# SurveyRMD_BSIT2B

ZydrickCeniza,AiraMiaLego,KentHerveyGener

2024-04-29

## Survey Table and Demographics

### Zydrick Ceniza

### Aira MIa Lego

### Kent Hervey Gener

### BSiT-2B

```
library(readxl)
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
survey<-read_xlsx("survey.xlsx")
original_survey<-read_xlsx("survey.xlsx")



survey<- survey[,-2]
name<-survey$`Name:(first name, middle initial, last name )`
age<- survey$`Age:`
gender<-survey$`Sex:`

survey$`Education Level`<-ifelse(is.na(survey$`Education Level`), "College", survey$`Education Level`)
education_level<-survey$`Education Level`



experience<-survey$`How satisfied were you with the overall experience of ordering food through food del
experience<-as.data.frame(experience)
experience<-replace(experience,experience>="Satisfied",1)
experience<-replace(experience,experience>="Average",2)
experience<-replace(experience,experience>="Disatisfied",3)

survey$`How satisfied were you with the overall experience of ordering food through food deliveries serv
```

```r
scale<-survey$`On a scale of 1 to 10, how would you rate the quality of the food you received?`


orderarrival<-survey$`Did your order arrive within the estimated delivery time?`


p1<-survey$`I would find the food delivery app useful for my needs`
p1 <- recode(p1,
             "Strongly Agree" = 1,
             "Agree" = 2,
             "Neutral" = 3,
             "Disagree" = 4,
             "Strongly Disagree" = 5)
p1mean<-mean(p1)
p1sd<-sd(p1)
survey$`I would find the food delivery app useful for my needs`<-p1
survey$`Performance Expectancy 1`<-survey$`I would find the food delivery app useful for my needs`

p2 <- survey$`Using the app enables me to order food more quickly and efficiently`
p2 <- recode(p2,
             "Strongly Agree" = 1,
             "Agree" = 2,
             "Neutral" = 3,
             "Disagree" = 4,
             "Strongly Disagree" = 5)
survey$`Using the app enables me to order food more quickly and efficiently` <- p2
survey$`Performance Expectancy 2`<-survey$`Using the app enables me to order food more quickly and effi
p2mean<-mean(p2)
p2sd<-sd(p2)

p3 <- survey$`Using the app increases my satisfaction with the food delivery process`
p3 <- recode(p3,
             "Strongly Agree" = 1,
             "Agree" = 2,
             "Neutral" = 3,
             "Disagree" = 4,
             "Strongly Disagree" = 5)
survey$`Using the app increases my satisfaction with the food delivery process` <- p3
survey$`Performance Expectancy 3`<-survey$`Using the app increases my satisfaction with the food delive
p3mean<-mean(p3)
p3sd<-sd(p3)

p4 <- survey$`If I use the app, I believe it will enhance my overall dining experience`
p4 <- recode(p4,
             "Strongly Agree" = 1,
             "Agree" = 2,
             "Neutral" = 3,
             "Disagree" = 4,
             "Strongly Disagree" = 5)
survey$`If I use the app, I believe it will enhance my overall dining experience` <- p4
survey$`Performance Expectancy 4`<-survey$`If I use the app, I believe it will enhance my overall dinin
p4mean<-mean(p4)
p4sd<-sd(p4)
```

```
e1<-survey$`My interaction with the app would be clear and understandable`
e1<-recode(e1,
           "Strongly Agree" = 1,
           "Agree" = 2,
           "Neutral" = 3,
           "Disagree" = 4,
           "Strongly Disagree" = 5)
e1mean<-mean(e1)
e1sd<-sd(e1)
survey$`My interaction with the app would be clear and understandable`<-e1
survey$`Effort Expectancy 1`<-survey$`My interaction with the app would be clear and understandable`
e2 <- survey$`It would be easy for me to become skillful at using the app`
e2 <-  recode(e2,
              "Strongly Agree" = 1,
              "Agree" = 2,
              "Neutral" = 3,
              "Disagree" = 4,
              "Strongly Disagree" = 5)
e2mean <- mean(e2)
e2sd <- sd(e2)
survey$`It would be easy for me to become skillful at using the app`<-e2
survey$`Effort Expectancy 2`<-survey$`It would be easy for me to become skillful at using the app`
e3 <- survey$`I would find the app easy to navigate and use`
e3 <-  recode(e3,
              "Strongly Agree" = 1,
              "Agree" = 2,
              "Neutral" = 3,
              "Disagree" = 4,
              "Strongly Disagree" = 5)
e3mean <- mean(e3)
e3sd <- sd(e3)
survey$`I would find the app easy to navigate and use`<-e3
survey$`Effort Expectancy 3`<-survey$`I would find the app easy to navigate and use`

e4 <- survey$`Learning to operate the app is easy for me`
e4 <-  recode(e4,
              "Strongly Agree" = 1,
              "Agree" = 2,
              "Neutral" = 3,
              "Disagree" = 4,
              "Strongly Disagree" = 5)
e4mean <- mean(e4)
e4sd <- sd(e4)
survey$`Learning to operate the app is easy for me`<-e4
survey$`Effort Expectancy 4`<-survey$`Learning to operate the app is easy for me`

s1 <- survey$`People who influence my dining choices think that I should use the app`
s1 <-  recode(s1,
              "Strongly Agree" = 1,
              "Agree" = 2,
              "Neutral" = 3,
              "Disagree" = 4,
              "Strongly Disagree" = 5)
```

```r
s1mean <- mean(s1)
s1sd <- sd(s1)
survey$`People who influence my dining choices think that I should use the app`<-s1
survey$`Social Influence 1`<-survey$`People who influence my dining choices think that I should use the

s2 <- survey$`People who are important to me recommend using the food delivery app`
s2 <-  recode(s2,
              "Strongly Agree" = 1,
              "Agree" = 2,
              "Neutral" = 3,
              "Disagree" = 4,
              "Strongly Disagree" = 5)
s2mean <- mean(s2)
s2sd <- sd(s2)


survey$`People who are important to me recommend using the food delivery app`<-s2
survey$`Social Influence 2`<-survey$`People who are important to me recommend using the food delivery ap

survey$`People who influence my dining choices think that I should use the app`<-s2

survey$`People who are important to me recommend using the food delivery app`<-s2



s3 <-survey$`Using the app helps me to put more time to other chores`
s3 <-  recode(s3,
              "Strongly Agree" = 1,
              "Agree" = 2,
              "Neutral" = 3,
              "Disagree" = 4,
              "Strongly agree" = 5)
s3mean <- mean(s3)
s3sd <- sd(s3)
survey$`Using the app helps me to put more time to other chores`<-s3
survey$`Social Influence3`<-survey$`Using the app helps me to put more time to other chores`

s4 <- survey$`In general, the food delivery app organization has supported its use`
s4 <-  recode(s4,
              "Strongly Agree" = 1,
              "Agree" = 2,
              "Neutral" = 3,
              "Disagree" = 4,
              "Strongly Disagree" = 5)
s4mean <- mean(s4)
s4sd <- sd(s4)
survey$`In general, the food delivery app organization has supported its use`<-s4
survey$`Social Influence 4`<-survey$`In general, the food delivery app organization has supported its us

f1 <- survey$`I have the resources necessary to use the food delivery app`
f1 <-  recode(f1,
              "Strongly Agreee" = 1,
              "Agree" = 2,
```

```
              "Neutral" = 3,
              "Disagree" = 4,
              "Strongly Disagree" = 5)
f1mean <- mean(f1)
f1sd <- sd(f1)
survey$`I have the resources necessary to use the food delivery app`<-f1
survey$`Facilitating Conditions 1`<-survey$`I have the resources necessary to use the food delivery app

f2 <- survey$`I have the knowledge required to use the app effectively`
f2 <-  recode(f2,
              "Strongly Agree" = 1,
              "Agree" = 2,
              "Neutral" = 3,
              "Disagree" = 4,
              "Strongly Disagree" = 5)
f2mean <- mean(f2)
f2sd <- sd(f2)
survey$`I have the knowledge required to use the app effectively`<-f2
survey$`Facilitating Conditions 2`<-survey$`I have the knowledge required to use the app effectively`
f3 <- survey$`The app is compatible with other device I use for ordering food`
f3 <-  recode(f3,
              "Strongly Agree" = 1,
              "Agree" = 2,
              "Neutral" = 3,
              "Disagree" = 4,
              "Strongly Disagree" = 5)
f3mean <- mean(f3)
f3sd <- sd(f3)
survey$`The app is compatible with other device I use for ordering food`<-f3
survey$`Facilitating Conditions 3`<-survey$`The app is compatible with other device I use for ordering


#-------------------------------------------------------------------------------

Performance <- data.frame(
  Variable = c("p1","p2","p3","p4"),
  Mean = c(p1mean, p2mean, p3mean, p4mean),
  SD = c(p1sd, p2sd, p3sd, p4sd)
)
PerformanceTotalMean<-mean(Performance$Mean)
PerformanceTotalSD<-mean(Performance$SD)


Effort <- data.frame(
  Variable = c("e1","e2","e3","e4"),
  Mean = c(e1mean, e2mean, e3mean, e4mean),
  SD = c(e1sd, e2sd, e3sd, e4sd)
)
EffortTotalMean<-mean(Effort$Mean)
EffortTotalSD<-mean(Effort$SD)


Social <- data.frame(
```

```
  Variable = c("s1","s2","s3","s4"),
  Mean = c(s1mean, s2mean, s3mean, s4mean),
  SD = c(s1sd, s2sd, s3sd, s4sd)
)
SocialTotalMean<-mean(Social$Mean)
SocialTotalSD<-mean(Social$SD)

Facilitate <- data.frame(
  Variable = c("f1","f2","f3"),
  Mean = c(f1mean, f2mean, f3mean),
  SD = c(f1sd, f2sd, f3sd)
)
FacilitateTotalMean<-mean(Facilitate$Mean)
FacilitateTotalSD<-mean(Facilitate$SD)


Overall <- data.frame(
  Variable = c("PE","EE","SI","FC"),
  Description=c("Performance Expectancy","Effort Expectancy","Social Influence","Facilitating Conditions
  TOTAL_Mean = c(PerformanceTotalMean,EffortTotalMean,SocialTotalMean , FacilitateTotalMean),
  TOTAL_SD = c(PerformanceTotalSD,EffortTotalSD,SocialTotalSD , FacilitateTotalSD)
)
Overall
```

```
##   Variable             Description TOTAL_Mean  TOTAL_SD
## 1       PE  Performance Expectancy   1.878571 0.6737912
## 2       EE       Effort Expectancy   1.846429 0.7116960
## 3       SI        Social Influence   2.017857 0.8217001
## 4       FC Facilitating Conditions   1.819048 0.7390437
```

```
survsumtable <- data.frame(
  Variable = c("p1","p2","p3","p4","e1","e2","e3","e4","s1","s2","s3","s4","f1","f2","f3"),Description=
  Mean = c(p1mean, p2mean, p3mean, p4mean, e1mean, e2mean, e3mean, e4mean, s1mean, s2mean, s3mean, s4mea
  SD = c(p1sd, p2sd, p3sd, p4sd, e1sd, e2sd, e3sd, e4sd, s1sd, s2sd, s3sd, s4sd, f1sd, f2sd, f3sd)
)
library(openxlsx)
survsumtable
```

