et al., 1989). Studies have shown that siblings of adults with autism compared with siblings of adults with Down's syndrome have higher levels of depression (Hodapp & Urbano, 2007; Orsmond & Seltzer, 2007a).

This research aims to investigate whether having a sibling with a disability exerts a common influence on their sibling's level of psychological distress, such as depression, anxiety and stress, regardless of the type of disability or whether the type of disability (i.e. psychosis or autism) differentiates the experiences of siblings. Using the stress, coping and appraisal model, it will be assumed that having a sibling with autism or psychosis is a stressor affecting the psychological well being of their siblings without autism or psychosis. This research will specifically investigate the severity of behaviour problems in the adult sibling with autism or psychosis as a potential stressor. Stressors might be directly or indirectly related to depression, anxiety and stress by influencing cognitive appraisals (Lazarus & Folkman, 1984). This research will also examine the appraisal of control that the adult sibling with autism or psychosis has over his or her behaviour problems and the subjective burden of having an adult sibling with autism or psychosis. Furthermore, coping strategies can influence the management of situations which are appraised to be stressful (Lazarus & Folkman, 1984), and they are broadly grouped into two categories: Problem-focused coping

refers to directed efforts toward managing the stressful situation; and emotion-focused coping refers to directed efforts toward managing the internal emotional distress. Based on a study which found that siblings of adults with disabilities use both problem-focused and emotion-focused coping strategies (Orsmond & Seltzer, 2007a), it will be assumed that this will be similar in the siblings in this research. Research has found that people who employed more problem-focused coping reported lower levels of distress (Aldwin & Reveson, 1987), whereas people who employed more emotion-focused coping reported higher levels of depression (Hastings et al., 2005).

Aims and Hypotheses

This research aims to address the role of stressors, appraisals and coping strategies of having an adult sibling with autism or psychosis and whether any of those factors predict depression, anxiety and stress, as illustrated in Figure 1. This research will address four specific hypotheses.

1. Higher levels of behaviour problems in the adult sibling with autism or psychosis were expected to predict higher levels of depression, anxiety and stress.
2. Higher levels of behaviour problems were expected to predict higher levels of subjective burden of having a sibling with autism or psychosis which in turn were expected to predict higher levels of depression, anxiety and stress.
3. Siblings who attribute greater control of behaviour problems to their sibling with autism or psychosis were expected to predict higher levels of depression, anxiety and stress directly or indirectly by influencing higher levels of subjective burden.
4. Coping strategies conceptualised as a moderating variable will be influenced by the sibling's level of subjective burden and control attribution and will also partially moderate their effects on depression, anxiety and stress, i.e. a sibling with high levels of subjective burden and greater attribution of control who uses more emotion-focused coping strategies was expected to have higher levels of depression, anxiety and stress where as a sibling who uses more problem-focused strategies was expected to have lower levels of depression, anxiety and stress.

