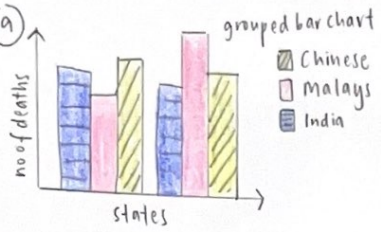
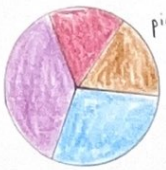
IDEAS:

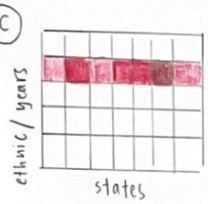
(a) grouped bar chart



(b) piechart



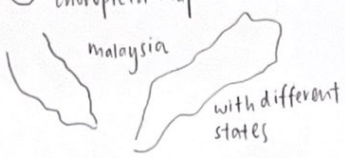
(c) heatmap



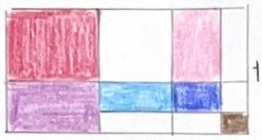
(d) donut chart

different ethnicity by colours

(e) choropleth map

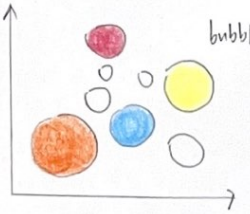


(f) treemap

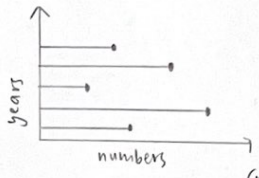


(colour) numbers over by states

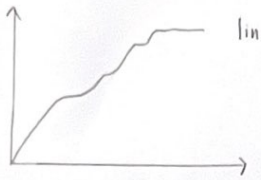
(g) bubble chart



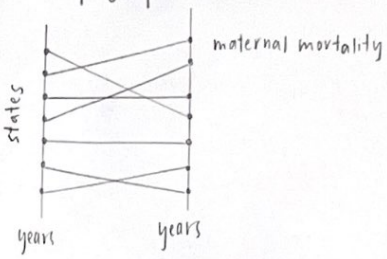
(h) lollipop chart



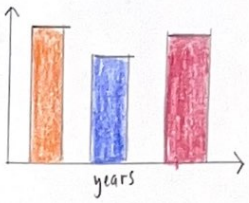
(i) linegraph



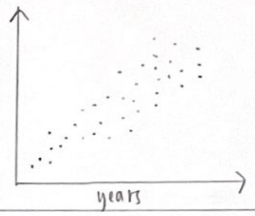
(j) slope graph



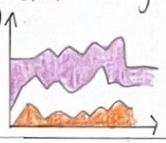
(k) bar graph



(l) scatterplot

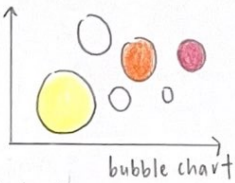


(m) stacked area graph

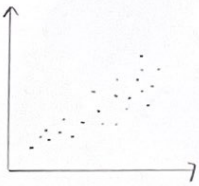


FILTER:

(g)



(l) scatterplot



- data is too little hence if scatterplot is used, graph will not be attractive and useful
- hard to read where there's too much data or categories

QUESTIONS:

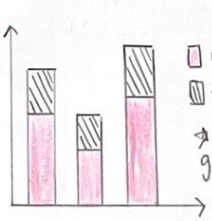
- is a slope graph too messy to implement?
  → slope graph is interesting
- does the visualisations able to be implemented using vega-lite, CSS, Javascript?
- can users use filter to apply the years they want?

