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# Children's Health

## Case Study 4

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# What is a Z score?

## Z-Score

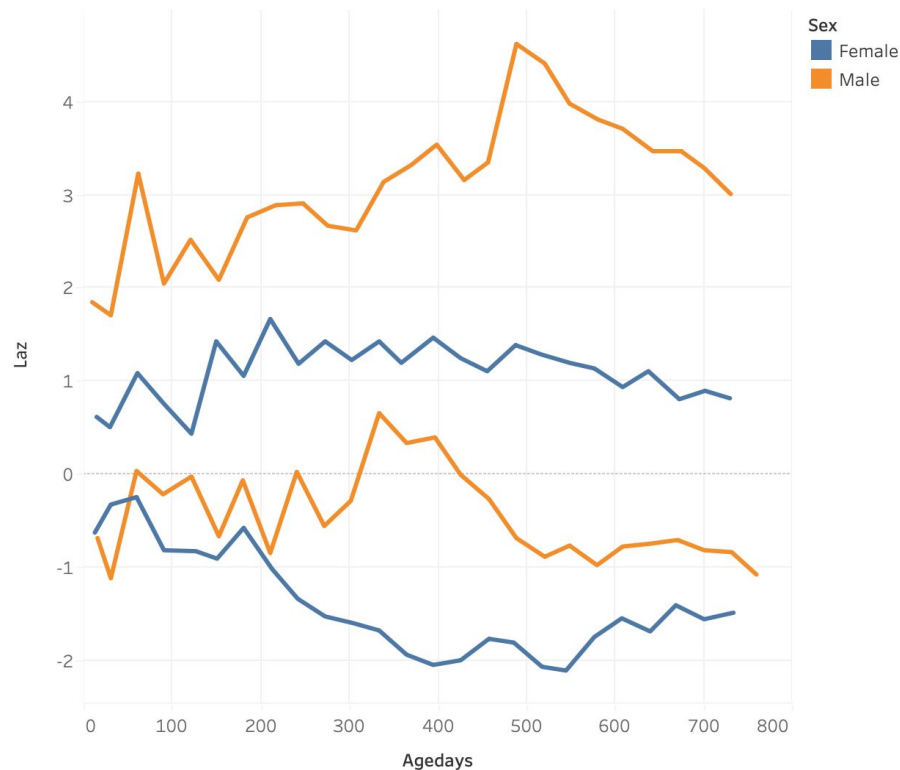
- The formula for calculating a z-score is  $z = (x - \mu) / \sigma$
- $x$  is the raw score
- $\mu$  is the population mean
- and  $\sigma$  is the population standard deviation

# 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

Length Adjusted Z-scores



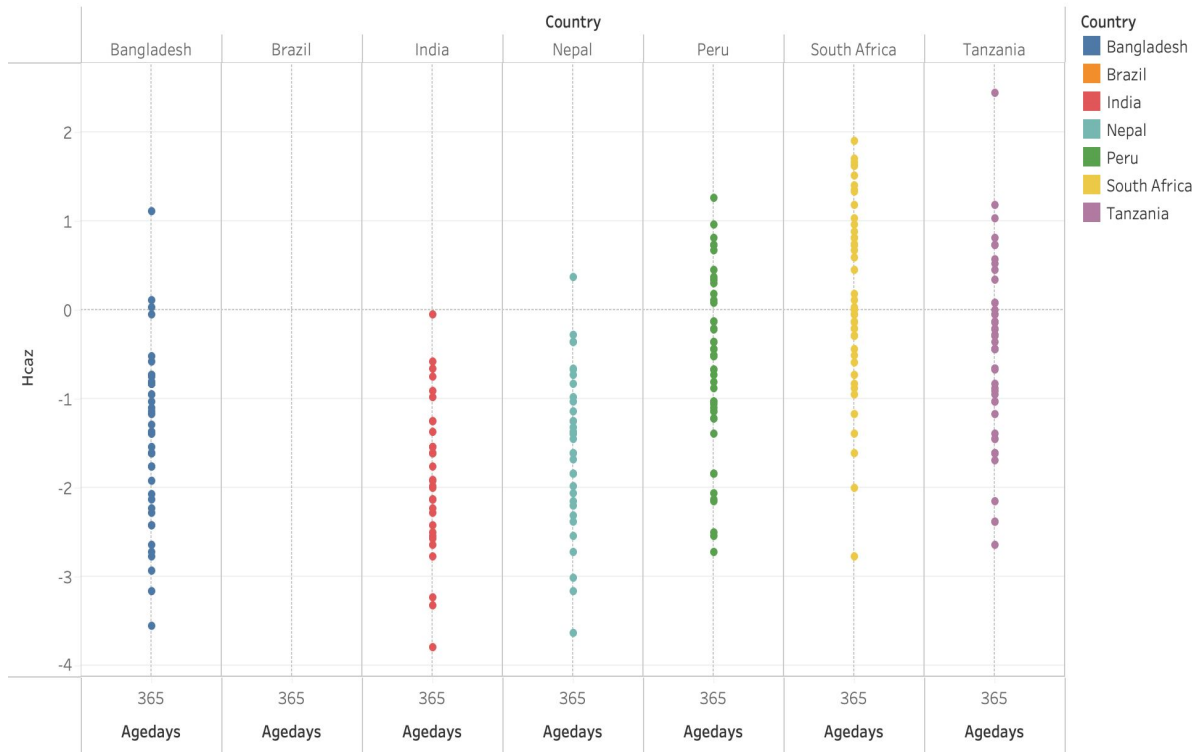
Agedays vs. Laz. Color shows details about Sex. Details are shown for Subjid. The view is filtered on Subjid, which keeps p\_0a75432ec142ab99, p\_0b3712a6ac967752, p\_2bbf210325d1d47f and p\_6b8b8baf076813b3.

