MAKING THE DENTAL VISIT A POSITIVE EXPERIENCE FOR CHILDREN WITH AUTISM

Irish Society for Disability and Oral Health

Annual Conference Kilkenny 2015

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DIAGNOSTIC CRITERIA FOR 299.00 AUTISM SPECTRUM DISORDER

The American Psychiatric Association's Diagnostic and Statistical Manual, Fifth Edition (DSM-5) - Standardized criteria

- Persistent deficits in social communication and social interaction across multiple contexts

- Restricted, repetitive patterns of behaviour, interests or activities

Symptoms must be present in the early developmental period & cause clinically significant impairment in social, occupational, or other important areas of current functioning

PERSISTENT DEFICITS IN SOCIAL COMMUNICATION AND INTERACTION

Deficits in:

- Social-emotional reciprocity
- Nonverbal communicative behaviours used for social interaction
- Developing, maintaining and understanding relationships

RESTRICTED, REPETITIVE PATTERNS OF BEHAVIOUR/INTERESTS/ACTIVITIES

- Stereotyped or repetitive motor movements, use of objects, or speech
- Insistence on sameness, inflexible adherence to routines, or ritualized patterns of verbal or nonverbal behaviour
- Highly restricted, fixated interests that are abnormal in intensity or focus
- **Hyper/hyporeactivity to sensory input (*as neurotypical people perceive it*)** or unusual interest in sensory aspects of the environment

Art work by Aegis Mario S. Nevado

WHAT DOES IT FEEL LIKE?

"To me the outside world is a totally baffling incomprehensible mayhem which terrifies me. It is a meaningless mass of sights and sounds, noises and movements, coming from nowhere, going nowhere."

Ros Blackburn

WHAT DOES IT FEEL LIKE?
"A NEW LOOK AT A 'THEORY' OF AUTISM"

Individuals with ASD describe that rather than being concerned with social disconnectedness their life is ***DOMINATED*** by:

- Specific sensory sensitivities
- Need to engage in repetitive behaviour patterns to let off steam
- Fact that NT people unable to understand their communication, rather than their inability to communicate

Dr. Karola Dillenburger

Professor of Behavioural Analysis & Education QUB

Featured News www.asiam.ie Feb 2013

EXPLANATION OF BEHAVIOUR – "REAL EXPLANATION"
"A NEW LOOK AT A 'THEORY' OF AUTISM"

Views behaviour as the interaction of the physical body with the environment.

"The dependent variable is the behaviour, while the independent variables are sought in the environmental relations that affect the behaviour, historically as well as currently."

Behaviour follows same principles ASD/NT

ASD behaviours not manifestation of functional deficits but rather the physiological reaction to the challenges of environment **AS** the person with ASD experiences it

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MULTIPLE SENSORY PROCESSING PROBLEMS

Out-of-proportion reactions to touch, sounds, sights, movement, tastes, or smells, including:

Oral motor and feeding problems –

- **ORAL HYPERSENSITIVITY**
- **FREQUENT DROOLING OR GAGGING**
- "Picky eating"
- Speech and language delays

"Sensitivity is also affected by context and comfort level. When a child is relaxed .....bright lights or crowds might not distress him. But when he's under stress ...they may throw him into a tailspin"

Lindsey Biel , OTR/L

www.sensorysmarts.com/signs_of_spd.html

WE KNOW THAT CHILDREN WITH ASD

- Are generally anxious in unfamiliar surroundings & situations (processing multiple sensory inputs, interaction with strangers + intimidating setting for any child? +/- ASD)
- Frequently have marked oral hypersensitivity – gagging +++ common (esp. younger)
- Sensory sensitivity exacerbated by stress
- Behaviour influenced by challenges of environment (Meltdown? = being pushed beyond coping limits)

ADVANCE PREPARATION

- www.autism.org.uk
- www.autismspeaks.org
- www.autismcenter.org
- www.sensorysmarts.com

Recommended to alleviate challenge of the dental setting by removing uncertainty about this new environment