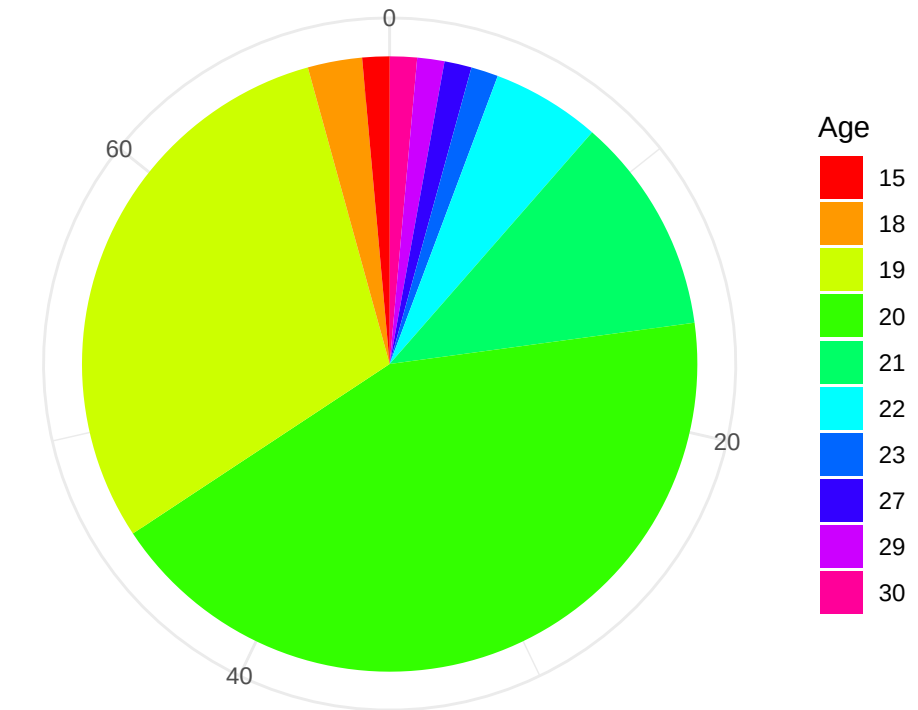
```
##    Variable             Description     Mean        SD
## 1        p1  Performance Expectancy 1.685714 0.5784251
## 2        p2  Performance Expectancy 1.757143 0.6688886
## 3        p3  Performance Expectancy 1.857143 0.7078384
## 4        p4  Performance Expectancy 2.214286 0.7400129
## 5        e1       Effort Expectancy 1.842857 0.6051881
## 6        e2       Effort Expectancy 2.014286 0.8251984
## 7        e3       Effort Expectancy 1.757143 0.7109030
## 8        e4       Effort Expectancy 1.771429 0.7054946
## 9        s1        Social Influence 2.214286 0.8828947
## 10       s2        Social Influence 2.100000 0.8538065
## 11       s3        Social Influence 1.885714 0.7902092
## 12       s4        Social Influence 1.871429 0.7598899
## 13       f1 Facilitating Conditions 1.871429 0.7787286
## 14       f2 Facilitating Conditions 1.685714 0.7130839
## 15       f3 Facilitating Conditions 1.900000 0.7253185
```

```r
write.xlsx(survsumtable, "survey_mean_sd_table.xlsx")
write.csv(survey, "survey_added_factors.csv")
write.xlsx(Overall, "survey_total_mean&sd.xlsx")
```

# Demographics

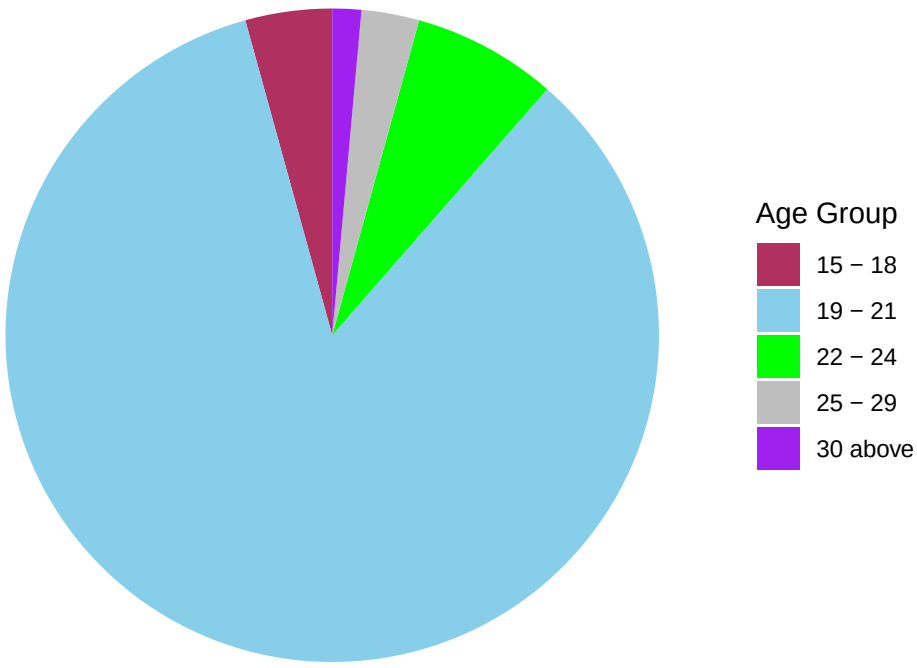
## Age of the people who answer the surveys

```r
library(ggplot2)
library(dplyr)


age_counts <- survey %>%
  count(`Age:`) %>%
  arrange(desc(`Age:`))


ggplot(age_counts, aes(x = "", y = n, fill = factor(`Age:`))) +
  geom_bar(width = 1, stat = "identity") +
  coord_polar(theta = "y") +
  labs(title = "Pie Chart of Age Distribution",
       fill = "Age",
       x = NULL,
       y = NULL) +
  theme_minimal() +
  scale_fill_manual(values = rainbow(nrow(age_counts)))
```



### Most of the respondent are age between 19 and 20

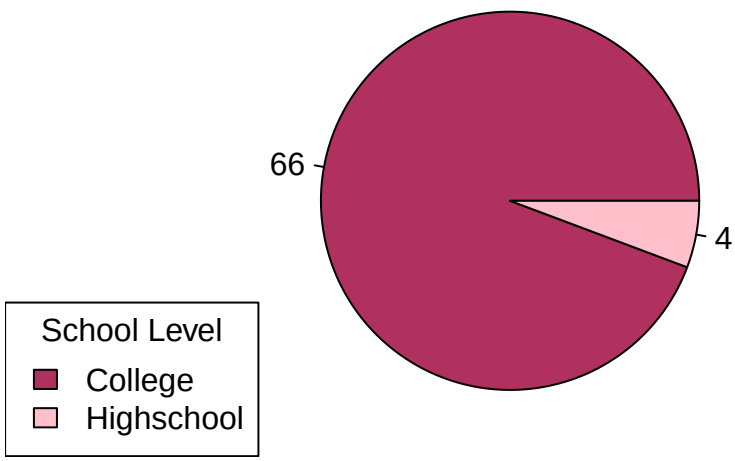
```
categorize_age <- function(age) {
  case_when(
    age >= 15 & age <= 18 ~ "15 - 18",
    age >= 19 & age <= 21 ~ "19 - 21",
    age >= 22 & age <= 24 ~ "22 - 24",
    age >= 25 & age <= 29 ~ "25 - 29",
    age >= 30 ~ "30 above",
    TRUE ~ NA_character_
  )
}
age_vector<-as.numeric(survey$`Age:`)
age_categories <- sapply(age_vector, categorize_age)

age_dataframe <- data.frame(OriginalAge = age_vector, CategorizedAge = age_categories)


age_counts <- table(age_dataframe$CategorizedAge)

age_counts_df <- as.data.frame(age_counts)
names(age_counts_df) <- c("AgeGroup", "Frequency")

age_colors <- c("15 - 18" = "maroon", "19 - 21" = "skyblue", "22 - 24" = "green", "25 - 29" = "gray", "

ggplot(age_counts_df, aes(x = "", y = Frequency, fill = AgeGroup)) +
  geom_bar(stat = "identity", width = 1) +
  coord_polar("y", start=0) +
  scale_fill_manual(values = age_colors) +
  labs(title = "Age Distribution",
       fill = "Age Group") +
  theme_void()
```




## Most of the respondents are in the age group of 19-21.

### Educational Level of the people who answer the surveys

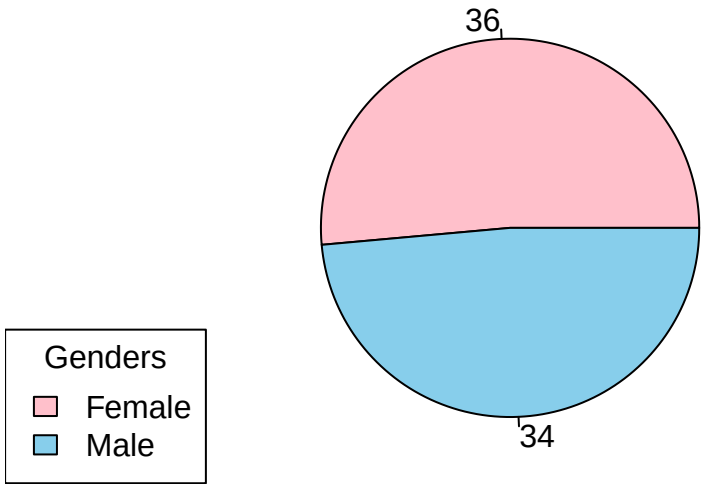
```
EducationalLevel<- survey %>%
  group_by(`Education Level`) %>%
  summarise(count=n())

colors <- c("maroon", "pink")
pie(EducationalLevel$count, labels = EducationalLevel$count, col = colors, main = "School Level of the S
legend("bottomleft", legend = EducationalLevel$`Education Level`, fill = colors, title = "School Level")
```




