Experience on Elicited Risk: Hypothesis and Data Analysis

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Data description

This dataset contains the result from 6 experimental sessions.

Session	N	Age	Women	G_1	G_2	CRT	Correct	G_Change	n_Even	Explore
1	21	20.76	0.52	4.10	4.76	1.86	0.90	0.67	12.14	0.86
2	11	20.36	0.55	3.18	3.64	1.82	11.73	0.45	11.45	0.82
3	21	19.71	0.67	3.52	3.67	1.76	10.38	0.14	11.86	0.86
4	20	19.65	0.55	4.45	4.20	2.20	11.30	-0.25	11.80	0.80
5	20	20.40	0.50	3.45	3.80	1.20	11.50	0.35	12.10	0.80
6	6	19.00	0.83	2.50	2.50	0.83	12.00	0.00	13.00	1.00

Risk elicited

In this study, the Eckle and Grossman risk elicitation task was implemented before and after the participants experience 24 realizations of the tasks. These correspond with **Gamble.1** and **Gamble.2** variables. Next table show the 6 gambles presented to the participants; events **odd** and **even** are equally probable and they had to choose only one gamble.

Notice the expected payoff is increasing from Gamble 1 to 5, and then it decreases to 34 (the same as gamble 4), but in this case choosing gamble 6 clearly elicits risk loving preferences.

Experience periods

The 24 experience periods correspond to realization of a gamble chosen. In the first 12, a gamble was pre-selected (variables **R1** to **R12**) and the participants throw two dice to determine the events (variables **E1** to **E12**) and wrote down the corresponding payoff (variables **P1** to **P12**). In the last 12, a gamble was chosen by the participants (variables **F1** to **F12**) and the participants throw two dice to determine the events (variables **EF1** to **EF12**) and wrote down the corresponding payoff (variables **PF1** to **PF12**). The 24 periods of realizations didn't affected the final payoff, but one of them (**Period.to.review**) was selected to check if they wrote down the correct payoff and then earned an extra dollar (**Correct.Payoff**).

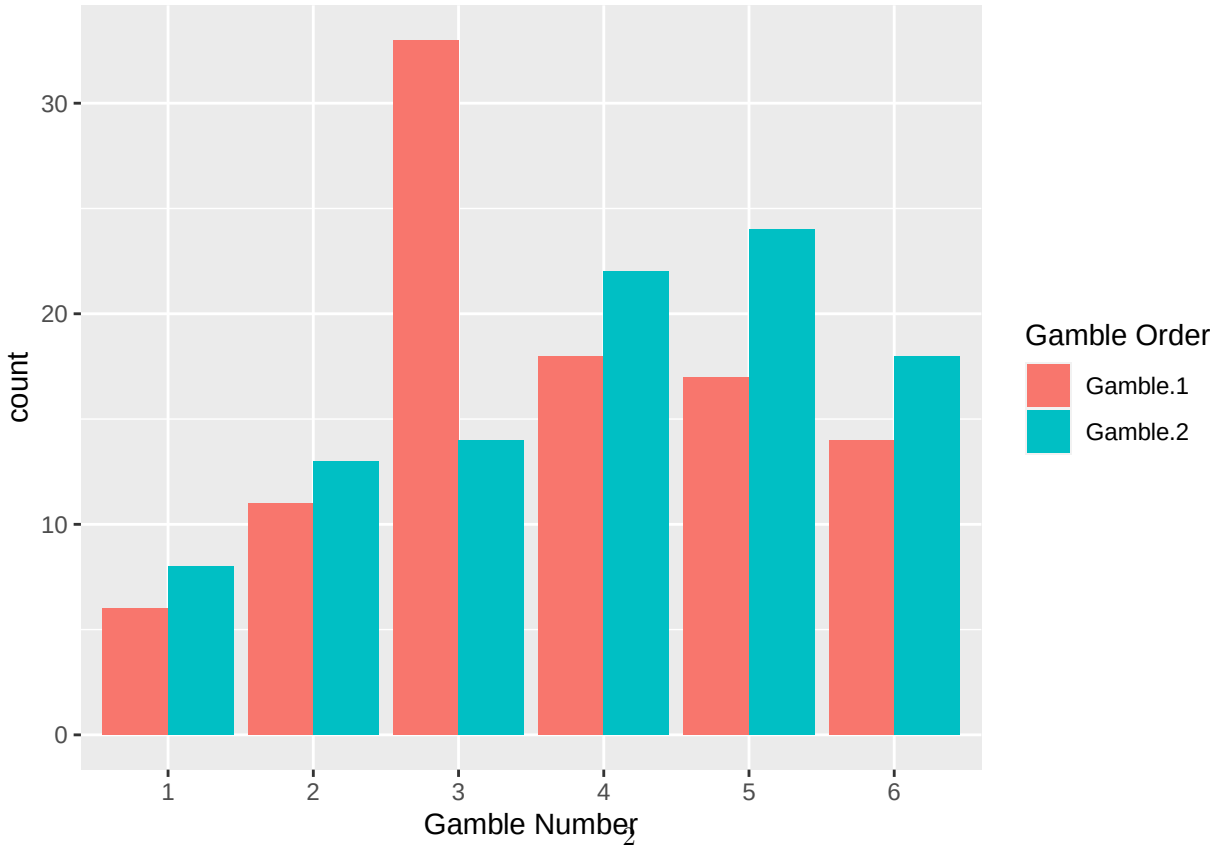
Potential Payments	Event	
Gamble	Odd	Even
1	28	28
2	36	24
3	44	20
4	52	16
5	60	12
6	66	2

