

# SurveyRMD\_BSIT2B

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## Survey Table and Demographics

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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 ser
```

```

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

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
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
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
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

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

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

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

s1 <- survey$`People who influence my dining choices think that I should use the app`
s1 <- recode(s1,
        "Strongly Agree" = 1,
        "Agree" = 2,
        "Neutral" = 3,
        "Disagree" = 4,
        "Strongly Disagree" = 5)
s1mean <- mean(s1)
s1sd <- sd(s1)
survey$`People who influence my dining choices think that I should use the app`<-s1

```

```

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 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

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

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

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

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

survsumtable <- data.frame(
  Variable = c("p1", "p2", "p3", "p4", "e1", "e2", "e3", "e4", "s1", "s2", "s3", "s4", "f1", "f2", "f3"),
  Mean = c(p1mean, p2mean, p3mean, p4mean, e1mean, e2mean, e3mean, e4mean, s1mean, s2mean, s3mean, s4mean, f1mean, f2mean, f3mean),
  SD = c(p1sd, p2sd, p3sd, p4sd, e1sd, e2sd, e3sd, e4sd, s1sd, s2sd, s3sd, s4sd, f1sd, f2sd, f3sd)
)
library(openxlsx)
survsumtable

```

```

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

```

```
write.xlsx(survsumtable, "survey_mean_sd_table.xlsx")
```

## Demographics

### Age of the people who answer the surveys

```

library(ggplot2)
library(dplyr)

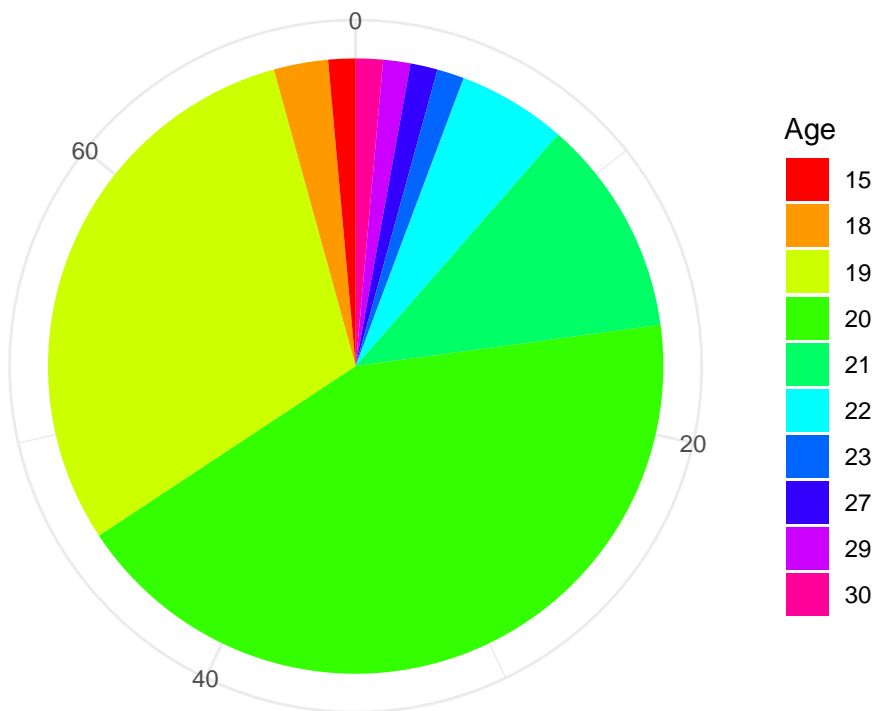
age_counts <- survey %>%

```

```
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)))
```

Pie Chart of Age Distribution

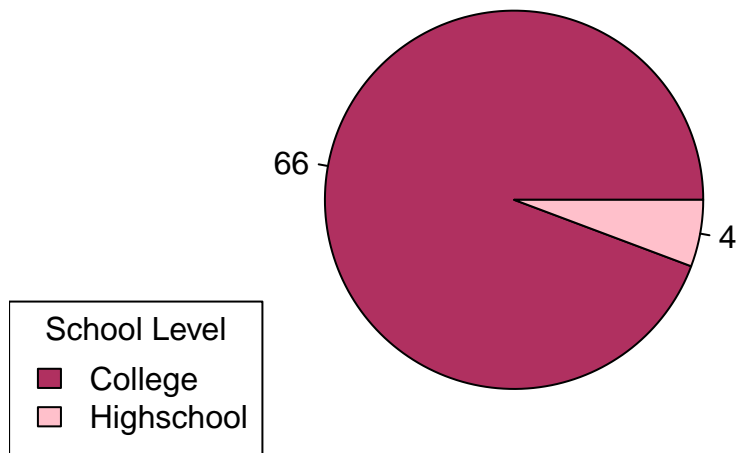


Educational Level of the people who answer the surveys

```
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",
    legend("bottomleft", legend = EducationalLevel$`Education Level`, fill = colors, title = "School Level"))
```

## School Level of the Surveyed People

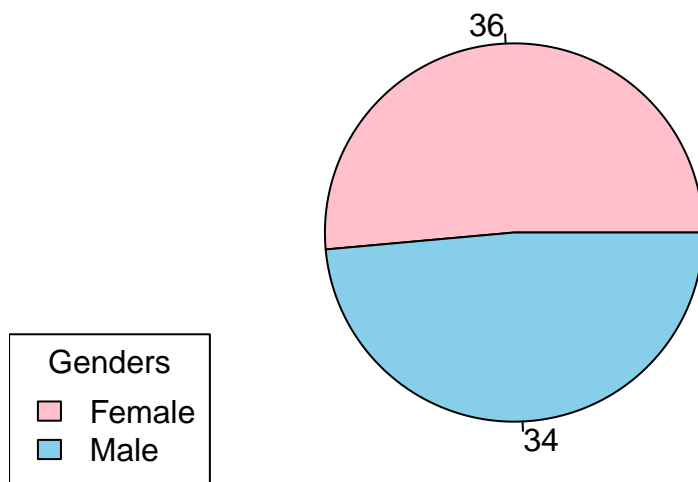


## Gender of the people who answer the surveys

```
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")
```

## Genders of the Surveyed People



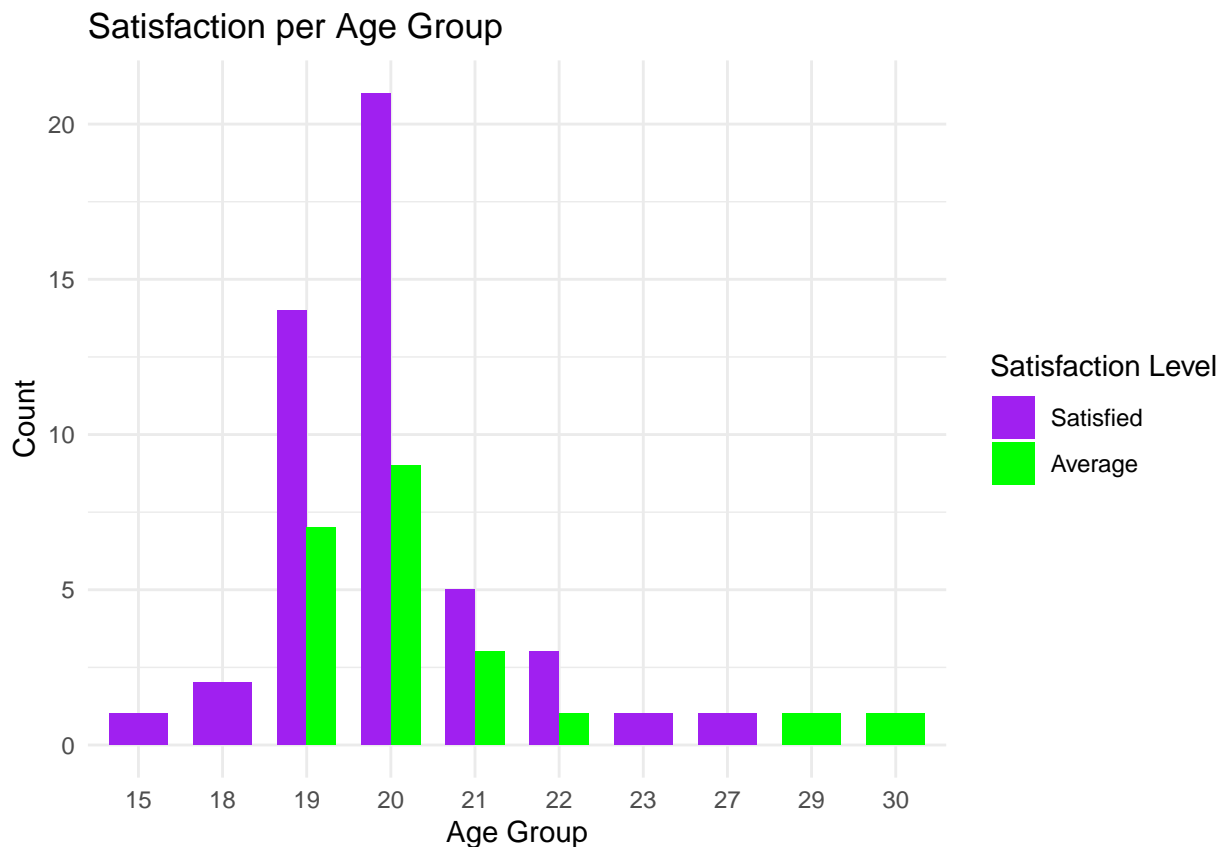
## Satisfaction Level Per Age

