A photograph of several pumpkins and autumn leaves on a wooden surface. The pumpkins are in various shades of orange and yellow, with some showing white streaks. The leaves are yellow and green. The background is a dark, textured surface.

Obesity and its relationship with trauma in people with Intellectual Disabilities: The role of re-traumatisation

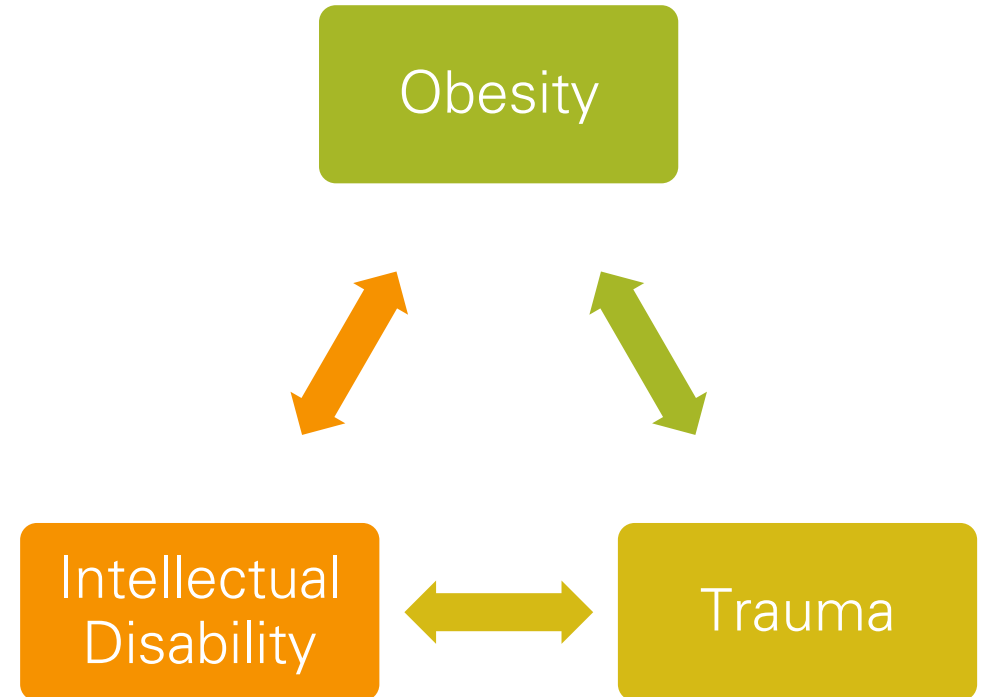
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Aims of the presentation

- 1. To describe the relationship between trauma, obesity and intellectual disabilities
- 2. To explore the potential role of trauma and re-traumatisation and their impact on obesity in people with intellectual disabilities



Obesity and its relationship with trauma



- Within neurotypical populations, extensive literature suggests a strong relationship between ***trauma exposure*** and obesity (46% increase in odds of being obese when exposed to multiple traumas / adversities in childhood)
- This relationship has been observed in toddlers, children, adolescents and adults
- Systematic reviews & meta-analyses of PTSD and obesity also suggest an association in ***trauma responses*** and obesity, and PTSD is likely to increase BMI (lifetime risk), with effect sizes ranging from small to large
- Obesity is considered a common 'response' to trauma exposure that has significant health implications, as well as being a risk factor for wider health pathologies
- Obesity and resulting health complications is likely in part to account for the life-limiting impact of trauma exposure

Obesity and its relationship with Intellectual Disability



- ♦ Adolescents with intellectual disabilities are
 - ♦ 1.54 times more at risk of being overweight
 - ♦ 1.8 times more likely of being obese
- ♦ Obesity in adults with intellectual disabilities are also more prevalent (38.3% vs. 28%) and morbid obesity (7.4% vs. 4.2%).
- ♦ Factors to account for this?
 - ♦ Gender
 - ♦ Specific types of intellectual disability present with an elevated risk
 - ♦ Genetic vulnerabilities
 - ♦ Familial / parental factors
 - ♦ Dietary habits
 - ♦ Sedentary lifestyles
 - ♦ Medication
 - ♦ Food as a coping strategy
 - ♦ Disruption to attachment bonds
 - ♦ The role of exposure to trauma?