# Distribution of Heights

## Takeaways

- South Africa has higher height z-scores than other countries
- India has the lowest height z-scores than the rest of the countries which is cause for concern

Distribution of Heights



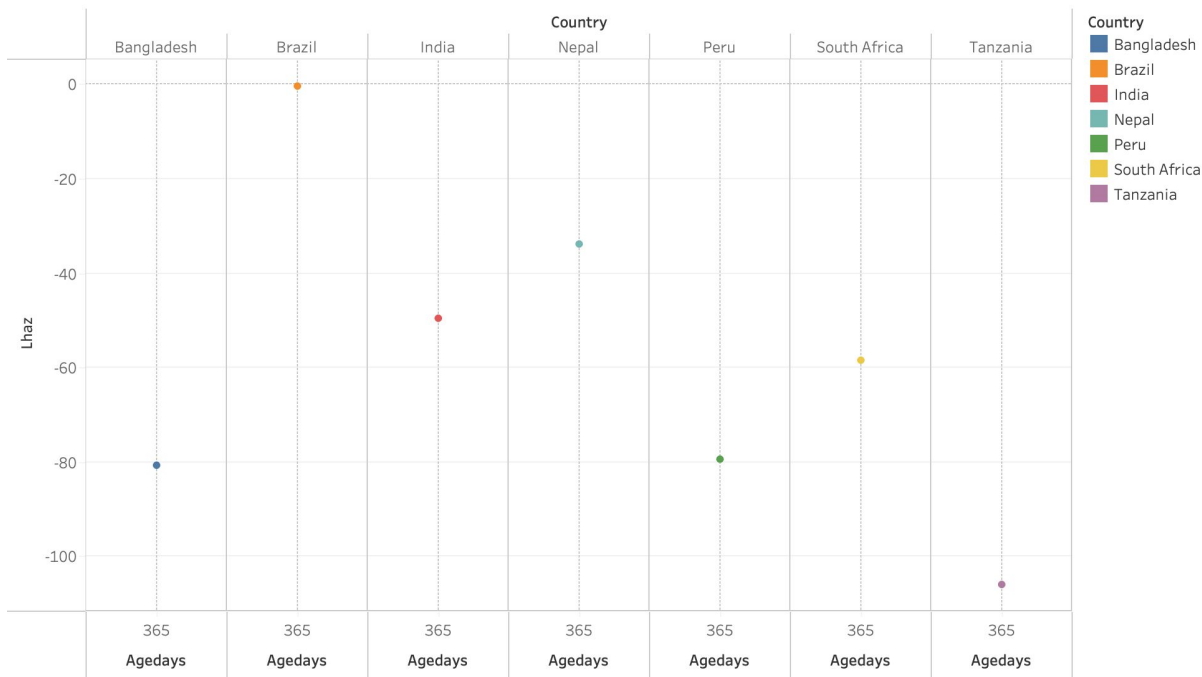
The trend of sum of Hcaz for Agedays broken down by Country. Color shows details about Country. Details are shown for Subjid. The view is filtered on Country, Subjid and Agedays. The Country filter excludes Pakistan. The Subjid filter keeps 2,145 of 2,145 members. The Agedays filter ranges from 365 to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

