EDA Rural group

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library(tidyverse)

## ── Attaching packages ─────────────────────────────────────── tidyverse 1.3.1 ──

## ✔ ggplot2 3.3.6 ✔ purrr 0.3.4  
## ✔ tibble 3.1.7 ✔ dplyr 1.0.9  
## ✔ tidyr 1.2.0 ✔ stringr 1.4.0  
## ✔ readr 1.4.0 ✔ forcats 0.5.1

## Warning: package 'tidyr' was built under R version 4.0.5

## ── Conflicts ────────────────────────────────────────── tidyverse\_conflicts() ──  
## ✖ dplyr::filter() masks stats::filter()  
## ✖ dplyr::lag() masks stats::lag()

Char\_choice <- read\_csv("~/Google Drive/USF Semesters /Semesters/2022 Fall/Rural Group Summer Work / Char\_choice.csv")

##   
## ── Column specification ────────────────────────────────────────────────────────  
## cols(  
## Giving\_Task = col\_character(),  
## Mean = col\_double(),  
## Sd = col\_double(),  
## Se = col\_double(),  
## CI = col\_double()  
## )

Norm\_choice <- read\_csv("~/Google Drive/USF Semesters /Semesters/2022 Fall/Rural Group Summer Work / Norm\_choice.csv")

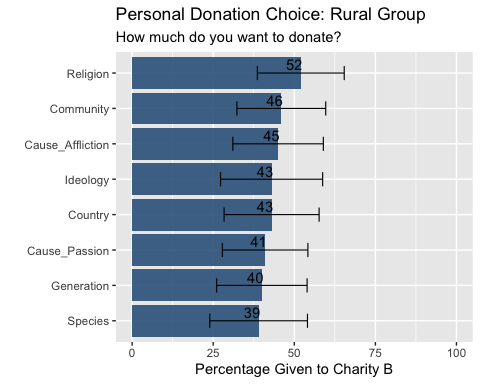
##   
## ── Column specification ────────────────────────────────────────────────────────  
## cols(  
## Giving\_Task = col\_character(),  
## Mean = col\_double(),  
## Sd = col\_double(),  
## Se = col\_double(),  
## CI = col\_double()  
## )

rural\_group\_few <- read\_csv("~/Google Drive/USF Semesters /Semesters/2022 Fall/Rural Group Summer Work / rural\_group\_few.csv")

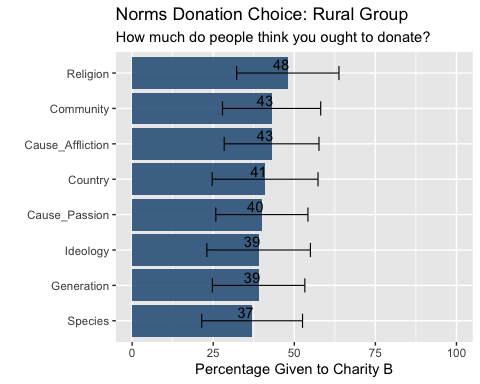
##   
## ── Column specification ────────────────────────────────────────────────────────  
## cols(  
## .default = col\_double(),  
## Finished = col\_logical(),  
## Country\_living = col\_character(),  
## Residential\_area = col\_character(),  
## Residential\_live = col\_character(),  
## Level\_of\_education = col\_character(),  
## Hh\_income\_pa = col\_character(),  
## Gender = col\_character(),  
## Race = col\_character(),  
## Family\_size = col\_character(),  
## Religion = col\_character(),  
## SubjectiveSES\_1 = col\_character()  
## )  
## ℹ Use `spec()` for the full column specifications.

### Average given in giving tasks

# Creating charitable choice graph   
  
Char\_choice %>%   
 mutate(Giving\_Task = fct\_reorder(Giving\_Task, Mean)) %>%   
 mutate\_if(is.numeric, round, digits = 2) %>%   
 ggplot(aes(x = Giving\_Task, y = Mean)) +   
 geom\_bar(stat = "identity", fill= "steelblue4", alpha=0.9) +   
 ylim(0, 100) +   
 geom\_errorbar(aes(x = Giving\_Task, ymin = Mean - CI, ymax = Mean + CI), color = "black", size = 0.4, width = 0.4) +  
 geom\_text(aes(label = Mean), vjust = -0.3, color = "black", position = position\_nudge(y = -2.0)) +  
 coord\_flip() +   
 labs(title = "Personal Donation Choice: Rural Group ",   
 subtitle = "How much do you want to donate?",  
 y = "Percentage Given to Charity B",   
 x = "")



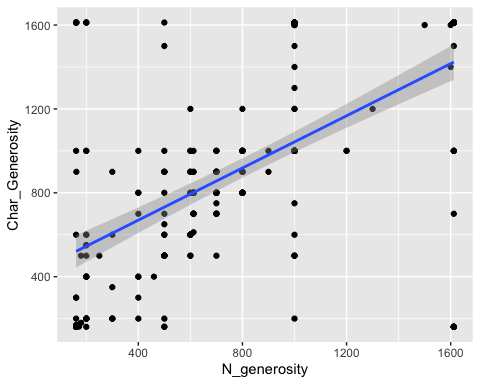
# Creating norms choice graph  
Norm\_choice %>%   
 mutate(Giving\_Task = fct\_reorder(Giving\_Task, Mean)) %>%   
 mutate\_if(is.numeric, round, digits = 2) %>%   
 ggplot(aes(x = Giving\_Task, y =Mean)) +   
 geom\_bar(stat = "identity", fill= "steelblue4", alpha=0.9) +   
 ylim(0, 100) +   
 geom\_errorbar(aes(x = Giving\_Task, ymin = Mean - CI, ymax = Mean + CI), color = "black", size = 0.4, width = 0.4) +   
 geom\_text(aes(label = Mean), vjust = -0.3, color = "black", position = position\_nudge(y = -2.0)) +  
 coord\_flip() +   
 labs(title = "Norms Donation Choice: Rural Group ",   
 subtitle = "How much do people think you ought to donate?",  
 y = "Percentage Given to Charity B",   
 x = "")



