Stacked Bar Plots

Maysen Pagan

2024-02-11

```
library(ggplot2)
library(tidyverse)
```

```
## -- Attaching core tidyverse packages ------------------------ tidyverse 2.0.0 --
## v dplyr     1.1.4     v readr     2.1.5
## v forcats   1.0.0     v stringr   1.5.1
## v lubridate 1.9.3     v tibble    3.2.1
## v purrr     1.0.2     v tidyr     1.3.1
## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

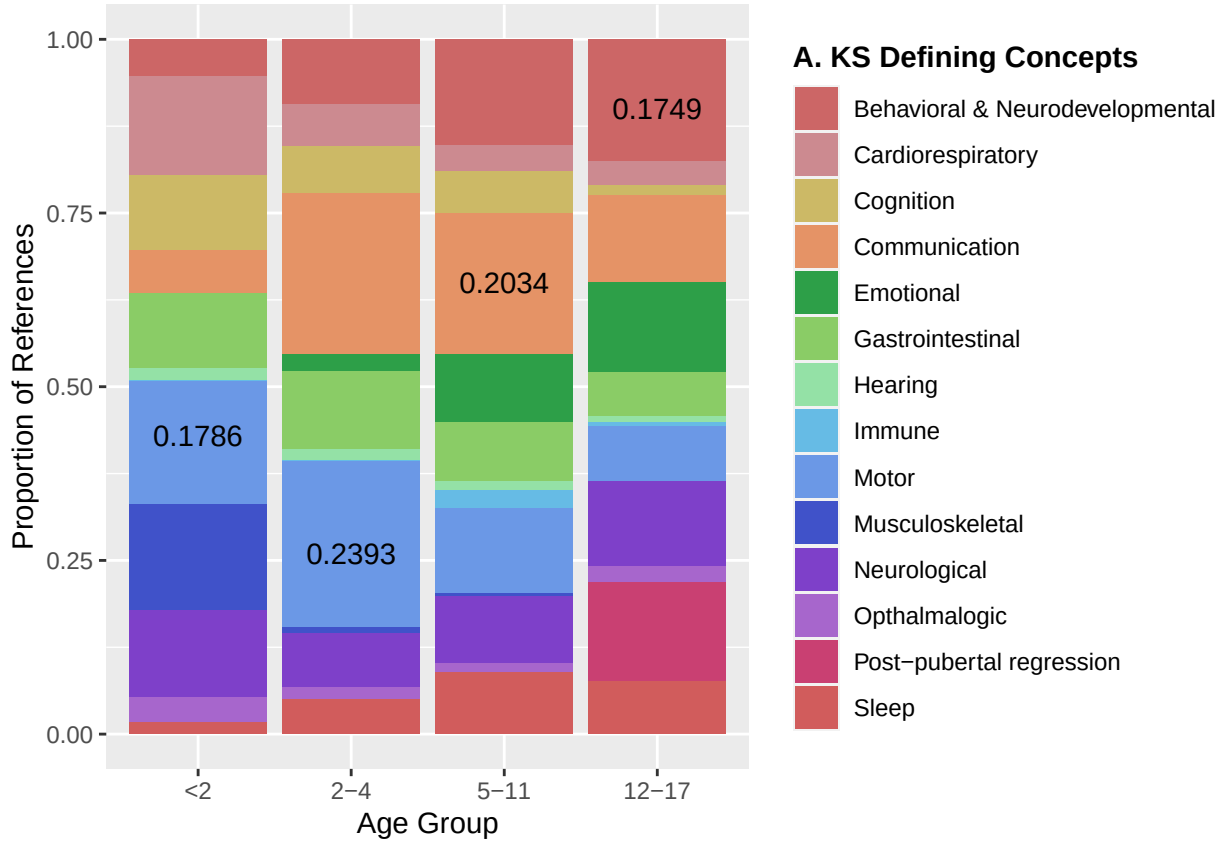
```
library(gridExtra)
```

```
##
## Attaching package: 'gridExtra'
##
## The following object is masked from 'package:dplyr':
##
##     combine
```