```

experience<-data.frame(
  survey$`Age:`,
  survey$`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()

```



### 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?`

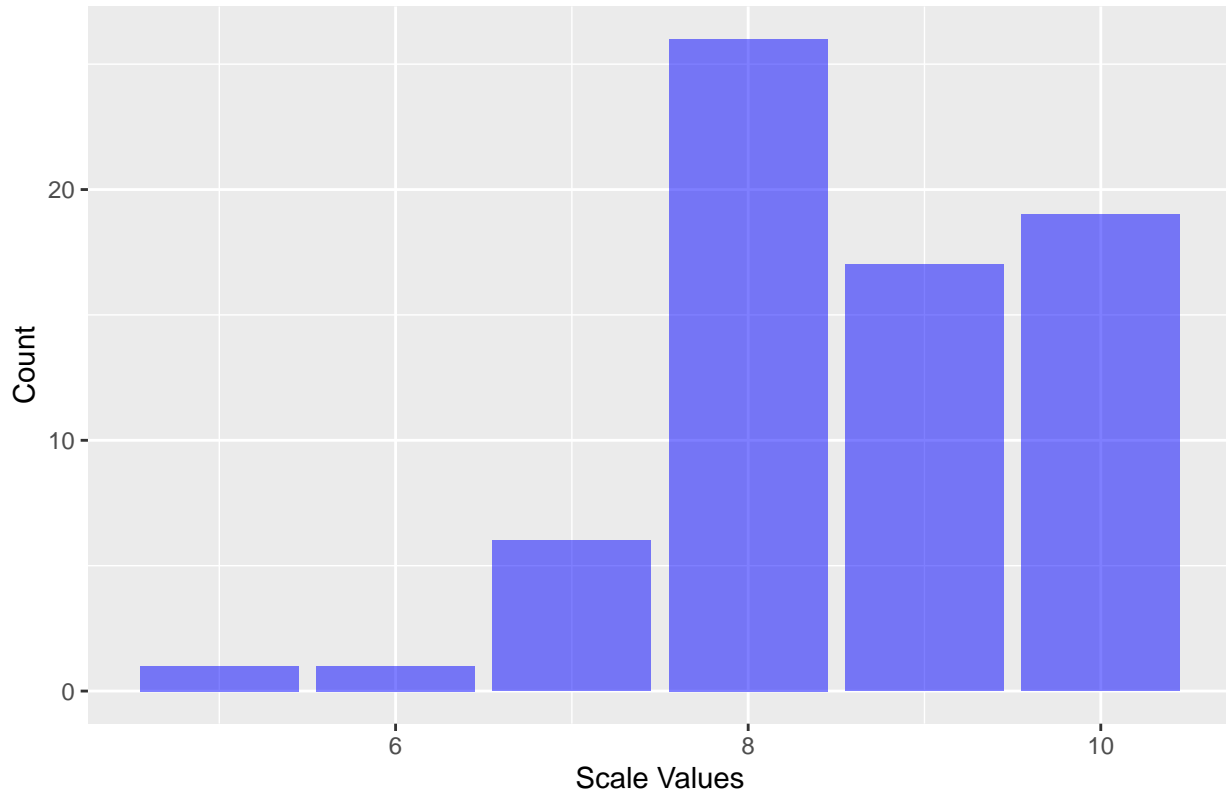
scaling <- data.frame(scale)
ggplot(scaling, aes(x = scale)) +
  geom_bar(fill = "blue", alpha = 0.5) +
  labs(title = "Quality Rating Distribution of Received Food",

