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**ASPBERGER'S SYNDROME AND AUTISTIC SPECTRUM
DISORDERS IN THE COURTS**

Mr Anthony Warren, (Psychologist, Director of Outreach and
Consultancy, Autism Spectrum Australia (Aspect), Sydney)

(This is an edited transcript of Mr Warren's presentation))

What are neuro-developmental disorders ?

1. Neuro-developments disorders do include the autism spectrum disorders. They include ADHD and other pervasive developmental disorders and they include disorders like specific language impairment - dyslexia. In the main, the point I want to make is that neuro-developmental disorders have a biological or genetic basis - that is that the disorder is part of the individual, it is hard-wired in and it has a pervasive impact on the person's development and life-long functioning.
2. That means there are very significant implications for the individual and for how we as communities develop service. It is early onset - begins pre-nataly and invariably it is life-long. Like other development disorders, it has no cure though some people respond very to interventions.
3. Neuro-developmental disorders, like autism spectrum disorders, have very significant functional and financial impacts. Functional impacts on individuals. Financial impacts on the individual, on their families and upon the community. The fundamental characteristic of neuro-developmental disorders is that there is a very significant delay and/or deviants in maturational determined developments. So it results from genetically driven inherited developmental processes. It has a big impact on developmental processes because of the genetic factor.
4. There is invariably a degree of global intellectual disability or specific cognitive impairment associated with neuro-developmental disorders. And as I have mentioned, included are the pervasive developmental disorders and the autism spectrum disorders. The autism spectrum disorders are separated out from the other disorders because they do have a very unique pattern of deficits and strengths, even though the individual presentation varies enormously. The autism spectrum disorders are differentiated essentially by very significant qualitative impairments in social interaction, in communication and in behaviour.

5. Just a little bit of history. Leo Kanner first diagnosed autistic disorder back in 1943 he said “these children have come into the world with the innate inability to form the usual biologically provided affective contact with people”. He had incredible insight, and this statement, this definition largely holds true today. He noted that there was a group of children he was seeing, often who were non-verbal, but whose behaviour and presentation was actually very different to emotionally disturbed children. About the same time (1944), Hans Asberger made the observation that there were another group of adolescents who again presented with severe social and communication deficits. He said this disturbance results in severe and characteristic difficulties of social integration. He emphasised the social impairment, the empathy, understanding and the social interacting difficulties. His group, unlike Canna’s group, did have speech, and had no clinical delay in early speech development. And that criteria still applies today in terms of differentiating Asberger’s disorder from autistic disorder. The pervasive developmental disorders then are characterised by qualitative impairments, in reciprocal social interactions, patterns of communication and repetitive behaviours and interests. The abnormalities are a pervasive feature of the individual’s functioning in all situations.

6. What are the autism spectrum disorders? Using the internationally recognised classifications systems, DSM4 and the World Health Organisation system ICD10 International Classification of Diseases Tenth Edition, there are just three recognised autism spectrum disorders. They are:

- autistic disorder;
- asberger’s disorder or asberger’s syndrome; and
- pervasive developmental disorder not otherwise specified (PDDNOS).

7. If we look at the DSM4 classification that PDDNOS is atypical autism. Atypical autism is much more common than other pervasive developmental disorders, than Rett’s disorder and childhood disintegrative disorder. The prevalence varies dependent on the research and the definitions that have been used and the changing notion of defining autism spectrum disorders. But there is general agreement at this time among the very latest research that roughly 0.25% of the population would meet the criteria for autistic disorder. That’s increasing a little because we know now that many people who have been diagnosed with asberger’s disorder actually meet criteria for autistic disorder if comprehensive and high quality diagnostic assessments are done. Many people who have diagnosed with asberger’s will meet the criteria for autistic disorder.

8. Asberger’s disorder has been more favoured partly because in some respects it has been perceived as being a softer diagnosis, as being easier for families, as having, if you like, a better outcome. That’s not necessarily true either. Asberger’s disorder is not a mild form of autism - it is another of the autism spectrum disorders and relative to a functional impact on the individual it can have very severe long-term impact.

9. People with Asperger's disorder have the highest levels of co-morbid psychiatric and behavioural problems of any of the neuro-developmental disorders. Roughly 0.25% of the population may meet criteria for Asperger's disorder and roughly 0.1% for pervasive developmental disorder not otherwise specified. This would give an overall incidence of around 1 in 160 people would have an autism spectrum disorder defined according to assumptions that I am making, ICD10 or DSM4 criteria, strictly meeting these criteria.