```
#load data
lifespan <- read.csv("~/Desktop/Client Projects/Kristen Conners/KSProject/KS_lifespan.csv")
lifespan$X <- str_replace(lifespan$X, " impact", "")
lifespan$X <- str_replace(lifespan$X, "and", "&")
#data set for references to symptoms
symptoms <- lifespan[2:15,-6]
colnames(symptoms) <- c("symptom", "1", "2", "3", "4")
symptoms <- symptoms %>% pivot_longer(names_to = "age", values_to = "value", cols = 2:5)
#data set for references to individual impacts
ind_impacts <- lifespan[18:21,-6]
colnames(ind_impacts) <- c("impact", "1", "2", "3", "4")
ind_impacts <- ind_impacts %>% pivot_longer(names_to = "age", values_to = "value", cols = 2:5)
#data set for references to caregiver impacts
care_impacts <- lifespan[24:27,-6]
colnames(care_impacts) <- c("impact", "1", "2", "3", "4")
care_impacts <- care_impacts %>% pivot_longer(names_to = "age", values_to = "value", cols = 2:5)
```

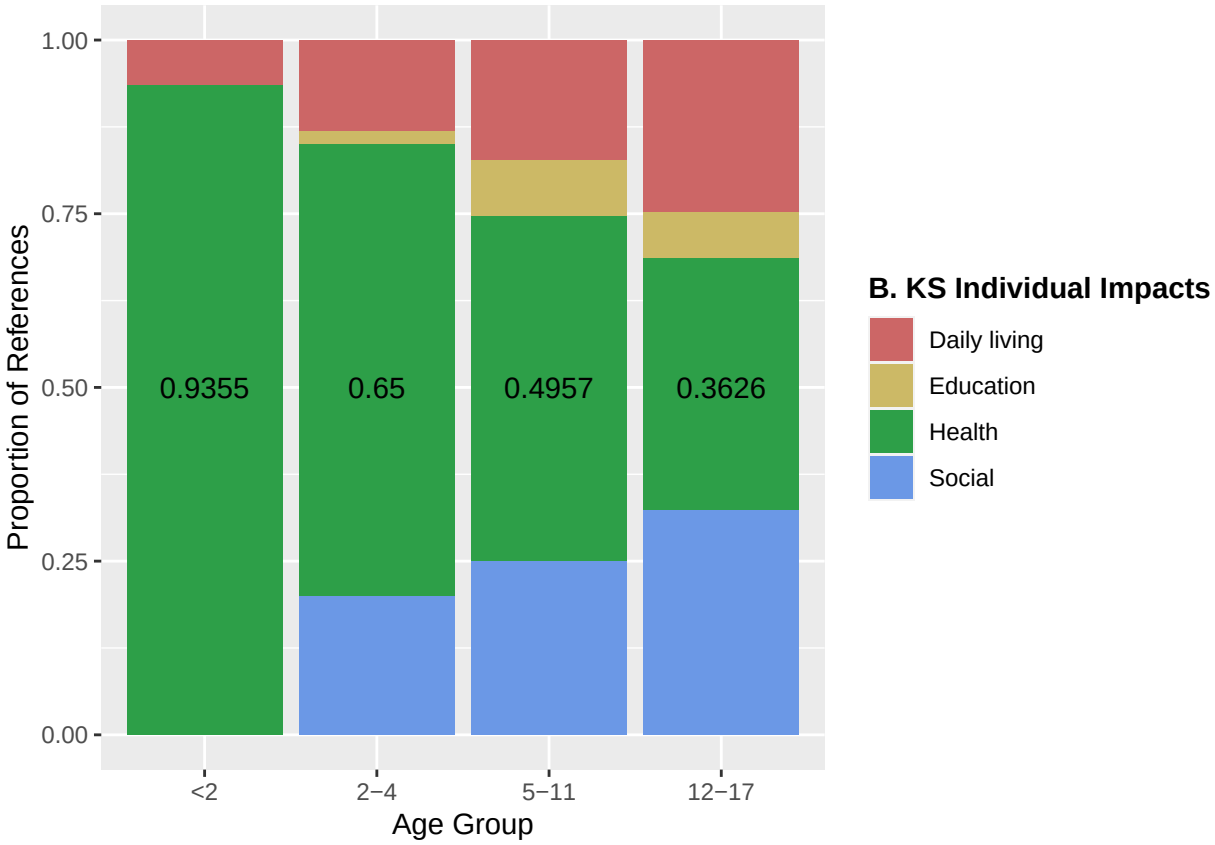
```
#frequencies
symptoms_freq <- symptoms %>% group_by(age) %>%
  mutate(sum = sum(value), freq = value/sum)

#stacked barplots for KS Defining Concepts
```

```
plot1 <- ggplot(symptoms, aes(fill=symptom, y=value, x=age)) +
  geom_bar(position="fill", stat="identity") +
  labs(x = "Age Group", y = "Proportion of References") +
  theme_grey() +
  scale_fill_manual(name = "A. KS Defining Concepts",
                    values = c("#cc6666", "#cc8a90", "#ccb966", "#e59366", "#2d9f48", "#8acc66", "#94e1
  scale_x_discrete(labels=c("<2","2-4","5-11", "12-17")) +
  theme(legend.title = element_text(face = "bold")) +
  annotate("text", x = 1, y = 0.43, label = 0.1786) +
  annotate("text", x = 2, y = 0.26, label = 0.2393) +
  annotate("text", x = 3, y = 0.65, label = 0.2034) +
  annotate("text", x = 4, y = 0.90, label = 0.1749)