Trauma exposure & obesity in people with Intellectual disabilities



Mehari et al., 2020 – US

- ♦ 2–7-year-olds, 75% male, parents reported ACEs.
- ♦ When income was considered ACEs didn't predict obesity
- ♦ Combined, ACEs and living below the poverty was associated with an increased risk of obesity

♦ **Morris et al., 2021**

- ♦ Adolescents, detained to secure services
- ♦ High prevalence for exposure to ACEs ($M=4.53$, $SD= 3.17$) obesity (41.2%).
- ♦ Strong positive association between number of ACEs and BMI.
- ♦ Those exposed to emotional and physical neglect, parental substance use or parental mental illness were at particular risk for obesity.
- ♦ A dose-response effect was also apparent; risk for obesity was two and five times higher for those with four or more and six or more ACEs, respectively

- ♦ BUT: Whilst exposure to trauma is a risk factor, the role of re traumatisation has been neglected

What is re-traumatisation?

- Events or practices that propagate or maintain collective / previous traumas that activate trauma responses, and is reticent of the initial trauma(s)
- Can be conscious or unconscious
- Re-traumatisation are broadly considered as reflecting ongoing lack of [psychological and physical] safety
- Scenarios that are reminiscent of previous trauma exposure
 - Sensory
 - Uniforms
 - Procedures / experiences
 - Relational (reenacting abusive / neglectful / disempowering experiences)
 - Invisibility
 - Environments
- It is associated with
 - activation of strong emotional and behavioural responses
 - Destructive coping mechanisms
 - Avoidance of healthcare services





The significance of re-traumatisation for people with intellectual disabilities

- Healthcare systems may inadvertently re-traumatise, through re-creating the conditions of 'original' traumas
- Given that people with intellectual disabilities often have long relationships with services, the concept of re-traumatisation is particularly relevant
- Experiences that can be framed as 're-traumatisation'
 - Experience caregiver disruption
 - Enter the 'looked after' children's system
 - Out of area placements
 - Experience abuse / harm / neglect within institutional care
 - Experience placement breakdowns
 - Experience multiple placement breakdowns
- Within care systems that are also likely to be exposed to the distress of peers, to restrictive practices, medications

Current study



Research Question

- What are the relative associations between ACEs, placement breakdowns and BMI in adolescents with intellectual disabilities?

Population

- Data was extracted for thirty-four adolescents (aged 13-20) detained to a secure specialist developmental disorder CAMHS service.

Methodology

- BMI was calculated from adolescents' most recent recorded weight and height measurements
- ACEs and placement breakdowns were assessed via a file review of patient records
- Placement breakdowns were defined as 'the early termination of or unplanned disruption in care which occurs as a result of either a failure to contain or ameliorate risk behaviours'

Weight characteristics of the population



Fig 1. Whole sample BMI profiles

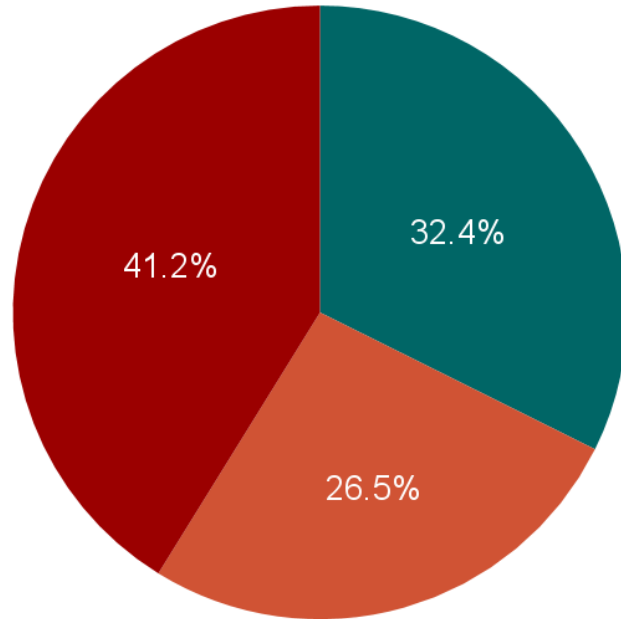
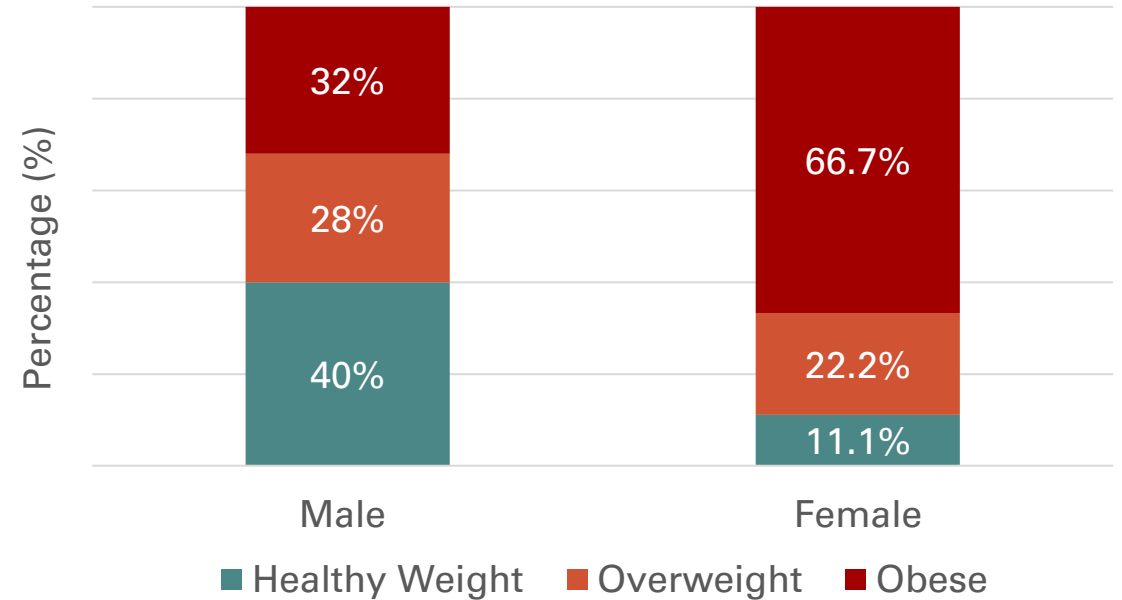


