

# ‘Bodysuits’: Identifying other ways of managing behavioural difficulties associated with toileting and sexuality



Victorian Autism Conference 2010

Brent Hayward  
Practice Advisor, Credentialed Mental Health Nurse  
Office of the Senior Practitioner  
Disability Services  
Department of Human Services  
Victoria, Australia

# Challenging Behaviours in ASD

- Behaviours related to ASD are more disabling than the primary disorder (Spence, Sharifi & Witnitzer, 2004)
- BoC more frequent in ASD (Grallton, James & Lindsay, 1998; Matson & Nebel-Schwalm, 2007)
- BoC are not considered central to the core features of ASD (Cuccaro et al., 2003)
- Age-related, peaking in late teens (Murphy et al., 2005)
- Higher levels of behavioural and emotional problems than children with severe ID (Hastings & Mount, 2001)
- More maladaptive behaviours than typically developing peers and peers with ID (Hartley et al., 2008)
- 75% of those with Autism have an intellectual disability (Matson & Nebel-Schwalm, 2007)
- Data collected by the Office of the Senior Practitioner (ASD, gender, age, challenging behaviours)

# Challenging Behaviours in ASD

## Sexualised Challenging Behaviours

- A lack of definition and hence no quality research (Lockhart et al., 2009)
- Public masturbation or genital touching are the most common challenging behaviours (Haracopos & Pedersen 1992, in Van Bourgondien et al., 1997, 1992; Hellemans et al., 2010; Ruble & Dalrymple, 1993; van Son-Schoones & van Bilsen, 1995)
- A major concern to parents (DeMyer 1979, in Van Bourgondien et al., 1997)

## Toileting Challenging Behaviours

- Lack of research in relation to these specific challenging behaviours (Matson & LoVollo, 2009)
- It is estimated that 10 to 20% of children with ASD experience non-retentive encopresis (Radford & Anderson, 2003)
- Encopresis: 66% and 86% (Tsai et al., 1981)
- 25 to 50% in those with intellectual disability (Smith et al., 2000)
- Urinating in places other than toilets, interfering with toilets and smearing most common problems reported by parents (Dalrymple & Ruble, 1992)

# The *Disability Act 2006* and the Role of the Office of the Senior Practitioner

human.  
services

Protects:

- The rights of people with a disability
- Especially those subject to restrictive interventions and compulsory treatment (section 23(2)(a))

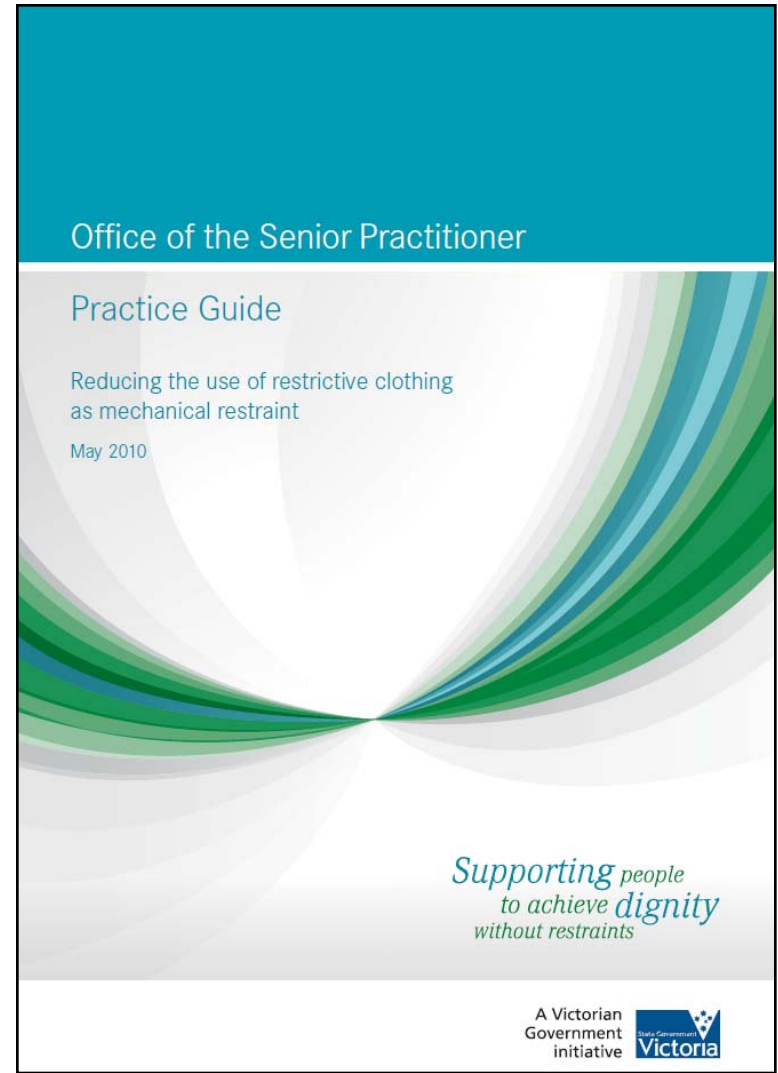
Develops:

- Guidelines and standards (section 24(1)(a))
- Provide information with respect to the rights of persons with a disability who may be subject to restrictive interventions (section 24(1)(c))
- To provide education and information with respect to restrictive interventions (section 24(1)(f))

# Challenging Behaviours in ASD

human  
services

[www.dhs.vic.gov.au/ds/osp](http://www.dhs.vic.gov.au/ds/osp)



# The *Disability Act 2006* and Restrictive Interventions

**"chemical restraint"** means the use, for the primary purpose of the behavioural control of a person with a disability, of a **chemical substance to control or subdue the person** but does not include the use of a drug prescribed by a registered medical practitioner for the treatment, or to enable the treatment, of a mental illness or a physical illness or physical condition (section 3)

**"seclusion"** means the **sole confinement of a person with a disability** at any hour of the day or night

(a) in **any room** in the premises where disability services are being provided of which **the doors and windows cannot be opened by the person from the inside**; or

(b) in any room in the premises where disability services are being provided of which **the doors and windows are locked from the outside**; or

(c) to a part of any premises in which disability services are being provided (section 3)

The Disability Act 2006 defines mechanical restraint as *‘the use, for the primary purpose of behavioural control of a person with a disability, of devices to prevent, restrict or subdue a person’s movement but does not include the use of devices (a) for therapeutic purposes; (b) to enable the safe transportation of the person’*

(section 3).

Restrictive clothing is one example of  
mechanical restraint.

Disability service providers must work to reduce  
the use of restraints

# What Exactly are Bodysuits?

*Any item of clothing that is worn in full or part, in original or modified form, or specially designed device that is worn by a person that restricts their movement in any way for the purpose of controlling behaviour*



Leotards



Overalls



Bike Shorts



Swimming Garments



Wetsuits



Jumpsuits



Especially designed clothing

# The Problems with Bodysuits

- Using bodysuits continuously (24 hours a day), without a context to a displayed challenging behaviour is not an effective intervention
- They can impair psychological, social and physical development (Rojahn et al., 1980)
- Do not account for the individual preferences and abilities of the person
- Promote excessive heating and cooling, interfere with sensory abilities, increase hazards and adverse consequences of accidental or adverse actions, increase fatigue, limit the ability to reach and manipulate objects (Center for Universal Design 1997, in Carroll & Kincade, 2007)
- They can reduce the positive behaviours of the person (work, play, social)
- Reduce positive behaviours of staff (through positive attention and reinforcement)
- May increase stereotyped movements

# The Problems with Bodysuits

- Poor freedom of movement, poor comfort and irritating features (Carroll & Kincade, 2007)
- Lycra is difficult to put on and is uncomfortable, may increase bowel and bladder problems and reduced independent toileting; skin irritation, friction sores and aggression when applied (Nicholson et al., 2001)
- 7/12 and 7/8 of parents reported their children disliked wearing lycra (Nicholson et al., 2001; Rennie et al., 2000)
- Circulation problems, excessive warmth and dehydration are reported adverse effects (Rennie et al., 2000)
- Velcro is reported to injure the skin (Stancliff, 1999)
- Clothing influences impressions of intelligence (Nisbett & Johnson, 1992)
- May impact upon Human Rights in Victoria