plot1
```



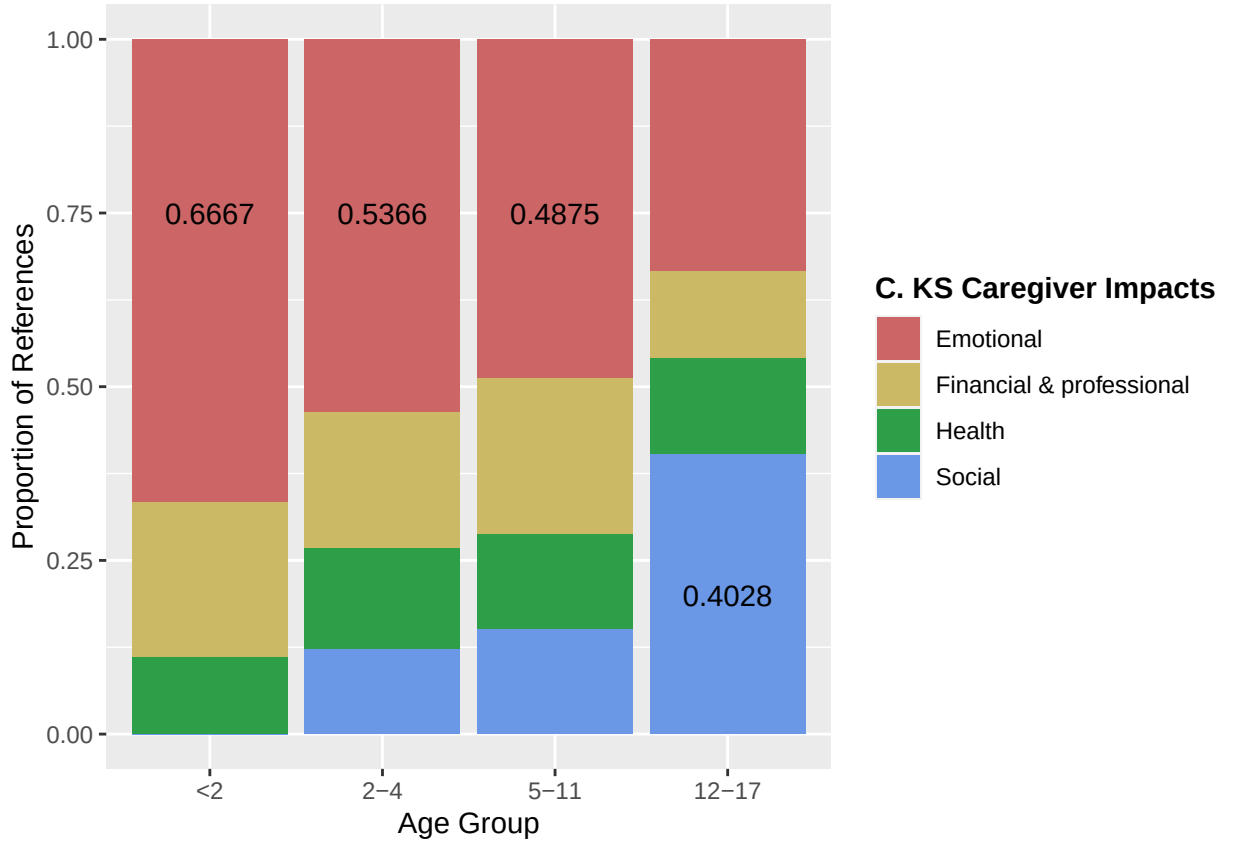

```
#frequencies
ind_freq <- ind_impacts %>% group_by(age) %>%
  mutate(sum = sum(value), freq = value/sum)

#stacked barplots for KS individual impacts
plot2 <- ggplot(ind_impacts, aes(fill=impact, y=value, x=age)) +
  geom_bar(position="fill", stat="identity") +
  labs(x = "Age Group", y = "Proportion of References") +
  theme_grey() +
  scale_fill_manual(name = "B. KS Individual Impacts",
                    values = c("#cc6666", "#ccb966","#2d9f48", "#6b98e6"))+
```

```
  scale_x_discrete(labels=c("<2","2-4","5-11", "12-17")) +
  theme(legend.title = element_text(face = "bold")) +
  annotate("text", x = 1, y = 0.5, label = 0.9355) +
  annotate("text", x = 2, y = 0.5, label = 0.65) +
  annotate("text", x = 3, y = 0.5, label = 0.4957) +
  annotate("text", x = 4, y = 0.5, label = 0.3626)

plot2
```




```
#frequencies
care_freq <- care_impacts %>% group_by(age) %>%
  mutate(sum = sum(value), freq = value/sum)

#stacked barplots for KS caregiver impacts
plot3 <- ggplot(care_impacts, aes(fill=impact, y=value, x=age)) +
  geom_bar(position="fill", stat="identity") +
  labs(x = "Age Group", y = "Proportion of References") +
  theme_grey() +
  scale_fill_manual(name = "C. KS Caregiver Impacts",
                    values = c("#cc6666", "#ccb966","#2d9f48", "#6b98e6"))+
  scale_x_discrete(labels=c("<2","2-4","5-11", "12-17")) +
  theme(legend.title = element_text(face = "bold")) +
  annotate("text", x = 1, y = 0.75, label = 0.6667) +
  annotate("text", x = 2, y = 0.75, label = 0.5366) +
  annotate("text", x = 3, y = 0.75, label = 0.4875) +
  annotate("text", x = 4, y = 0.2, label = 0.4028)
```

```
plot3
```




```
grid.arrange(plot1, arrangeGrob(plot2, plot3), ncol = 2)
```