Most of the respondents are college students

Gender of the people who answer the surveys

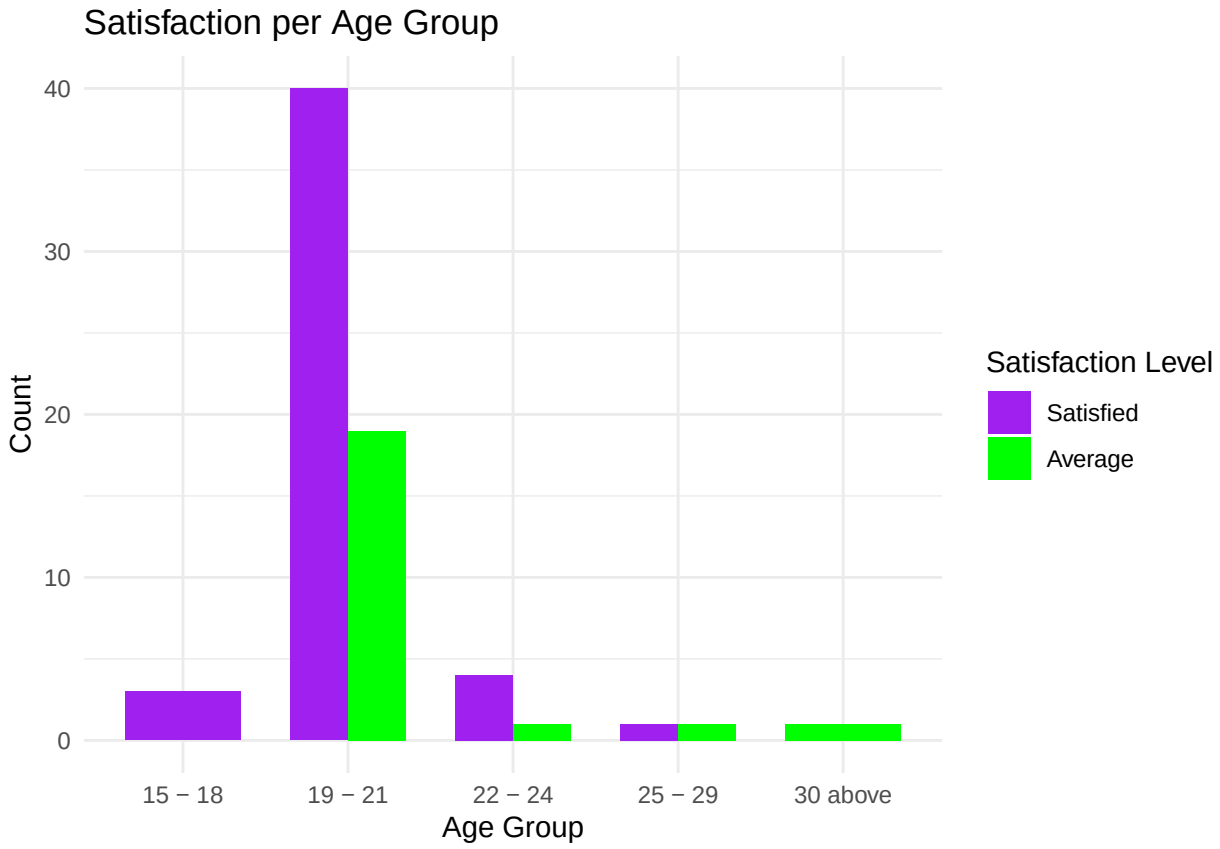
```
Gender<- survey %>%
  group_by(survey$`Sex:`) %>%
  summarise(count=n())

colors <- c("pink","skyblue")
pie(Gender$count, labels = Gender$count, col = colors, main = "Genders of the Surveyed People",)
legend("bottomleft", legend = Gender$`survey$\`Sex:\``, fill = colors, title = "Genders")
```



**There are more female respondents than male but it has a little difference.**

**Satisfaction Level Per Age**

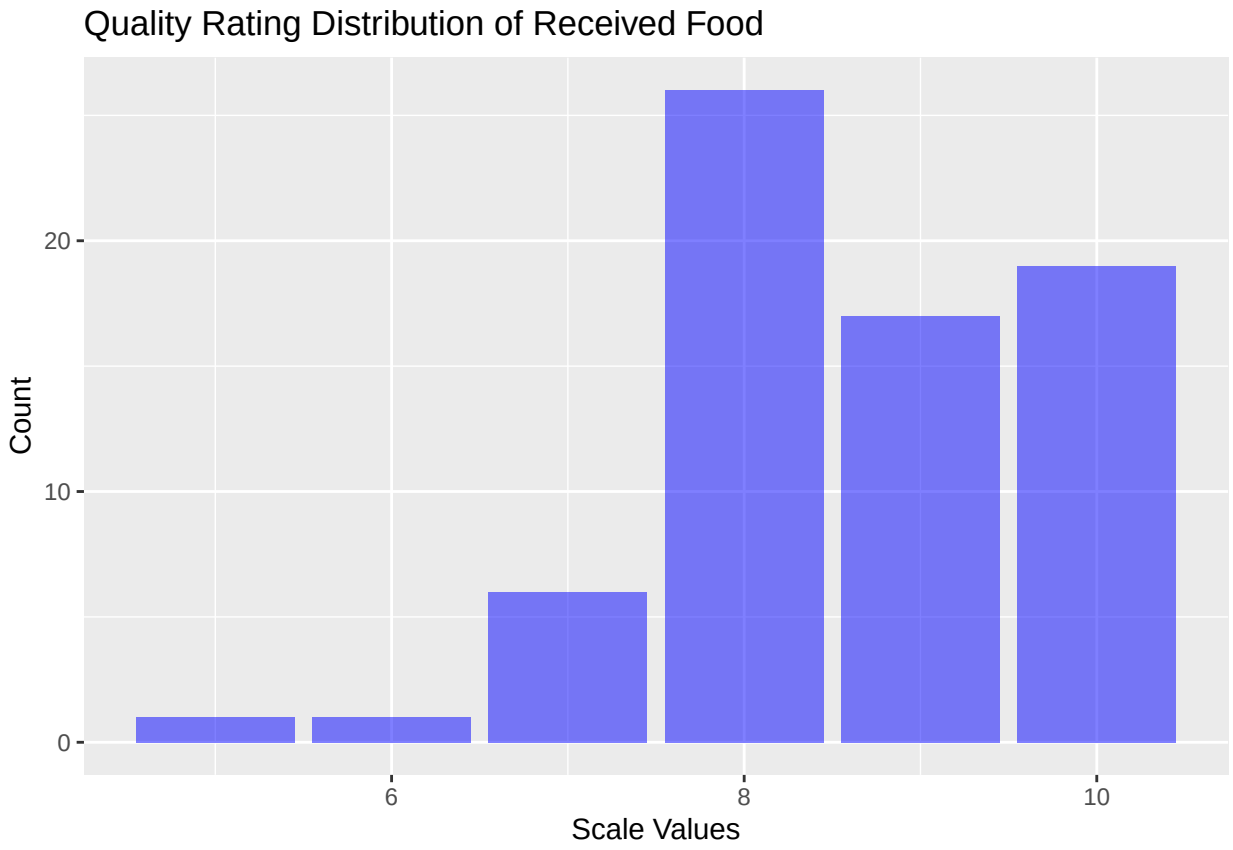
```
experience<-data.frame(
  age_categories,
  survey$`How satisfied were you with the overall experience of ordering food through food deliveries s
)
colnames(experience)<-c("age","satisfaction")
satisfaction_labels <- c("1" = "Satisfied", "2" = "Average")

ggplot(experience, aes(x = factor(age), fill = factor(satisfaction))) +
  geom_bar(position = "dodge", width = 0.7) +
  labs(title = "Satisfaction per Age Group",
       x = "Age Group",
       y = "Count") +
  scale_fill_manual(name = "Satisfaction Level",
                    values = c("1" = "purple", "2" = "green"),
                    labels = satisfaction_labels) +
  theme_minimal()
```



**Most of the respondents per age group are satisfied but as you can see the age group 25-29 are having equal number of satisfaction level which is satisfied and average**

**scaling of the people who uses the delivery app**

```
scale<-survey$`On a scale of 1 to 10, how would you rate the quality of the food you received?`

scaling <- data.frame(scale)
ggplot(scaling, aes(x = scale)) +
  geom_bar(fill = "blue", alpha = 0.5) +
  labs(title = "Quality Rating Distribution of Received Food",

       x = "Scale Values",
       y = "Count") +
  scale_fill_hue(name = "Scale Value")
```

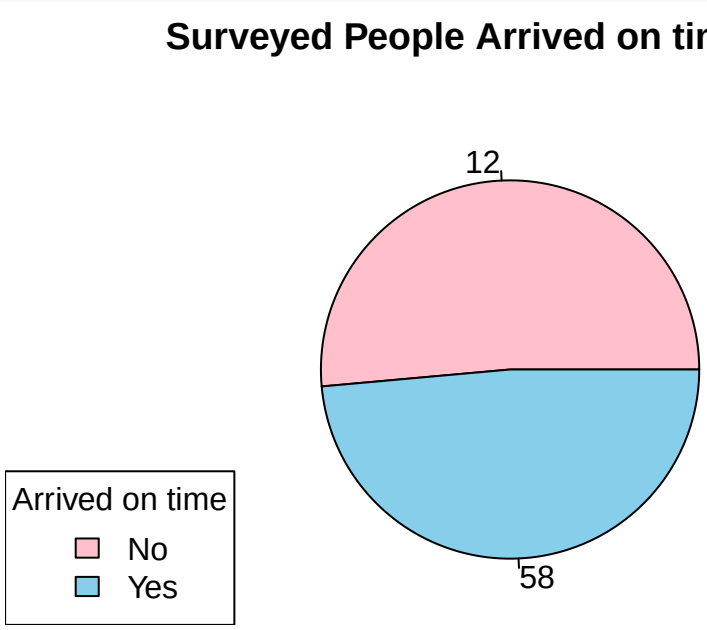



**The respondent are likely rate the quality of food 8 out 10 and have a count of more than 20 persons and the gap are not that far for those respondents who rate it a 10 out 10 and 9 out of 10**

**Customer delivery arrived on time**

```
arrival<- survey %>%
  group_by(survey$`Did your order arrive within the estimated delivery time?`) %>%
  summarise(count=n())
```

