Is there an age difference in color naming?

Are people able to name more colors as they age?

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# Hypothesis:

People can name more colors as they age regardless the language they speak

# Dataset

- Data types:
  - Number of distinct colors speaker can name
  - Speaker's age

- Data preparation:
  - Remove problematic data points
  - Use samples that have more than 15 participants for each language group
  - Remove samples that have biased age distribution

# Methods:

- Find the **<u>correlation score</u>** between age and average number of color names for each language and across language.
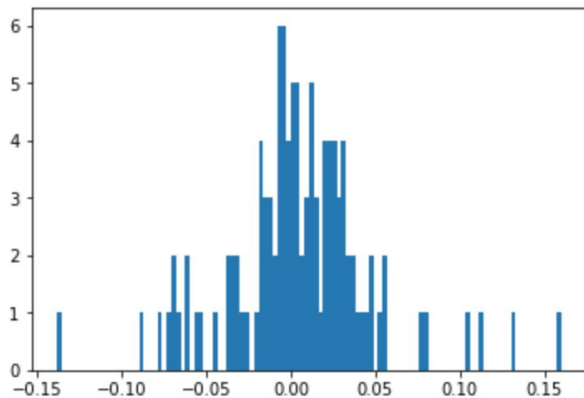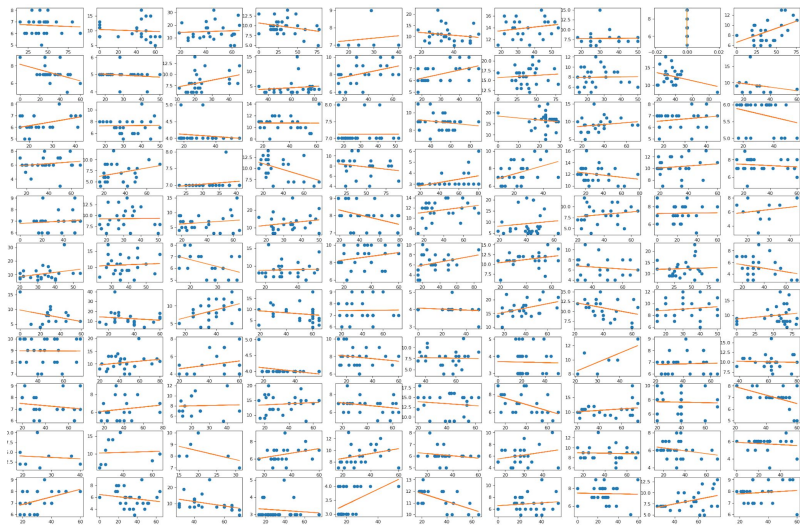
# Results:



- positive: 55.5%
- negative: 44.5%
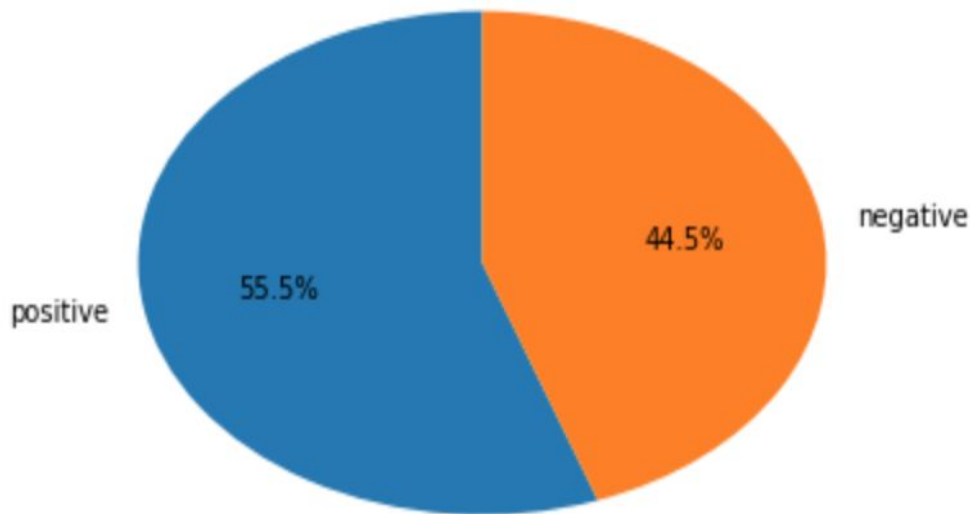
# Methods:

- Find the **<u>linear regression</u>** between age and average number of color names for each language and across all language
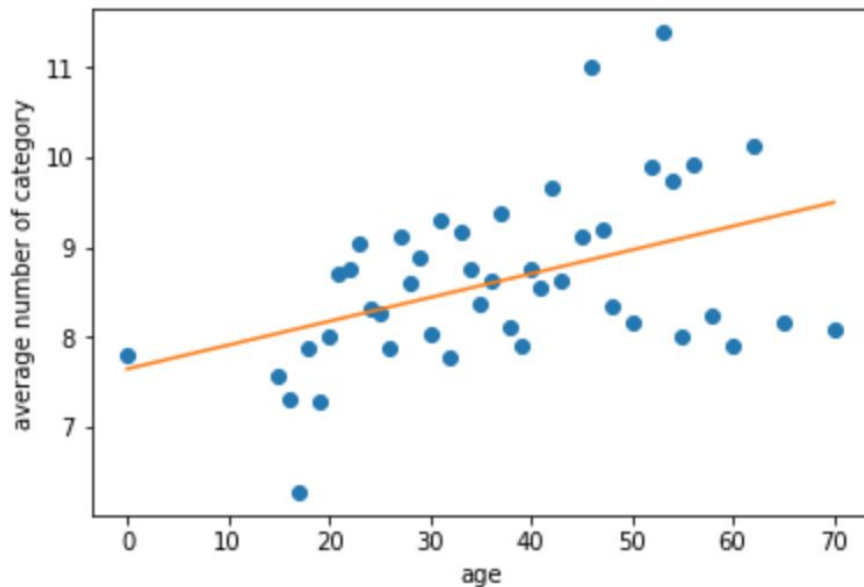
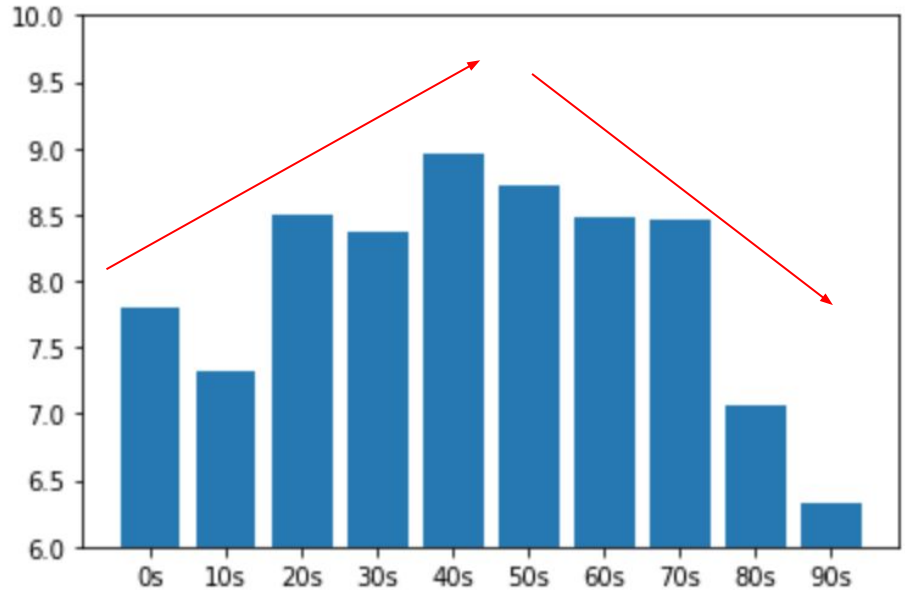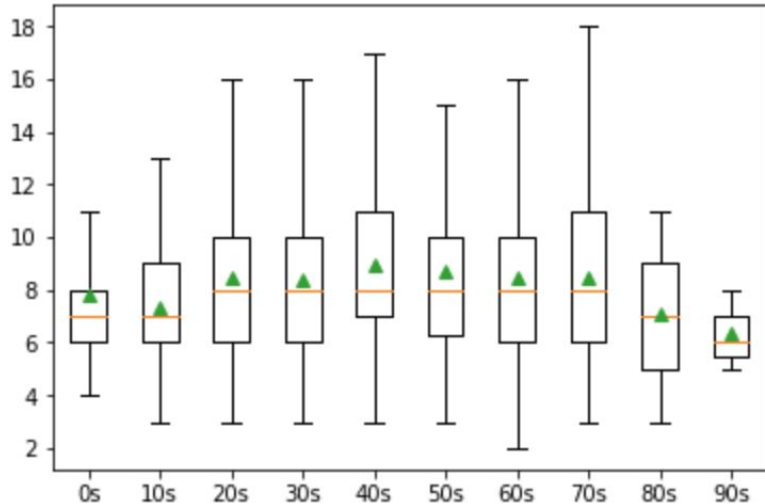# Results:

# Result: Linear Regression

Exclude:

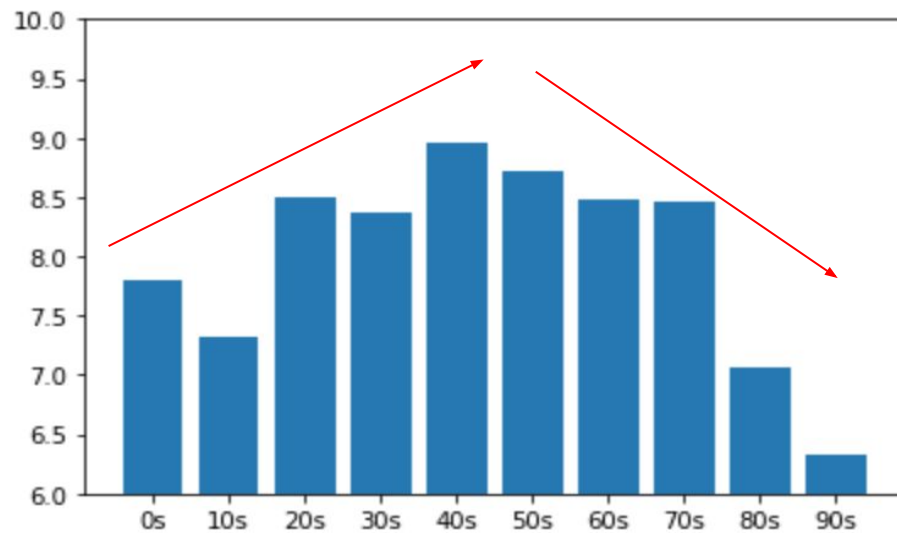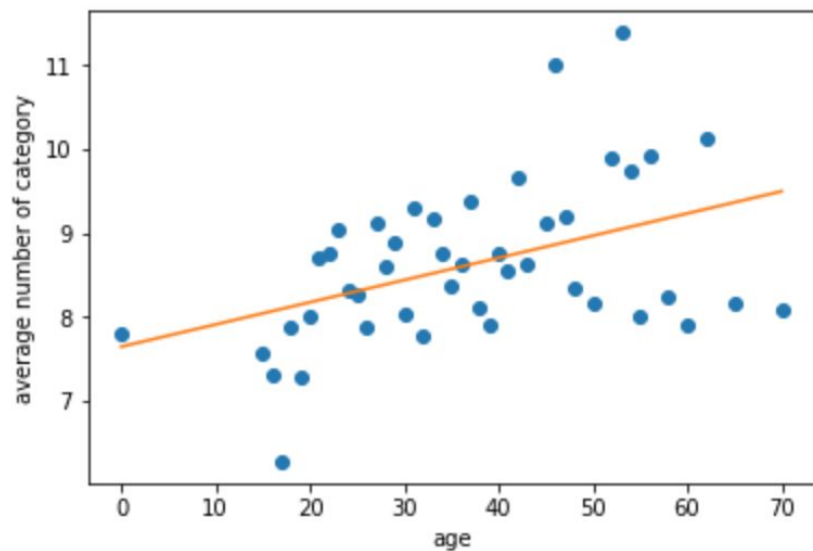-   Ages that have < 15 participations

# Methods:

- **Box plot and bar chart** of average number of colors names and different **age groups** across all languages (age 0 - 100, 10 groups).

# Result:

# Discussion:

Exclude:  Ages that have < 15 participations

# Discussion

1. Younger people can categorize less colors
2. Older people's performance depends on health condition
3. Middle age group have the best performance

Possible Explanation:

1. Older people tends to have more physical disease, such as eye disease, memory problem
2. Younger people tends to have not perceived enough information to form more detailed color categories
3. Middle age group are most equipped with the knowledge of different color names and healthy physical conditions

# Conclusion:

People, regardless what language they speak,
can name more colors as they age,
**but…**