**BDA CAMHS sub-group meeting**

**Thursday 25th April 2024**

**Research paper summaries from Dr Elizabeth Roberts**

Here are five papers we will talk about with a short summary of each:

PAPERS:

1.

Frostad et al 2022, BMI at Discharge from Treatment Predicts Relapse in Anorexia Nervosa: A Systematic Scoping Review: [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9144864/](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.ncbi.nlm.nih.gov%2Fpmc%2Farticles%2FPMC9144864%2F&data=05%7C02%7Cbkpatel%40stah.org%7Ce7ca67bbb8e340bb406a08dc5fa483ea%7Ce2247d949c5440ae98ad6ce6ba7bcbad%7C0%7C0%7C638490407405898041%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=qMYV2KKjegTQ%2BrriBIiG8bJXISeBrLEauDsqM0bwSQg%3D&reserved=0)

Nineteen publications met the criteria and included 1398 AN patients and 39 healthy controls (HC) from adults and adolescents (ages range 11–73 years). Sample sizes ranged from 16 to 191 participants.

Two high quality studies found a low percentage of body fat to be a predictor of relapse [33,38], whereas one low quality study did not [30].

Two high quality studies found levels of leptin at discharge to be a predictor of relapse [26,33], while one moderate quality study did not [25].

Summary: In the 19 included of adults and children, “BMI or measures of body fat and leptin levels at discharge were the strongest predictors of relapse with an approximate relapse rate of 50% at 12 months.”

2.

Yilmaz et al 2018, Developmental Premorbid Body Mass Index Trajectories of Adolescents With Eating Disorders in a Longitudinal Population Cohort: [https://www.jaacap.org/article/S0890-8567(18)32042-2/abstract](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.jaacap.org%2Farticle%2FS0890-8567(18)32042-2%2Fabstract&data=05%7C02%7Cbkpatel%40stah.org%7Ce7ca67bbb8e340bb406a08dc5fa483ea%7Ce2247d949c5440ae98ad6ce6ba7bcbad%7C0%7C0%7C638490407405906989%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=XEHBohHG8tC9x5Ku%2BY8GOIv0zq1W9IZ1yROvxd5xhkM%3D&reserved=0)

Using a subsample from the Avon Longitudinal Study of Parents and Children (N = 1,502), random-coefficient growth models were used to compare premorbid BMI trajectories of individuals who later developed anorexia nervosa (n = 243), bulimia nervosa (n = 69), binge-eating disorder (n = 114), and purging disorder (n = 133) and a control group without EDs or ED symptoms (n = 966). BMI was tracked longitudinally from birth to 12.5 years of age and EDs were assessed at 14, 16, and 18 years of age.

The average growth trajectory for individuals with later anorexia nervosa veered significantly below that of the control group before 4 years of age for girls and 2 years for boys. BMI trajectories were higher than the control trajectory for all other ED groups. Specifically, the mean bulimia nervosa trajectory veered significantly above that of controls at 2 years for girls, but boys with later bulimia nervosa did not exhibit higher BMIs. The mean binge-eating disorder and purging disorder trajectories significantly diverged from the control trajectory at no older than 6 years for girls and boys.

Conclusion: in general (there will be exceptions), adolescents who develop anorexia are leaner than their peers before the disease appears. Getting them back to their pre-illness trajectory, at the very least, means they will mostly still be lean.

This also reflects Eva Musby’s position of have this in mind with growth trajectories – leaner people are known to be at greater risk of anorexia, which might just mean they are genetically determined to be leaner, but there is also a risk that child/young person started to lose weight well before anyone noticed.

3.

Steinberg et al, 2023, Evaluating differences in setting expected body weight for children and adolescents in eating disorder treatment: [https://onlinelibrary.wiley.com/doi/full/10.1002/eat.23868](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fonlinelibrary.wiley.com%2Fdoi%2Ffull%2F10.1002%2Feat.23868&data=05%7C02%7Cbkpatel%40stah.org%7Ce7ca67bbb8e340bb406a08dc5fa483ea%7Ce2247d949c5440ae98ad6ce6ba7bcbad%7C0%7C0%7C638490407405914702%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=JQqHoPRO2GOQkVC%2B5iXlYouW1zJ00rj6%2FfnTa0xVE2s%3D&reserved=0)

The individualized approach led to significantly higher EBW on average (mean difference = 8.4 lbs [SE: .75]; p < .001) compared to mBMI; 70% of patients had a higher EBW using the individualized approach. (I think they were aiming for 100%mBMI, although I couldn’t find this explicitly stated in the paper, unless I missed something.)