CATEGORISE:

- Number of Deaths in Malaysia from 2015 to 2022
  (c) (f) (e) (k)
- Gender-based visualisations
  (a) (b) (i) (m)
- Ethnicity-based visualisations
  (a) (b) (c) (d) (m)
- Early Childhood Deaths (i) (m) (b) (d)
- Maternal Deaths
  (j) (m) (c)

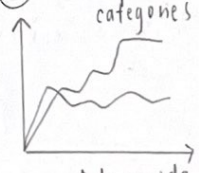
COMBINE AND REFINE:

(a) + (k)



- combining both graphs can show more information to viewers

(i) multiples categories



- to provide comparable statistics

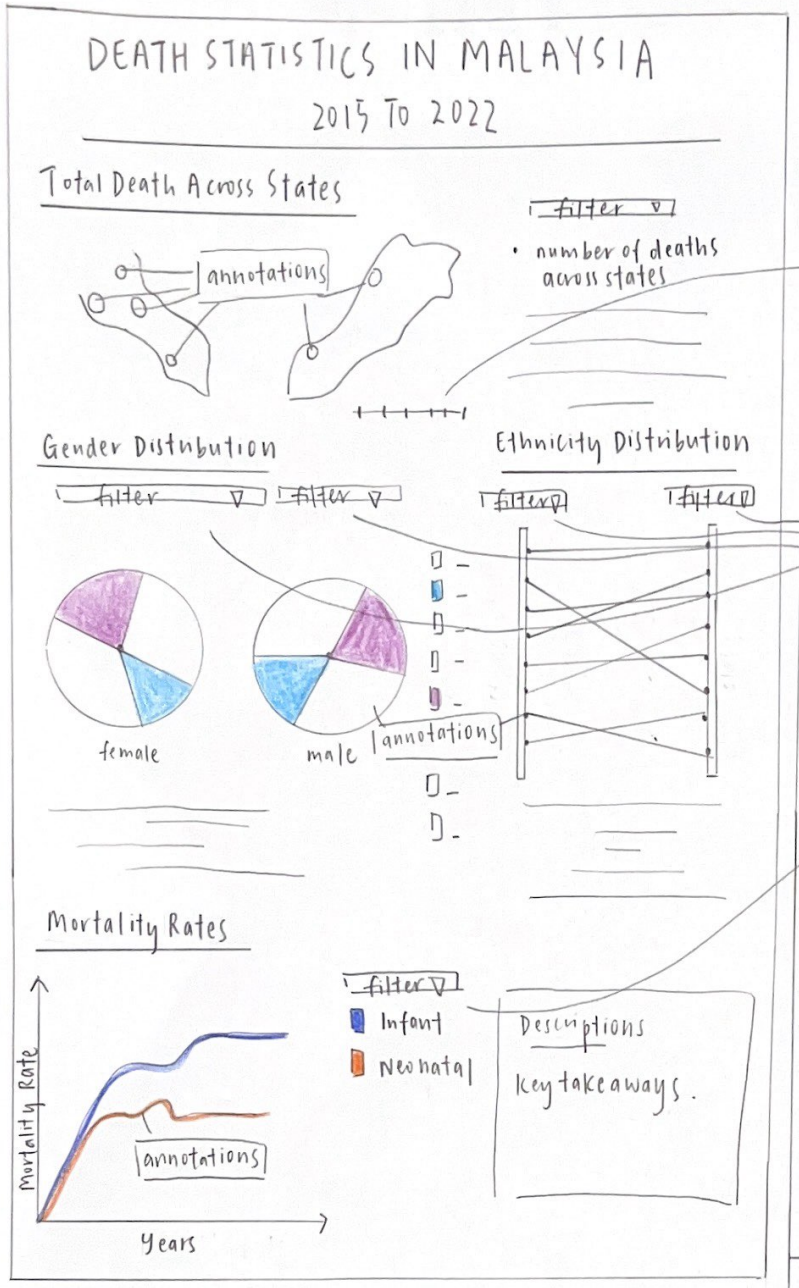
Author: Renee Yeo Shu Ting

Sheet: 1

Date: 29/9/2024

Task: Planning Visualisations

LAYOUT:



Author : Renee Yeo Shu Ting

Date : 30/9/2024

Sheet : 2

Task : Death Statistic and Mortality Rates

OPERATIONS:

Scrolling by Year

viewers get to move their cursor when click to each year to see for changes in total deaths between states

→ colour of states changes when scrolling

Filter by Year

viewers click on triangle icon to change viewing year

- pie chart changes upon clicking
- slope chart changes their lines upon clicking

Filter by States

viewers can change states in Malaysia to check on the mortality rates

- dual line graph changes upon clicking

Tooltips

Added in all graphs to show information whenever viewers explore around the visualisation

Information like : state : XX , Death Rate : XX , Mortality Rate : XX , Ethnicity: XX , Gender : XX and etc.

FOCUS:

- Focusing on gender of deaths in all states

☆ piechart shows states for each gender

☑ 2015
☐ 2016
☐ 2017
⋮

☆ viewers can choose multiple years to display and allow comparison

☆ colour hue used for different states

- Focusing on choropleth map

☆ shows total death for each states in Malaysia

☆ colour gradient used
- darker colour represents higher total death while lighter colour represents lower total death

filter

☆ filter used for different years

- Focusing on dual line graphs

☆ x axis = years
y axis = mortality rates

☆ using colour hue to differentiate infant & neonatal

DISCUSSION:

Advantages

→ Well organised structure allowing viewers to follow

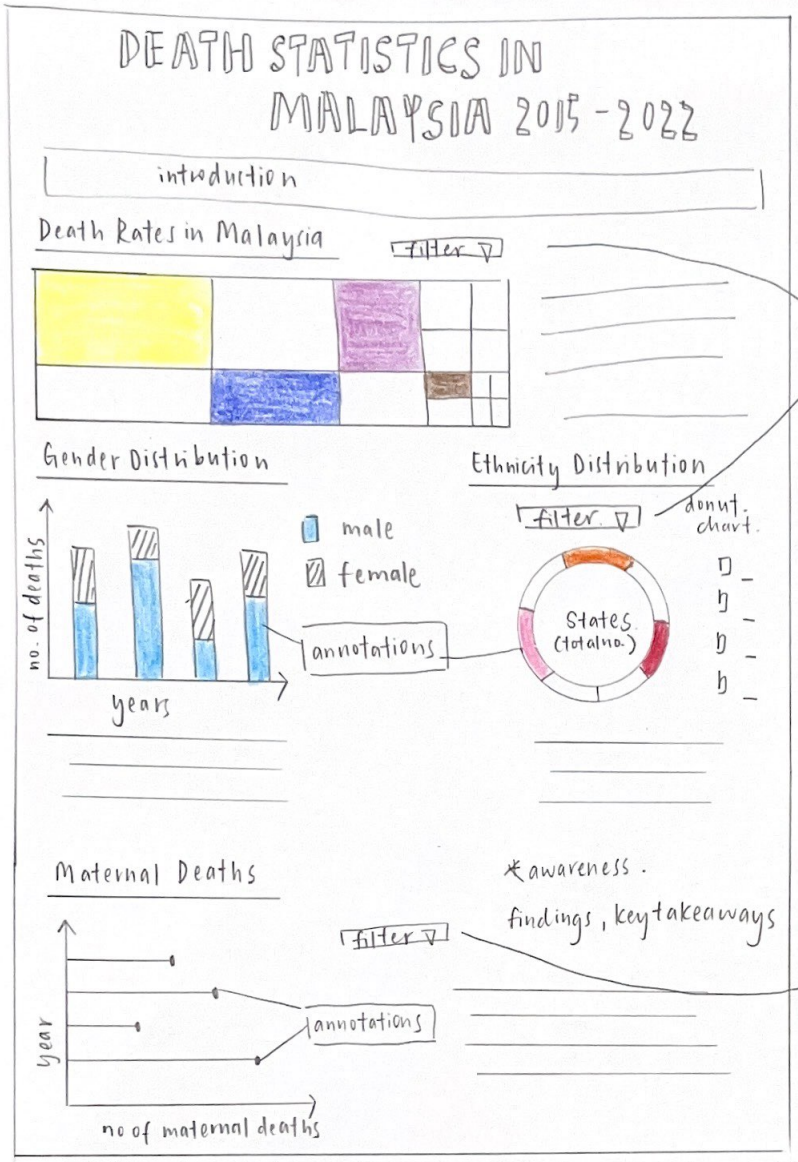
→ Interesting graphs like choropleth map grabs viewers' attention