# One Year in Health Chart

## Takeaways

- Brazil seems to be the healthiest when it comes to height and length
- Tanzania is the lowest which is major cause of concern due the lower than normal height rates: this could be due to malnourishment or others causes of stunted growth

Visualization of Health



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

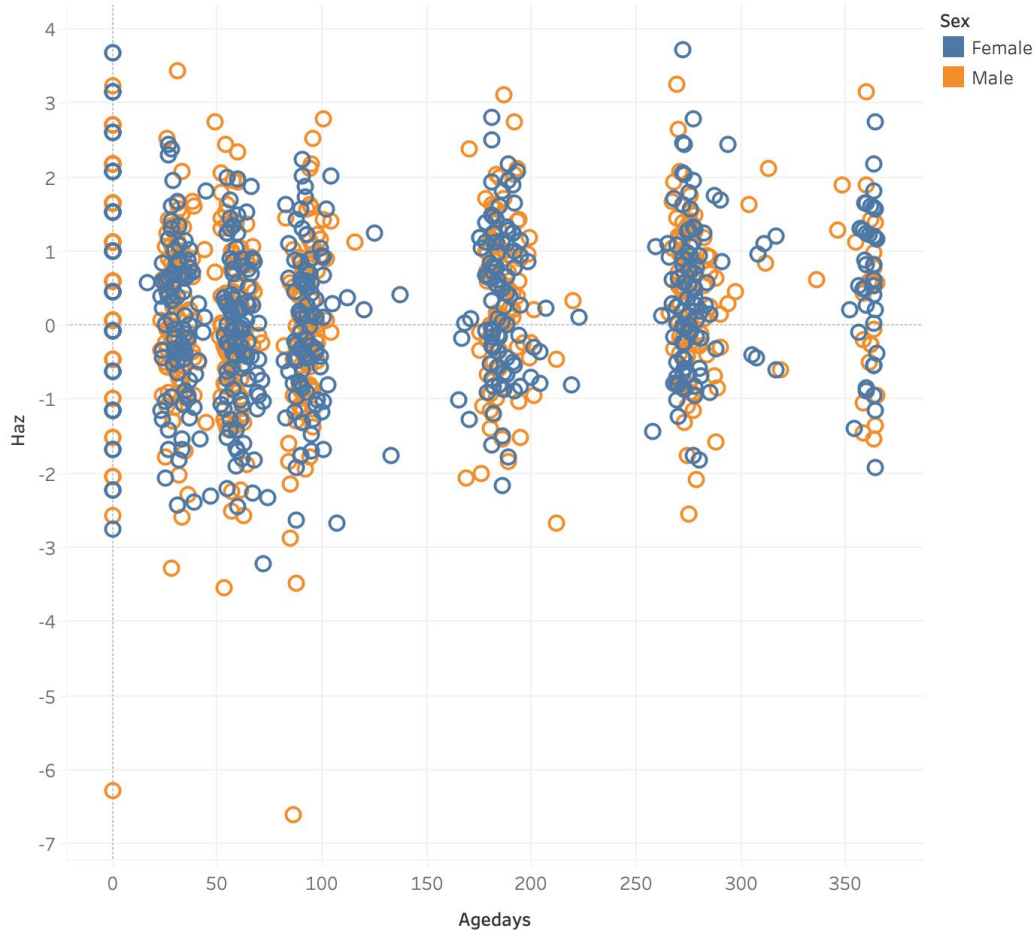
# Visualizing Health

## Takeaways

- One slide should show a plot of the heights of the Dutch children over time. Take the time to describe the key takeaways about their 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

This is an overview showing the health of young children over their first few years. In many provinces, different health models of the over all populations have been made. Some assumptions can be made, however, the overlining theme of this data is that children's health have naturally been declining over the years. This could be due to a lack of medical attention, sanitary measures, and/or malnutrition.