4. Maurel, MacKean and Lacey, 2024. Factors predicting long-term weight maintenance in anorexia nervosa: a systematic review: [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10998787/](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.ncbi.nlm.nih.gov%2Fpmc%2Farticles%2FPMC10998787%2F&data=05%7C02%7Cbkpatel%40stah.org%7Ce7ca67bbb8e340bb406a08dc5fa483ea%7Ce2247d949c5440ae98ad6ce6ba7bcbad%7C0%7C0%7C638490407405921788%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=QmPyI5YV28Q82YExAk1AHF0n25Jfze7KWwb21tFAod4%3D&reserved=0)

There was a range of weight maintenance definitions across the studies, with different definitions for both adult and adolescent samples. Eleven studies used a measure of between BMI ≥18 and 19.5 [26–33, 35–37], whilst Forman [34] used > 85% median BMI (%mBMI). (!!!!)

Follow-up ranged from 6 months to 5 years. Six studies provided measures of weight between discharge and follow-up to ensure weight maintenance was sustained during the given time period [27, 28, 30, 31, 35, 38]. Furthermore, three studies defined the time in weight maintenance needed for a patient to be considered in ‘maintenance’, specifying a requirement ranging from 4 to 8 consecutive weeks [27, 28, 30]. (!!!!)

Findings:

The most common finding was that BMI at discharge from inpatient treatment significantly predicted weight maintenance at follow-up... women with a higher BMI at discharge from intensive treatment (inpatient or day patient) were more likely to maintain their weight at 6- and 12-month follow-up.

Forman [34] found that %mBMI was a significant predictor of weight maintenance at 1-year follow-up in a sample of adolescents and young adults, such that for each 5% increase in baseline %mBMI, patients were 1.69 times more likely to reach weight maintenance.

The most common significant finding across studies was that BMI at admission and discharge from inpatient treatment significantly predicted weight maintenance across both adult and adolescent samples.

5. The Accurso et al (2020) paper I have shared previously, in case anybody hasn’t had it before: [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7269124/](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.ncbi.nlm.nih.gov%2Fpmc%2Farticles%2FPMC7269124%2F&data=05%7C02%7Cbkpatel%40stah.org%7Ce7ca67bbb8e340bb406a08dc5fa483ea%7Ce2247d949c5440ae98ad6ce6ba7bcbad%7C0%7C0%7C638490407405927840%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=5C6Zhf54txOxha2dISA4sNYQIdTzIjVWtg8DAFxA21s%3D&reserved=0) (free to access)

387 parents and caregivers from 21 countries were interviewed, including the UK. Parents and caregivers were asked open-ended questions about what they thought recovery meant for their child. Just over ¾ of the children and adolescents were recovered at the time the survey took place and their children were diagnosed on average 4.96 years before the survey date. This means that the majority of parents and caregivers were able to look backwards, at what recovery means after recovery has happened.

Caregivers free-text responses were organised into “domains”. These domains were:

Physical recovery (weight, “vitals”, menses, growth, bone density)

Social recovery (withdrawal/isolation, able to socialize with peers)

Emotional recovery (including mood)

Behavioral recovery (eating and compensatory behaviours)

Cognitive recovery

49.4% of parents surveyed reported that “Higher than predicted weight” was necessary for recovery.

Social and emotional recovery occurred on average 3 pounds higher than the weight at which physical recovery occurred.

Overall recovery, behavioral recovery, and cognitive recovery occurred about 6–7 pounds higher than the weight at which physical recovery occurred.

Weight gain for those who achieved full behavioral recovery was greater than those who achieved only partial behavioral recovery.

Here are two Eva Musby blogs I recommended. She has recently updated these I noticed for those who have seen them a while ago.

Eva Musby blogs:

WEIGHT-RESTORATION: WHY AND HOW MUCH WEIGHT GAIN?

[https://anorexiafamily.com/weight-restoration-eating-disorder/](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fanorexiafamily.com%2Fweight-restoration-eating-disorder%2F&data=05%7C02%7Cbkpatel%40stah.org%7Ce7ca67bbb8e340bb406a08dc5fa483ea%7Ce2247d949c5440ae98ad6ce6ba7bcbad%7C0%7C0%7C638490407405934133%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=NCdZ3LtIRgaglBwAHSZeIx2g4VqGgHHTa0O2IVBu5c8%3D&reserved=0)

I love her quote: “it's as imprecise as a weather forecast so don't get caught up in numbers.”

WHAT DO BMI AND WEIGHT-FOR-HEIGHT MEAN?

[https://anorexiafamily.com/bmi-weight-for-height-wfh/](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Fanorexiafamily.com%2Fbmi-weight-for-height-wfh%2F&data=05%7C02%7Cbkpatel%40stah.org%7Ce7ca67bbb8e340bb406a08dc5fa483ea%7Ce2247d949c5440ae98ad6ce6ba7bcbad%7C0%7C0%7C638490407405940434%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=oamue9d1vHKTV5pAmwmxsS7W4%2BnbhzA0g%2FELBc4VqDE%3D&reserved=0)