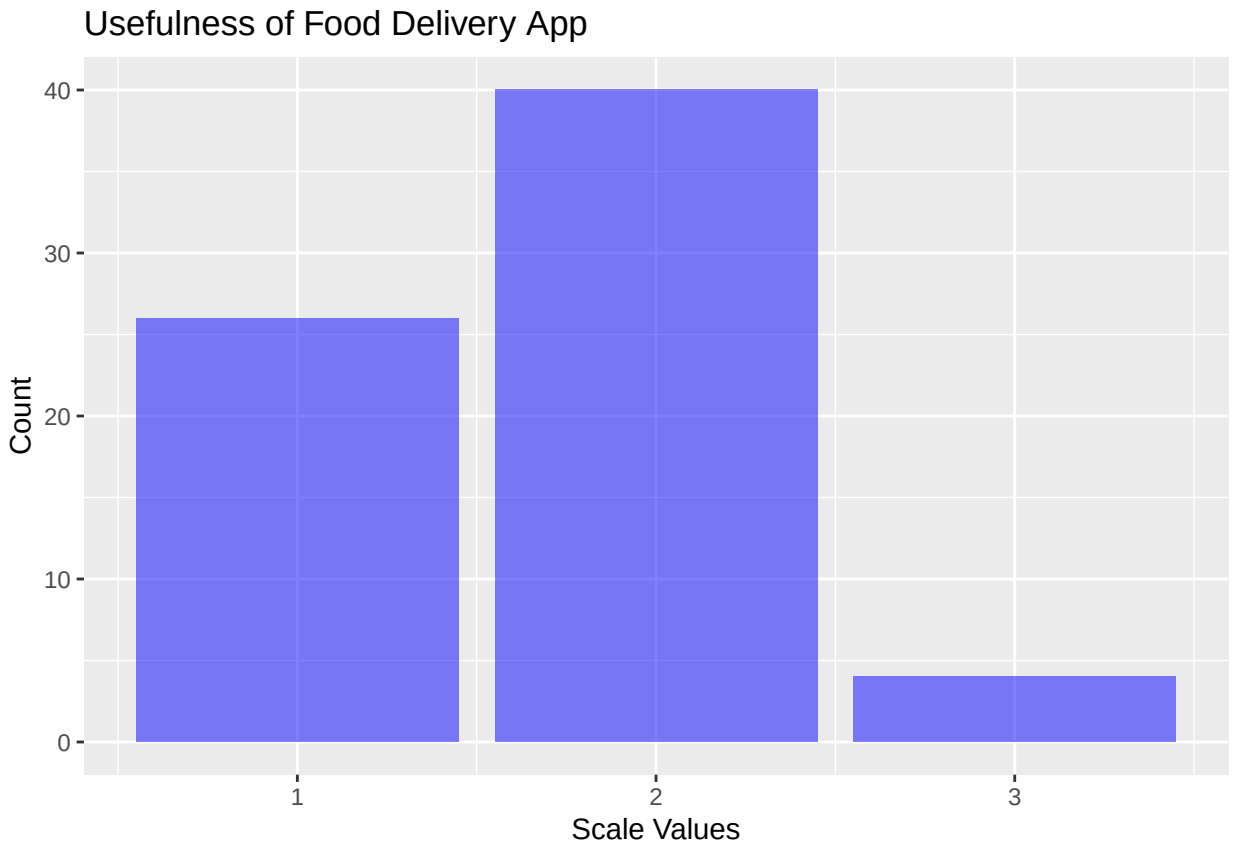
```
colors <- c("pink","skyblue")
pie(Gender$count, labels = arrival$count, col = colors, main = "Surveyed People Arrived on time order",
legend("bottomleft", legend = arrival$`survey$\`Did your order arrive within the estimated delivery time
```




**Most of the respondent's orders arrived on time.**

**p1**

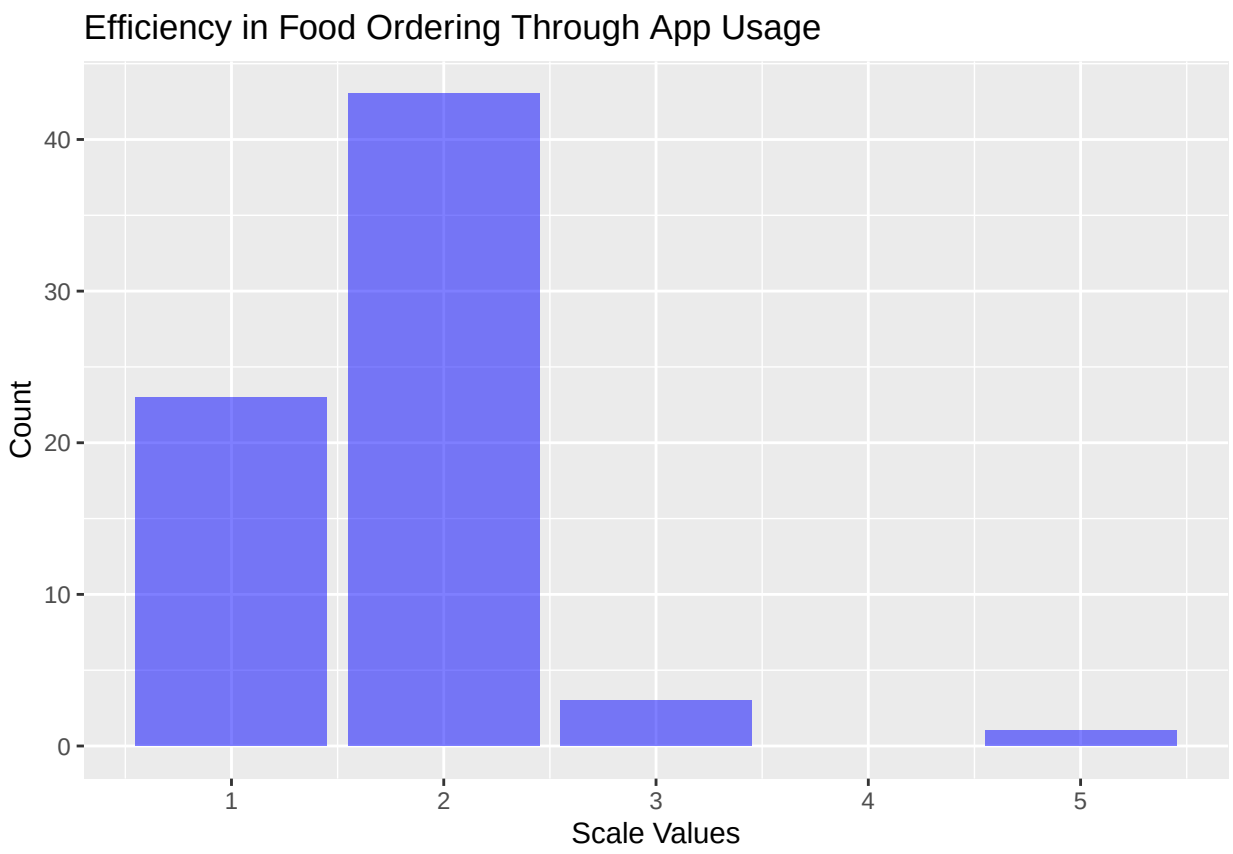
```
p1<-survey$`I would find the food delivery app useful for my needs`
p1s <- data.frame(p1)
ggplot(p1s, aes(x = p1)) +
  geom_bar(fill = "blue", alpha = 0.5) +
  labs(title = "Usefulness of Food Delivery App",
       x = "Scale Values",
       y = "Count") +
  scale_fill_hue(name = "Scale Value")
```




### Most of the respondents Agree in the PE1

### p2

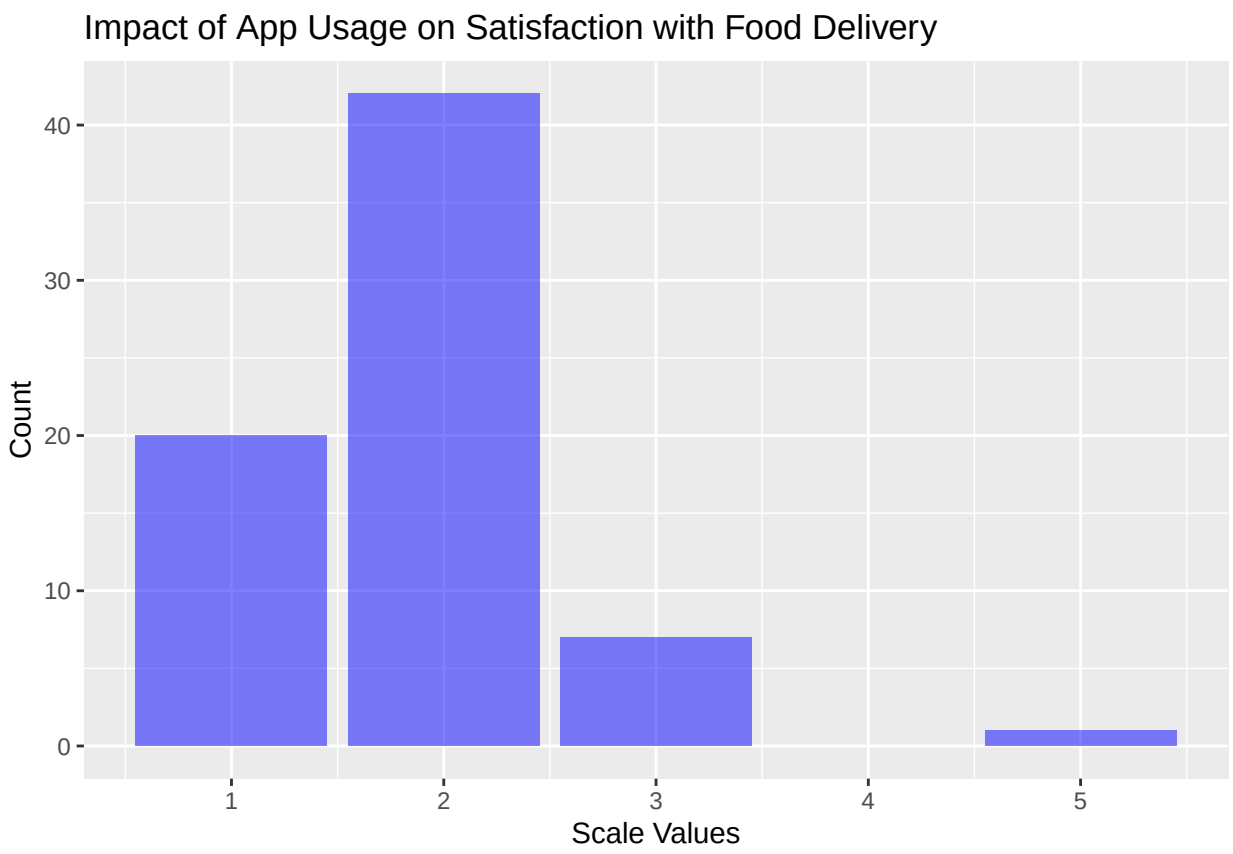
```
p2<-survey$`Using the app enables me to order food more quickly and efficiently`
p2s <- data.frame(p2)
ggplot(p2s, aes(x = p2)) +
  geom_bar(fill = "blue", alpha = 0.5) +
  labs(title = "Efficiency in Food Ordering Through App Usage",
       x = "Scale Values",
       y = "Count") +
  scale_fill_hue(name = "Scale Value")
```




