Auditing Learning Environments from a Sensory Perspective

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Presentation aims

• Explore the prevalence of Sensory Processing Issues
• Explore what we mean by sensory environment and sensory modulation
• Explore why we conducted a sensory audit
• Share outcomes from the Audit of Library Spaces and lessons learnt
• Recommendations
Audit Aims

• To identify what environmental barriers exist within Trinity College Libraries that impact on student’s occupational performance from a sensory perspective

• To explore what environmental changes can be made to the libraries to improve students’ experience of and engagement with them

• Make recommendations for improving the libraries for all students including those with sensory difficulties
Areas of the Libraries Audited

- Berkeley Counter
- Berkeley Orientation Foyer
- Berkeley 1st Floor
- Berkeley Basement and Learning Pods
- Lecky Library
- Ussher Library
- Hamilton Library
- John Stearne Library, St James’ Hospital
Prevalence of sensory processing difficulties

- 5-16% - ‘Neuro-typical’ children
- 40-60% - Adults and Children with ADHD
- 70-90% - Adults and Children with ASD

Fox et al. 2014
Why Audit?

- Higher Education Environments can be overwhelming (Johnson & Irving, 2008)

- Those with ASD & ADHD experience a range of difficulties in Higher Education Equally (Clince, Connolly & Nolan, 2016)

- Those with ASD and ADHD experience more sensory processing difficulties compared to peers without these diagnoses (Little et al, 2018)

- Significant research into areas of sensory difficulties from an individual perspective

- Previously successful individual coping strategies may not transfer easily to 3rd level (Johnson and Irving, 2008)
Why Audit?

- Dearth of information on what impacts the ‘sensory environment’
- Need for research into sensory difficulties from an environmental perspective identified (Lewis and Nolan, 2013)
- Need to make alterations to the sensory environment identified (Johnson and Irving, 2008)
- Sensory defensiveness can lead to increased anxiety and avoidance of areas that are overwhelming (Abernethy 2010, Pfeiffer and Kinnealy 2003, Yeger and Dunn 2011)
- Sensory difficulties reported as a main reason for non-attendance of lectures (Dillon, 2017)
Why Audit?

• Environmental factors can impact upon students with ASD’s participation in college life (Toor et al, 2016)

• Adapting the sensory environment for exam settings (low distraction venues) had positive results on concentration (Lewis and Nolan, 2012)

• Libraries identified as difficult to use for students with ASD (Slattery, 2012)
What do we mean by a sensory environment?
How do we modulate our environment?

‘...it requires grading one’s response to the degree, nature, or intensity of the sensory information.’ (Miller et al, 207 as cited by Schaaf et al, 2010)

Modulation difficulties can occur in ANY SYSTEM
What do we mean by Modulation Difficulties?

Modulation Difficulties

- Sensory Modulation Disorder
  - Under-Responsiveness
    - Passive Response: BYSTANDER
    - Active Response: SEEKER
  - Over-Responsiveness
    - Passive Response: SENSOR
    - Active Response: AVOIDER
If we understand the sensory environment we can............

• support a person’s occupational engagement,

• support adaptations of the environment,

• support the implementation of reasonable accommodations.
What do you do to escape the environment??
Visual

Smell

Auditory

Body Awareness/ Proprioception

Communication

Escape

Awareness of safety needs and Need for Training

Sensory Touch

Balance/Vestibular
Numbers registered with AS in Disability Service in Trinity

Autistic Spectrum 2008-2018

9 14 22 28 43 54 68 78 86 94
Numbers registered with ADHD/ADD in Disability Service in Trinity
FINDINGS
## Visual

<table>
<thead>
<tr>
<th>Feature</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bright colours</td>
<td>1/8 spaces</td>
</tr>
<tr>
<td>Clutter</td>
<td>3/8 spaces</td>
</tr>
<tr>
<td>Patterns</td>
<td>0/8 spaces</td>
</tr>
<tr>
<td>Blinds available</td>
<td>2/8 spaces</td>
</tr>
<tr>
<td>Fluorescent lighting</td>
<td>8/8 spaces</td>
</tr>
<tr>
<td>Sunlight</td>
<td>7/8 space</td>
</tr>
<tr>
<td>No natural light</td>
<td>1/8 spaces</td>
</tr>
</tbody>
</table>
Smell

This area not identified as a significant issue:

- Toxicity of smells: 0/8 spaces
- Polish/air fresheners/man made odours: 0/8 spaces
- Smells of other individuals using space:
  » Observed: 3/8 spaces
  » Possibility: 5/8 spaces
- Drift of offensive smells: 2/8 spaces
<table>
<thead>
<tr>
<th>Auditory</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>General noise level</td>
<td>5/8 space</td>
</tr>
<tr>
<td>Auditory hypersensitivity</td>
<td>8/8 spaces</td>
</tr>
<tr>
<td>Noise from flooring</td>
<td>3/8 spaces</td>
</tr>
<tr>
<td>Noise at different times of day</td>
<td>6/8 spaces</td>
</tr>
<tr>
<td>Specific quieter places</td>
<td>5/8 spaces</td>
</tr>
<tr>
<td>Difficulty with pitch of noises</td>
<td>5/8 spaces</td>
</tr>
</tbody>
</table>
Body Awareness / Proprioception

- Unnecessary obstacles in the way: 6/8 spaces
- Navigate by different colours: 5/8 spaces
- Differing heights to navigate: 8/8 spaces

- Desk positioning and space between desks
- Trolleys blocking access to books
Communication

Clear signs to indicate use of each room 2/8 spaces
Clear directional signs to each area 1/8 spaces
Alternative communication systems 0/8 spaces
Rooms with different functions 2/8 spaces
Use of photos/visual 4/8 spaces
Plan for routine changes 0/8 spaces
Communication Cont........

- In all areas there was poor or confusing signage and modes of orientation
- Alternative modes of communication such as picture of individuals they were going to meet such as subject librarian were poorly located
- Function of spaces not clear
- Directions confusing and not clear
- Mixture of old and new signs leading to confusion for students
- Rooms with multi functions and not clear as to their purpose
Escape

- System in place for escape: 0/8 spaces
- Space to escape to: 3/8 spaces
- Escape room sole purpose: 0/8 spaces
- Outside area quickly accessible: 1/8 spaces

Assistive Technology Space is lower stimuli than general library spaces
Awareness

Some ability to make changes but there are financial and design constraints

ASD/sensory issue awareness training up to date – No evidence of this
Sensory Touch

Colours of rooms – making it easier to navigate

Seating at various heights

Barrier free in middle of the floor i.e. free from clutter and bins etc

Temperature of the room too hot/too cold
Balance/Vestibular

- Environment suitable for movement seekers: 3/8 spaces
- Opportunity to go outside: 8/8 spaces
- Suitable for oversensitivity to movement: 1/8 spaces
Overall Findings of Audit

Audit showed that the difficulties tend to be in the areas of:

1. Auditory
2. Communication
3. Escape
What do we need to think about?
Lessons Learnt

• Communication
• Recognise the person as an expert.
• Include individuals with different processing needs in your audit process.
• Expert group to advise on sensory audit and suggest changes.
• Change the focus from one of deficit to participation and inclusion
Recommendations

• Add sensory questioning to the disability needs assessment process
• Use empowerment and Inclusive models.
• Frame outcomes in terms of QOL and meaningful occupation.
• Think about sensory processing needs/preferences
• Be clear in your communication
• Ensure the use of visuals to support sign posting
• Minimise distraction including reflective surfaces
• Think about the multiple use of space
• Create Safe (low sensory) Spaces
References


References contd


November 2018

Report of the Review of the Irish Health Services for Individuals with Autism Spectrum Disorders

Health Service Executive
The Use of SI in Unilink
An Emerging Population: Supporting Adults with ASD in Higher Education: The Occupational Therapists Role
COTEC – ENOTHE Congress-Galway 2016

Dr. Elizabeth McKay, PhD. FCOT, FHEA

1 & 2 Discipline of Occupational Therapy, Trinity College Dublin, the University of Dublin. 3. Brunel University London

Introduction & Background
Over the past ten years, the number of children and adults diagnosed with autism spectrum disorders (ASD) has increased dramatically (Olsson, et al, 2013). This is in part, related to increased recognition and identification of ASD (Wing & Potter, 2002), an increase in the prevalence of the disorder (Chakrabarti & Fombonne, 2005) and due to improvements in access and availability of early intervention services (Adreon & Durocher, 2007). According to Tantam (1991), the effects of ASD however are greatest in adulthood, with more and more adults presenting to mental health services in search of support. Equally so, there has been a huge increase in the number of students entering higher education with ASD, and this trend is expected to continue (Quinn, Gleeson & Nolan, 2014).

