

Junior Crush Result Analysis

I measured the grip strength of the TCA Junior Bouldering Squad and collected other demographic data to see if anything interesting popped up. Full parental consent was sought and pre-test advice was issued as well as on-going support if required. This information was checked out by my friend at the University and deemed to be fit for purpose.

Regarding my calculations there was no clever statistical analysis – just number crunching.

Assumptions

There is an obvious correlation with grip strength to age, size, gender and to a lesser extent grade. This is a preliminary study to confirm this but more importantly to compare with adult results to see if there is any significant differences.

Notes on data

A sample size of 15 (5 female, 10 male)

Age range; 11-16 years, mean age 13.8

Years climbed; 1 – 10 years, mean 4.1

Grade climbed; 6a – 8a, mean 6c, median 6b, mode 6b

There were 4 incidences of finger/hand injury within the group – these were described as insignificant.

Notes on data

There was a correlation between grade climbed and grip strength but this also correlated with age so would need a larger sample and some clever maths to distinguish the two.

Comparisons with adult data

- The young climbers gave a greater range of readings between the 3 times measured on each hand – averaging a range of about 5kg. Some as high as 8kg. Adult readings are much more consistent.
- Less than a third of the climbers recorded stronger reading on their 3rd test than their 1st. The 3rd reading would often be considerably lower than their 1st suggesting quicker onset of fatigue or boredom.
- The junior females were matching adult females at aged 13 even when taking into account grade and years climbed. Only 2 adult females were significantly stronger but they did not climb at a harder grade.

Next step

A longitudinal study measuring strength against growth would be good. It would need 20 willing participants, regular meets, growth charts, a dynamometer and a willing physio.