10. I should also say that from Leo Canna's time when we started off with autistic disorder, which is quite a very narrow group, definitions have certainly changed. We move to Lorna Wing, a new case psychiatrist in the 60's and particularly the 70's, and her colleagues, Scandinavian colleagues particularly, identified a broader group they called autism continuum disorder. That's been moved on to be, now we recognise, as autism spectrum disorder. Then we move onto the concept of the broader Fenner type, which has been described by people like Simon Baron-Cohen and many others. That recognised that many members of families who have an individual with an autism spectrum disorder have some characteristics or features. And, we move on then to the idea that there are actually many individuals who have quite isolated strengths or specific weaknesses. That would be the very, very broad Fenner type.

11. I've mentioned the difference between autistic disorder and asperger's. Essentially for asperger's disorder there is no early expressive language delay. This is not an entirely clear cut difference - many people with asperger's disorder do have communication and language problems, particularly processing of language and comprehension. They have a lot of difficulty with inferential language processing. So with atypical autism, that diagnosis is given where an individual does not clearly meet criteria for either autistic disorder or asperger's. It's none the less, a very significant developmental disorder, with often a complex neuro-developmental presentation. Typically the child would have very significant language delay, receptive and expressive. They well may meet criteria for ADHD as well. They would have social and communication problems and lots of learning difficulties, and would have enormous difficulty functioning in classroom situations.

	Autistic Disorder	Asperger's Disorder
Language development	Usually delayed or disordered	NO delay in language (single words by 2 yrs, communicative phrases by 3 yrs)
Cognitive functioning	Severely delayed through to gifted	'Normal' through to gifted
1. Social interaction 2. Communication 3. Restricted and repetitive interests and behaviour	ALL IMPAIRED	Must be impaired in social interaction and restricted and repetitive interests and behaviours

12. In terms of cause, there is no single known cause. There is certainly no blood test or medical test to detect an autism spectrum disorder. Environmental causes or factors such as inter-uterine infections or toxins, post-natal insults such as immunisation really lack any convincing evidence at this stage. Environmental factors occurring, co-incidentally or in tangent with a genetic cause are by no means excluded, but there is very little evidence that environmental factors would explain other than a very small number of diagnoses.

13. The current research is strongly currently indicating that there is a neurological genetic basis, so that the actual hunt in terms of genetic explanation for autism is moving on from looking for a single gene for autism to recognise that there are in fact multiple independent specific genes operating. Why any one individual would be so unfortunate to have a cluster or group of genes that end up with a full presentation of one of the autism spectrum disorders is really not known. The main evidence for genetic explanation comes from twin studies. For example, we know that with identical twins, that if one twin has the diagnosis the chances of the second are in the range of 60 to 90%. We know that if one sibling, the first born male, has an autistic disorder, the chances are 50% greater a sibling will too. We know that 15% of siblings who have a sibling with asperger's disorder are at risk too, or likely to have asperger's disorder.

14. There is some recent, very interesting genetic research in twins early development study, by the Institute of Psychiatry in the UK that's looked at 3,000 pairs of twins, not just twins with asd, but a whole range of twins. And what this study has found is that each aspect of the triad of impairments, or of the behavioural presentations, are highly heritable. That the genetic effects are actually very specific so there is a separate gene explanation. For example, only 32% of the twins who had a significant social impairment also had a significant communication impairment. So there are specific areas of specific genes for specific impairments. And this theory of explanation perhaps goes quite a long way to explaining, as Happe describes, the highly recognisable yet richly hetro-geneous group, the spectrum broader Fenner type individuals with isolated difficulties. It doesn't, as I've mentioned, explain how the three major impairments would co-occur with above chance rates in some individual people. The implications of this research for autism spectrum disorder I think is significant, it means that we need to aggressively and comprehensively thoroughly assess the individual, to identify the core actual impairments. The assumption that the person has autism and we just then intervene with an autism general intervention program, I think is behind us. I think that what this research means is that we need to identify the specific information processing skills, or the empathy skills, or the executive function deficits and so on that are called to explaining the person's overall autistic presentation. So the outcome will be better targeted interventions versus autism specific programs and interventions.

15. Our prevalent ASDs, when we take the best and most recent research, are 60 to 65 people per 10,000. The ratio is strongly weighted towards males, 4 to 1 for autistic disorder, 8 or 9 to 1 for asberger's disorder.

16. Autism spectrum disorders are not socially, culturally or socio-economically specific. There are very specific implications, as Beard points out, for unserved delivery. In NSW this research would translate into an estimated prevalence of 43,000 people with an autism spectrum disorder in NSW and nationally around 130,000. In this number we are not including of course the broader spectrum, we are not including some people who have some isolated features.