# The Charter of Human Rights & Responsibilities Act 2006

- Sets out 20 human rights that are protected in Victoria
- Applies to Individuals who are the “Right Bearers”
- Duty is to protect, promote and fulfil the human rights as outlined in the Charter
- Duty Bearers are bound by the Charter (e.g. disability services)
- Must act compatibility with a human right, or must give proper consideration to a human right when making a decision

Some of the Human Rights which may be applicable to the use of bodysuits:

- Protection from torture and cruel, inhuman or degrading treatment (section 10(b&c))
- Freedom of expression (section 15(2)(e))
- Right to liberty and security of person (section 21(1&3))
- Humane treatment when deprived of liberty (section 22(1))

# Identifying why the Challenging Behaviour is Occurring – FBA

- Behavioural interventions are more likely to be effective if they are based on FBA (Carr et al., 1999; Didden et al., 1997; Scotti et al., 1991)
- Functional Behaviour Assessment is especially recommended in people with toileting and clothing-related challenging behaviours (Beare et al., 2004; Bernard, 1999; Carlson et al., 2008; Cascio et al., 2008; Sequeira & Hollins, 2003; Smith, 1996)
- Identification of the times, places and circumstances in which the behaviour occurs and does not occur
- Identification of the factors that precede the occurrence of the behaviour (Antecedent)
- Clear definition of the behaviour (Behaviour)
- Identification of the factors that follow the occurrence of the behaviour (Consequence)
- Develop ideas about the function or relationship between the behaviour and the individual's environment, which then lead to proposed interventions
- Ongoing data collection to monitor/revise the ideas about the suspected reason for the behaviour and/or interventions

# Before Starting FBA: Accounting for the Person's Specific Disabilities

- IQ and level of disability
- Additional disorders, e.g. autism, depression
- Adaptive functioning
- Visual and/or hearing impairment
- Sensory preferences
- Communication ability
- Physical illness and pain
- Behavioural phenotype

# Components of FBA



... is present when the problem occurs?



... is happening just before the problem occurs, and what happens immediately after the problem behavior?



... does the problem behavior occur?



... does the problem behavior take place?

# Functional Behaviour Assessment

## STAR method

- Setting
- Trigger
- Action
- Response

## ABC method

- Antecedent
- Behaviour
- Consequence

# Example of ABC Method

**Table 2. Example behaviours documented on an ABC data sheet**

Date	Antecedent	Behaviour	Consequence	Hypothesised Function
2/5/06	Child playing on floor, parent attending to sibling	Child climbs on table	Caregiver rushes over, swoops child up, telling her "No, no, honey, that's dangerous" followed by a hug and a kiss. Caregiver puts child down with toys and plays with child	Attention
2/7/06	Teacher presents nonpreferred task (e.g., writing activity)	Child makes a silly face and begins to sing a rhyming song	Teacher laughs with child and joins in song, delaying the request to engage in the nonpreferred task	Escape and attention

From: Feeley & Jones (2006)

# Example of STAR Method

- Setting: Lounge room, mother and child at home alone
- Trigger: Mother does not turn around when child calls out to her
- Action : Child climbs onto the table
- Response: Mother runs over to child, picks her up and kisses her
- Develop ideas about the function or relationship between the behaviour and the individual's environment, which then lead to proposed interventions

# Removing Clothing (Disrobing)

- This behaviour is of great concern to parents (Stokes & Kaur, 2005)
- It may not be completely eliminated but can be reduced (Carlson et al., 2008)
- Punishment and “time-out” are not successful (Rollings & Baumeister, 1977), nor are jumpsuits and other one piece garments (Simon & Rappaport, 1996)
- Activities, time of day and other people are not necessarily factors (Carlson et al., 2008)
- Poor social awareness, hot weather and adverse effects of medication and need to frequently toilet (Savage et al., 2007), preference for certain clothes (Carlson et al., 2008) and sensory abnormalities associated with the skin (Blairs et al., 2007; Cascio et al., 2008) may be factors to consider
- Successful interventions have included engaging the person in structured activity (Beare et al., 2004; Simon & Rappaport, 1996) and when provided with scheduled times to change clothing (Carlson et al., 2008)