```



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

Quality Rating Distribution of Received Food

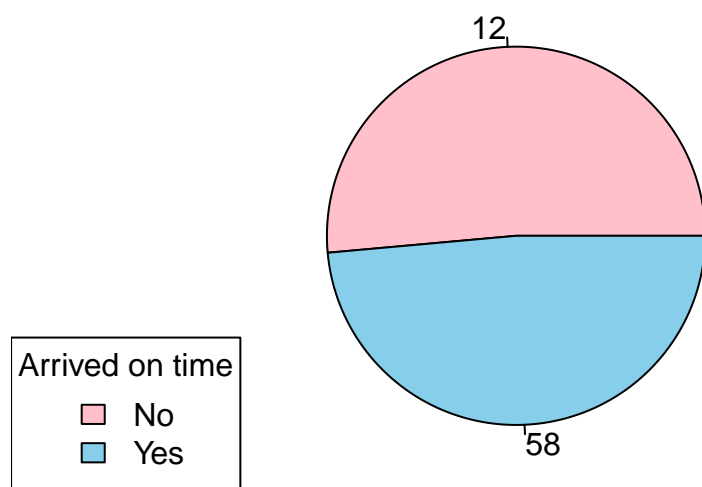


Customer delivery arrived on time

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

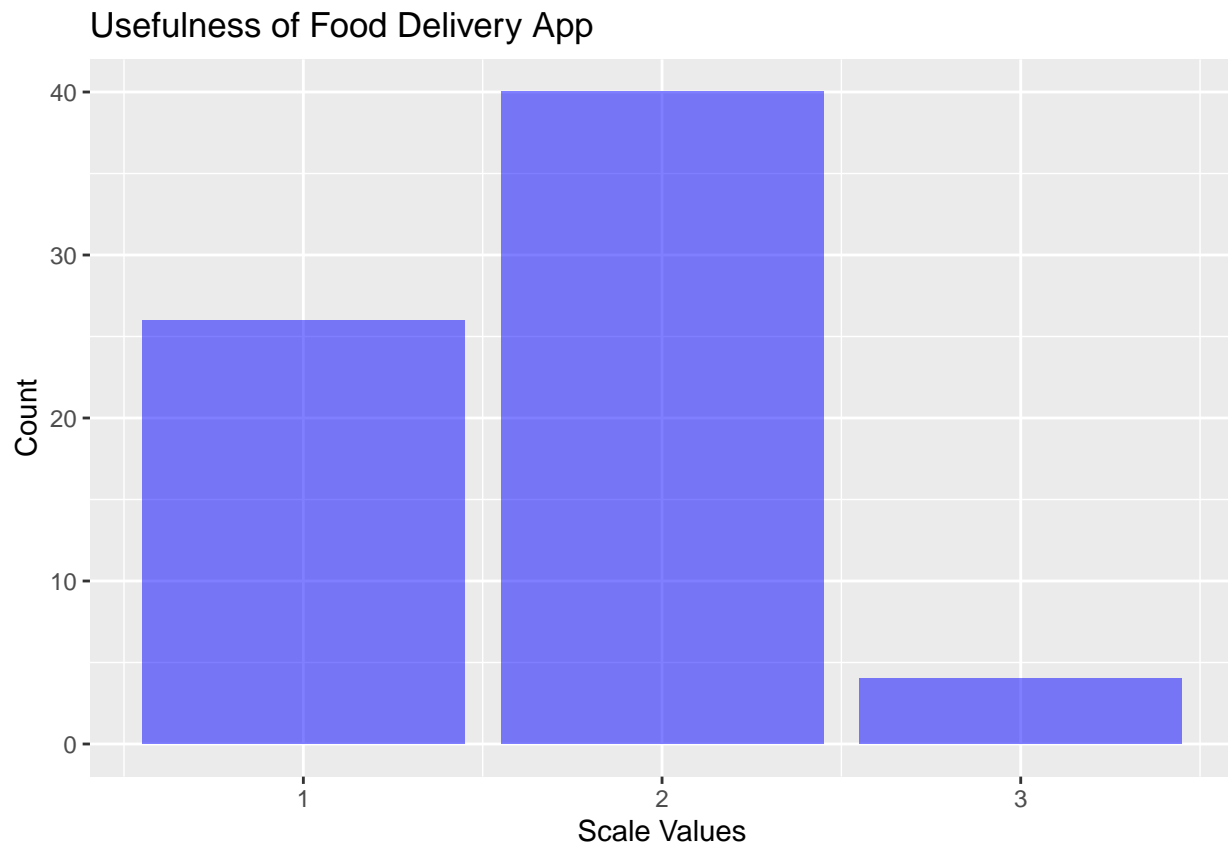
colors <- c("pink","skyblue")
pie(Gender$count, labels = arrival$count, col = colors, main = "Surveyed People Arrived on time order",
legend("bottomleft", legend = arrival$survey$`Did your order arrive within the estimated delivery time`))
```

## Surveyed People Arrived on time order



p1

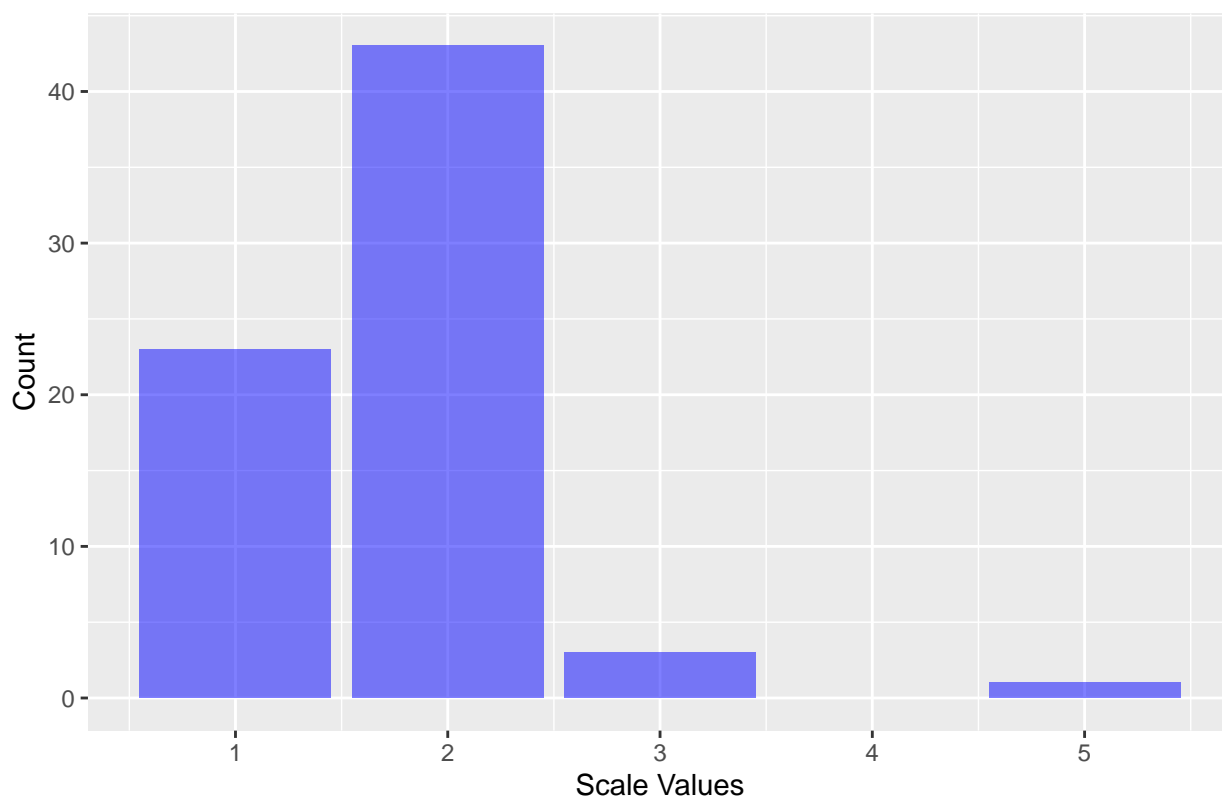
```
p1<-survey$`I would find the food delivery app useful for my needs`  
p1s <- data.frame(p1)  
ggplot(p1s, aes(x = p1)) +  
  geom_bar(fill = "blue", alpha = 0.5) +  
  labs(title = "Usefulness of Food Delivery App",  
        x = "Scale Values",  
        y = "Count") +  
  scale_fill_hue(name =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



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")
```

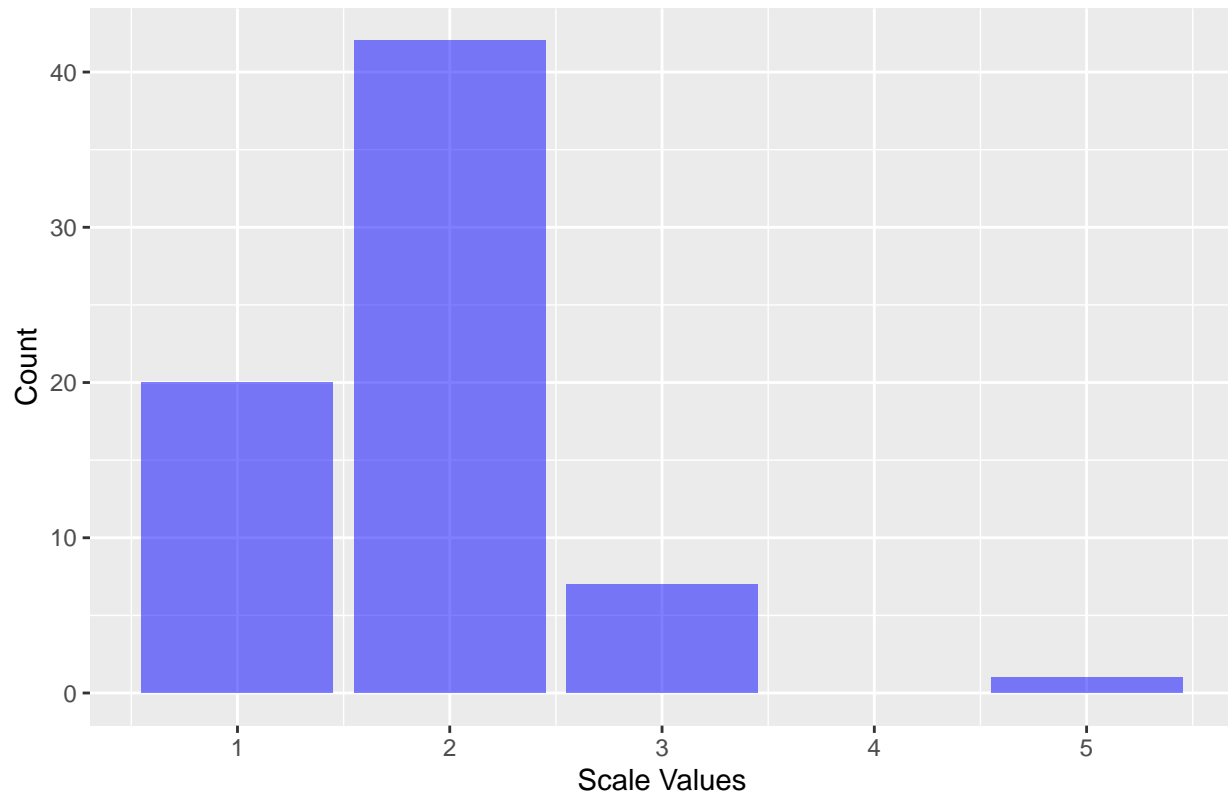
## Efficiency in Food Ordering Through App Usage



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")
```