The behavioural presentation of autism spectrum disorders

17. Autism spectrum disorders present, or manifest, as a very significant quality of impairments in social interacting, in communication and in restrictive and repetitive patterns of behaviour. This has been conceptualised, over many decades, as a triad of impairments:

- **IMPAIRED COMMUNICATION**
- **IMPAIRED SOCIAL RELATING**
- **REPETITIVE BEHAVIOURS & RESTRICTED INTERESTS**

18. The triad is very limited, in my view, in terms of explaining or describing the impairments because it does not include areas of functioning that are actually fundamental to autism spectrum disorders, such as executive functioning difficulties, which tend to be domain general, so across the person's information processing environments. It doesn't take account of sensory processing difficulties. So I think that it is a limited but useful way of perhaps describing the effects of the various psychological deficits.

19. In terms of the behavioural difficulties - how it presents in terms of social interaction - there is a very significant lack of socio-emotional responsiveness. A real difficulty developing and sustaining peer relationships. Children with autism spectrum disorder, for example, maybe very uninterested in other children, they may demonstrate very clumsy social interactions. In fact they may interact with other children purely to have their own needs met, not understanding or being able to develop or connect in that social and emotional way that is the very essence of friendship.

20. People with autism spectrum disorder invariably have significant difficulty processing cues, affective cues. You can understand why, not understanding how relationships work and certainly the impact of their behaviour for other people, people with asperger's may be associated with offending behaviour such as harassment, assault, stalking behaviours or offences. There is a very significant lack of capacity for shared enjoyment and of interest, although that can be acquired with appropriate interventions to an extent, sometimes to a very great extent. A lot of mums will say, for example that their child doesn't get excited when their mum gets excited about some achievement - for example that the child doesn't join in excitement about an older child with something that is happening on the football - the Swan's winning the grand final. Or there is an over-emotional response that is exaggerated and still out of context. So that lack of shared enjoyment interest has a huge impact on emotional development. It has an impact on the person's awareness of their emotional processes and responses and has huge implications for capacity to establish a friendship and for later relationship forming. It also contributes to isolation, and because of those emotional impacts is a big co-contributing factor to co-occurring disorders especially anxiety and depression during adolescence and adulthood.

21. In terms of communication I guess the key message here is that the receptive comprehension difficulty - the processing and comprehension of especially inferential and more abstract language and concepts and information - goes a long way to explaining a lack of compliance, lack of co-operation, limited motivation and anti social behaviour.

22. People with autistic disorder or asperger's present with various idiosyncratic stereotype repetitive language. With a child with autistic disorder the repetitive behaviour might occur in a form of flapping or rocking. With asperger's disorder it may be more likely to occur in terms of strong pre-occupation with circumscribed interests. It might be the Melbourne tram system but it could be anything. There is very significant impaired imagination and emotive play. That's a very strong developmental feature. I think it probably has implications, for example, for difficulties in understanding deception, the fact that they are being set-up means that these people are particularly vulnerable to being led and to being manipulated.

23. It's interesting that in terms of repetitive behaviours there may be over focus, for example on fire. There's some evidence from the literature that there is some association between asperger's disorder and arson. Other characteristics include sometimes stereotype motor-mannerisms and certainly interest in non-functional paths.

24. This is a summary of the spectrum. The main point it makes is that any one individual could have a mix of strengths and weaknesses. For example, someone with asperger's disorder might have very little communication impairment. They might in fact have a very rich vocabulary and good grammatical structures, but they might have very severely impaired social related skills, and they might have some restricted and repetitive behaviours.

Co-occurring disorders

25. Professor Margo Prior's quite large study in Melbourne, where she looked at over 200 adolescents with asperger's disorder, identified that one in four of them also met criteria for ADHD. Professor Christopher Gilberg, a Swedish psychiatrist and researcher, says that 100% of people with autism spectrum disorders also meet criteria for another developmental disorder or psychiatric problem. The most common he says are ADHD and obsessive compulsive disorder. There are other commonly associated features.

- Sensory hyper- and hypo-sensitivities
- Motor clumsiness
- Epilepsy
- Allergies, vitamin deficiencies etc.
- Intellectual impairment (except in Asperger's)
- Learning disabilities
- Vulnerability to psychopathology, e.g. depression, anxiety (more common in high-functioning autism/Asperger's disorder)
- Behaviour disturbances

26. I haven't included visual impairment on this list, but it is certainly in the autistic disorder population. At least 15% of people with autistic disorder have a visual impairment. And if we look at epilepsy 10% of people with autistic spectrum disorder more generally will develop epilepsy. If we look at vulnerability, psychopathology studies show, including Australian researchers like Professor Bruce Tonge and Professor Stewart Einfield show that 40 to 80% of children with autism spectrum disorder have very significant emotional and behavioural difficulties. And during adolescence, research shows that anxiety and depression are very high co-occurrences. I think the message here is that as it is with ADHD it's critical to look out for and to assess and treat the co-order disorders. Often they are the main reason for law breaking and for management difficulties.