# Smearing Faeces

- Learning how to use the toilet is the first step towards reducing this behaviour
- It may occur for a number of reasons including sensory stimulation (Prasher & Clarke, 1996; Gelber & Meyer 1965 in Friedin & Johnson, 1979), **escape** (Friedin & Johnson, 1979), aggression (Brahm et al., 2007) and **gastrointestinal infection** (Brahm, 2004)
- There is also some indication that the development of smearing may be related to physical or sexual abuse in some situations (Sinason, 2002; Bernard, 1999)
- Successful interventions have included assisting to toilet when waking in the morning (Smith, 1996), changing the times of day for showering and allowing longer play while showering (Friedin & Johnson, 1979)

# Why may Smearing be Occurring?

Identify if a physical condition could be producing irritation in the anal area. If this is true, the person may be touching their anus and therefore inadvertently getting faeces on their hands.



Physical Health

Does the behaviour occur in situations that are known to be disliked by the person? When the behaviour occurs, is the person taken from one place to another in order to be cleaned?



Escape

(From: Friedin & Johnson, 1979)

# Smearing Faeces

Does this behaviour tend to occur when activities and play materials are unavailable?



Boredom, Tangible

Does the person receive little attention for appropriate behaviour? Does the person present themselves to staff or parents after they have smeared faeces? Does the person attempt to shower or bath themselves at times other than standard washing times?



Attention

(From: Friedin & Johnson, 1979)

# Toileting and Challenging Behaviour in ASD

- Disability should not be regarded as the cause of incontinence (Smith, 1996)
- People with severe levels of disability can benefit from behavioural approaches to bowel-related challenging behaviours – effectiveness is around 70% or better (Smith, 1996)
- The focus needs to be on the behaviours related to toileting rather than the underlying reasons for incontinence (if a health reason has been eliminated)
- Many children with developmental disabilities require training to acquire toileting skills (Luiselli, 1997) and without intervention, problems can persist into adulthood (Benninga, 2004)
- Children under the age of 12 years respond to toileting interventions faster than adults with a similar disability (Ducker & Dekkers, 1992)

# What Contributes to Toileting Challenging Behaviours?

human.  
services

(Dalrymple & Ruble, 1992; Radford & Anderson, 2003; Smith et al., 2000; von Wendt et al., 1990)

- Physiology
- Motor skills
- Communication skills
- Social skills
- Cognitive limitations
- Previous bad experiences of toileting
- Control
- 'Anxiety'
- Skill performance
- IQ
- Male gender
- Being non-verbal
- Bowel compared with bladder

What are NOT explanations?

- Deliberate naughtiness
- Representation of anger towards parents

# Intervening in Toileting Challenging Behaviours

- Medical review
- Collecting data
- Learning opportunities
- Start with very short periods of sitting on the toilet
- Engage the child in a preferred activity while on the toilet
- Praise successful motions
- Minimise reactions to 'accidents'
- *Transfer-of-stimulus Control* - moving from nappy/pad to toilet (Luiselli, 1996; 1997; Tarbox et al., 2004)
- Prompted and scheduled toileting
- Bed wetting vs. *early morning wetting* (Rogers, 2002)
- Toilet priming (Bainbridge & Smith Myles, 1999)
- Aversive techniques are not effective (Smith, 1996)
- Punishment is not lawful in Victoria
- Punishment is not effective (Knell & Moore, 1990; Piazza et al., 1991)

# Intervening in Toileting Challenging Behaviours

Child's name	Date begun													
	Day 1		Day 2		Day 3		Day 4		Day 5		Day 6		Day 7	
Time	Pants	Toilet	Pants	Toilet	Pants	Toilet	Pants	Toilet	Pants	Toilet	Pants	Toilet	Pants	Toilet
7:00														
8:00														
9:00														
10:00														
11:00														
12:00														
13:00														
14:00														
15:00														
16:00														
17:00														
18:00														
19:00														

Pants: W = wet; D = damp; P = poo

Toilet: U = wee; B = poo

(From: Rogers, 2002)