- child knows exactly what to expect

PREPARATION STRATEGIES

Pre-appointment surgery acclimatisation visits

Modelling – sibling/parent

Social stories

- Written – Lists, books – e.g. “Off we go”
- Diagrammatic – e.g. Widgets 
- Photographic +/- written headings
- Apps – www.iautism.info “Off we go”
- Multisensory – “Dental Playbox”, “Jig”, “Book Cover”

CALMING STRATEGIES IN DENTAL SETTING

- Music (headphones)
- Toy
- Game apps
- Yoga breathing
- Essential oils
- Guide dogs
- **Parental strategies - hand rubbing, tummy rubbing etc.**

REACTIONS TO PREPARATION

"At this point the most interesting observation made by her parents was that **the child would begin to cry and jump while looking at the dentist's picture in the book**"

Pictorial social story - Yilmaz et al (2007)

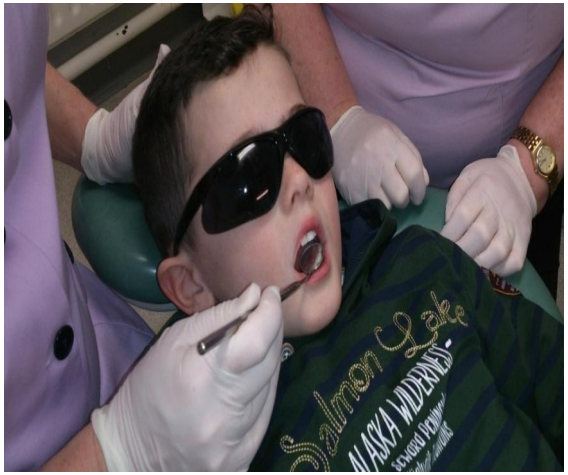
"She indicated that Joseph accepted the dental tools in a more appropriate way across sessions of storytelling and that **after two episodes of extreme aggression, Joseph sat down and listened to his story**"

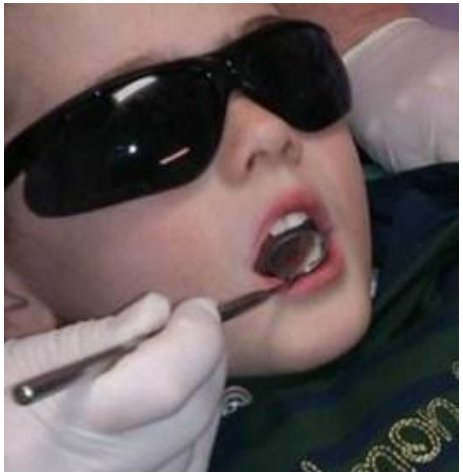
Multisensory sensitive story - Lambe et al (2014)

Successful outcomes over time but prep causes anxiety +++

An easier way?

BEHAVIOUR - ENVIRONMENT TOO MUCH TO PROCESS?



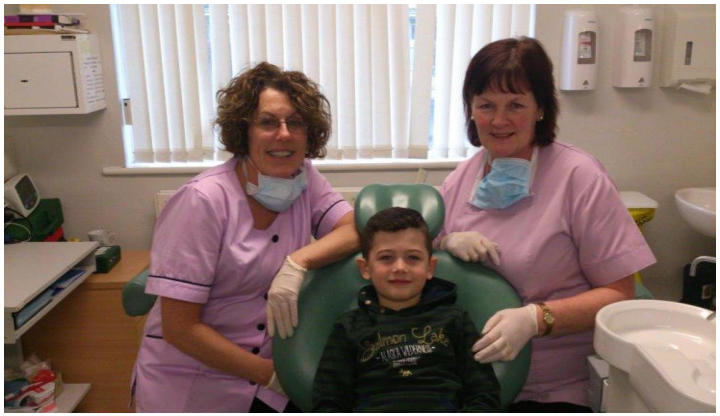


Social Story
Tom goes to the dentist

This is Tom and his Mum in the waiting room.