Underlying psychological deficits

27. I encourage you to think about how hard-wired deficits lead to law breaking behaviour and implications for your roles.

28. **Theory of Mind / Mind Blindness:** Difficulty imagining what others are thinking (their beliefs, desires, emotions)

- Difficulties:
- Understanding intentions and motives of others
- Understanding effect of their behaviour on others
- Predicting the behaviour of others
- Understanding deception
- Adhering to social norms, social and legal rules (lack understanding of their importance)
- Understanding pretend, fact and fiction

29. The theory of mind idea is that the person would have great difficulty imagining what others are thinking. So their empathy, their social cognition is significantly impaired, and some of the difficulties would be understanding the intentions and motives of others. So that could feed into offending behaviour, such as minor assault and harassment. Understanding the effect of behaviours on others varies from extreme naivety through to just not being aware of the effect that they have - that they are distressing others.

30. The issue there is that there is absolutely no intent to distress or harm. Predicting the behaviour of others can be very difficult. Unfamiliar social situations could be very distressing - court appearances, being interviewed by the police. Understanding deception, as I've mentioned, because of very little way they are very easily influenced, and led. Difficulties adhering to social norms and to understanding legal rules will lead to offences such as assault, trespass, riding on the wrong side of the road and so on. Understanding pretence, fact and fiction I think has very significant implications for understanding the motives of others.

31. **Central coherence:** The tendency to draw together diverse pieces of information to construct higher level meaning”
- Imposes own perspective, loses context
 - Lack of compliance
 - Difficulty prioritising
32. This deficit is defined as the tendency to draw together diverse pieces of information to construct high level meaning. Again there are implications, for example, not being able to grasp the context, becoming obsessed with a girl, desperately wanting a girlfriend leads to inappropriate behaviour which could be misinterpreted. Whereas, really the person is losing context and their intent is not to hurt or harm but to have a girlfriend. I remember one young man saying to me that he watches kids in the playground in his high school and some of the boys just seem to get a girlfriend. It just happens and he had a map and he was trying to learn the process of how you do it, but was very puzzled by it, it was very difficult for him.
33. Lack of compliance has got implications for treatment, probation, and so on.
34. **The executive function deficit:** Mental operations to problem solve (flexible thinking to plan, inhibit impulses, anticipate outcomes)
- Inability to think through steps to achieve goals
 - Inhibiting impulsivity
 - Starting and stopping
 - Planning and organising
35. The evidence is that this is domain general for autism spectrum disorders. That means that the person has great difficulty thinking through and getting to a reasonable solution to a problem - being able to predict what the consequences of behaviour will be for example. Some research findings show there is a much higher rate of psycho-pathology compared with other developmental disorders.

Other research findings

- Much higher rate of psychopathology compared with other developmental disabilities (Brereton et al., 2006)
- Rate of law breaking less than that of non-asd group (Woodbury-Smith et al., 2006)
- When law breaking (low rate) does occur, over-representation violent behaviour (perhaps due to co-morbid disorders) (Woodbury-Smith et al., 2006)
- Evidence of impaired ability to recognise the distress of others (sub-group) supports need for empathy education (Woodbury-Smith et al., 2005)
- Family and environmental factors interact with core impairments to lead to increased co-morbidity and increased risk for behaviour/conduct problems (Brereton et al., 2006)
- Obsessive cognitive style (e.g. fire) poor social skills and family dysfunction predict recidivism (Kennedy et al., 2006)

- Association between arson and PDD's (Siponmaa 2001)
- Lack of evidence that Asperger's Disorder is over-represented in Forensic Psychiatry (Barry-Walsh et al., 2004)

36. I've mentioned the much higher rates of emotional and behavioural disturbances in this group. The rate of law breaking is actually, so very recent research is suggesting, less than that of the non-ASD group. The message is that even though this group has very significant psychiatric disturbance, it doesn't necessarily lead onto offending behaviour. The research is very, very limited.

37. When law-breaking behaviour does occur there is some evidence that there is an over representation of violent behaviour, but it is a very low incidence to start with. There is evidence of impaired ability to recognise the distress of others, and so, for example, the person with asperger's would not be aware that they are frightening the other person. So we know that interventions like victim offender meetings could be very helpful for this group. Certainly the empathy education is very helpful. Again, its family and environmental factors and co-morbid problems that probably lead to increased conduct law-breaking behaviours, not the asperger's or autism itself.