# Sexual Behaviour in Young People with ASD

- Adolescents with ASD have the same sexual desires as those without ASD (Stokes, Newton & Kaur, 2007)
- Approx. 75% of people with ASD display some kind of sexual behaviour and most masturbate (Sullivan & Caterino, 2008)
- **It is necessary to accept and promote appropriate masturbation**
- Up to 30% of young people with ASD experience increases in challenging behaviour during adolescence (Eaves & Ho, 1996)
- Bodysuits are commonly used for three main reasons:
  1. Touching private body parts
  2. Removing clothes in public
  3. Masturbating in public areas

# Understanding Sexual Behaviour in ASD

(Adapted from Lee, 2004 and Ray, Marks & Bray-Garretson, 2004)

1. Sexuality may be the only source of pleasure, excitement or gratification available to the person
2. Sexuality serves to reduce anxiety
3. Sexuality may have the same value as any other behaviour the person exhibits
4. Sexuality can allow the young person to feel security in routine
5. Sexual activity stimulates the sensory organs

## **There are a number of explanations for why sexual challenging behaviours may occur:**

1. Inappropriate sexual conduct becomes the only alternative to seeking relationships
2. A young person tries to copy an observed adult sexual behaviour
3. Attempts to make connections with peers using sexual information and behaviours (without distinction between the emotions of kindness and attraction for example)
4. Experiences of sexual abuse
5. Some medications can affect libido, sexual interest or drive. Others can make arousal and ejaculation difficult which may increase tendency towards compulsive masturbation and other sexual behaviours

# Why may Inappropriate Sexual Behaviour Occur?

(Adapted from: Aruffo, Ibarra & Strupp, 2000; Hellemans et al., 2007 and Koller, 2000)

- The person may not have access to the sexual areas of their body due to the wearing of incontinence pads or restrictive clothing
- Lack of structured routine and time made available for masturbation
- Lack of education
- Lack of opportunity for privacy and/or the use of bedrooms may be discouraged during the day
- There may be no locks on bedroom doors to provide privacy
- Staff, carers, parents, siblings etc. may not respect the privacy of another person's bedroom
- Private spaces at school or day activities are not made available
- The use of medication may cause sexual side effects
- A lack of opportunity for individualised sensory stimulation
- Hormone levels can influence sensitivity to tactile stimulation

# Positive Intervention

Teaching new, adaptive skills is the most powerful strategy for producing durable change (Horner et al., 2000)

- Modify activities to suit the skill level of the individual
- Ensure sufficient sensory stimulation
- Provide sufficient support, attention, praise
- Allow regular breaks from tasks
- Provide access to preferred items at regular intervals
- Ensure independent access to preferred activities during non-structured times
- Make sure they can easily move from one place to another
- Ensure they can predict the schedule of events throughout the day
- Provide a sufficient variety of activity

# If a Bodysuit is Currently Being Used & My Child Accesses a Disability Service...

The Disability Service Provider will be required to devise a  
Behaviour Support Plan (BSP)

- **This is required by the *Disability Act 2006***
- Need to consult with parents/guardians
- Will require information such as why the bodysuit is being used, how effective is it, when it can be removed etc.
- Explain how it benefits the person

# If a Bodysuit is Currently Being Used...

1. The advice of a relevant clinician should be sought (Occupational Therapist, Physiotherapist)
2. Be used in the context of a wider behavioural support program
3. A written plan should be written which outlines the following:
  - What exactly is the restrictive clothing?
  - Specifically why is it being used?
  - The circumstances in which it is applied
  - How long is it applied for and periods of time when the restrictive clothing can be removed
  - What adverse effects to look for and what to do if they are observed
  - When the use of the restrictive clothing is to be reviewed

# Summary

- Bodysuits can impair development
- Behaviours need to be seen in the context of individual abilities and normal development
- Behavioural interventions have evidence
- Data collection important
- Aversive practices and punishment are not effective
- Learning how to use the toilet (to an appropriate level) and engage in appropriate sexual behaviour are the ultimate aims
- Early intervention is the key
- Interventions will take time!
- Bodysuits do not change behaviour in the long-term
- Do not teach new, adaptive behaviours
- Restrict human rights
- Don't address why the behaviour is occurring
- Have inherent health risks
- Collaboration between school and respite
- Consistent approach to behaviour support