Figure 1: Payoff table of the gambles as presented to the participants.

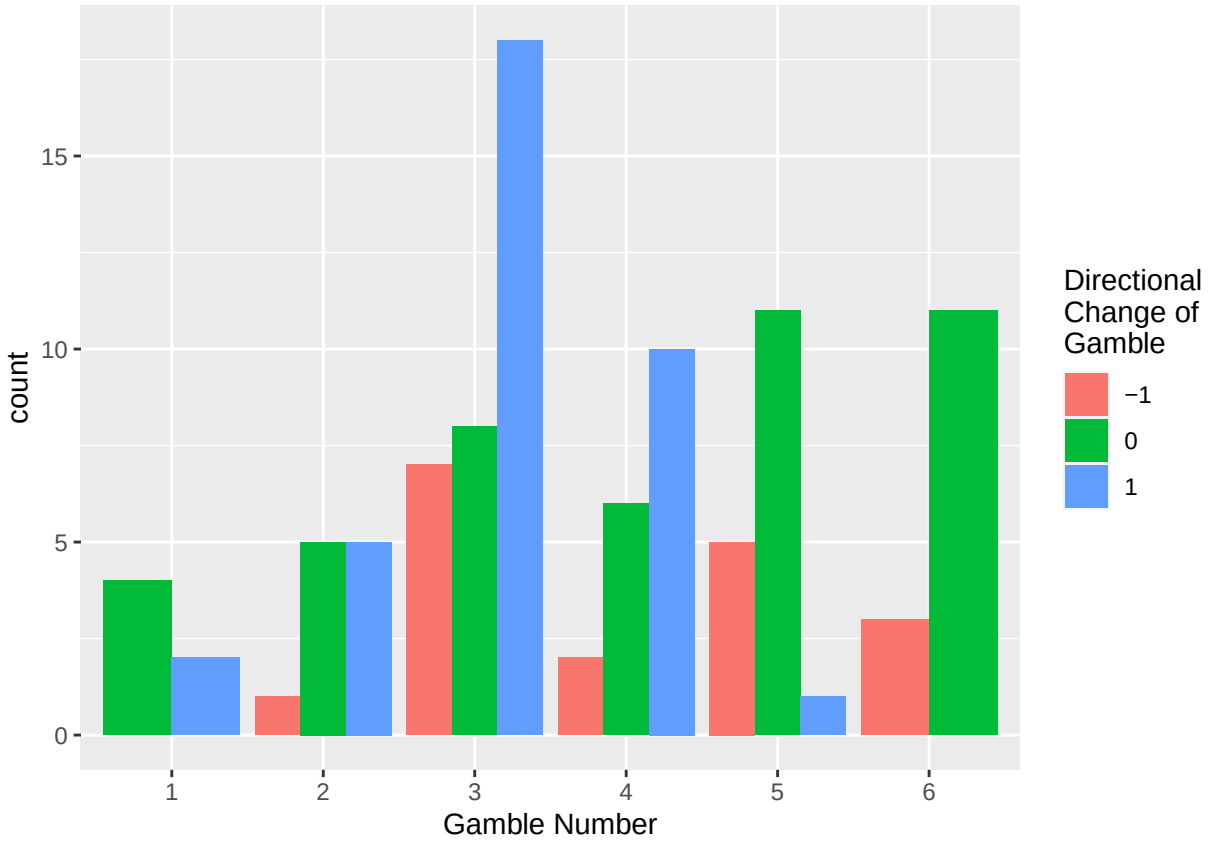
Hypothesis

Participants display larger levels of risk tolerance