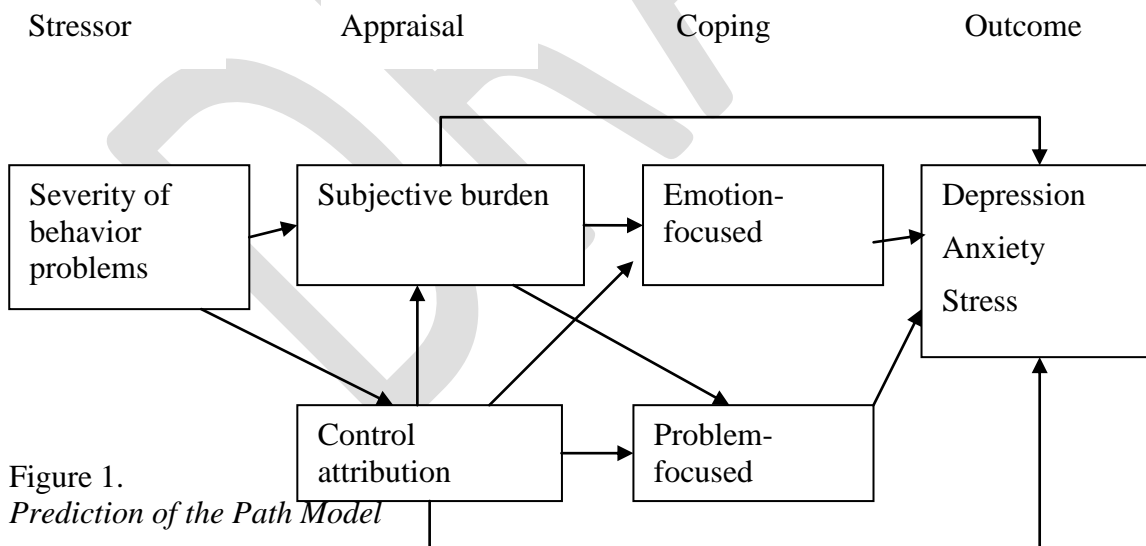


Figure 1.
Prediction of the Path Model

Method

Participants

This project is currently being designed. This research aims to recruit 50 siblings of adults with autism and 50 siblings of adults with psychosis. Participants and their sibling with autism or psychosis will be aged 18 years or over. Participants will be recruited through notices on sibling,

autism and psychosis websites. Participants will be asked to complete questionnaires via a secure internet website.

Materials

The stressor will be measured by the severity of behaviour problems using the Questions About Behavioral Function (QABF; Paclawskyj, Matson, Rush, Smalls, & Vollmer, 2000). The QABF measures maladaptive behaviour and consists of 25 items answered on a 5-point Likert Scale (0 = does not apply to 4 = often).

Appraisal will be measured by control attribution and subjective burden. Control attribution will be measured by the Control Attribution Scale (Greenley, McKee, Stein, & Griffin-Francell, 1989) which consists of 5 items answered on a 4-point Likert scale (0 = "strongly disagree" to 3 = "strongly agree") measuring the sibling's appraisal of the degree of control to which the adult with autism or psychosis has control over their behaviour problems. Subjective burden will be measured using an adapted version of the Caregiver's Burden Scale (CBS, Zarit, Reever, & Bach-Peterson, 1980) from the sibling's perspective. The CBS is a 29-item scale designed to measure feelings of burden experienced and it is rated on a 5-point Likert Scale (0 = never to 4 = nearly always).

Coping strategies will be measured by the Ways of Coping Questionnaire (WAYS; Folkman & Lazarus, 1988). The WAYS consists of 50 items answered on a 4 point Likert scale (0 = does not apply to 3 = used a great deal) and are in 8 categories (Confrontive Coping, Distancing, Self-Controlling, Seeking Social Support, Accepting Responsibility, Escape-Avoidance, Planful Problem-Solving and Positive Re-appraisal. For this research, those categories will form two coping styles: emotion-focused coping (Distancing, Escape-Avoidance, Positive Re-appraisal and Self-Controlling) and problem-focused coping (Confrontive Coping, Seeking Social Support, Planful Problem-Solving and Accepting Responsibility).

Outcomes will be measured by depression, anxiety and stress using the Depression, Anxiety and Stress Scale (DASS) (Lovibond & Lovibond, 1995), which is a 42-item self-report scale comprised of three 14-item subscales measuring depression, anxiety and stress. Ratings will be made on a 4 point Likert scale (0 = did not apply to me at all to 3 = applied to me very much or most of the time).

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14. *AUTISM SECONDARY CONSULTATION AND TRAINING STRATEGY* (ACT-NOW)

Bull, K.J., Brereton, A. V. & Tonge, B.J., Monash University. Centre for Developmental Psychiatry and Psychology

Attendance time at Poster - 12:30 – 1:00

In line with the goals of the Early Childhood Intervention Services vision and key priorities statement (DHS, 2003), the aim of the Autism Consultation Team: Now (ACT – NOW) program was to build skills and capacity to enable the network of regional early childhood intervention services to better identify Pervasive Developmental Disorders in at risk young children and provide a more integrated range of evidence based early interventions for these children and their families that will complement and interface with other agencies and services for young children and their families.