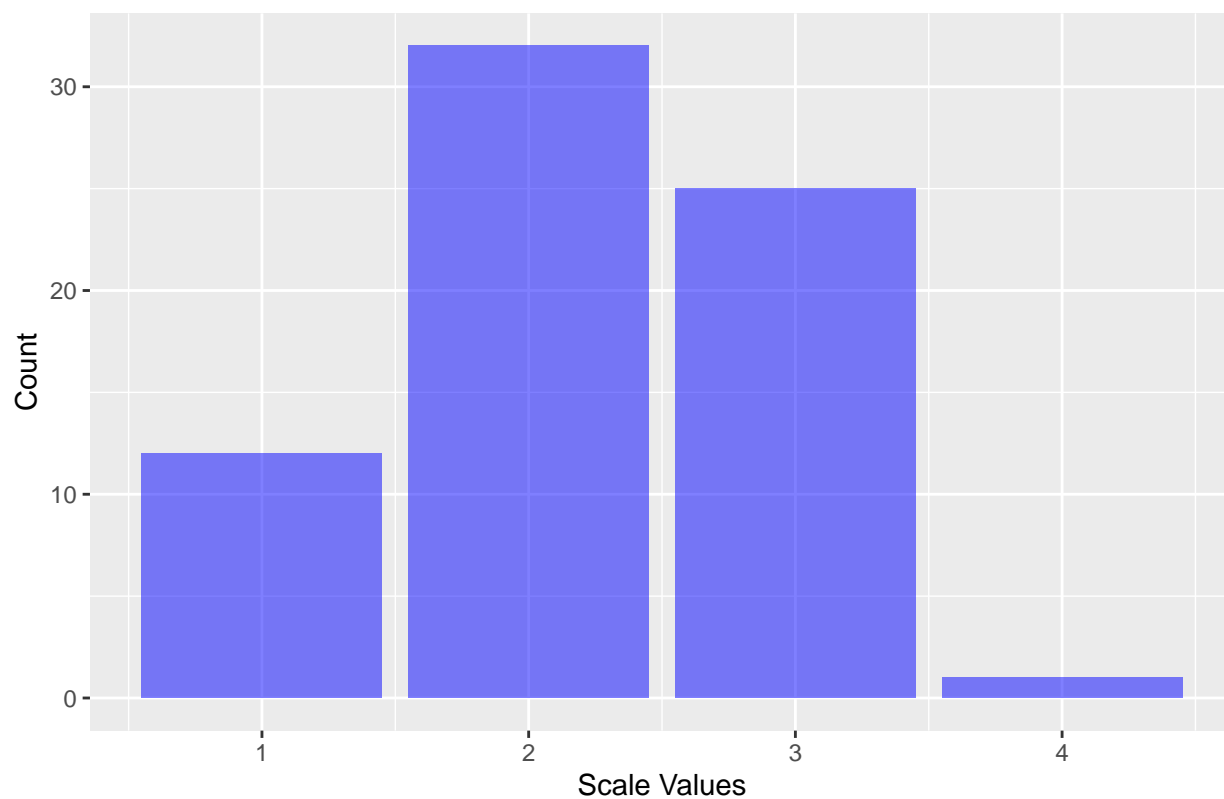
## Impact of App Usage on Satisfaction with Food Delivery



