Step 1/Sample Descriptives: Characterize parameters in the sample(s) (< 13 years)

1. N retained with >2 BMIz datapoints
   * ALSPAC : % of datapoints that are parent report and % that are objectively obtained
   * Mean and SD of all parent report BMIz; Mean and SD of Objectively obtained
2. Year-over-year autocorrelation
3. N datapoints (mean, SD)
4. Within-subject BMIz Mean, SD
5. N of subsample with BMIz and ED data at future timepoints
6. Identify individuals with ED symptoms prior to age 13 – remove them from analysis
7. Identify matching BMIz and ED measurement timepoints
   * Identify Ns at each timepoint
   * Within subsample: identify ED symptom rates and N endorsing at these timepoints, both males and females
     + Binge Eating (Monthly+, Weekly+)
     + Purging (Monthly+, Weekly+)
     + Fasting (Monthly,+ Weekly+)
     + Maladaptive Exercise (ALSPAC – as per 2022 paper; ABCD ??)
     + Fear of Weight Gain
       - How are we thresholding?
     + Body Dissatisfaction
       - How are we thresholding?
     + Dietary Restriction
       - How are we thresholding?

STOP. Step 2: Pre-register

Step 3/Aim 2: Identify cohort of children with 3+ childhood BMI z measurements (< age 13) and at least one BMIz and ED measurement (age 13+). Compute eBMIz and drop using different thresholding

1. Identify individuals with at least one concurrent BMIz and ED measurement age 13+
2. Start with first datapoint after age 13 where BMI is collected
3. Define BMIz reductions and elevations using:
   1. Mean
   2. Most recent
   3. Mean+ Most Recent
   4. Maximum
4. Identify BMIz loss, stable, or gain, thresholding at +/- 0.5, +/- 1, 80%, 95%, and 99% windows: contrast code as loss, stable, gain – use stable as reference group (this will lead to 4 eBMIzs for each individual and 5 thresholds for each of those eBMIzs
   1. Report Ns and rates using all choices
   2. Report descriptives for differences between eBMIz and true BMIz, and % within ranges (mean, median, sd)
   3. If best avail used: Examine potential difference between reporters (parent / self vs. objective)
5. Identify participant absolute weight status: OW (BMIz 1+); ‘Normal Wt’ (+/- 1) UW (BMIz -1 or less). Contrast code as UW, NW, OW, use NW as reference group
   1. Report Ns and rates
   2. If best avail used: Examine potential difference between reporters (parent / self vs. objective)
6. Complete crosstabs on Weight status and eBMI loss, stable, gain
   1. Are these getting at similar vs. different groups?
7. Do the 2-6 for the next timepoint

Step 4/Aim 3: Evaluate the degree to which weight status vs. weight changes are associated with ED symptoms in adolescence

1. Compute association using continuous BMIz & eBMIz differential as well as thresholds. \*\* If N endrorsing symptoms at higher severity is enough
   1. ABCD – see what data we have -- potentially pick MOST RECENT for each individual and complete on this. Will clarify after aim 1
   2. ALSPAC – % endorsing each ED behavior at 14, 16, and 18