The aim was achieved by the development of Regional Autism Coordination Teams (ReACT); networking with their community through a comprehensive program of broadly accessible education and professional skills training workshops and multimedia resources; justified by the acquisition of specialist assessment and intervention skills; and supported and facilitated by specialist consultation.

The ACT – NOW Program comprised professional development and training, provision of information and resources, community development and secondary consultation. As the expertise of the ReACT developed during the FIRST 3 years of the ACT – NOW program, each ReACT progressively became self sustaining.

1. TRAINING:

In concert with each ReACT and harnessing their advice and knowledge of regional service profiles and expertise we provided training sessions depending on local advice and learning outcome requirements. These workshops progressively involved the entire range of people in the region who work with young children and their families and come into contact with children with developmental delays and autism.

- 7,500 total attendances at workshops across the three years of the program.
- 812 attendances at the Understanding Autism: workshops (3 X 2 hour workshops)
- 4,115 attendances at specific workshops for kindergarten teachers, child care staff, HACC workers and parents

Three further more specialised and focussed training programs were provided that also enhance community development by improving services and their integration.

- 71 early childhood professionals completed the training in the Parent education and skills training intervention and received a Monash University School of Psychiatry, Psychology & Psychological Medicine certificate.

- 210 parents have attended the 20 week parent education and skills training programme.
- Early Childhood professionals who were trained to deliver the Parent education programme have trained a further 12 colleagues.
- 159 received training in the Psychoeducational Profile-3.
- 20 (2 per DHS region) satisfactorily completed the ADI/ADOS accredited training and received a Monash University School of Psychiatry, Psychology & Psychological Medicine certificate.
- 925 Maternal and Child Health Nurses were trained in the use of the DBC Early Screen and the ChAT to detect the early signs of autism.
- 18 EC clinicians (2 per region) completed the ‘train the presenter’ program in the Autism in the Preschool Years workshop.

2. SECONDARY CONSULTATION

The ACT - NOW team provided a hierarchy of Secondary Consultation that consolidated the progressive acquisition of knowledge and skills by early childhood services staff flowing on from our training activities and provision of information and resources. The aim was to help regional services, through the ReACT, to improve the integration of early childhood services for children with autism and develop a service that is mutually supportive and self sufficient.

Level 1 Consultation - focused on helping ReACTs to form and develop a vision and strategic plan for the coordination and integration of early childhood services for children with autism.

Level 2 Consultation - focused on the professional supervision required to enhance regional specialist skills particularly in connection with the Parent education intervention and the ADI/ADOS autism assessment training.

- Level 3 Consultation - focused on individual or group supervision of specific cases or intervention issues. As each ReACT developed it acted as a clearing house and resource for agencies or individual professionals who needed advice or assistance on management or service provision.

3. WEBSITE

- A successful and popular website has been developed. It contains 43 fact sheets, regional training calendars, lists of further reading, quarterly newsletters about the ACT NOW program and links to reputable autism websites.

www.med.monash.edu.au/spppm/research/actnow

Due to the success of the ACT NOW initiative, The Victorian Government continued funding for a further 18 months. The project will finish in December 2008.

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15. Listening to the Links – Education Experiences of Dual Labelled Students (Gifted and Asperger Syndrome)

Ms. Emma L. Donaldson, PhD Researcher, Edith Cowan University

Supervisors: Associate Professor Deslea Konza, Edith Cowan University & Associate Professor Wilma Vialle, University of Wollongong.

Attendance time at Poster - 12:30 – 1:00

Identification, characteristics and school experiences of dual labelled students is the research project currently being undertaken, which looks at Asperger Syndrome Children who are Gifted. To date, as there has been little research on the population of Asperger Syndrome children who are gifted, this early research is gaining much interest in both areas of Special Education, as parents, educators and students struggle to find how their needs can be catered for in the classroom.

This research is currently literature based and is now progressing to Case Study Methodology. The aim of this research is to listen and reach this population of students in our schools to understand their experiences to improve and enhance awareness of the education and skills and strategies needed to cater for the diversity of Gifted/Asperger Syndrome Dual Labelled students.