→ Good user interaction

Disadvantages

→ Complicated graphs may be hard to construct

LAYOUT:



Author : Renee Yeo Shu Ting

Date : 1/10/2024

Sheet : 3

Task : Death Rates and Maternal Deaths

OPERATIONS:

Filter by Year

viewers click on triangle icon to open up menu, which gives selection of year 2015 to 2022

→ treemap changes according to selected year

→ donut chart changes, areas of it changes with different years

Tooltips

Available in all graphs, so viewers will know the statistic of each part means. Details like : Death Rate : XX, Number of deaths : XX, Maternal Deaths : XX, States : XX will be placed in corresponded graph

Filter by States

viewers click on icon to choose the states they want to explore

→ Lollipop chart changes according to selected states.

FOCUS:

- Focusing on treemap

☆ shows the death rates for each state in Malaysia

☆ colour hue used for different states

☆ higher death rates will have higher portion while lower death rates will have lower portion

- Focusing on donut chart

☆ colour hue used for separation of ethnicity

☆ can be filtered by states and years

- Focusing on lollipop chart

☆ shows the total number of maternal death across the years

☆ end of lollipop determine the end point

☆ multiple selection of states can be chosen to allow viewers to visualise

- [x] Selangor
- [ ] Perak
- [ ] Kuantan

DISCUSSION:

Advantages

→ creates clear flow with each section defined, viewers can follow accordingly

→ There is interaction for viewers to do with

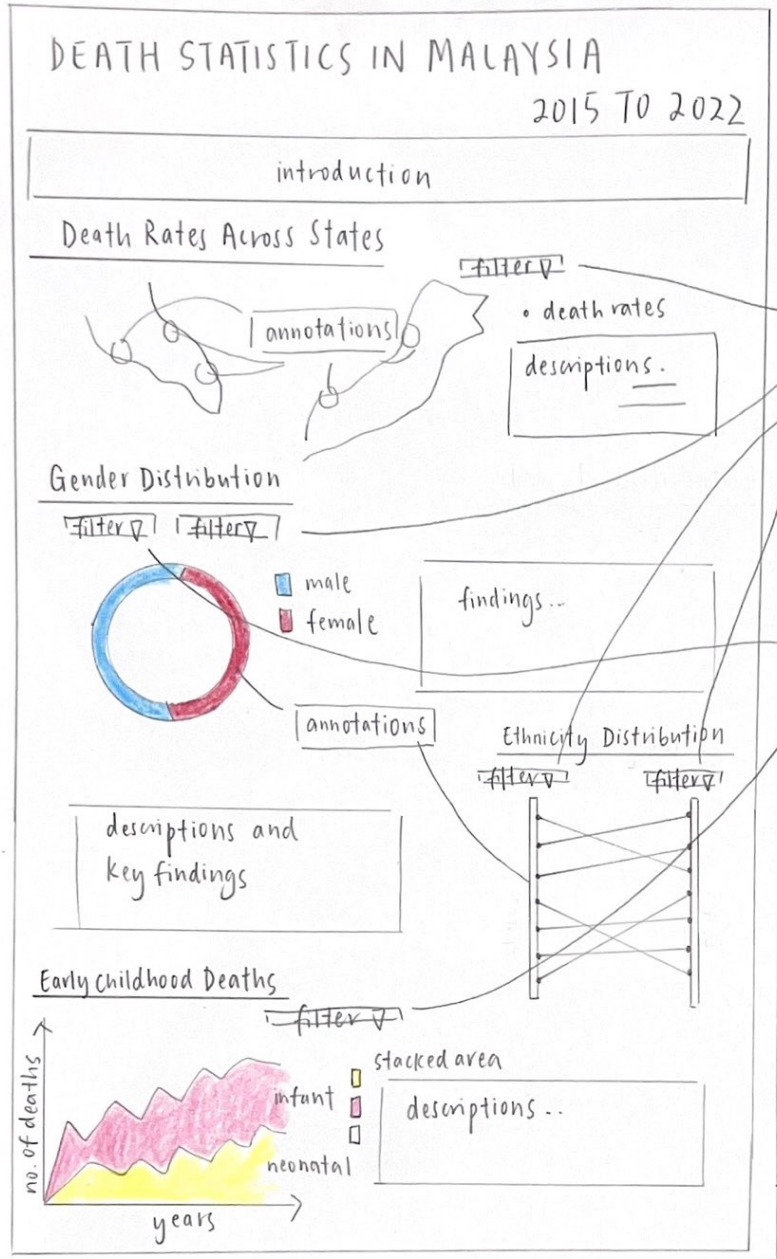
→ well formatted

Disadvantages

→ Filtering may be confusing for ethnicity distribution

→ Some graphs may be too simple

LAYOUT:



Author: Renee Yeo Shu Ting

Date: 2/10/2024

Sheet: 4

Task: Death statistics and Early Childhood Deaths

OPERATIONS:

Filter by Year

viewers click on triangle icon to change viewing year

→ choropleth map changes upon clicking

→ donut chart changes the proportion when different year selected

→ slope chart changes the rank of ethnicity when clicked

Filter by States

viewers click on an arrow icon to choose which states they want to explore

→ donut chart changes upon clicking

→ stacked area chart changes with chosen states

Tooltips

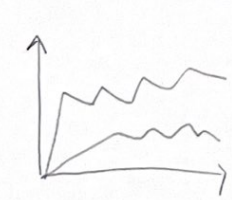
Details of statistics can be seen when viewers hover over the visualisation.

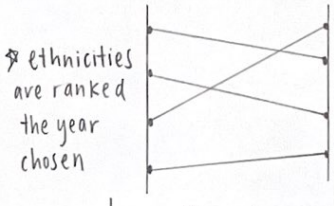
State: XX
Ethnicity: XX
Gender: XX

and etc.

FOCUS:

- Focusing on ethnicity distribution of deaths





☆ x axis = years

☆ y axis = number of early childhood deaths

☆ using colour hue to differentiate infant and neonatal

☆ different colour hue used to differentiate the ethnicities

☆ can be filtered with different years from 2015 to 2022

DISCUSSION:

Advantages

→ There is interaction like hovering, and filtering around the datapoints

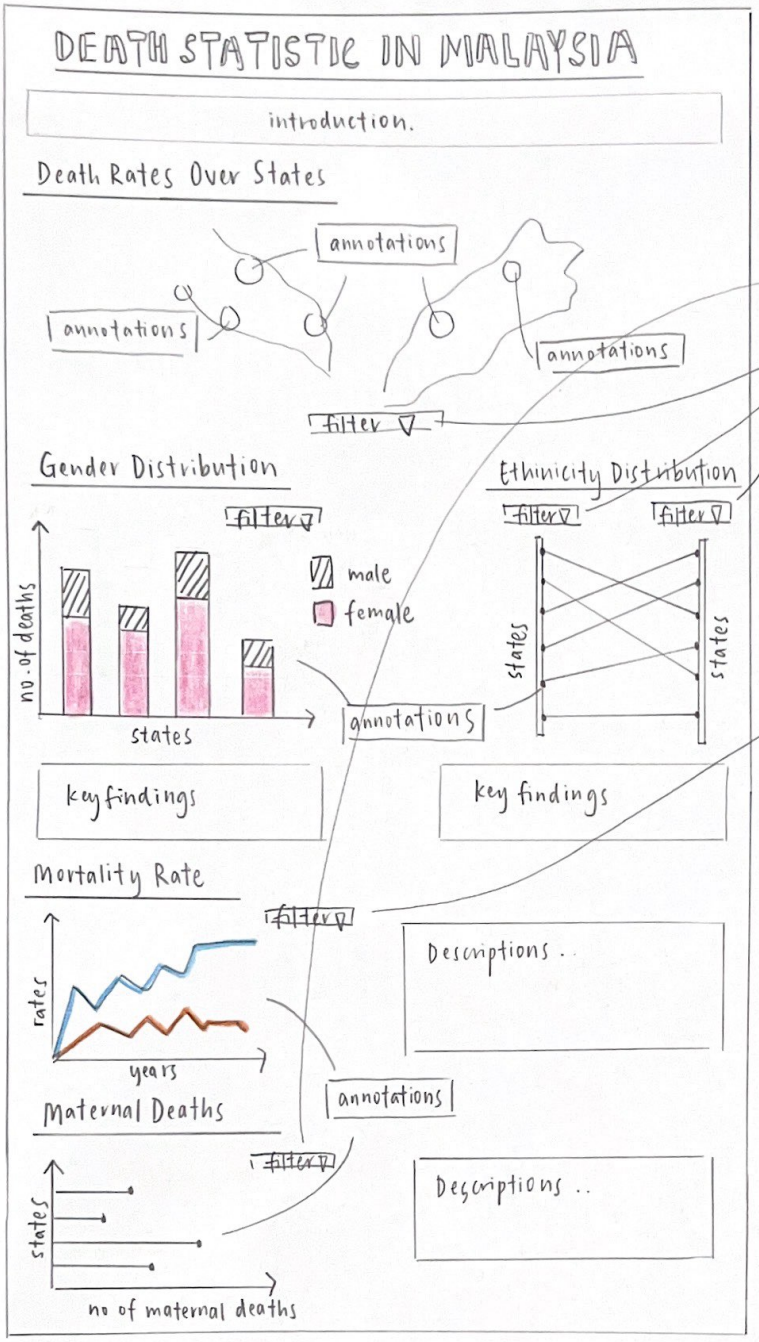
→ Easy to follow; gives viewers a clear knowledge on the statistics of deaths in Malaysia

→ well structured

Disadvantages

→ Donut chart may be hard for viewers to compare the differences between years and states

LAYOUT:



Author : Renee Yeo Shu Ting
Date : 3/10/2024
Sheet : 5
Task : Finalising Visualisations

OPERATIONS:

Filter by Year

viewers click on the arrow icon to choose which year they want to explore

- Choropleth map, slope chart, stacked bar chart and lollipop chart will change according to the year viewers selected

Filter by States

viewers can change states in Malaysia to check on the mortality rates

- line graph will change based on state selected

Tooltips

used in all graphs like Death Rate : XX, Gender : XX, Year : XX, Ethnicity : XX, Maternal Deaths : XX, Mortality Rate : X

DETAILS:

Dependencies

- Using Visual Studio Code with vega-lite libraries, CSS and Javascript to code HTML web
- Connecting to GitHub for deployment

Estimated time and effort

- At least 4 days to build up all diagram
- 1 day for description and a little intro
- 1 day for slight lines and layout considerations

Specific Requirements

- Annotate why deaths?
- Visualisation on phone / tablet and laptop is the same?

FOCUS:

All graphs / charts are equally important as each represent an objective presented to viewers. Focusing on story-telling and flow of all visualisations. Add in annotations and key findings to guide viewers to understand.

Also, allow viewers to compare with each graphs so that comparision and occur which help for better understanding