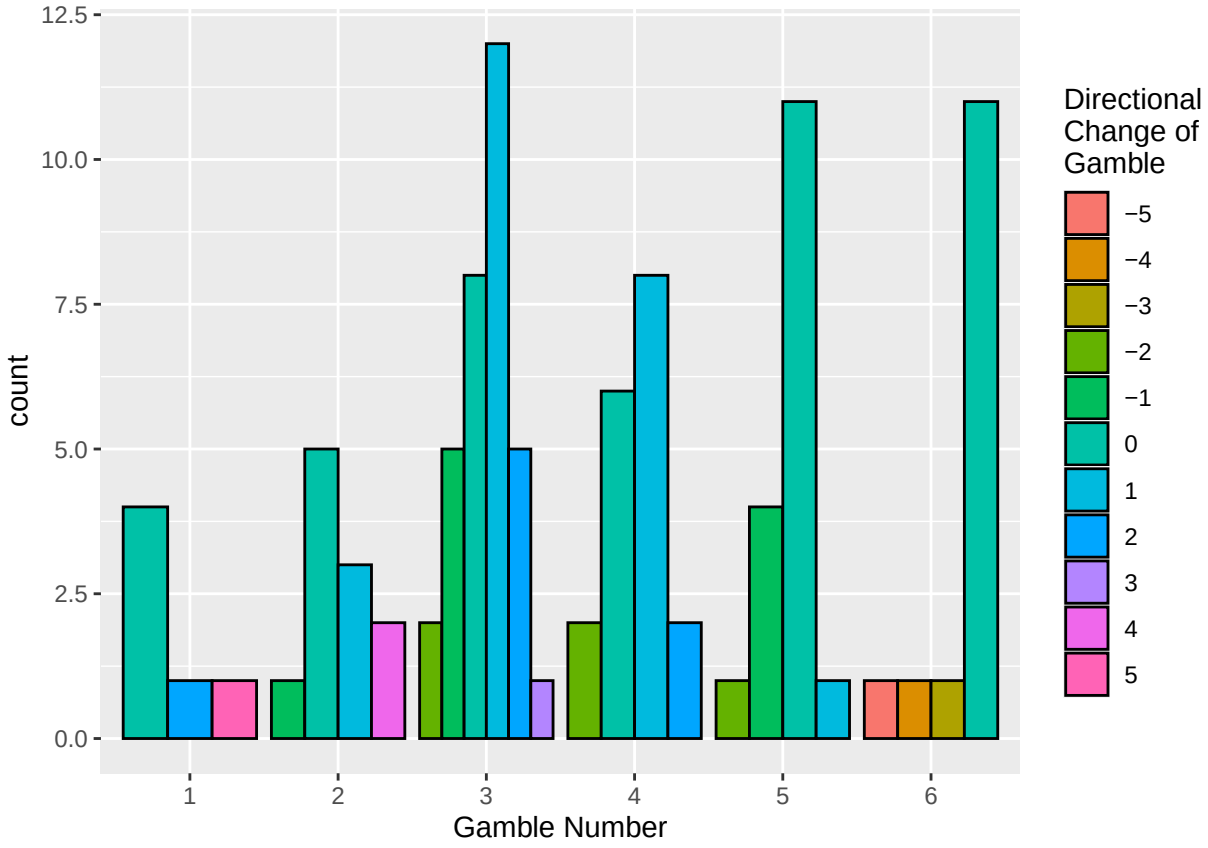
G2 - G1



The direction of the change is driven mostly by people choosing gamble 3 at the beginning and moving upwards.



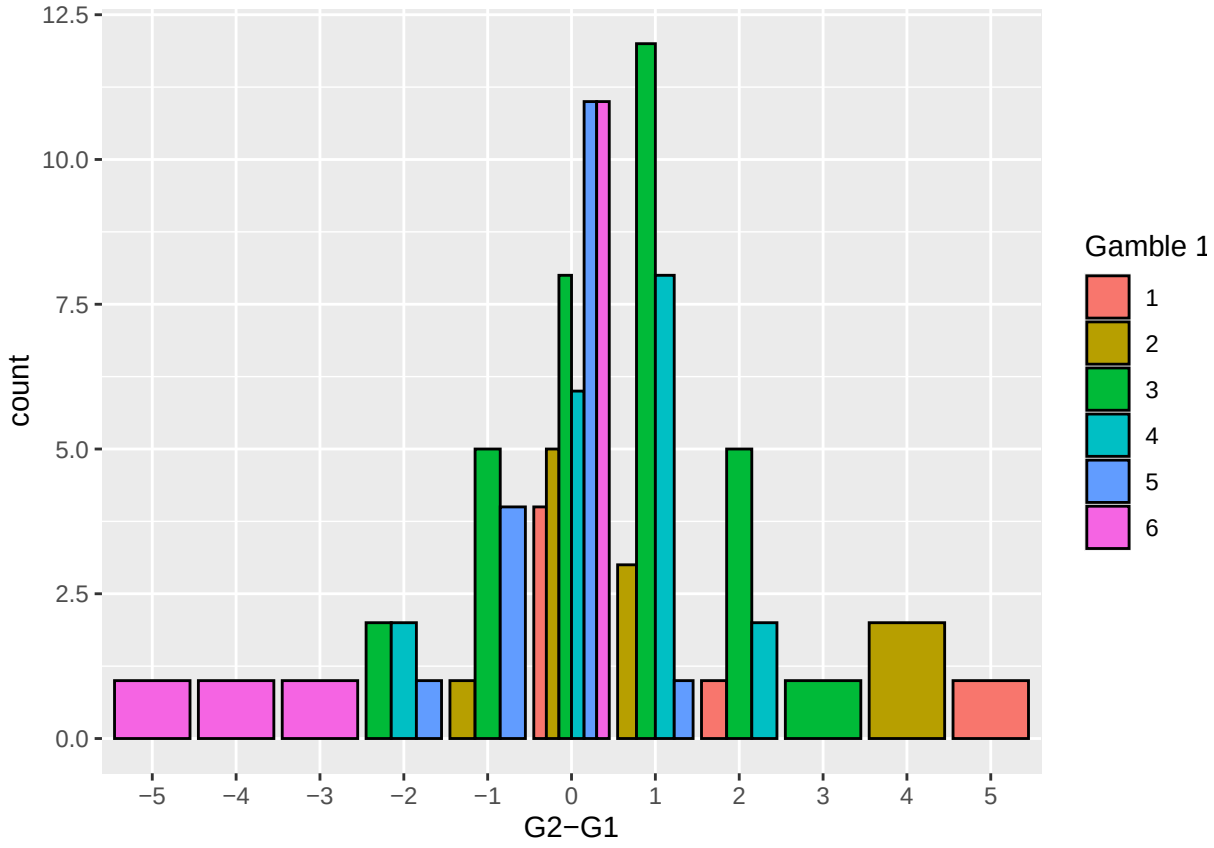
When analyzing the magnitude of the direction, it is clear that the main effect is driven by people moving from gamble 3 to gamble 4 (11 participants), and from gamble 4 to gamble 5 (8 participants).



