Outlier Removal Process for Daily Weights Data – Drift 2 Database

*Note: Due to Covid-19 restrictions, there was a slightly different process of removing outliers between cohorts 1,2 and cohort 3.*

1. Initial changes to data based on researchers’ direction
   1. Participant Drift2 Staff was removed as this was a researcher’s data who was not in the study
   2. Participant CWE-124 was removed as this participant was an early withdrawal.
   3. Participants JUT-032 and KCE-034 are husband and wife. They interchanged scales. Thus, weights under 215 were assigned to KCE-034 and all other weights were assigned to JUT-032.
   4. Participant weights from YOL-103 were combined with YOR-103. These belong to the same participant, but the participant had a name change.
2. Removing Outliers from Cohorts 1 and 2
   1. For the first 16 weeks, participants had class weights recorded by the researchers every week. After 16 weeks, participants came every two weeks.
   2. To establish a baseline for participant weights, we used the researcher verified weights. We wanted to have two potential weigh-ins in each period. To ensure this, we broke up periods into eight 15-day periods and the remainder of the periods were broken up into 30-day periods.
   3. For the first 8 periods, we removed any weights that were 5% lower or higher than the mean of the researcher verified weights for that period.
   4. For the remaining periods, since the duration of the period was longer, we removed weights that were 10% higher or lower than the mean of the researcher verified weights for that period.
   5. We only took one observation from each day. If there were multiple observations on the same day, the weight that was closest to the mean of the researcher verified weights for that period was kept.
3. Removing Outliers from Cohort 3
   1. Researcher classes proceeded normally for the first 18 weeks of the study and then were interrupted due to Covid-19 restrictions. After this point, researchers took Bluetooth weights as class weights and thus, they were not verified with researcher scales.
   2. To establish a baseline for participant weights, we used the researcher verified weights (class weights and outcome weights). For cohort 3, we broke up the periods in to seven 15-day periods, one 30-day period, and a remainder period. By doing this, we were able to collect researcher verified weights for each period either through class weights or outcome weights for most participants.
   3. For the first 7 periods, we removed any weights that were 5% lower or higher than the mean of the researcher verified weights for that period.
   4. For the remaining periods, since the duration of the period was longer, we removed weights that were 10% higher or lower than the mean of the researcher verified weights for that period.
   5. We only took one observation from each day. If there were multiple observations on the same day, the weight that was closest to the mean of the researcher verified weights for that period was kept.
4. Additional Outlier removal based on researcher verified information.
   1. For participant AKI-011, researcher verified that weights from the following dates were not accurate and thus were removed: 01/26/2019, 04/20/2019, 06/11/2019, 09/09/2019.
   2. For participant LBU-015, the researcher verified with participant that weights remained in the 170s range and that all other weights were her husbands. After removing outliers, there were still weights that registered as outliers after day 400 and thus all of those weights above 182 were removed as outliers.
   3. For participant NEL-094, researcher made the educated assumption that all weights under 240 did not belong to the participant and thus, those weights were removed as outliers.
   4. For participant PBE-123, researcher made the educated assumption that all weights under 185 did not belong to the participant and thus, those weights were removed as outliers.
5. Lastly, all withdrawal participants were removed from the dataset.