## 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")
```

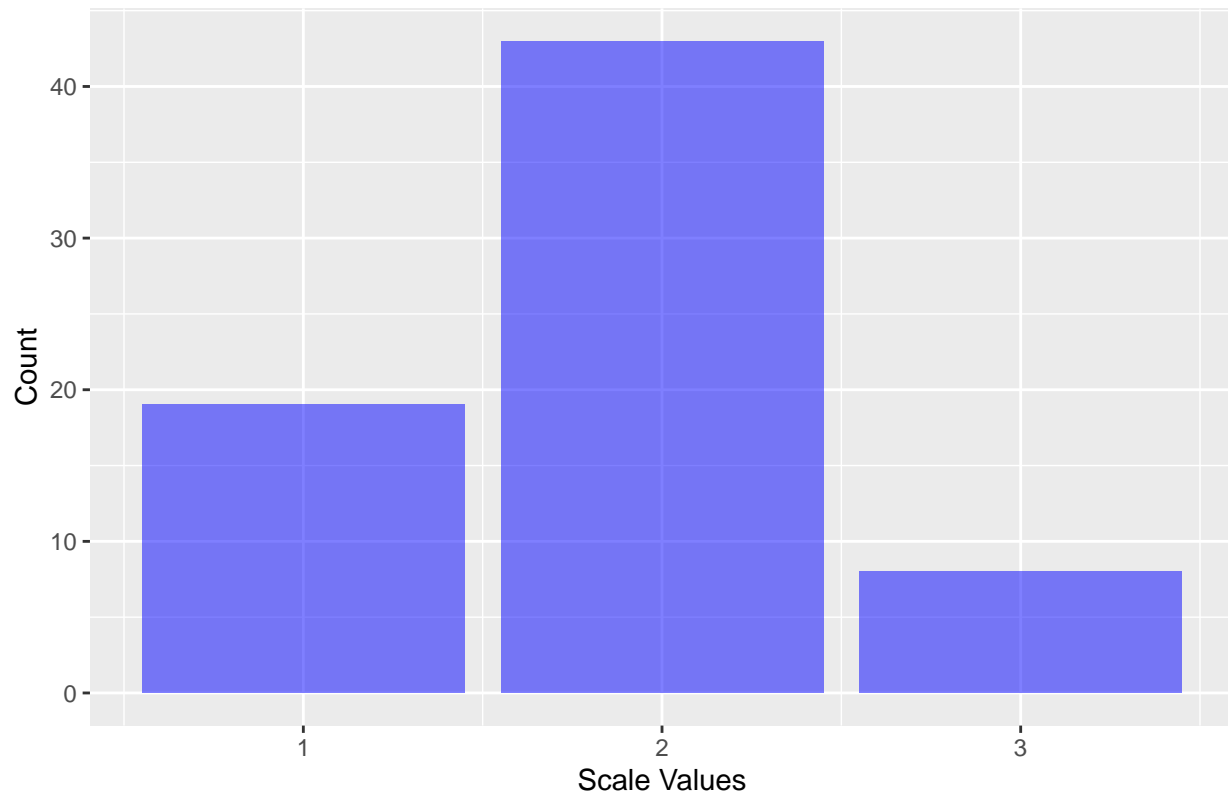
## Expectation of Enhanced Dining Experience Through App Usage



e1

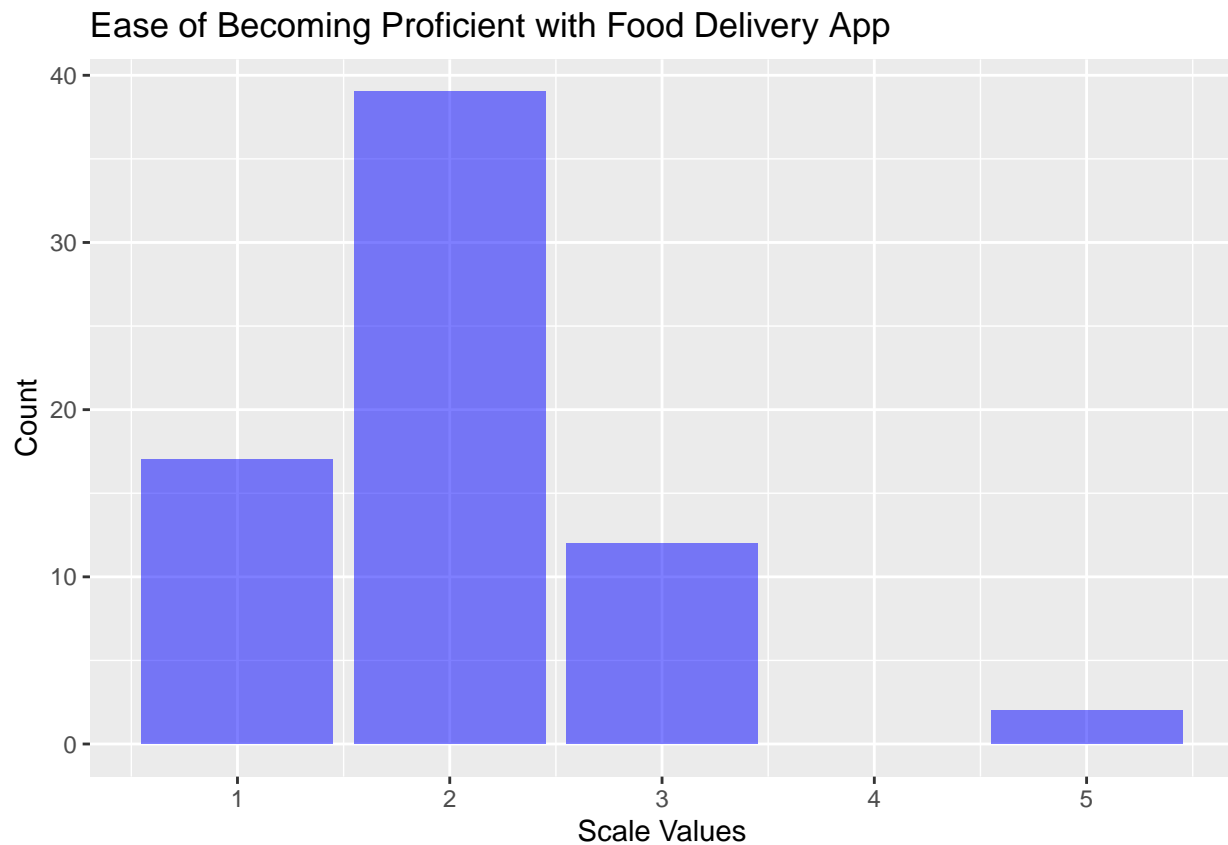
```
e1<-survey$`My interaction with the app would be clear and understandable`  
e1s <- data.frame(e1)  
ggplot(e1s, aes(x = e1)) +  
  geom_bar(fill = "blue", alpha = 0.5) +  
  labs(title = "Perception of Clarity and Understandability in Food Delivery App Interaction",  
        x = "Scale Values",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

## Perception of Clarity and Understandability in Food Delivery App Interaction



e2

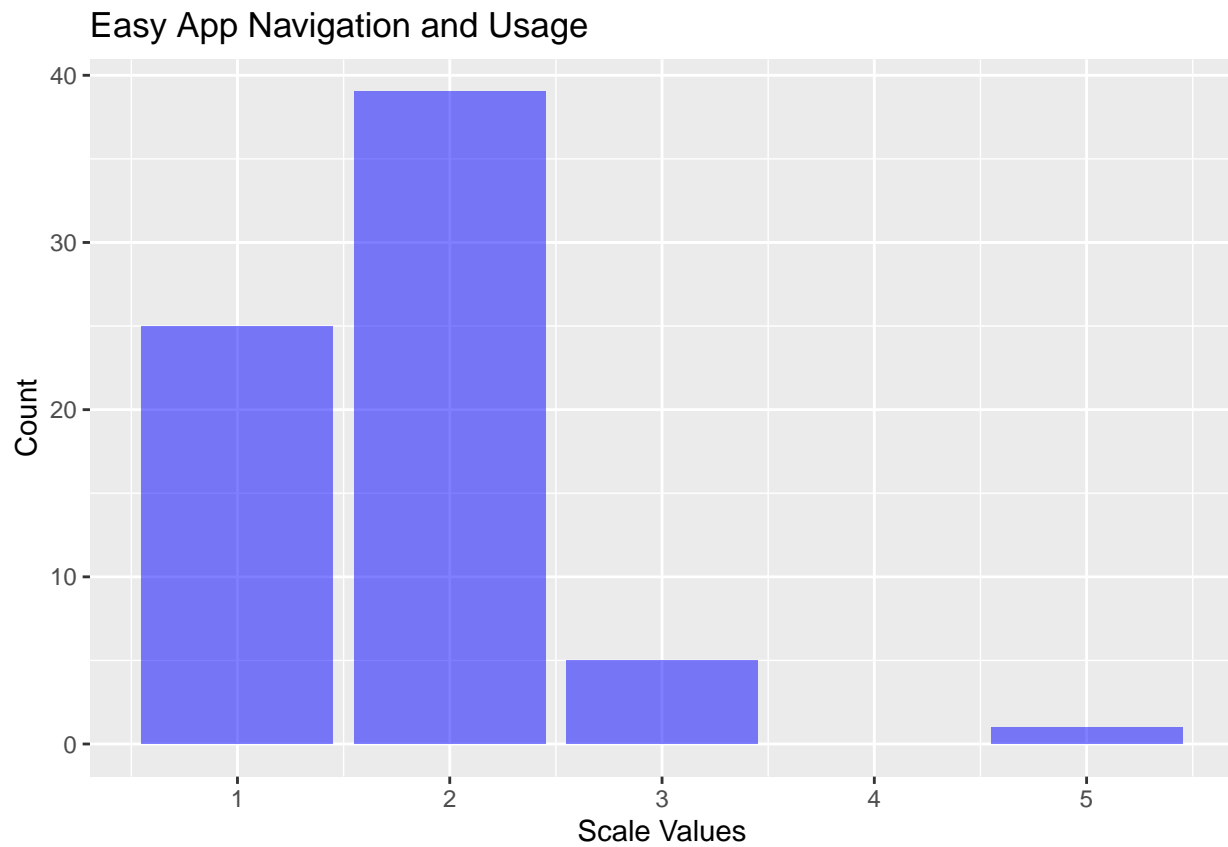
```
e2<-survey$`It would be easy for me to become skillful at using the app`  
e2s <- data.frame(e2)  
ggplot(e2s, aes(x = e2)) +  
  geom_bar(fill = "blue", alpha = 0.5) +  
  labs(title = "Ease of Becoming Proficient with Food Delivery App",  
        x = "Scale Values",  
        y = "Count") +  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



**e3**

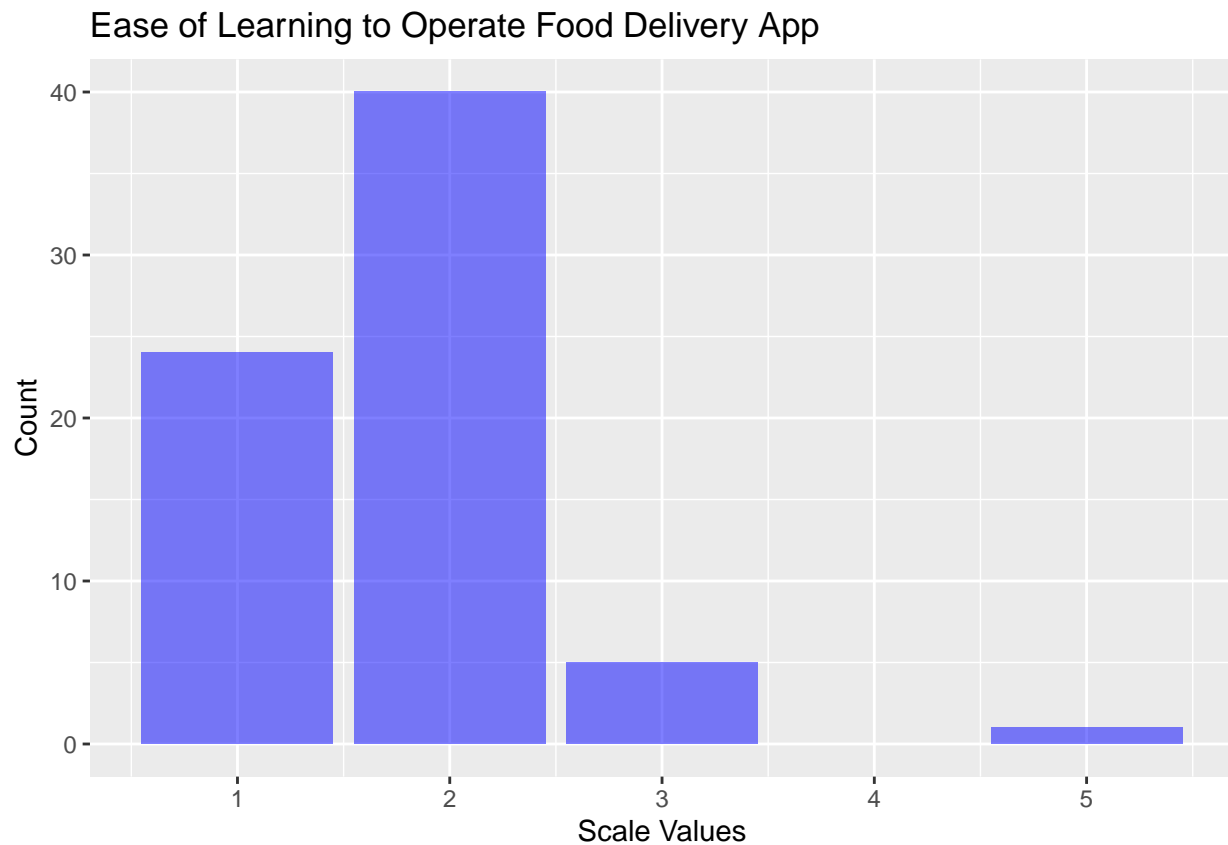
```
e3<-survey$`I would find the app easy to navigate and use`  
e3s <- data.frame(e3)  
ggplot(e3s, aes(x = e3)) +  
  geom_bar(fill = "blue", alpha = 0.5) +  
  labs(title = "Easy App Navigation and Usage",  
        x = "Scale Values",  
        y = "Count") +  
  scale_fill_hue(name = "Scale Value")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





