
Children's Health

Case Study 4

What is a Z score?

Z-Score

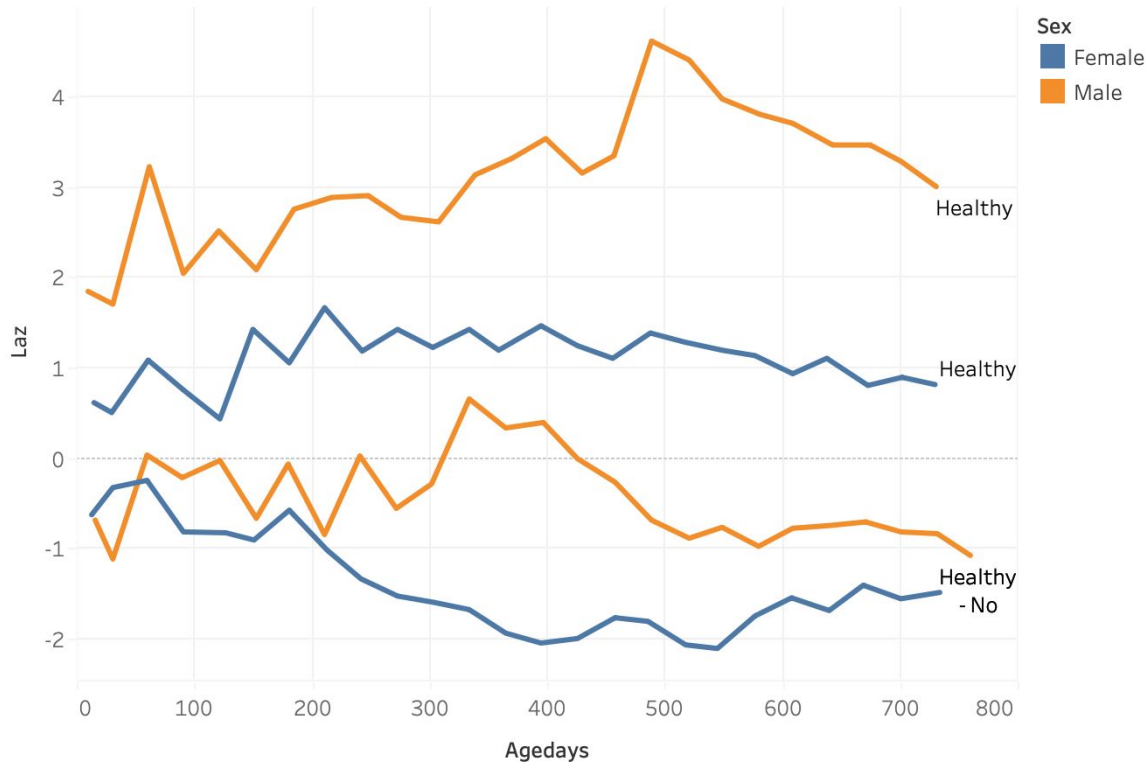
- The formula for calculating a z-score is $z = (x - \mu) / \sigma$
- x is the raw score
- μ is the population mean
- and σ is the population standard deviation

Length Adjusted Z-Scores

Takeaways

- The males tend to get better over time
- The females tend to be more consistent in their health over time
- The lower two are unhealthy because they aren't as tall as everyone else

Length Adjusted Z-scores



Agedays vs. Laz. Color shows details about Sex. The marks are labeled by Subjid and In / Out of Subjid Set. The data is filtered on Laz, which keeps non-Null values only. The view is filtered on Subjid, which keeps p_0a75432ec142ab99, p_0b3712a6ac967752, p_2bbf210325d1d47f and p_6b8b8baf076813b3.

Distribution of Heights

Takeaways

- South Africa has higher height z-scores than other countries
- India has the lowest heights but isn't far behind Nepal and Bangladesh
- Each dot is a child's adjusted z-score height at day 365

Distribution of Heights



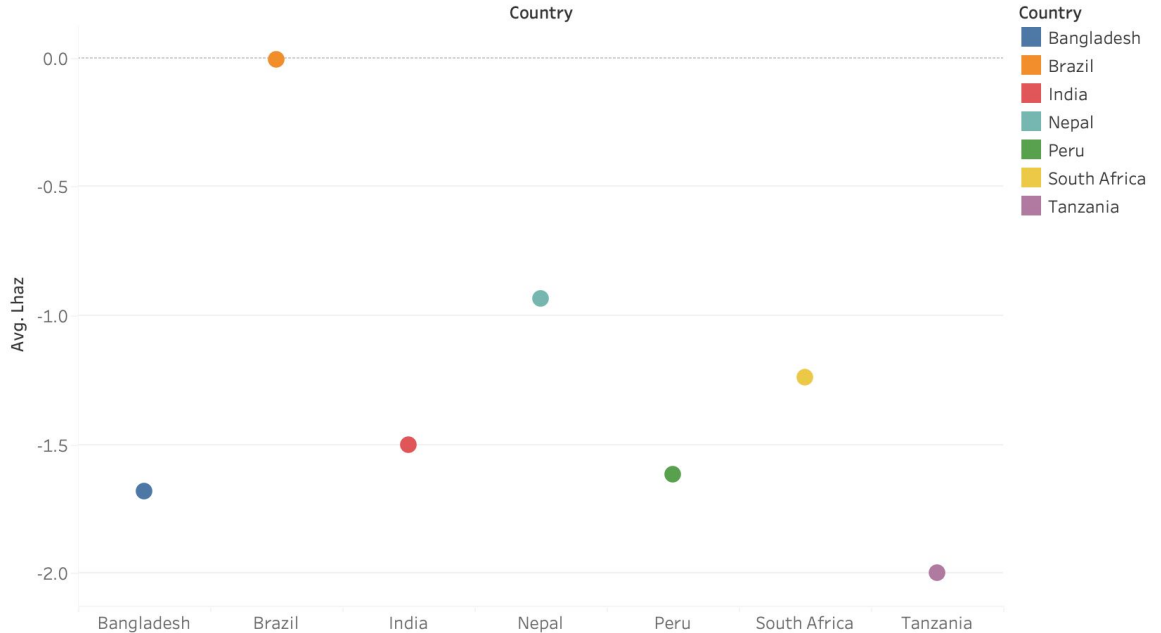
The trend of sum of Hcaz for Country. Color shows details about Country. Details are shown for Subjid. The data is filtered on Agedays, which ranges from 365 to 365. The view is filtered on Country and Subjid. The Country filter excludes Pakistan. The Subjid filter keeps 2,145 of 2,145 members.