Brent Hayward

Office of the Senior Practitioner

T. 9096 0211

E. [brent.hayward@dhs.vic.gov.au](mailto:brent.hayward@dhs.vic.gov.au)

[www.dhs.vic.gov.au/ds/osp](http://www.dhs.vic.gov.au/ds/osp)

# References

- Aruffo, R.N., Ibarra, S. & Strupp, K.R. (2000). Encopresis and anal masturbation, *Journal of the American Psychoanalytic Association*, 48(4): 1327-1354.
- Bainbridge, N. & Smith Myles, B. (1999). The use of priming to introduce toilet training to a child with autism, *Focus on Autism and Other Developmental Disabilities*, 14(2): 106-109.
- Beare, P.L., Severson, S. & Brandt, P. (2004). The use of a positive approach to increase engagement on-task activities and decrease challenging behaviour, *Behaviour Modification*, 28(1): 28-44.
- Benninga, M.A. (2004). Children with constipation: what happens to them when they grow up? *Scandinavian Journal of Gastroenterology*, 241: 23-26.
- Bernard, C. (1999). Child sexual abuse and the black disabled child, *Disability and Society*, 14: 325-339.
- Blairs, S., Slater, S. & Hare, D.J. (2007). The clinical application of deep touch pressure with a man with autism presenting with severe anxiety and challenging behaviour, *British Journal of Learning Disabilities*, 35: 214-220.
- Brahm, N.C. (2004). Protozoal infections in the developmentally disabled: often overlooked cause of rectal digging and faecal smearing, *The Annals of Pharmacotherapy*, 38: 1542.
- Brahm, N.C., Farmer, K.C. & Brown, R.C. (2007). Risperidone for the treatment of fecal smearing in a developmentally disabled adult, *American Journal of Health Systems Pharmacy*, 64: 382-384.
- Carlson, J.I., Luiselli, J.K., Slyman, A. & Markowski, A. (2008). Choice-making as intervention for public disrobing in children with developmental disabilities, *Journal of Positive Behaviour Interventions*, 10(2): 86-90.
- Carr, E. G., et al. (1999). *Positive behaviour support for people with developmental disabilities: A research synthesis*. Washington, DC: American Association on Mental Retardation.

# References

- Carroll, K.E. & Kincade, D.H. (2007). Inclusive design in apparel product development for working women with physical disabilities, *Family and Consumer Sciences Research Journal*, 35(4): 289-315.
- Cascio, C. et al. (2008). Tactile perception in adults with autism: a multidimensional psychophysical study, *Journal of Autism and Developmental Disorders*, 38: 127-137.
- Cuccaro, M.L. et al. (2003). Factor analysis of restrictive and repetitive behaviours in autism using the Autism Diagnostic Interview – Revised, *Child Psychiatry and Human Development*, 34: 3-17.
- Dalrymple, N.J. & Ruble, L.A. (1992). Toilet training and behaviours of people with autism: parent views, *Journal of Autism and Developmental Disorders*, 22(2): 265-275.
- Didden, R., Duker, P. C., & Korzilius, H. (1997). Meta-analytic study on treatment effectiveness for problem behaviours with individuals who have mental retardation. *American Journal on Mental Retardation*, 10: 387-399.
- Ducker, P.C. & Dekkers, M. (1992). Development of diurnal bladder control in severely and profoundly mentally handicapped residents, *Journal of Intellectual Disability Research*, 36: 177-181.
- Eaves, L.C. & Ho, H.H. (1996). Brief report: stability and change in cognitive and behavioural characteristics of autism through childhood, *Journal of Autism and Developmental Disorders*, 26(5): 557-569.
- Feeley, K.M. & Jones, E.A. (2006). Addressing challenging behaviour in children with Down syndrome: the use of applied behaviour analysis for assessment and intervention, *Down Syndrome Research and Practice*, 11(2): 64-77.
- Friedin, B.D. & Johnson, H.K. (1979). Treatment of a retarded child's faeces smearing and coprophagic behaviour, *Journal of Mental Deficiency Research*, 23: 55-61.
- Gralton, E.J.F., James, D.H. & Lindsay, M.P. (1998). Antipsychotic medication, psychiatric diagnosis and children with intellectual disability: a 12-year follow-up study, *Journal of Intellectual Disability Research*, 42(1): 49-57.