Fig 2. BMI profiles by gender



- More than two-thirds (67.7%) had a BMI above the healthy range. Of these adolescents, most (58.3%) had a BMI within the obese range.
- Females were particularly at risk for being overweight, and for being obese. The difference in BMI between gendered groups was significant ($U=174.5$, $p=.01$).
- BMI was not significantly associated with length of stay in inpatient services (current admission nor total admissions).

Trauma profiles of the population

88.2%

had experienced at least one type of ACE

58.8%

had experienced 4+ ACEs, with an average of 4.53 ACEs

38.2%

had experienced 6+ ACEs

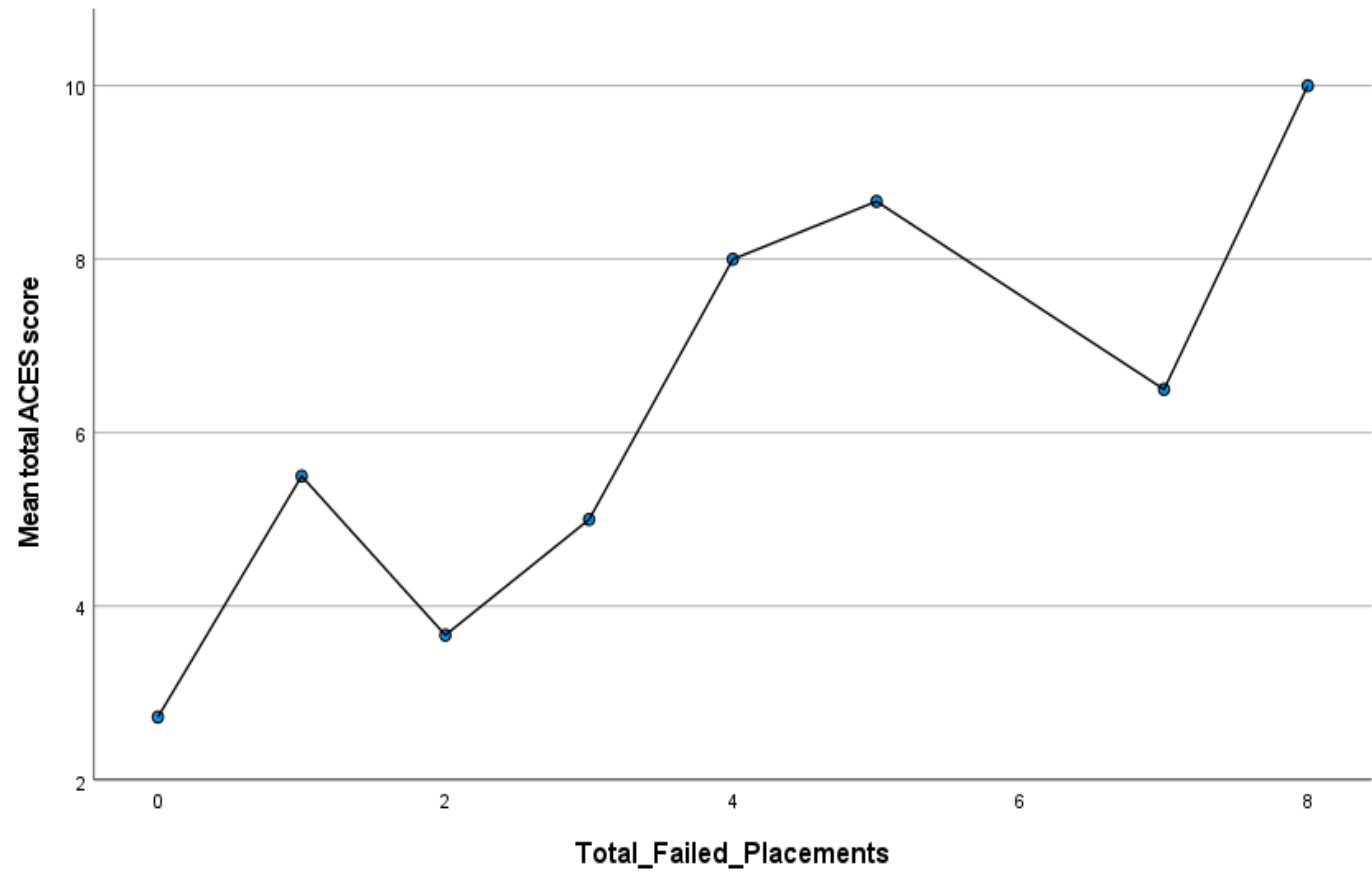
47.1%

had experienced a placement breakdown

87.5%

of whom experienced multiple, with an average of 3.94 breakdowns

Fig 3. Association between number of placement breakdowns and ACEs



BMI, ACEs and placement breakdowns



ACES

	Risk for being above a healthy weight (25 kg/m ² +)		Risk for being obese (30 kg/m ² +)	
	OR	RR	OR	RR
Experienced 6+ ACEs				
Yes (n=13)	10.91	5.74	-	-
No (n=21)	0.92	0.53	-	-

PLACEMENT BREAKDOWNS

	Risk for being above a healthy weight (25 kg/m ² +)		Risk for being obese (30 kg/m ² +)	
	OR	RR	OR	RR
Placement Breakdown				
Yes (n=16)	3.47	2.07	3.34	1.84
No (n=18)	0.29	0.60	0.30	0.55

BMI, ACEs and placement breakdowns



DIRECT ACEs

Variable	β	t	R ²	Δ R ²
Step 1			.14	.14
Direct ACEs	.37	2.24*		
Step 2			.24	.10
Direct ACEs	.06	.27		
Placement Breakdowns	.45	2.05*		
Step 3			.24	-.00
Placement Breakdowns	.49	3.16**		

HOUSEHOLD ACEs

Variable	β	t	R ²	Δ R ²
Step 1			.12	.12
Household ACEs	.35	2.13*		
Step 2			.25	.13
Household ACEs	.15	.82		
Placement Breakdowns	.41	2.31*		
Step 3			.24	-.02
Placement Breakdowns	.49	3.16**		

- When entered alone, both direct and household ACEs were significant predictors of BMI.
- Addition of placement breakdowns into the model nullified their effect, and accounted for 24% of the variance in BMI
- No interaction effect of ACEs and placement breakdowns on BMI was found.

Summary of Findings



- ACEs were highly prevalent in the sample, especially in females
- 2/3s of the sample reported a BMI's outside of the healthy range