There is a yellow and orange and green desk for drawing pictures while you wait to see the dentist.

Tom goes to the dentist

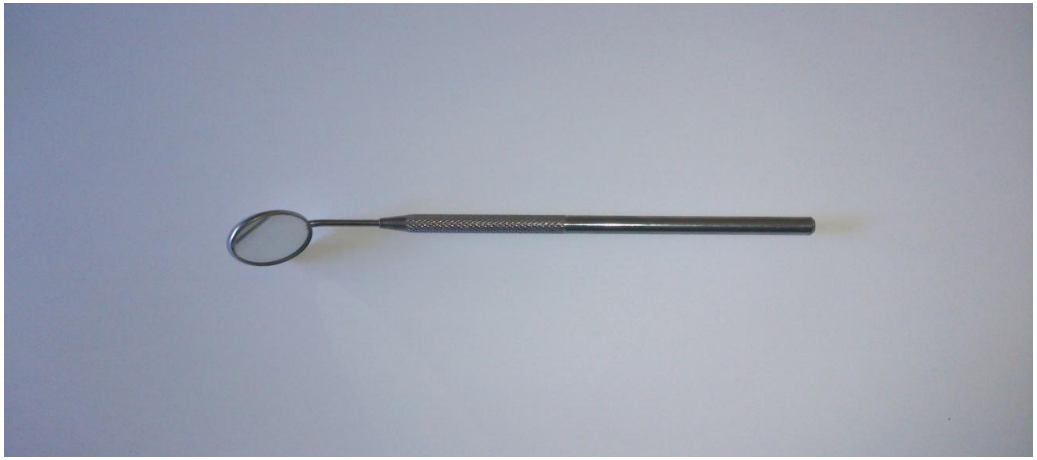


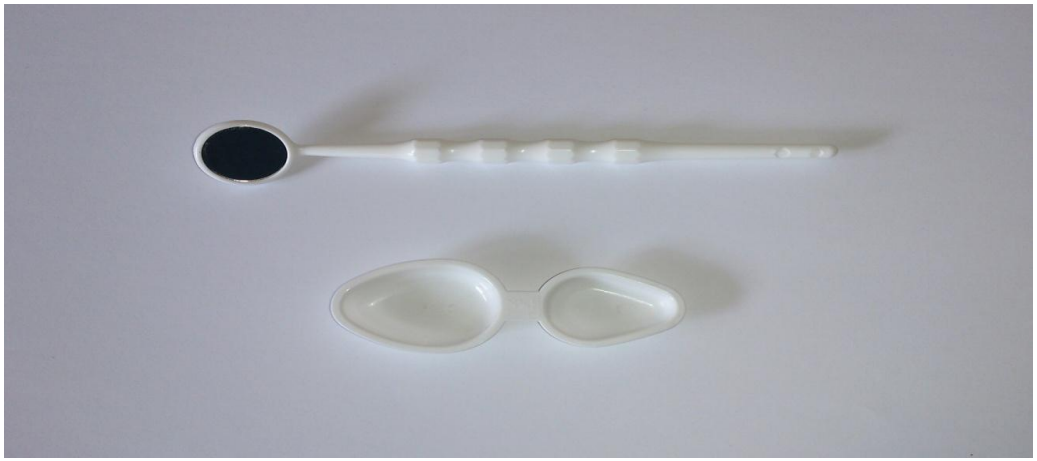
Social stories best used on “Need to know” basis.
Avoid surgery initially if possible