# References

- Hartley, S.L., Sikora, D.M. & McCoy, R. (2008). Prevalence and risk factors of maladaptive behaviour in young children with autistic disorder, *Journal of Intellectual Disability Research*, 52(10): 819-829.
- Hastings, R.P. & Mount, R.H. (2001). Early correlates of behavioural and emotional problems in children and adolescents with severe intellectual disabilities: a preliminary study, *Journal of Applied Research in Intellectual Disabilities*, 14: 381-391.
- Hellemans, H., Colson, K., Verbraeken, C., Vermeiren, R. & Deboutte, D. (2007). Sexual behaviour in high-functioning male adolescents and young adults with autism spectrum disorder, *Journal of Autism and Developmental Disorders*, 37: 260-269.
- Hellemans, H. et al. (2010). Sexual behaviour in male adolescents and young adults with autism spectrum disorder and borderline/mild mental retardation, *Sexuality and Disability*, 28(2): 93-104.
- Horner, R.H., Sugai, G., Todd, A.W. & Lewis-Palmer, T. (2000). Elements of behaviour support plans: a technical brief, *Exceptionality*, 8(3): 205-215.
- Knell, S.M. & Moore, D.J. (1990). Cognitive behaviour play therapy in the treatment of encopresis, *Journal of Clinical Child Psychology*, 19: 55-60.
- Koller, R. (2000). Sexuality and adolescents with autism, *Sexuality and Disability*, 18(2): 125-135.
- Lee, D.O. (2004). Menstrually related self-injurious behaviour in adolescents with autism [letter], *Journal of the American Academy of Child and Adolescent Psychiatry*, 43(10): 1193.
- Lockhart, K. et al. (2009). Defining "sexualised challenging behaviour" in adults with intellectual disabilities, *Journal of Policy and practice in Intellectual Disabilities*, 6(4): 293-301.
- Luiselli, J.K. (1996). A case study evaluation of a transfer-of- stimulus control toilet training procedure for a child with pervasive developmental disorder, *Focus on Autism and Other Developmental Disabilities*, 11(3): 158-162.
- Luiselli, J.K. (1997). Teaching toilet skills in a public school setting to a child with pervasive developmental disorder, *Journal of Behavior Therapy and Experimental Psychiatry*, 28(2): 163-168.

# References

- Matson, J.L. & Nebel-Schwalm, M. (2007). Assessing challenging behaviours in children with autism spectrum disorders: a review, *Research in Developmental Disabilities, 28*: 567-579.
- Matson, J.L. & LoVulla, S.V. (2009). Encopresis, soiling and constipation in children and adults with developmental disability, *Research in Developmental Disabilities, 30*: 799-807.
- Murphy, G.H. et al. (2005). Chronicity of challenging behaviours in people with severe intellectual disabilities and/or autism: a total population study, *Journal of Autism and Developmental Disorders, 35*(4): 405-418.
- Nicholson, J.H., Morton, R.E., Attfield, S. & Rennie, D. (2001). Assessment of upper-limb function and movement in children with cerebral palsy wearing lycra garments, *Developmental Medicine and Child Neurology, 43*(6): 384-391.
- Nisbett, D.J. & Johnson, K.K.P. (1992). Clothing fashionability and students with a disability: impression of social and mental competencies, *Clothing and Textiles Research Journal, 11*(1): 39-44.
- Piazza, C.C., Fisher, W., Chinn, S. & Bowman, L. (1991). Reinforcement of incontinent stools in the treatment of encopresis, *Clinical Pediatrics, 30*: 28-32.
- Prasher, V.P. & Clarke, D.J. (1996). Case report: challenging behaviour in a young adult with Down's syndrome and autism, *British Journal of Learning Disabilities, 24*: 167-169.
- Radford, J. & Anderson, M. (2003). Encopresis in children on the autistic spectrum, *Early Child Development and Care, 173*(4): 375-382.
- Ray, F., Marks, C. & Bray-Garretson, H. (2004). Challenges to treating adolescents with Asperger's syndrome who are sexually abusive, *Sexual Addiction and Compulsivity, 11*: 265-285.