- BMI was not related to length of stay or total time in services
- Placement breakdowns were also prevalent
- ACEs (both direct and indirect) predicted BMI, BUT when placement breakdowns were considered, the effect of ACEs was nullified
- Experiencing a placement breakdown at a categorical level increased the risk of being obese
- Placement breakdowns, as a continuous variable (multiple) predicted obesity, above ACEs

Mechanisms that may account for the relationship between trauma and obesity in people with intellectual disabilities



- ♦ Systematic reviews cite that the most common explanations for this relationship are
 - ♦ social disruption,
 - ♦ health behaviours,
 - ♦ chronic stress response (often cited in the context of attachment difficulties)
- ♦ Additional paradigms of interest are:
 - ♦ Alterations in the hypothalamo-pituitary-adrenal (HPA) axis
 - ♦ Deficits in response inhibition and working memory (impulse suppression)
 - ♦ Evolutionary response (food insecurity in the context of neglect)
 - ♦ Self soothing / comforting response

Clinical Implications



- When assessing obesity consider the role that trauma and re traumatisation may play in weight outside of the healthy range (factor also in management approaches)
- Obesity may be a potential marker for previous and current adversity
- Consider screening for placement breakdowns in new assessments for services
- Consider conducting audits within your own services about the prevalence of placement breakdowns and their relationships with wellbeing (psychological and physical) and introduce monitoring processes
- In mental health services, the current findings suggest that physical health sequelae should have parity with psychological impacts

Next steps



- ♦ Findings need replicating, with different neurodiverse populations
- ♦ Wider forms of 're traumatisation' need to be explored to assess whether placement breakdowns are apart of a wider class of 're traumatising' experiences
- ♦ The mechanisms that account for this relationship need to be explored in order to support interventions to mitigate their impact



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Key references



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