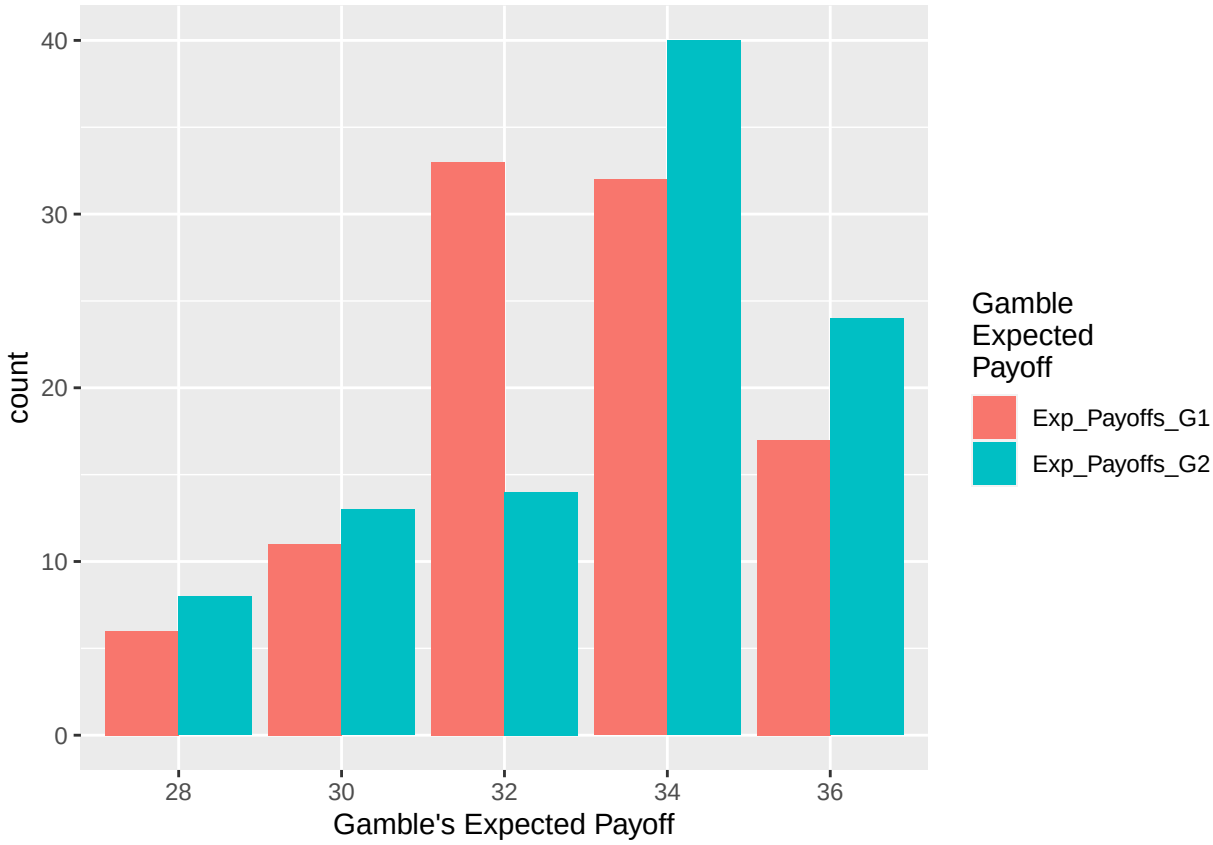
The Wilcox test shows that the difference is significant at 5% when analyzing the hypothesis that Gamble 2 is greater.