### Most of the respondents Agree in the PE2

### p3

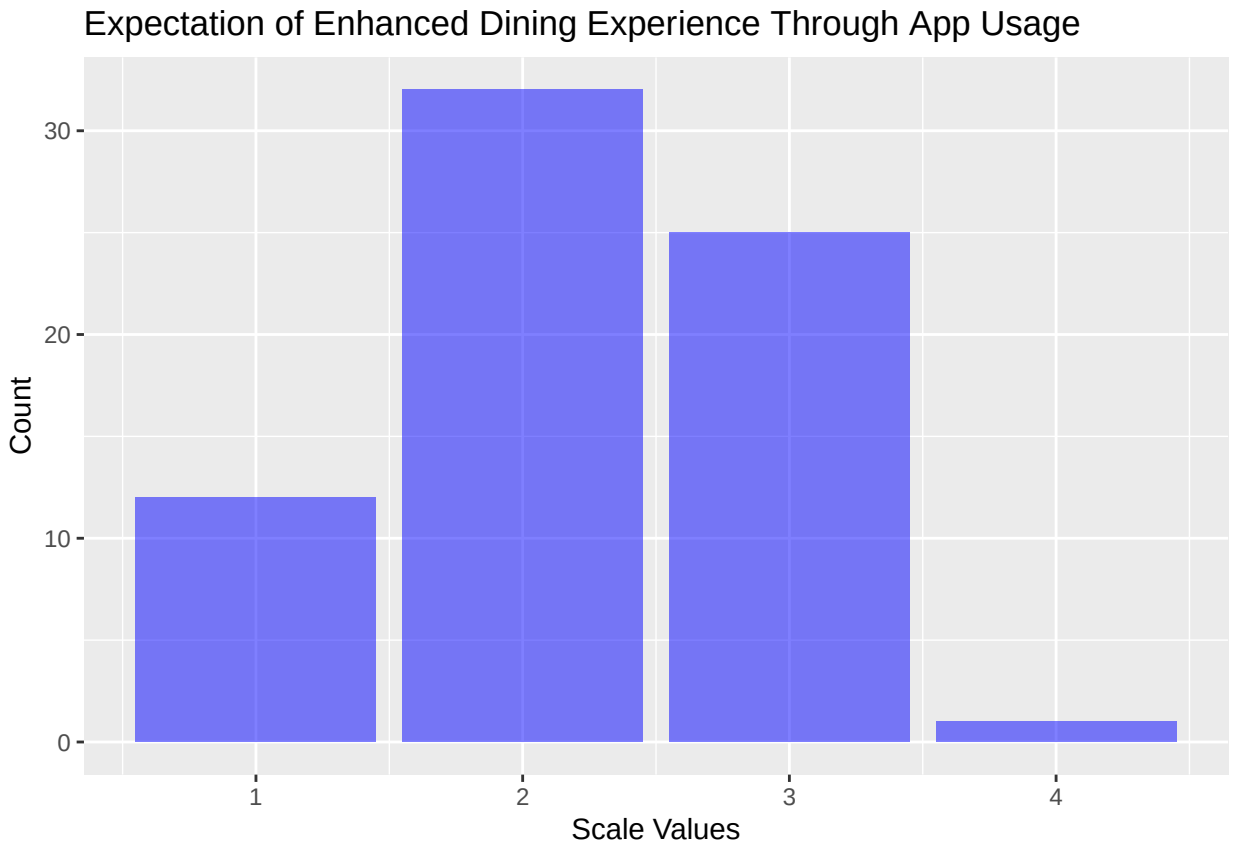
```
p3<-survey$`Using the app increases my satisfaction with the food delivery process`
p3s <- data.frame(p3)
ggplot(p3s, aes(x = p3)) +
  geom_bar(fill = "blue", alpha = 0.5) +
  labs(title = "Impact of App Usage on Satisfaction with Food Delivery",
       x = "Scale Values",
       y = "Count") +
  scale_fill_hue(name = "Scale Value")
```




### Most of the respondents Agree in the PE3

### p4

```
p4<-survey$`If I use the app, I believe it will enhance my overall dining experience`
p4s <- data.frame(p4)
ggplot(p4s, aes(x = p4)) +
  geom_bar(fill = "blue", alpha = 0.5) +
  labs(title = "Expectation of Enhanced Dining Experience Through App Usage",
       x = "Scale Values",
       y = "Count") +
  scale_fill_hue(name = "Scale Value")
```




### Most of the respondents Agree in the PE4

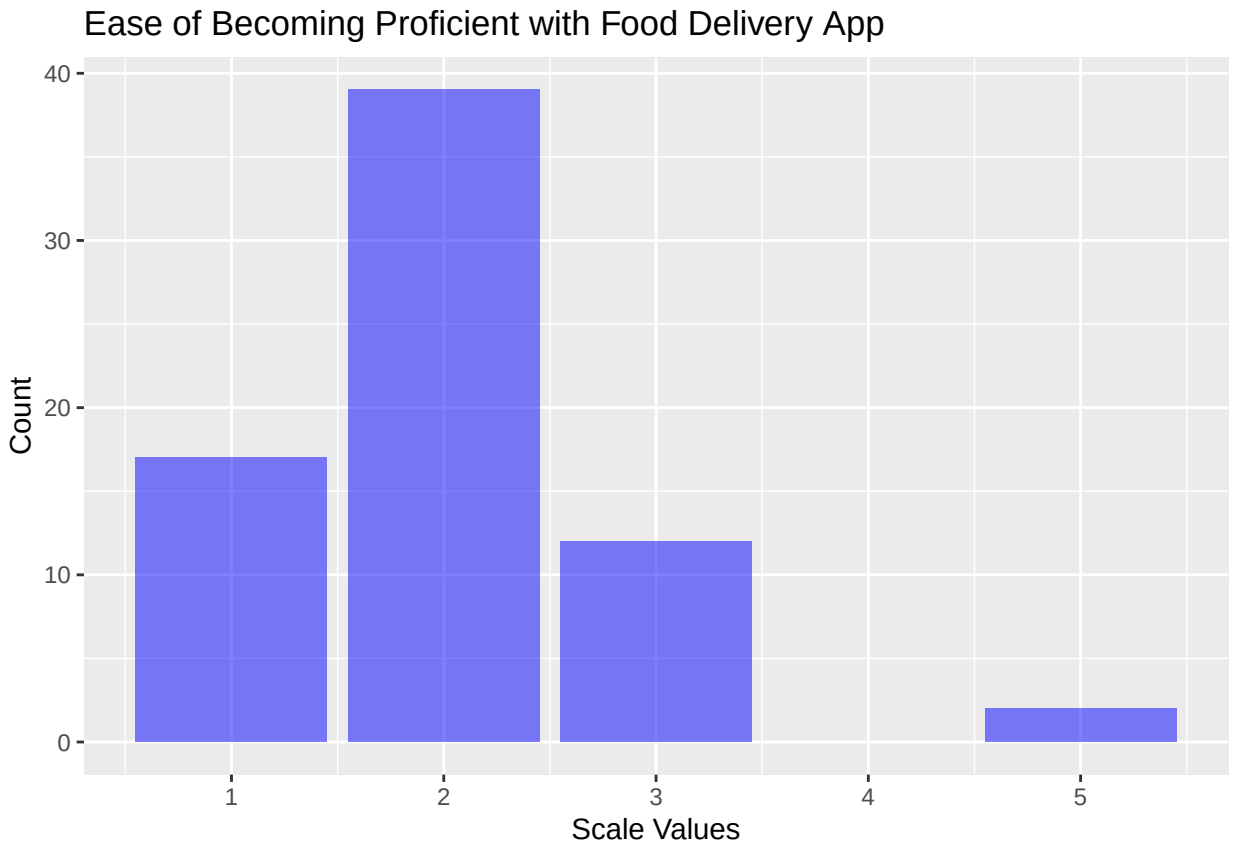
### e1

```
e1<-survey$`My interaction with the app would be clear and understandable`
e1s <- data.frame(e1)
ggplot(e1s, aes(x = e1)) +
  geom_bar(fill = "blue", alpha = 0.5) +
  labs(title = "Perception of Clarity and Understandability in Food Delivery App Interaction",
       x = "Scale Values",
       y = "Count") +
  scale_fill_hue(name = "Scale Value")
```


**Most of the respondents Agree in the EE1**

**e2**

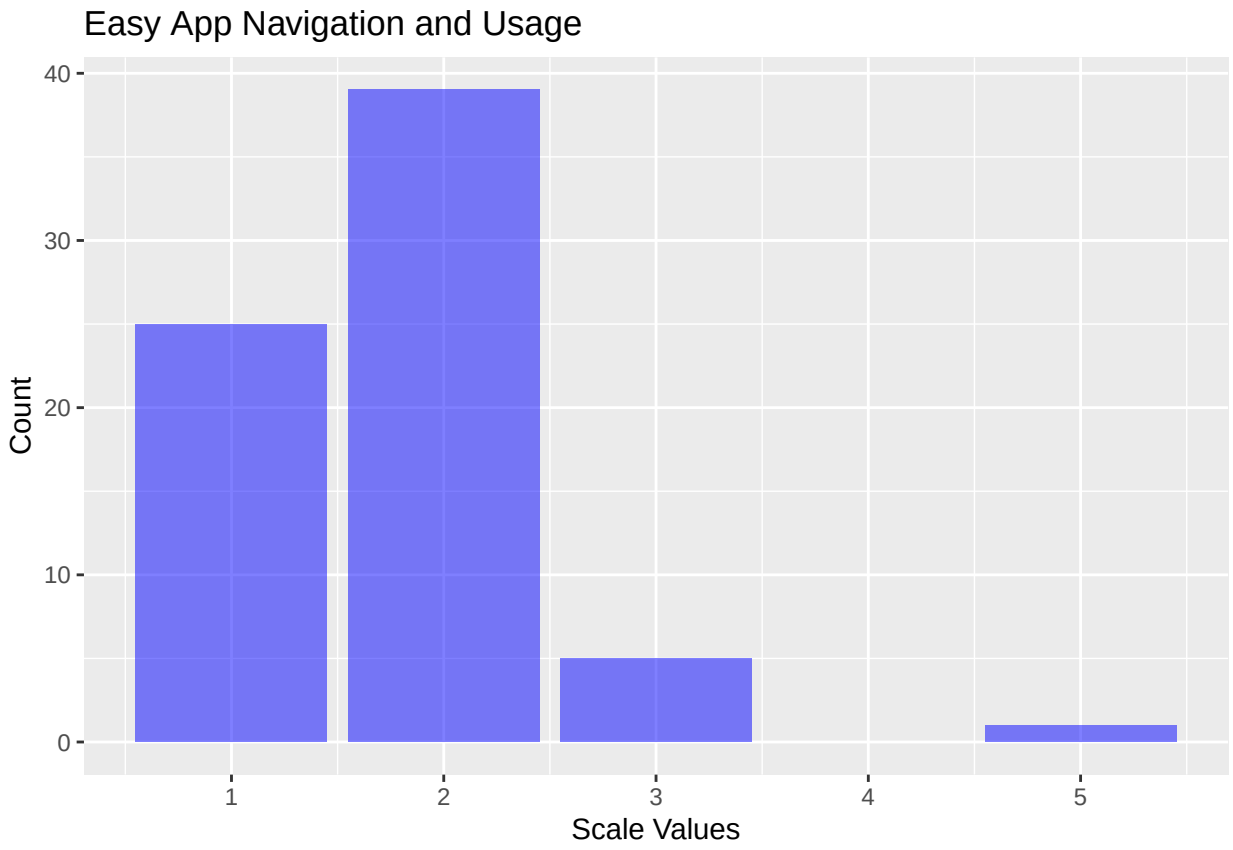
```
e2<-survey$`It would be easy for me to become skillful at using the app`
e2s <- data.frame(e2)
ggplot(e2s, aes(x = e2)) +
  geom_bar(fill = "blue", alpha = 0.5) +
  labs(title = "Ease of Becoming Proficient with Food Delivery App",
       x = "Scale Values",
       y = "Count") +
  scale_fill_hue(name = "Scale Value")
```