e4

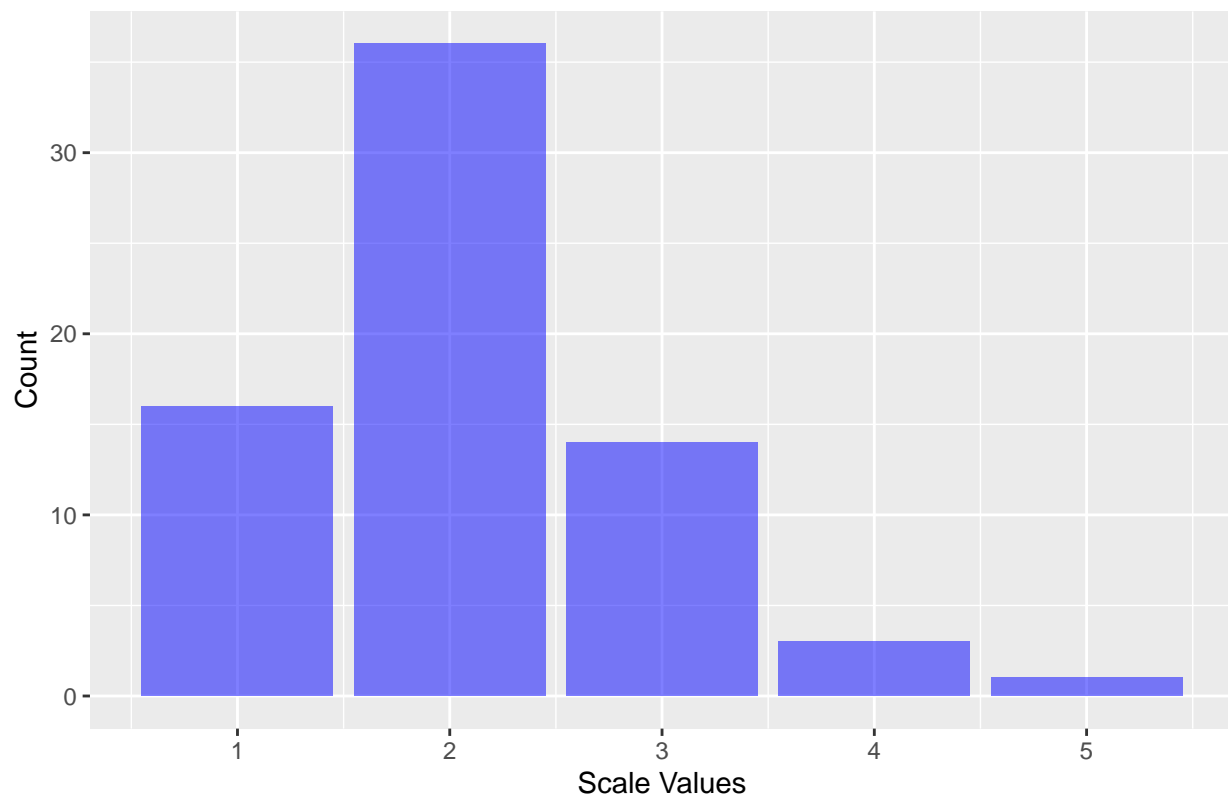
```
e4<-survey$`Learning to operate the app is easy for me`  
e4s <- data.frame(e4)  
ggplot(e4s, aes(x = e4)) +  
  geom_bar(fill = "blue", alpha = 0.5) +  
  labs(title = "Ease of Learning to Operate Food Delivery App",  
        x = "Scale Values",  
        y = "Count") +  
  scale_fill_hue(name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



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")
```