Transitions to a new role in higher education brings much change in a person’s occupational domains and for the person with ASD can present a myriad of challenges;
- academic,
- social,
- environmental,
- sensory.

Occupation and environments components could also be explored to support John’s occupational performance. In sessions, the OT and John explored ways of communicating and practiced role playing scenarios. They discussed how the occupation of socialising could be graded, by saying hello to someone in class, up to attending a society event. John had the opportunity to build his skills and competence and use the multiple environments to support his engagement in meaningful occupations.

Role of the Occupational Therapist in supporting Students with ASD
- To identify meaningful occupations for students with ASD
- Support the student to understand their sensory preferences and to develop and use strategies to support them in managing the sensory environment.
- Support students to utilise their skills and abilities to understand how, and when they can use them within the context of their student role.
- Encourage engagement in new experiences that are presented, by firstly exploring with the student what they
Perspectives of Adults Living With Autism Spectrum Disorder: Psychosocial and Occupational Implications

KRISTINE HAERTL
St. Catherine University, St. Paul, Minnesota

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SARA STROUF SHEPPARD
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The transition to employment: the perspectives of students and graduates with disabilities

Clodagh Nolan & Claire Irene Gleeson
Pages 230-244 | Received 27 Jan 2015, Accepted 20 Sep 2016, Published online: 06 Oct 2016

DOWNLOAD CITATION

https://doi.org/10.1080/15017419.2016.1240102

ABSTRACT

Education and employment are basic human rights and during the past decade in Ireland, the number of students with disabilities progressing through universities has dramatically increased as a result of improved support (AHEAD 2012. Survey on the Participation Rates of Students with Disabilities in Higher Education for the Academic Year 2011/2012, AHEAD). However, embarking on the transition from college to...
A pre-college transition programme for students with Autistic Spectrum Disorder in Ireland

Alison Doyle Educational Psychologist, Caerus Education.

Dr. Alison Doyle is a teacher, researcher and educational psychologist. She specialises in guidance and transition planning for children and young people with special educational needs and disabilities, focusing on the management of transitions between schools, college, and employment. She is currently researching supported transitions to employment for young people with intellectual disabilities, in association with Dublin City University. Alison has published ‘Planning Transitions for Young People with Special Needs and Disabilities, a workbook for secondary students and their families’ and her second book ‘Ready, Steady, Go! Planning the Move to Secondary School’ will be published in the spring of 2017.

Claire Gleeson Senior Occupational Therapist, Disability Service, Trinity College Dublin.

Claire qualified with a Bachelor of Science Honours Degree in Occupational Therapy from Trinity College Dublin. Claire has worked within the field of Mental Health and Autism, and has worked across all educational levels, from primary school to university. Claire currently works as a Senior Occupational Therapist in the Disability Service in Trinity. Claire also holds a Master’s of Science by Research from Trinity and a Post Graduate Advanced Certificate in Education from Queens University, Belfast, both specialising in the area of Autism Spectrum Disorders. Claire is currently undertaking a PhD which explores the lived experiences of women with Autism in their transition out of college. Claire is the Chairperson of the...
Autism Spectrum Support/Asperger's Syndrome Support

Trinity College Dublin, like many other third level institutions, has seen a rise in the number of students with disabilities accessing the university. In particular, one of the greatest demographic increases has been among students with Asperger's Syndrome (AS). Over the past five years the number of students with AS utilising supports from the Disability Service has increased six-fold, and Trinity College now has the highest number of students with AS in Ireland.

The Trinity College Disability Service has developed a suite of resources and supports for students with AS, which aim to support the student at all stages of their academic journey, from first day, to graduation, and into professional employment.

This website is divided into different sections, relating to each stage in the university journey: whether that is thinking about choosing courses, deciding to apply for a place, surviving the first year, or moving on to professional development.
Book by Tony Attwood
Book by Winnie Dunne

living
Sensationally
Understanding Your Senses
A to Z of ASD -
Websites with detailed lists of sensory processing strategies to support persons with ASD.

Sensory Processing Hints and Tips:

http://theinspiredtreehouse.com/sensory-processing-helpful-hints-information/

Sensory Integration Activities:

Other website resources

http://autismdigest.com/classroom-sensory-strategies/
www.autismspeaks.org
http://www.sensory-processing-disorder.com/
www.ace-centre.org.uk/html/resources/symbols/res02.htm
www.educateautism.com
www.autismteachingstrategies.com
http://www.sensory-processing-disorder.com/what-is-occupational-therapy.html
Thank you for listening.

Any questions?