### Most of the respondents Agree in the EE2

### e3

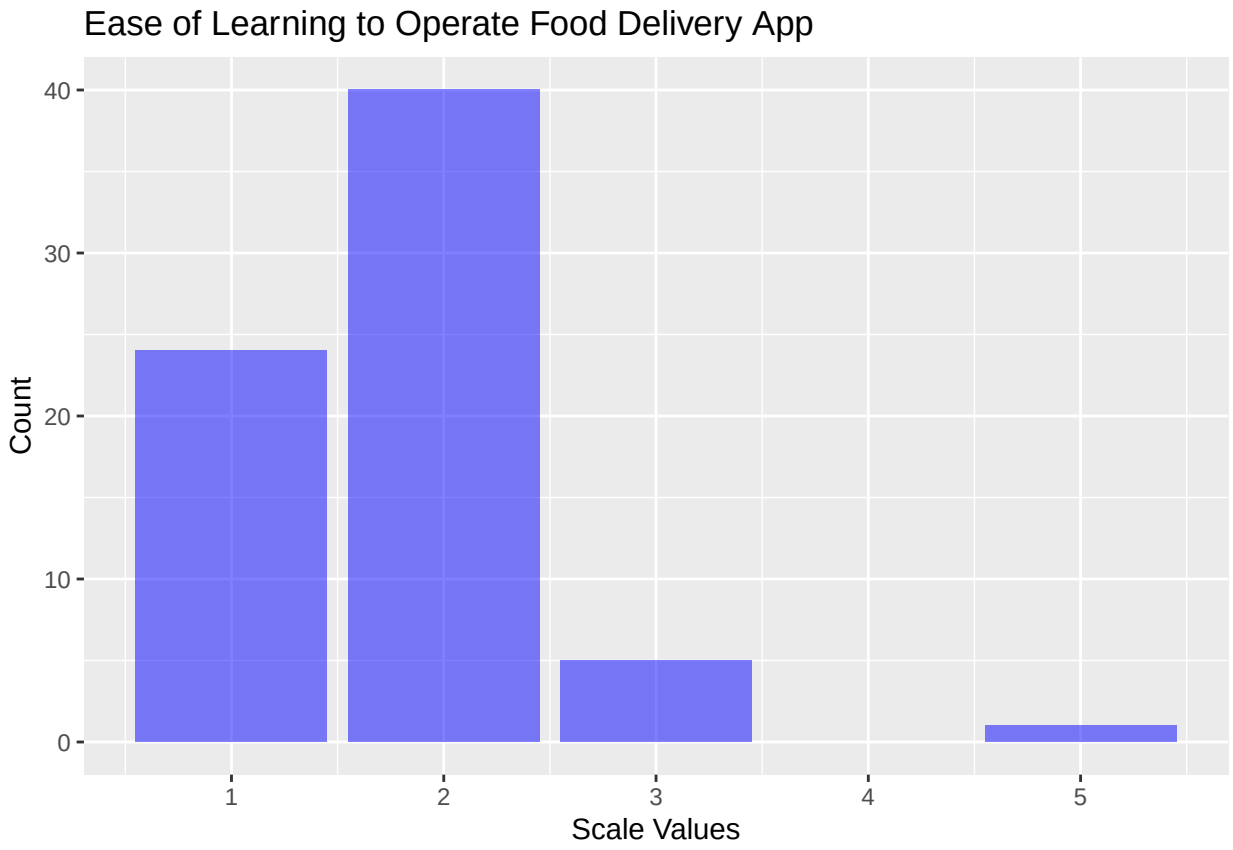
```
e3<-survey$`I would find the app easy to navigate and use`
e3s <- data.frame(e3)
ggplot(e3s, aes(x = e3)) +
  geom_bar(fill = "blue", alpha = 0.5) +
  labs(title = "Easy App Navigation and Usage",
       x = "Scale Values",
       y = "Count") +
  scale_fill_hue(name = "Scale Value")
```




### Most of the respondents Agree in the EE3

### e4

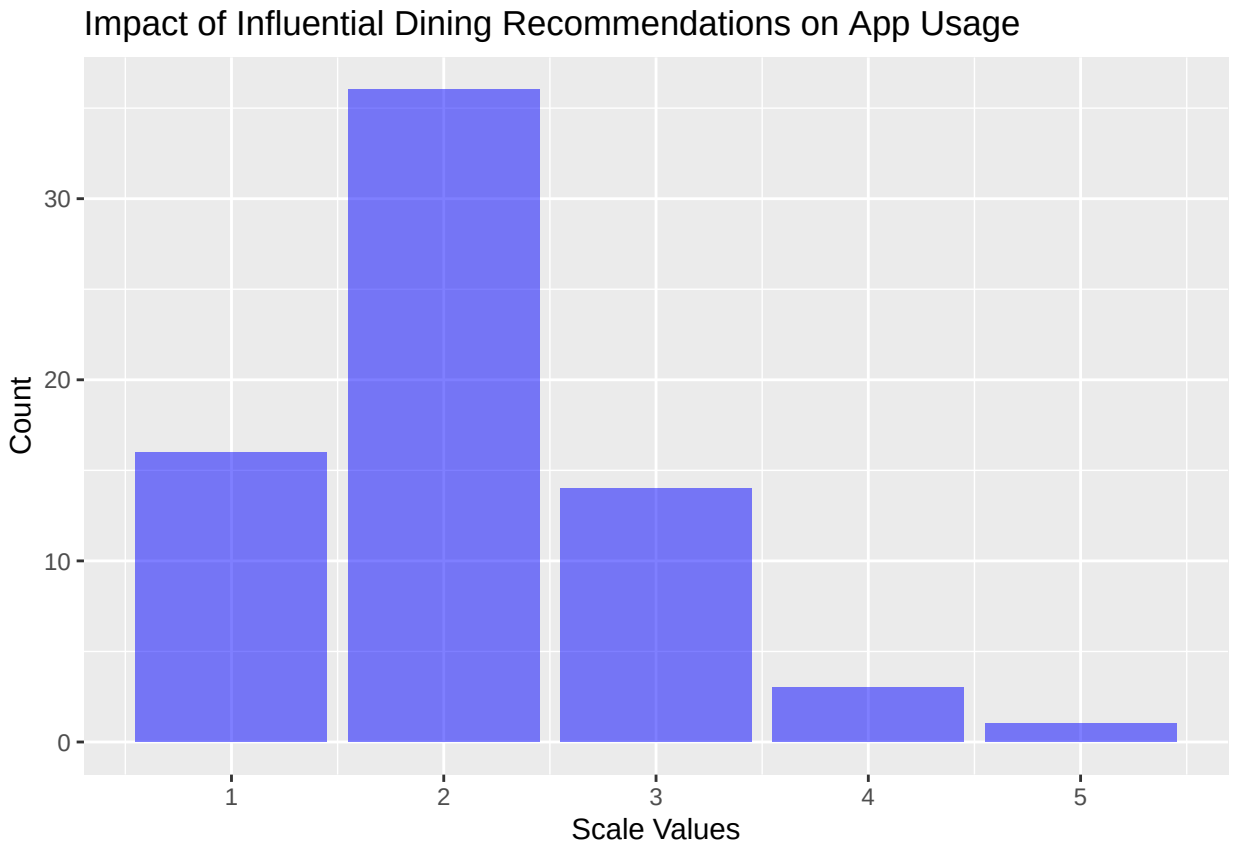
```
e4<-survey$`Learning to operate the app is easy for me`
e4s <- data.frame(e4)
ggplot(e4s, aes(x = e4)) +
  geom_bar(fill = "blue", alpha = 0.5) +
  labs(title = "Ease of Learning to Operate Food Delivery App",
       x = "Scale Values",
       y = "Count") +
  scale_fill_hue(name = "Scale Value")
```




### Most of the respondents Agree in the EE4

### s1

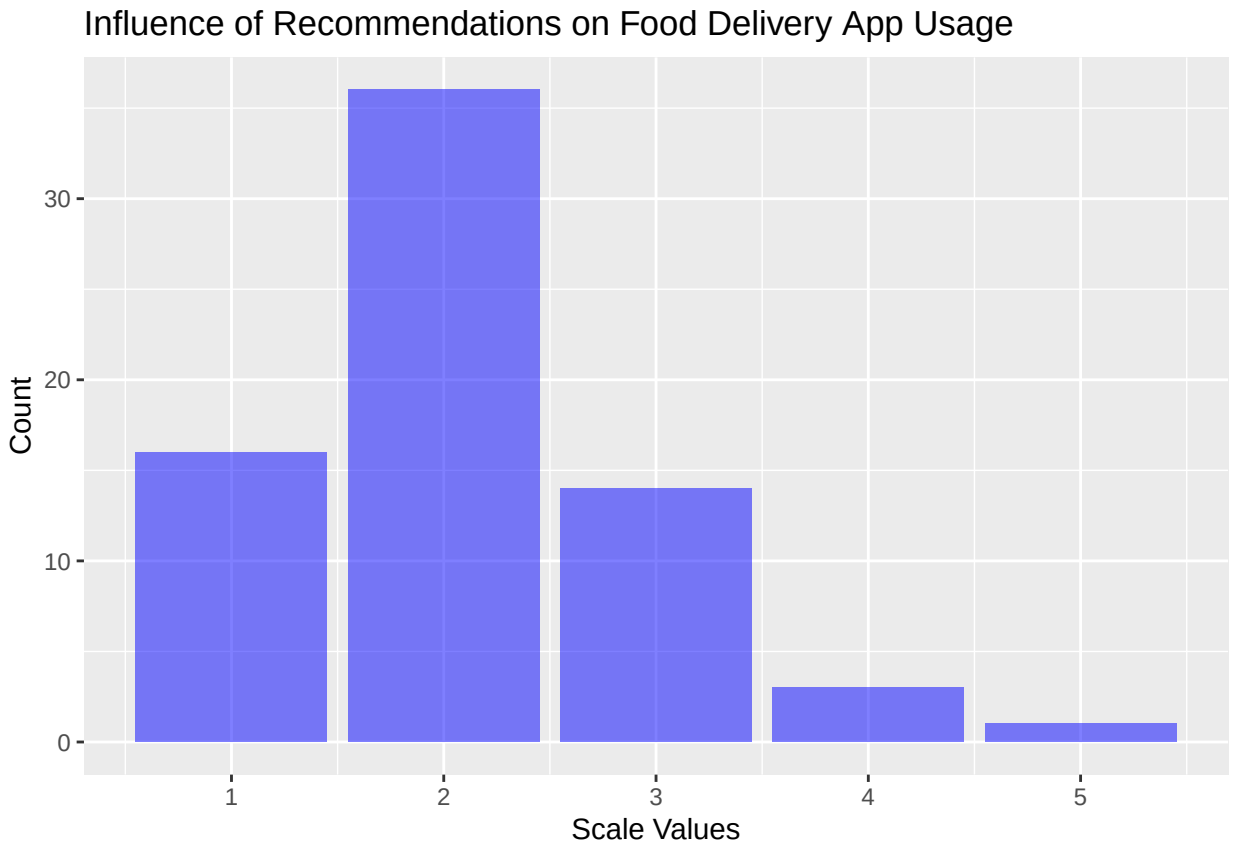
```
s1<-survey$`People who influence my dining choices think that I should use the app`
s1s <- data.frame(s1)
ggplot(s1s, aes(x = s1)) +
  geom_bar(fill = "blue", alpha = 0.5) +
  labs(title = "Impact of Influential Dining Recommendations on App Usage",
       x = "Scale Values",
       y = "Count") +
  scale_fill_hue(name = "Scale Value")
```