SENSORY CHALLENGES

Intimidating vs. non-threatening environment

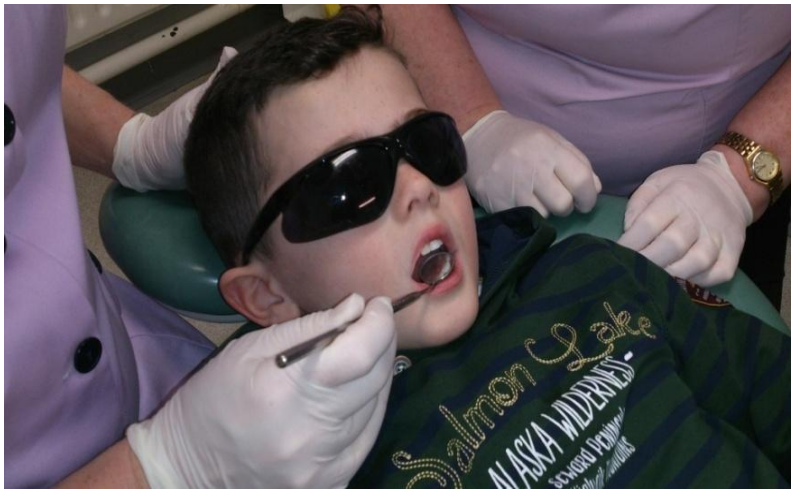
SENSORY CHALLENGES





Will be familiar with plastic spoon regardless of oral hypersensitivity

SENSORY CHALLENGES



Parent introduces play mirror in reassuring & fun manner

INTRODUCTORY ROUTINE

First/last patient of session – empty waiting room

1

2

Ordinary chair in surgery

3

INTRODUCTORY ROUTINE

4

5

6

7

1ST VISIT - NO ENGAGEMENT & CROSS MELTDOWN NOT IMMINENT

Don't try to engage. "X can draw picture while I talk to Mum"

Do you know what I have here Mum? - present for X

Do you know what it is Mum? - little tiny white mirror

Do you know what it's for Mum? – for looking at yourself in

Will I show you Mum? Funny isn't it?

Can you see yourself? Eye, nose, teeth etc.

- If child's interest piqued will engage with Mum => "Taking turns"
- If no engagement => home practice with play mirror +++

1ST VISIT - NO ENGAGEMENT & CROSS MELTDOWN IMMINENT

- Boy A – Aged 2 ½ : Headbanging on waiting room door
- Boy B – Aged 4 ½ : Very agitated in waiting room

DISCHARGE PROMPTLY

"great boy, good bye"

Play mirror & Collis Curve brush => home practice +++

- Play mirror – role play/*FUN*
- Brush short spurts - counts of 5, brush posterior teeth rapidly – minimize gagging

2ND VISIT 1 MONTH LATER
LIMITED PROGRESS BUT NO DISTRESS

Boy A:

- Seen in waiting room. Opened mouth very briefly from a distance – no mirror -> still caused gagging.

  Good progress with play mirror at home only
- Brushing still difficult but improving. Regular toothpaste

Boy B:

- Seen in car. Tolerated play mirror very briefly
- Brushing still very difficult -> physical sensation. Flavoured paeds toothpaste

Currently both:

- **Tolerate exam in dental chair with play mirror well**
- **Tolerate toothbrushing well in spite of severe oral hypersensitivity**

BOY A: 3½ YRS

1st visit aged 2 ½

Good communication & interaction

Hyperactive +++ EI 2 mornings/wk, 2hrs sleep/night

Oral hypersensitivity – gags easily with toothbrushing

Fixations –
Mermaids
Full water bottle

HOSPITALIZATIONS (RELATED TO DIETARY RESTRICTIONS/FIXATIONS)

- **2012:** Severe Fe++ def anaemia – dietary. Transfusion
- **2013:** Symptomatic hyponatraemia- seizures due to extreme H2O consumption
- **2014:** Hyponatraemia & fever

Strategies recommended to avoid excessive H2O intake -

Smaller H2O bottle

Distraction with biscuits – up to 6 times daily

Must have 2 of everything

Day case dental GA

Hospitalization with seizures

STILL CARIES FREE

Non-food distractions sometimes successful – biscuits otherwise

Mum insists on frequent toothbrushing - pea-sized full Fl toothpaste

Mermaid toothbrush promotes tolerance of OH

Brushing short spurts, counts of 5 - alleviates gagging

Home practice +++ with play mirror

Acclimatization slow => extreme hyperactivity, oral hypersensitivity & age

Exam in dental chair with play mirror tolerated 5th ¼ hr visit over 1yr

Enjoys dental visit aged 3 ½ yrs

DIETARY ISSUES FOR CHILDREN WITH ASD

- Highly restricted diet very common. Frequently consists of:

  Yoghurts/custards++ , dry foods e.g. breads, dry cereal, crackers, biscuits. “Anything the consistency of cardboard” - father’s description

- Texture – may only tolerate pureed food

- Frequently picky eaters – small and often

- Parents may allow more sweet treats to “keep the peace”

- Sweet treats as reward system in school – recommend non-food

Important to recognise difficulties for parents- primary concern often is to get child to eat enough of the foods s/he will eat

May only be reasonable to seek gradual or limited changes

BOY B: 9 YRS

1st visit aged 4 ½

Non verbal & limited interaction

Extreme oral sensory sensitivity

EXTREME ORAL SENSORY SENSITIVITY => SLOW PROGRESS

Age 4 ½ - 6 yrs:

- Home practice with play mirror - minimal progress
- Toothbrushing very difficult due to physical sensation . Flavoured paeds toothpaste tolerated
- Exam = viewing teeth from a distance in waiting room while Mum brushes – appears caries free
- Dietary modification feasible

Age 6 -9 yrs:

- Tolerates play mirror home & waiting room though bites on it
- Tolerance of brushing improving though marked gag reflex. OH good
- Exam = good view as far as 1st dec molars – appears caries free

AGED 9 YEARS

11th ¼ hr visit over 4 ½ yrs = 37 minutes/yr

Exam in dental chair with play mirror tolerated well

Shallow cavity tooth 75. No other caries

GI dressing tolerated though reaction to taste

FS, Fl application not feasible currently – all prevention home based

GA unlikely to be required as gradual acclimatization progresses

Facial expressions, clapping & vocal sounds demonstrate extreme sensory challenge of toothbrushing

Brushing in short counted spurts & rapid brushing of posterior lingual surfaces allows tolerance in spite of severe hypersensitivity & gagging tendency

PROMOTING TOLERANCE OF ORAL HYGIENE

SMALL HEADED, NARROW NECKED BRUSHES

Collis Curve reduces gagging - doesn't encroach on most sensitive areas

PROMOTING TOLERANCE OF ORAL HYGIENE

CAPITALISE ON FASCINATIONS

Electric toothbrush useful if child likes sensory stimulus of vibration.

However, any brush is only as useful as degree to which it can be used effectively.

If strong gag reflex, Collis Curve may be preferable

PROMOTING TOLERANCE OF ORAL HYGIENE

OPTIONS IF TOOTHPASTE A SENSORY CHALLENGE

PROMOTING TOLERANCE OF ORAL HYGIENE

APP - MY TALKING ANGELA

PROMOTING TOLERANCE OF ORAL HYGIENE

BOY C: 10½ YRS

1ST CONSCIOUS TX

1st visit aged 5 ½ yrs

Non verbal & limited interaction

Extreme oral sensory defensiveness up to 7 ½ yrs

EXTREME ORAL SENSORY DEFENSIVENESS => SLOW PROGRESS

Age 5 ½ yrs:

- Extreme oral sensory defensiveness. Deciduous caries evident
- Brushing poorly tolerated - non-Fl toothpaste
- Juice +++. Bedtime snack

Age 5 ½ - 7 ½ yrs:

- Home practice with play mirror - minimal progress
- Brushing still difficult – Fl toothpaste
- Dietary alterations

Age 7 ½ - 10 ½ yrs:

- Good tolerance of toothbrushing
- Play mirror well tolerated by age 8 – permanent caries -> GA
- Full exam age 9
- Diet non-cariogenic, OH excellent, Fl toothpaste & MW