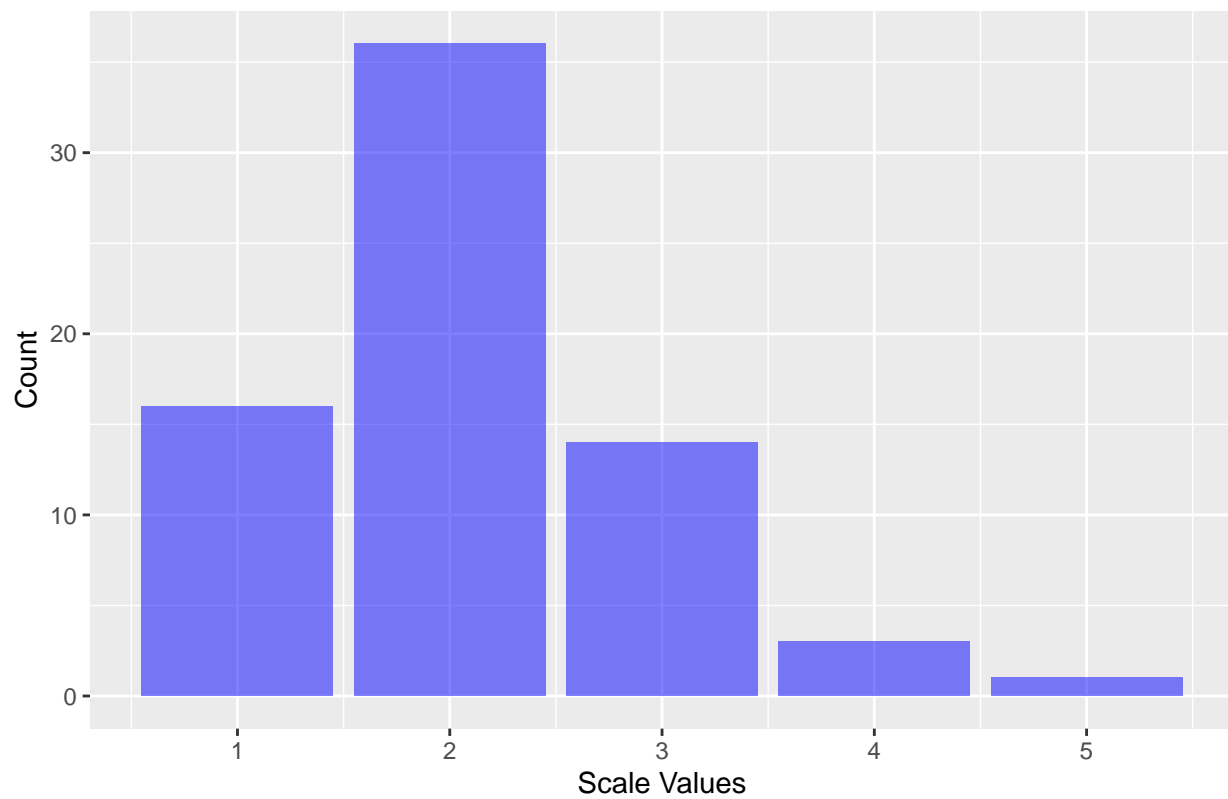
## Impact of Influential Dining Recommendations on App Usage



##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")
```

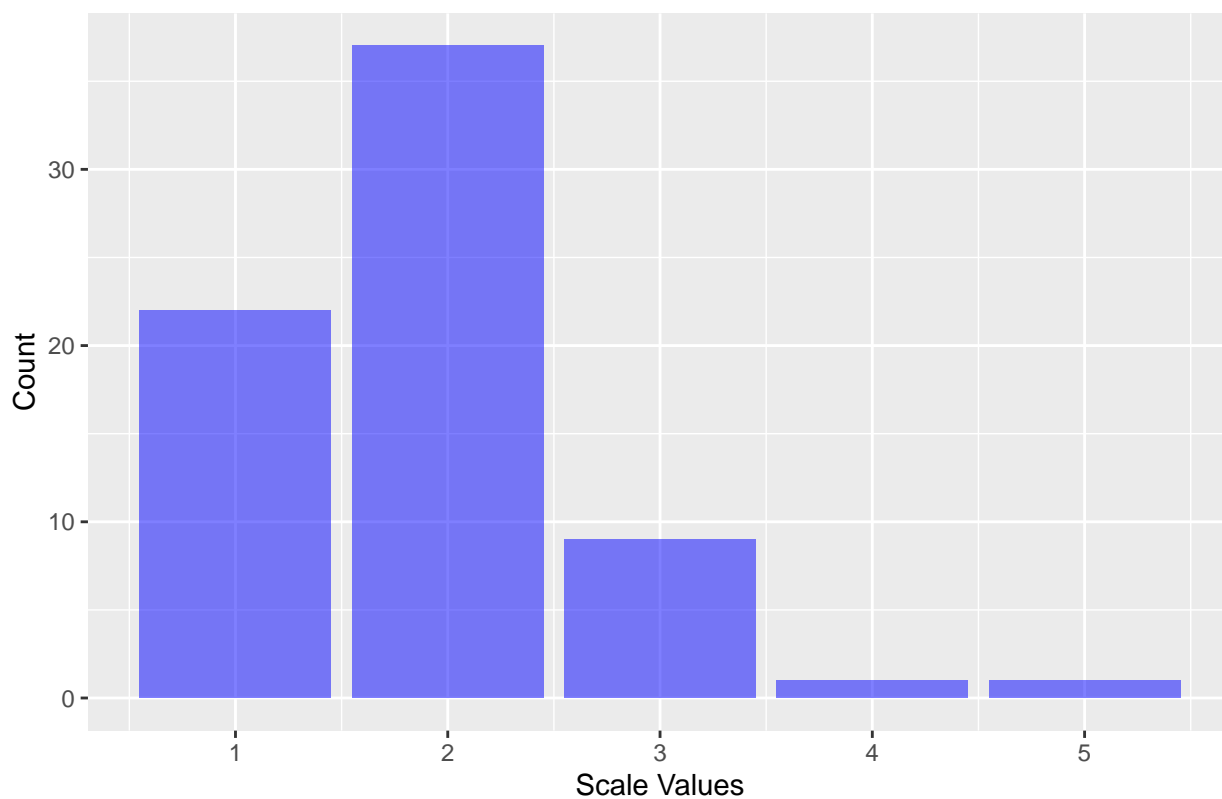
## Influence of Recommendations on Food Delivery App Usage



##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")
```

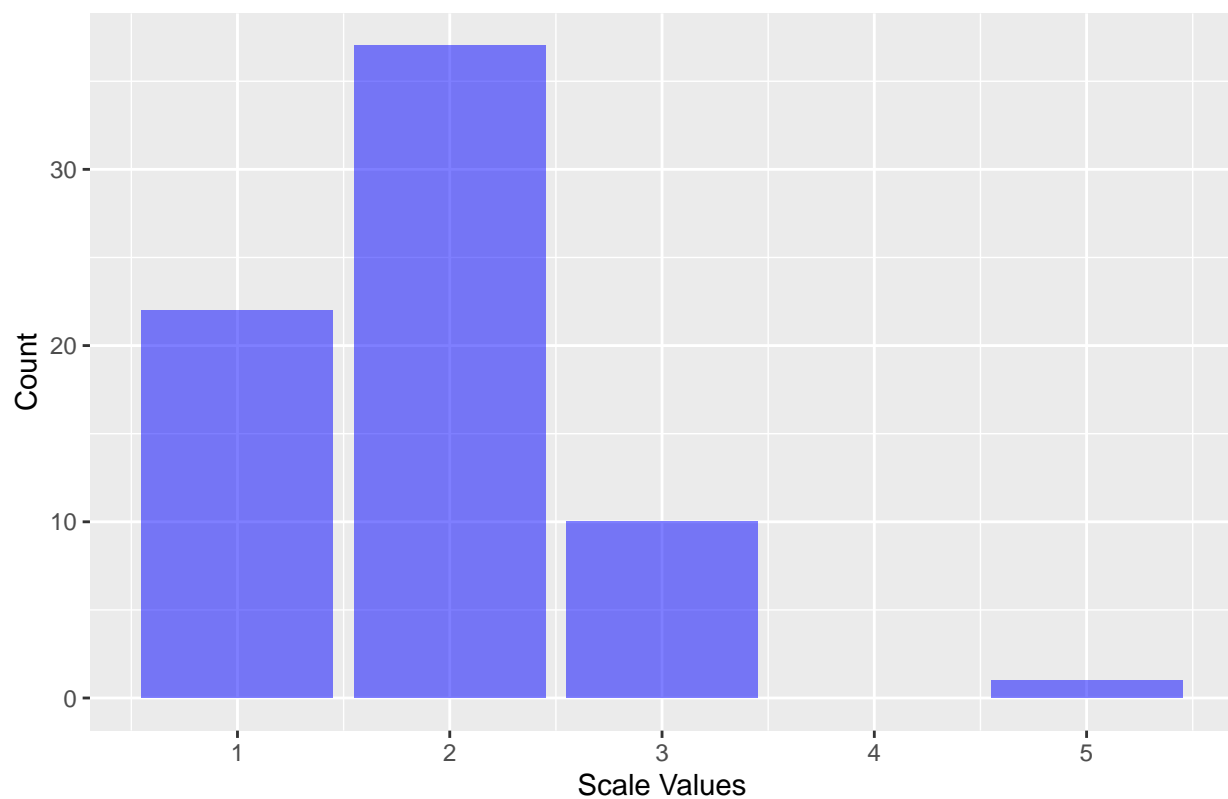
## Effect of App Usage on Allocating Time to Other Chores