### Most of the respondents Agree in the SI1

##s2

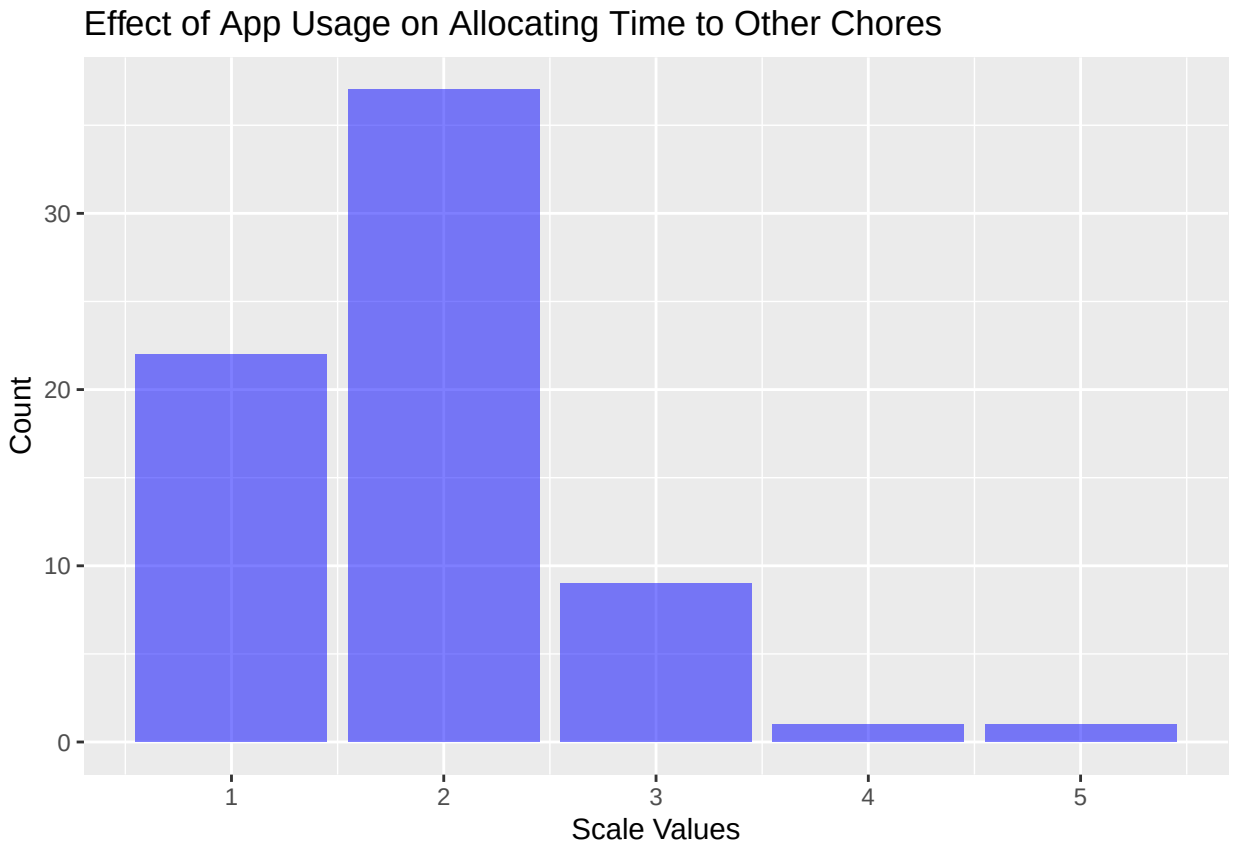
```
s2<-survey$`People who are important to me recommend using the food delivery app`
s2s <- data.frame(s2)
ggplot(s2s, aes(x = s2)) +
  geom_bar(fill = "blue", alpha = 0.5) +
  labs(title = "Influence of Recommendations on Food Delivery App Usage",
       x = "Scale Values",
       y = "Count") +
  scale_fill_hue(name = "Scale Value")
```




### Most of the respondents Agree in the SI2

##s3

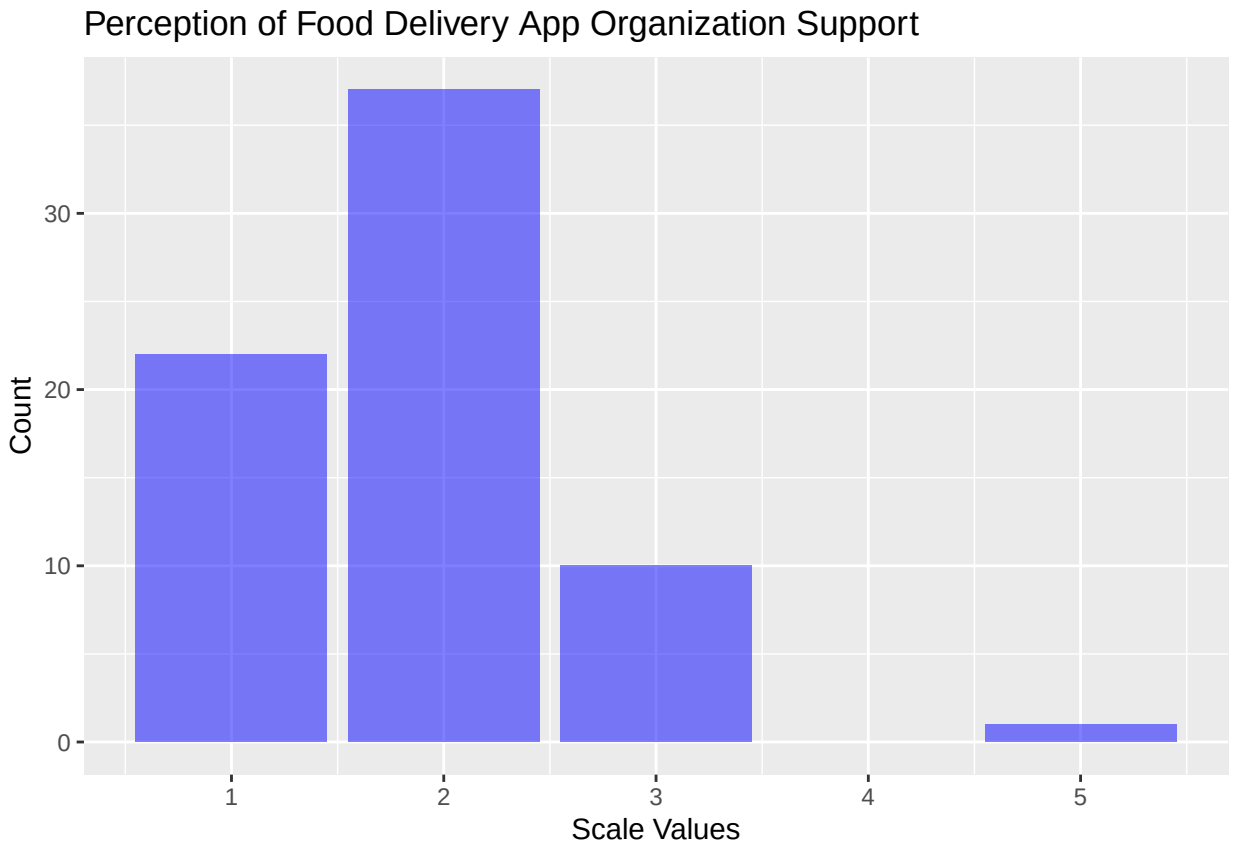
```
s3<-survey$`Using the app helps me to put more time to other chores`
s3s <- data.frame(s3)
ggplot(s3s, aes(x = s3)) +
  geom_bar(fill = "blue", alpha = 0.5) +
  labs(title = "Effect of App Usage on Allocating Time to Other Chores",
       x = "Scale Values",
       y = "Count") +
  scale_fill_hue(name = "Scale Value")
```