38. Therefore, the pre-sentence assessment of the range of specific clinical disorders and psycho-social factors is incredibly important. There is a lack of evidence that asperger's disorder is over-represented in forensic psychiatry generally. It is important that there is a comprehensive, very good quality diagnostic assessment, it means that maybe its other disorders that co-occur and it is a much higher risk that they will leading to the law breaking.

Preparing for court

39. I now have a some practical suggestions, I hope, around the preparing for court and conduct of the court.

Pre-Court Appearance

- Written / pictorial information (social story) outlining the whole session
- Visit
- Arrange family member / mentor e.g. speech pathologist to assist communication, reduce anxiety
- Explain communicative contexts e.g. who speaks, why, defendant's role
- Establish rules e.g. short speaking turns work best
- Explain non-literal language; provide a glossary of terms
- Prepare the Court (e.g. rocking or ear covering may be calming mechanism; limited eye contact does not signify guilt or not listening)
- Explain why person may not answer questions or introduces different topic

Conduct of the Court

- Few people
- Closed session
- Family member/mentor
- Simplified language (avoid idioms, ambiguity)
- Accompany facial expressions, gestures with verbal information
- Reduce sensory overload (bright lights, noise, movement)
- Regular breaks; avoid changing routine
- Ask directly for the information that's needed (person with autism spectrum disorder won't know what you are thinking; they may expect you to know what they are thinking)
- Allow extra time to process and respond
- Minimise waiting – schedule first; arrange suitable waiting area; allow to return later

Other Implications for the Courts

- Lifelong learner; progress is possible with a strengths-based approach
- Autism spectrum disorder and mental health specific assessments essential
- Request an individualised treatment plan (targeting actual needs e.g. obsessive behaviours; social interaction skills); strengths-based approach
- Autism Support Professional

Case study

40. The scenario is that 16 year old John comes home on his school bus and he has had a crush on a girl on his bus for quite a long time, but he has never spoken to her - she wouldn't have a clue because he has asberger's disorder. He desperately wants a girlfriend because he wants to be like the other kids his age.

41. He follows her, he grabs her from behind. The girl's sense is that he tried to molest her. She runs home and she tells her parents who contact, understandably, the police. The police at interview note that he has poor eye contact, they note that he is nervous, that he rocks, that he refuses to answer some questions. Sometimes he goes off on tangents talking about what happened to be one of his interests, sharks. Police who are trained in interrogation and interview techniques understandably make some assumptions that this boy is behaving like a guilty person. They are dismissive of the parents' asberger's explanation because they don't know what asberger's disorder is. There is a lot of evidence. The police believe that John is in fact guilty. One of the outcomes in this real case is that the family were advised to plead guilty to attempted assault and with intent to rape to minimise a jail sentence. John did admit to the police during the interview that he followed the girl, that he grabbed her and he did say that he intended to rape. The actual explanation for John's actual behaviour is, as I've said, that John had a crush on this girl and had for a long time. That he was following this girl because he wanted to hug her and he wanted her to talk to him. He has seen other boys kissing girls. He was very distressed that he didn't have a girlfriend. She went home crying. He has asberger's disorder.

42. An alternative outcome, if there was an autism support professional that could become involved at the point of police involvement, is that the police on learning the diagnosis from the parents would immediately contact the autism support professional to assist with the interview. The police would learn that John's eye contact and other behaviours are typical of autism - they are not at all evidence of guilt. They would avoid leading asking questions - "what are you trying to do to that girl, rape her?" Instead they might ask an open-ended question like, "John, what were you trying to do with that girl?", and he would have gone on to explain "I just wanted her to talk to me, I just wanted her to like me". Autism spectrum disorder informed questions indicate that John in fact doesn't even know what rape is and there was no intent to sexually assault. The girl and her family, when fully informed, agree that intent to rape charge was not appropriate and there ends up being an appropriate assessment for John with appropriate social educational interventions, perhaps during a probational period with no victim contact. So the focus during that intervention could be on things like victim feelings on that empathy understanding on relationship or building pro-social skills.

Conclusion

43. I will just finish with this that recommendation that Aspect and perhaps the Attorney Generals Department could discuss resourcing an autism support professional to assist each step of the process from education, from police interview to assisting to ensure that there are just outcomes when individuals with autism spectrum disorder do present with apparent law-breaking behaviour.

Autism Spectrum Australia (Aspect)

www.aspect.org.au

Autism Information Line

(02) 8977 8377

infoline@aspect.com.au