AGED 10 ½ YEARS

9 clinic visits = 2.5 hrs over 5 yrs – 30 minutes/yr

1 GA

9th visit

- FS tolerated without adjunct – tell, show, do
- Excellent OH & diet low risk for caries
- Will be amenable to future conscious treatment +/- RA

VIDEO PERIOD
27/01 - 15/05/15 = 44 DAYS

39 patients with ASD – 19 video recorded

- Adult >21yrs – 1. Recorded – 0
- 16 – 21yrs – 9. Recorded – 7
- 12– 15yrs - 7. Recorded – 3
- Child <12yrs – 22. Recorded - 9

VIDEO PERIOD

21 patients exam/GI dressing only:

7 full

14 part (8: 1st/2nd visit)

(Part = Mirror only in WR/ordinary chair/dental chair not reclined)

18 Treatment:

5 FS – no adjunct (child 3, young teen 2)

5 scaling (late teen/early 20s 4, adult 1)

- 4 no adjunct
- 1 IV

1 extraction – RA (young teen)

7 filling +/- other tx

- 3 no adjunct (child 2, young teen 1)
- 1 RA (late teen/early 20s) 4 previous GAs
- 1IV (late teen/early 20s) 3 previous GAs
- 2 GA (fill, ext, FS, S/P) (young teen 1, late teen/early 20s 1)

REQUIREMENT FOR GA

39 patients with ASD 27/01 – 15/05/15

2 GA /1 GA W/L

13 Previous GA. All significant caries on presentation aged 4-7yrs – need to pick up earlier

Conscious tx now feasible 7

- 4 No adjunct/RA
- 1 No adjunct/premed
- 2 IV

All ASD Patients Jan 2013 - June 2015

10 GA / 6 GA W/L currently

REQUIREMENT FOR GA

39 patients with ASD 27/01 – 15/05/15

ASD classes St. X Special School = Severe ASD + Mod/Severe/Profound ID

2 of 39 are current St. X pupils (Early teen 1, late teen 1)

1 IV

1 GA

GA necessary adjunct for remaining 10 St. X pupils if tx reqd

3 GA W/L, 7 caries free & unlikely to require GA

9 of 39 patients are former St. X pupils (Late teen/early 20s)

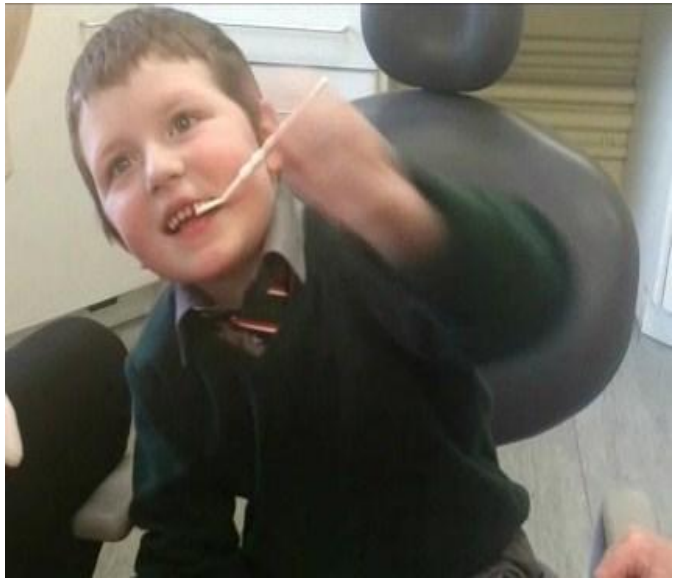
- 2 part exam – NTR
- 3 S/P no adjunct
- 1 fill RA
- 2 IV – 1 fill, 1 S/P
- 1GA

PARENTAL SUPPORT ESSENTIAL

REASSURANCE/MODELLING

A CHILD (WITH ASD)

- Make the child feel safe
- Harness the child's propensity for fun
- Make the child feel good about him/herself




Tooth Tips
Tooth Tips

Mol an óige agus tiocfaidh sí.

(Praise the young and they will blossom)