Which Countries are Healthiest?

Takeaways

- Brazil tends to be the healthiest
- Tanzania has the lowest overall health average would be due to: poor medical practices, malnourishment, and other common causes

Visualization of Health



Average of Lhaz for each Country. Color shows details about Country. The data is filtered on Agedays, which ranges from 365 to 365. The view is filtered on Country, which excludes Pakistan. -Averages were taken at day 365

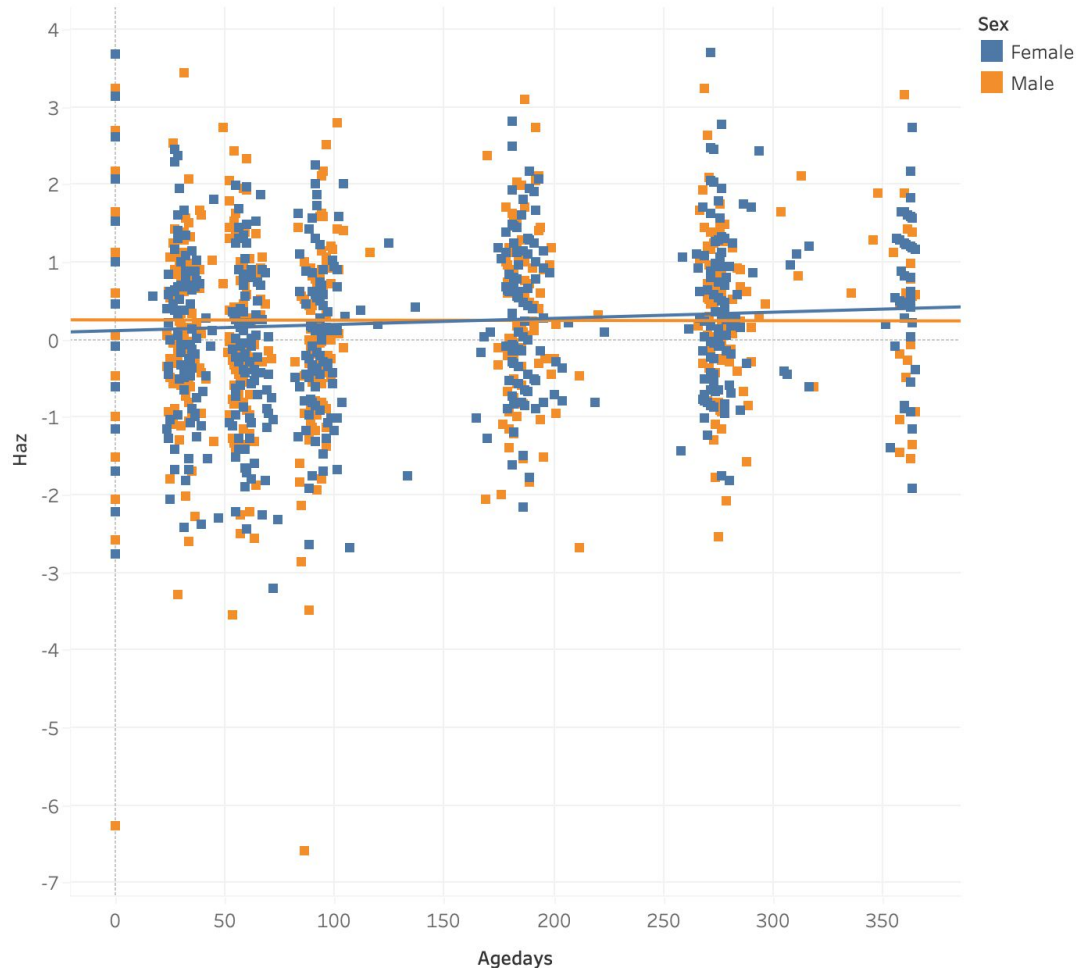
The Dutch

Takeaways

- Females tend to be born with lower heights, yet grow more rapidly over time than males do
- It could be genetics for the cause of faster growth

Source: Tableau childhealth_maled

Heights of Dutch Children



Agedays vs. Haz. Color shows details about Sex. The data is filtered on Agedays, which ranges from 0 to 365.

What is the Overall Health?

Health

Assumptions can be made, however, the overlining theme of this data is that children's health have naturally been declining over the years. In many provinces, different health models have been provided to show only a glimpse of what is happening. More information is needed to come to a conclusion on children's' health. Possible culprits of the decline in health are: , lack of medical attention, poor sanitary measures, and malnutrition.