### Most of the respondents Agree in the SI3

##s4

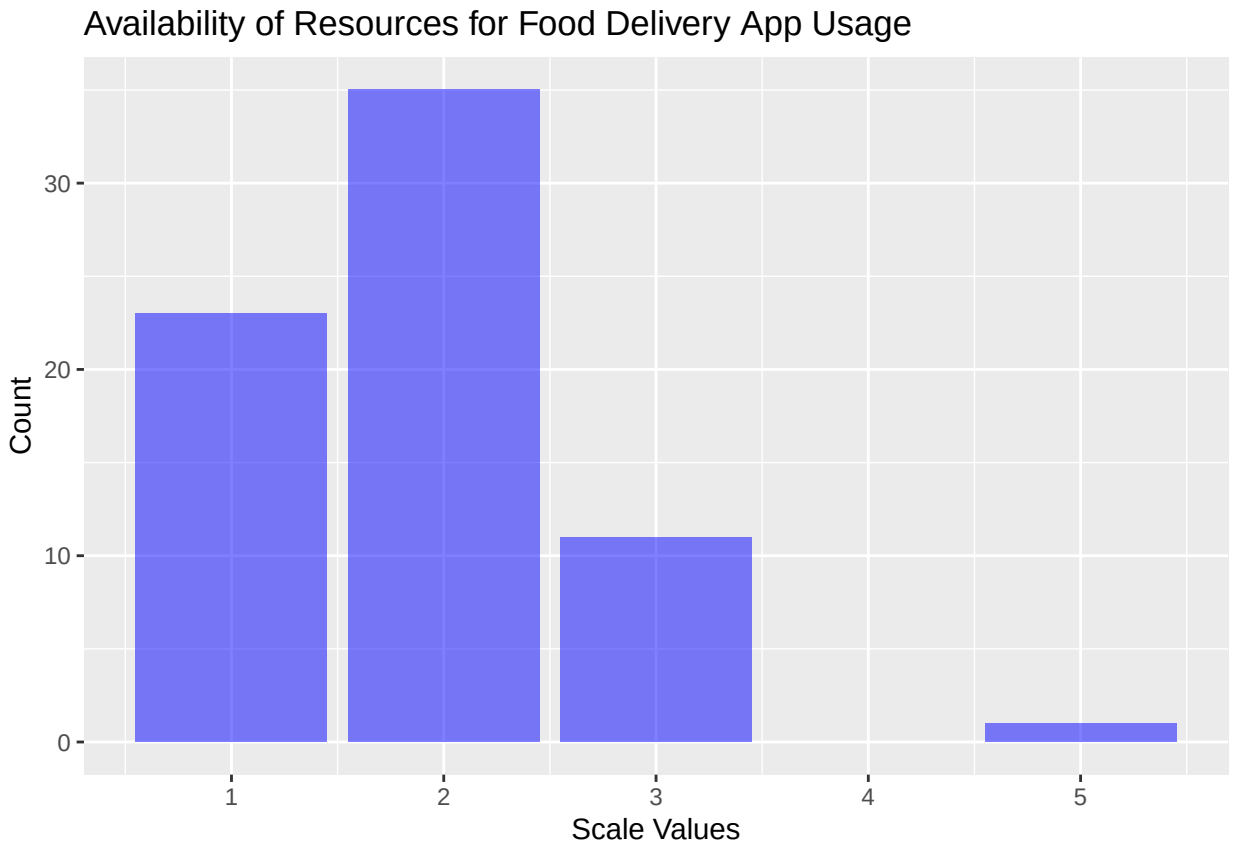
```
s4<-survey$`In general, the food delivery app organization has supported its use`
s4s <- data.frame(s4)
ggplot(s4s, aes(x = s4)) +
  geom_bar(fill = "blue", alpha = 0.5) +
  labs(title = "Perception of Food Delivery App Organization Support",
       x = "Scale Values",
       y = "Count") +
  scale_fill_hue(name = "Scale Value")
```




### Most of the respondents Agree in the SI4

### f1

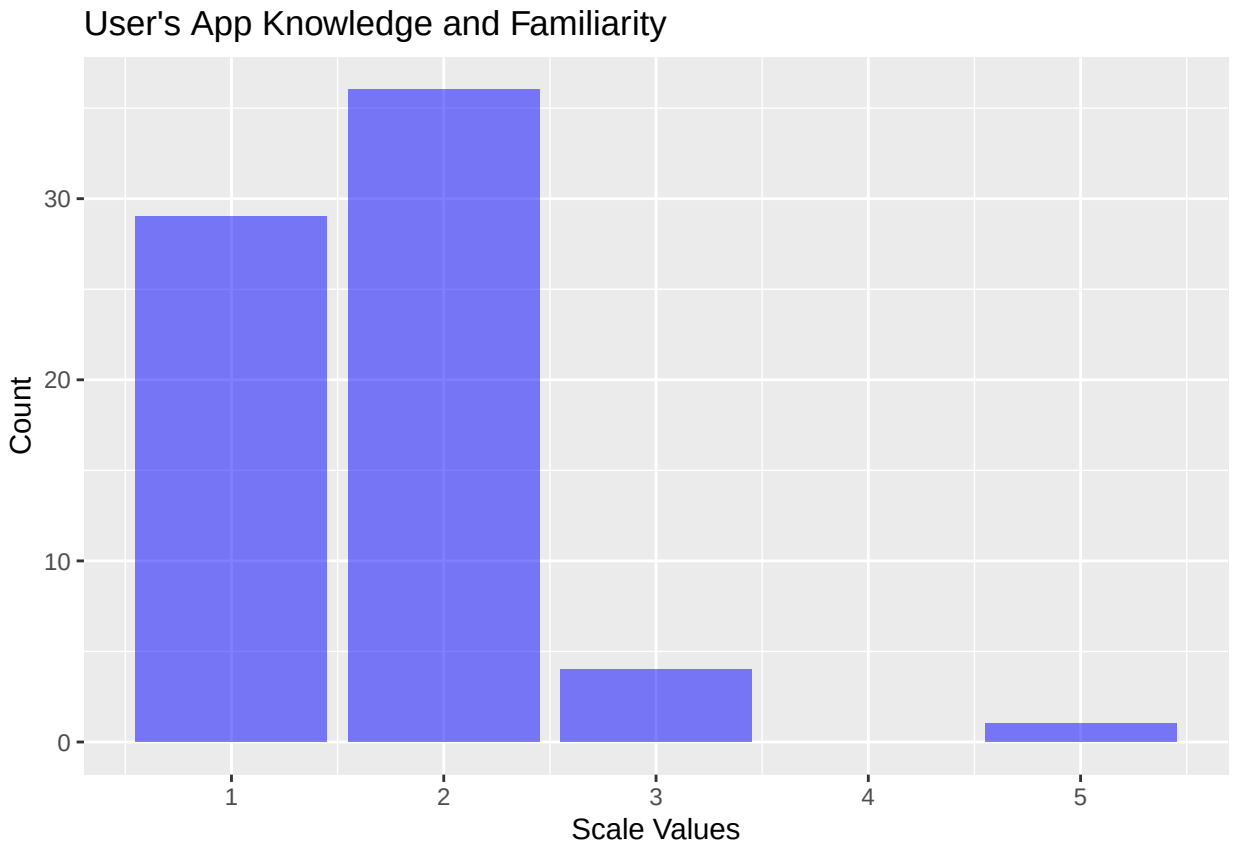
```
f1<-survey$`I have the resources necessary to use the food delivery app`
f1s <- data.frame(f1)
ggplot(f1s, aes(x = f1)) +
  geom_bar(fill = "blue", alpha = 0.5) +
  labs(title = "Availability of Resources for Food Delivery App Usage",
       x = "Scale Values",
       y = "Count") +
  scale_fill_hue(name = "Scale Value")
```




### Most of the respondents Agree in the FC1

### f2

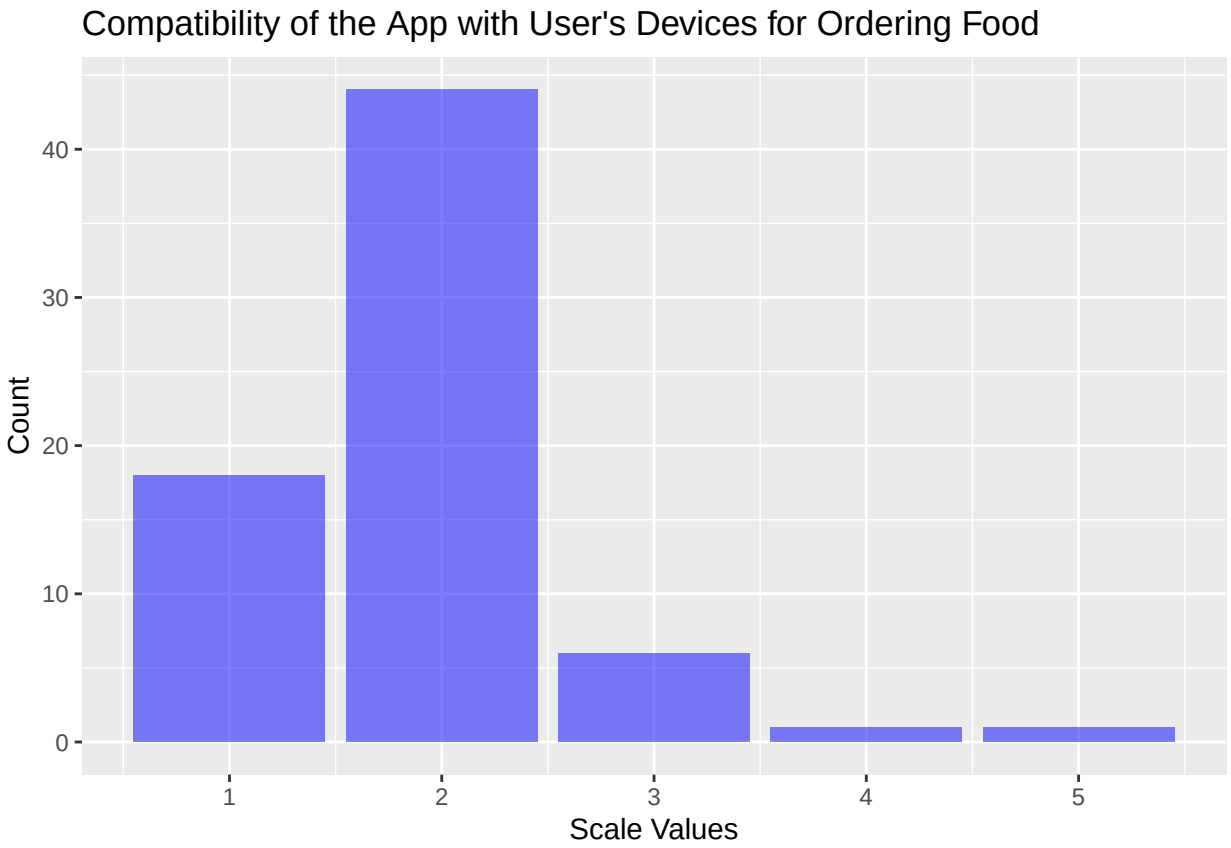
```
f2<-survey$`I have the knowledge required to use the app effectively`
f2s <- data.frame(f2)
ggplot(f2s, aes(x = f2)) +
  geom_bar(fill = "blue", alpha = 0.5) +
  labs(title = "User's App Knowledge and Familiarity",
       x = "Scale Values",
       y = "Count") +
  scale_fill_hue(name = "Scale Value")
```




**Most of the respondents Agree in the FC2**

**f3**

```
f3<-survey$`The app is compatible with other device I use for ordering food`
f3s <- data.frame(f3)

ggplot(f3s, aes(x = f3)) +
  geom_bar(fill = "blue", alpha = 0.5) +
  labs(title = "Compatibility of the App with User's Devices for Ordering Food",
       x = "Scale Values",
       y = "Count") +
  scale_fill_hue(name = "Scale Value")
```




**Most of the respondents Agree in the FC3**