### General generosity in norms and personal choice

rural\_group\_few %>%   
 ggplot(aes(x = N\_generosity,  
 y = Char\_Generosity )) +  
 geom\_point() + geom\_smooth(method = lm, se = TRUE, span = 0.2)

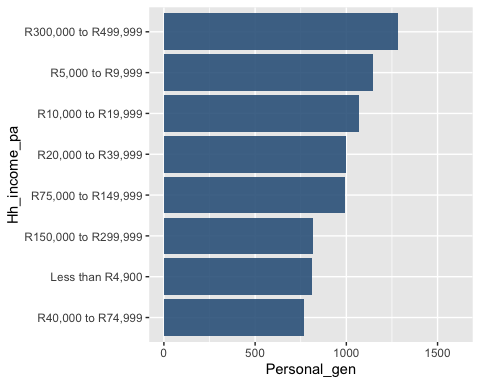
## `geom\_smooth()` using formula 'y ~ x'



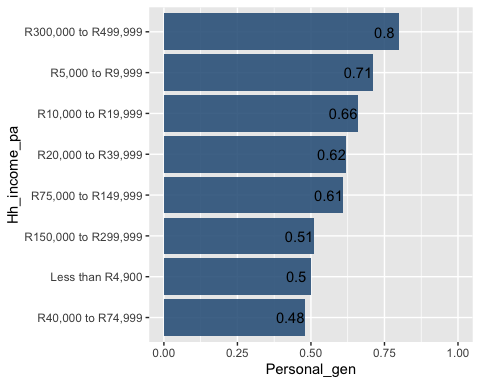
# we can see that there is a strong directly proportional relationship between norm generosity and personal choice generosity.

### Giving by hh income

rural\_group\_few %>%   
 group\_by(Hh\_income\_pa) %>%   
 summarise(Personal\_gen = mean(Char\_Generosity)) %>%   
 mutate(Hh\_income\_pa = fct\_reorder(Hh\_income\_pa, Personal\_gen)) %>%   
 ggplot() + geom\_bar(aes(x = Hh\_income\_pa, y = Personal\_gen), stat = "identity", fill= "steelblue4", alpha=0.9 ) +  
 ylim(0, 1612) +   
 coord\_flip()

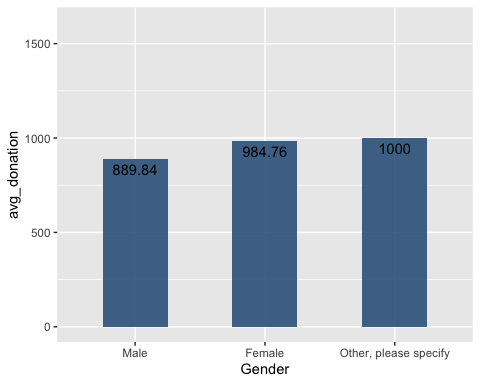


# below is everything I did above but in percentage form  
rural\_group\_few %>%   
 group\_by(Hh\_income\_pa) %>%   
 summarise(Personal\_gen = mean(Char\_Generosity)/1612) %>%   
 mutate\_if(is.numeric, round, digits = 2) %>%   
 mutate(Hh\_income\_pa = fct\_reorder(Hh\_income\_pa, Personal\_gen)) %>%   
 ggplot(aes(x = Hh\_income\_pa, y = Personal\_gen)) + geom\_bar(stat = "identity", fill= "steelblue4", alpha=0.9 ) +  
 ylim(0, 1) +   
 geom\_text(aes(label = Personal\_gen), vjust = 0.5, color = "black", position = position\_nudge(y = -0.05)) +  
 coord\_flip()



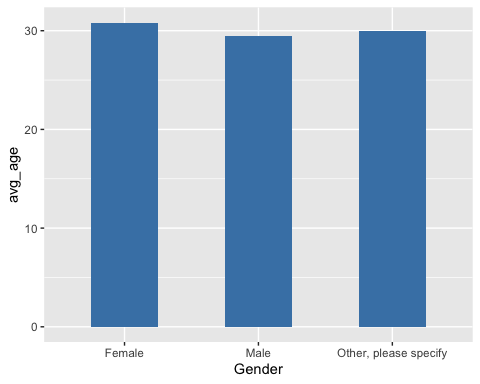
### Giving by gender

rural\_group\_few %>%   
 group\_by(Gender) %>%   
 summarise(avg\_donation = mean(Char\_Generosity)) %>%   
 mutate\_if(is.numeric, round, digits = 2) %>%   
 mutate(Gender = fct\_reorder(Gender, avg\_donation)) %>%   
 ggplot(aes(x = Gender, y = avg\_donation)) +  
 geom\_bar( stat = "identity", fill = "steelblue4", alpha = 0.9, width = 0.5) +  
 ylim(0, 1612) +  
 geom\_text(aes(label = avg\_donation), vjust = 1.5, color = "black")



### Age demographics

rural\_group\_few %>%   
 group\_by(Gender) %>%   
 summarise(avg\_age = mean(Age)) %>%   
 ggplot() +  
 geom\_bar(aes(x = Gender, y = avg\_age), stat = "identity", width = 0.5, fill = "steel blue")



rural\_group\_few %>%   
 group\_by(Gender) %>%   
 summarise(count = n()) %>%   
 ggplot() +  
 geom\_bar(aes(x = Gender, y = count), stat = "identity", width = 0.5, fill = "steel blue")