# References

- Rogers, J. (2002). Solving the enigma: toilet training children with leaning disabilities, *British Journal of Nursing*, 11(14): 958, 60, 61, 64-65.
- Rojahn, J., Schroeder, S.R. & Mulick, J.A. (1980). Ecological assessment of self-protective devices in three profoundly retarded adults, *Journal of Autism and Developmental Disorders*, 10(1): 59-66.
- Rollings, J.P. & Baumeister, A.A. (1977). The use of overcorrection procedures to eliminate the stereotyped behaviours of retarded individuals: an analysis of collateral behaviours and generalisation of suppressive effects, *Behaviour Modification*, 1: 29-46.
- Ruble, L.A. & Dalrymple, N.J. (1993). Social/sexual awareness of persons with autism: a parental perspective, *Archives of Sexual Behaviour*, 22(3): 229-240.
- Savage, M., Benia, F., Balanquit, M. & Palucka, A.M. (2007). Unrecognised medical concern as a cause of 'psychiatric' disorder and challenging behaviour in developmental disability: a case study, *Journal on Developmental Disabilities*, 13(3): 205-210.
- Sequeira, H. & Hollin, S.A. (2003). Clinical effects of sexual abuse on people with learning disability: critical literature review, *British Journal of Psychiatry*, 182: 13-19.
- Scotti, J. R., Evans, I. M., Meyer, L. H., & Walker, P. (1991). A meta-analysis of intervention research with problem behaviour: Treatment validity and standards of practice. *American Journal on Mental Retardation*, 96: 233-256.
- Simon, E.W. & Rappaport, D.A. (1996). Specific response blocking, exposure and differential reinforcement eliminate disrobing: a case study, *British Journal of Developmental Disabilities*, 42(1): 70-74.
- Sinason, V. (2002). Treating people with learning disabilities after physical or sexual abuse, *Advances in Psychiatric Treatment*, 8: 424-432.
- Smith, L.J. (1996). A behavioural approach to the treatment of non-retentive encopresis in adults with learning disabilities, *Journal of Intellectual Disability Research*, 40(2): 130-139.

# References

- Smith, L., Smith, P. & Lee, S.K.Y. (2000). Behavioural treatment of urinary incontinence and encopresis in children with learning disabilities: transfer of stimulus control, *Developmental Medicine and Child Neurology*, 42: 276-279.
- Spence, S.J., Sharif, P. & Wiznitzer, M. (2004). Autism spectrum disorder: screening, diagnosis and medical evaluation, *Seminars in Pediatric Neurology*, 11: 186-195.
- Stancliff, B.L. (1999). A better fit. Apparel for persons with disabilities, *OT Practice*, 4(2), 17/20.
- Stokes, M.A. & Kaur, A. (2005). High-functioning autism and sexuality, *Autism*, 9: 266-289.
- Stokes, M., Newton, N. & Kaur, A. (2007). Stalking and social and romantic functioning among adolescents and adults with autism spectrum disorder, *Journal of Autism and Developmental Disorders*, 37: 1969-1986.
- Sullivan, A. & Caterino, L.C. (2008). Addressing the sexuality and sex education of individuals with autism spectrum disorders, *Education and Treatment of Children*, 31(3): 381-394.
- Tsai, L. et al. (1981). Implications of sex differences in the familial transmission of infantile autism, *Journal of Autism and Developmental Disorders*, 11: 165-172.
- Van Bourgondien, M.E. et al. (1997). Sexual behaviour in adults with autism, *Journal of Autism and Developmental Disorders*, 27(2): 113-125.
- van Son-Schoones, N. & van Bilsen, P. (1995). Sexuality and autism: a pilot study of parents, health care workers and autistic persons, *International Journal of Adolescent Medicine and Health*, 8(2): 87-101.
- Von Wendt, L., Similia, S., Niskanen, P. & Jarvelin, M.R. (1990). Development of bowel and bladder control in the mentally retarded, *Developmental Medicine and Child Neurology*, 32: 515-518.