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AUTISM RESEARCH IN VICTORIA

The Autism Victoria website www.autismvictoria.org.au has a section specifically for Autism Spectrum Disorder research and researchers in Victoria. There are two parts to this section – details of current research projects, and an opportunity for families and individuals to register their interest in participating in research.

To have your research listed, go to “Autism Research Group” at

http://www.autismvictoria.org.au/research/current_projects.php

and complete the form.

To register your interest in participating in suitable research, go to “Get Involved” at

http://www.autismvictoria.org.au/research/get_involved.php

and complete the form.

RECRUITING RESEARCH SUBJECTS.

Autism Victoria can help researchers in two ways. The first is by requesting a list of email addresses of suitable subjects from the “Get Involved” register. This is an email-based list – only names and email addresses will be made available to bona fide researchers. Once Autism Victoria has provided a researcher with a list of email addresses, the researcher should contact the potential participants via email, briefly explaining their study. Recipients are under no obligation to participate in the study unless they wish to do so. To request a listing of possible subjects, researchers should complete the “Research Request” details (see below) and send via email to Josie Barbaro at J.Barbaro@latrobe.edu.au.

The second way of recruiting subjects is for researchers to place a request in the quarterly magazine of Autism Victoria, *The Spectrum*. This magazine reaches over 2000 Victorian families, services and interested people. Here are details of how to place your request, and some helpful advice to maximize the response to your request.

RECRUITING RESEARCH SUBJECTS VIA “THE SPECTRUM”.

Autism Victoria publishes its member magazine four times a year – Autumn, Winter, Spring and Summer. Research teams and students are able to submit details of their current research project(s) for publication, in order to recruit possible subjects.

Some suggestions:

1. Response by families to research subject requests publicised in our previous publication, *Autism News*, has been relatively low. Experience has shown that requests via the child’s program or direct contact are usually the most successful in terms of subjects recruited. If inserting an item in *The Spectrum*, it is advisable to offer some sort of ‘return’ to participating families. This may be a cognitive or other assessment report, a copy of any video footage made or even a short intervention program (eg. social skills sessions, sleeping, toileting or eating program etc).
2. Ensure you clearly explain in your text for publication what is required in terms of time and travel commitments by participants and the age and ability level of the subjects required.

3. TIMELINES:

- a. Email a “Research Request” incorporating the details below to the Autism Victoria office. A Word format document is available on request.
 - b. You will be notified if your request is accepted, or if extra information is required, and also with the next expected publication date. Autism Victoria is a very small office and we are not able to guarantee a publication date, just give you an indication.
 - c. Expect your responses to come in the four to six weeks after the issue is published. Make sure you are easy to contact – respondees give up easily if they have to leave messages or ring elsewhere – and not all families can access email!
4. Note that follow up – with your subject families and with Autism Victoria – **is essential**. Families often say how they participated in a project but never heard a thing more. *The Spectrum* is a good forum to note completion of your research and the outcomes/findings – readers feel more a part of the research environment if they regularly read about it. In fact, Autism Victoria now requires formal follow up from research projects – see the ‘undertaking’.

RESEARCH REQUEST:

Please complete the following details and forward via email to research@autismvictoria.org.au.

1. Name of student/researcher.....
2. Course/Institution details (for students - include year or level).....
3. Contact details – phone, email, mobile, faculty office etc.....
4. Name of your supervisor(s)/senior researcher and their contact details
5. Research Project Topic
6. Project details – in **no more than 150 words** outline your hypothesis/rationale, basic research methodology, details of subjects required, time line, what the research can offer to participating families:.....
7. If applicable, the issue(s) of *The Spectrum* in which you wish to place the details:

Please read the following – submitting a request for research subjects implies that you agree to this undertaking:

UNDERTAKING:

The researcher confirms that the details provided are correct, are approved by their supervisor (and any institutional ethics process), undertakes to forward to Autism Victoria a copy of the paper resulting from the above research project upon completion (or a two page summary of findings if more practicable), and gives permission for Autism Victoria to place this in their library for general access, and, if applicable, to publish an overview of the project in an issue of *The Spectrum*.