##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")
```

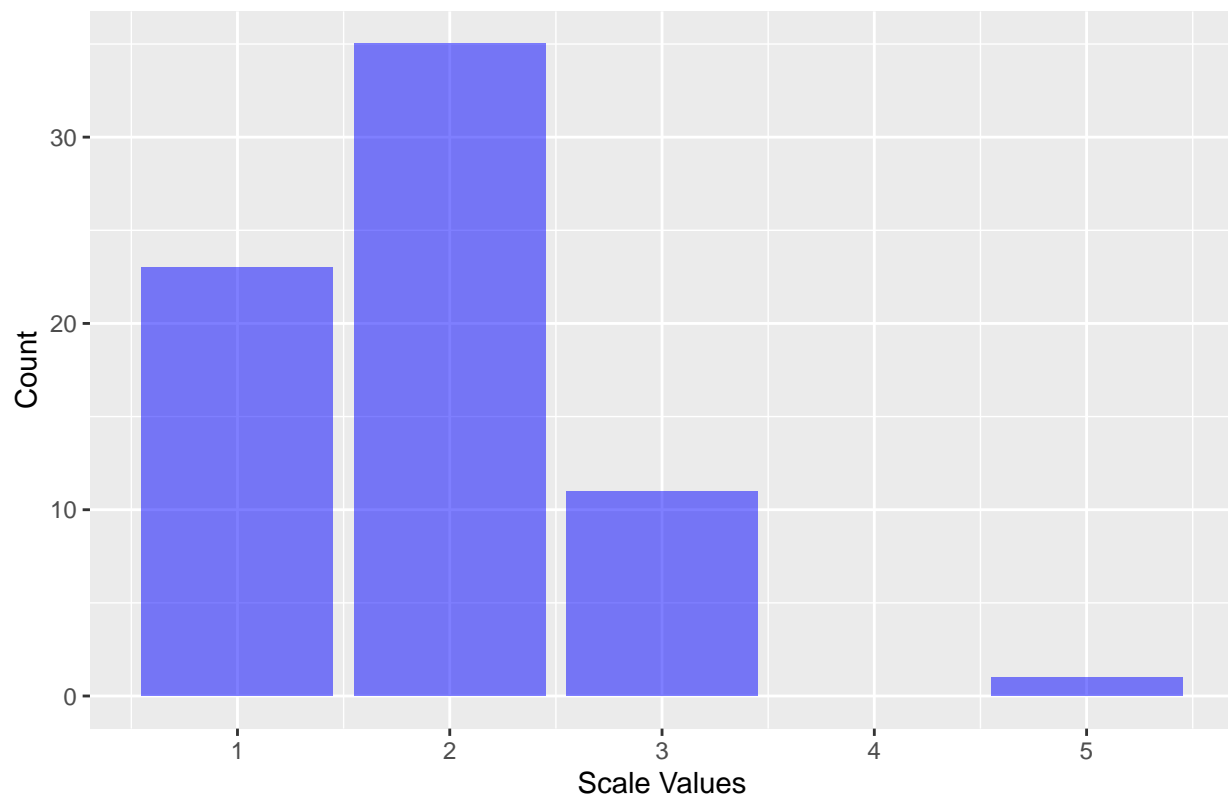
## Perception of Food Delivery App Organization Support



f1

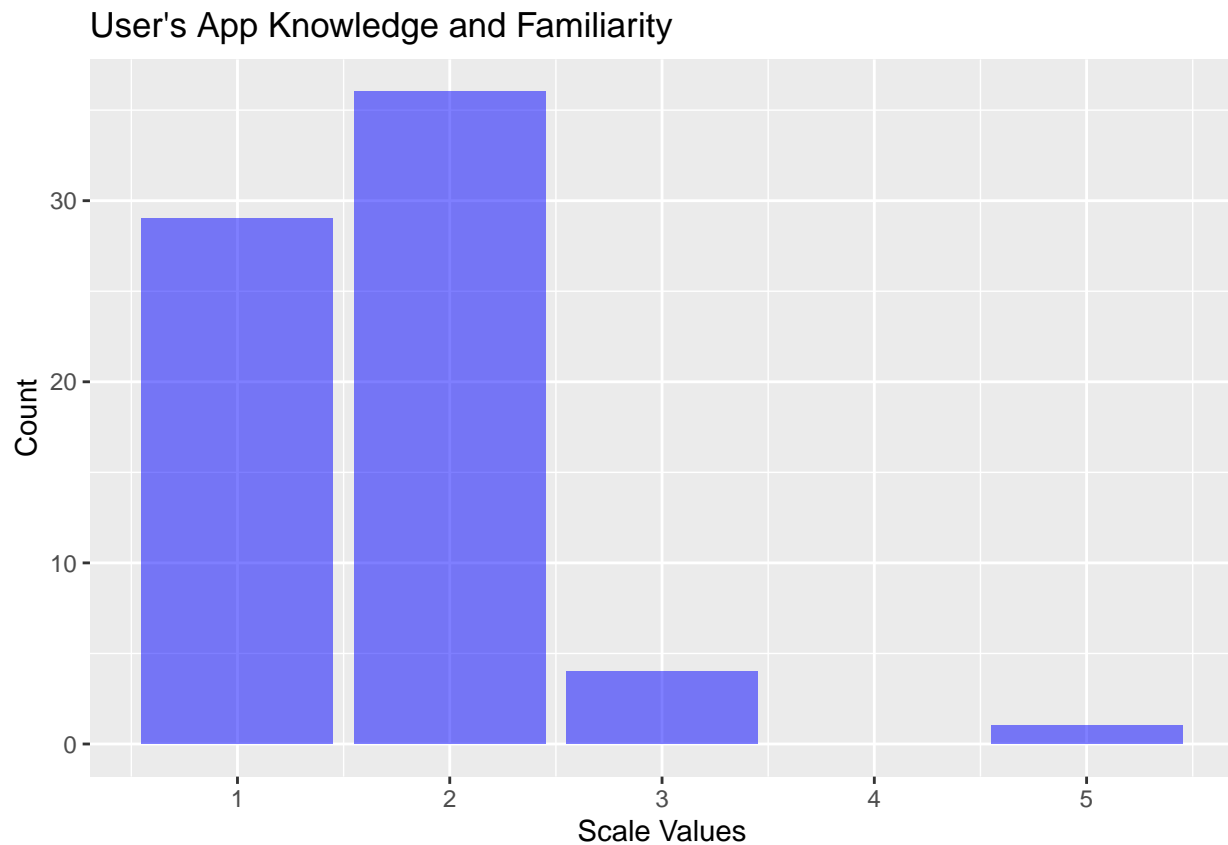
```
f1<-survey$`I have the resources necessary to use the food delivery app`  
f1s <- data.frame(f1)  
ggplot(f1s, aes(x = f1)) +  
  geom_bar(fill = "blue", alpha = 0.5) +  
  labs(title = "Availability of Resources for Food Delivery App Usage",  
        x = "Scale Values",  
        y = "Count") +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

## Availability of Resources for Food Delivery App Usage



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")
```



**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")
```