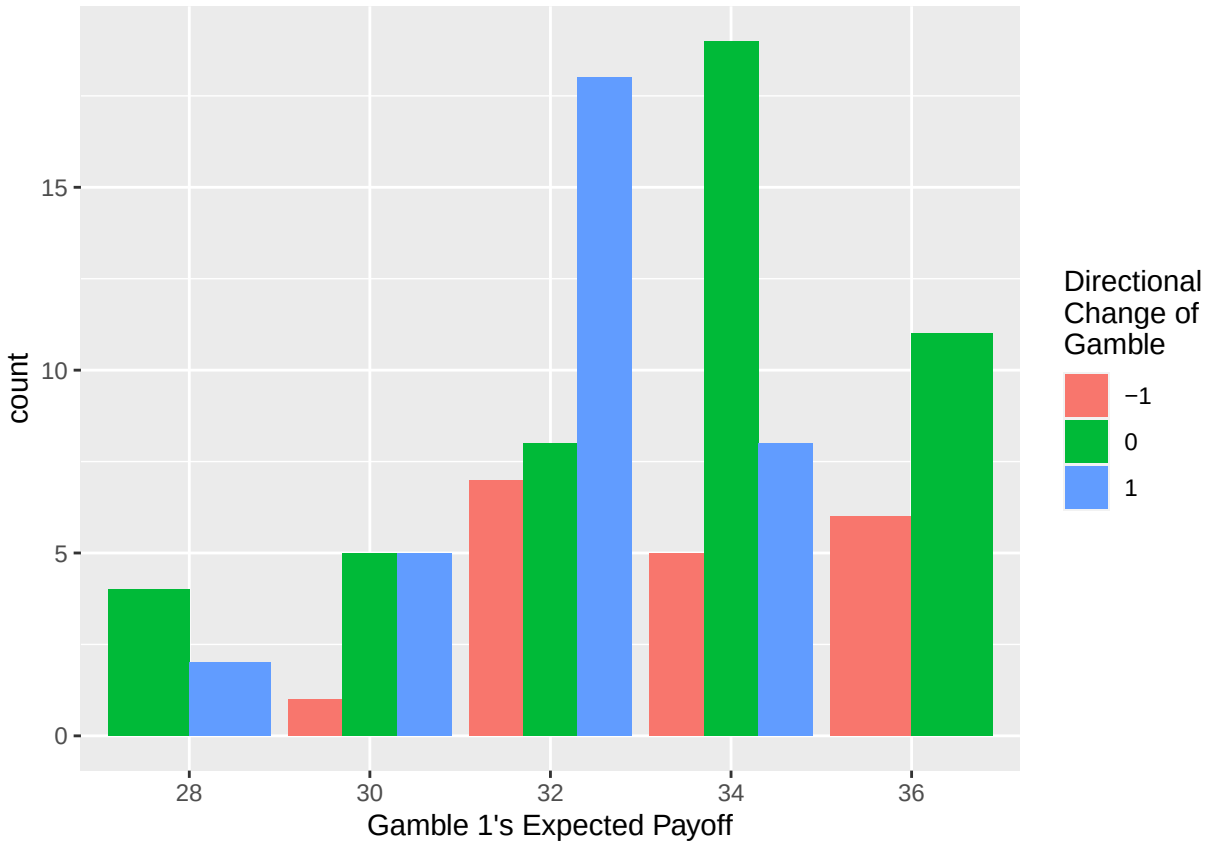
```
wilcox.test(x = ExperienceRisk$simple_diff,alternative = "greater")
```

```
##
##  Wilcoxon signed rank test with continuity correction
##
## data:  ExperienceRisk$simple_diff
## V = 952, p-value = 0.03143
## alternative hypothesis: true location is greater than 0
```


12.5
10.0
7.5
5.0
2.5
0.0
count
−5
−4
−3
−2
−1
0
1
2
3
4
5
G2−G1
Gamble 1
1
2
3
4
5
6

EP1 - EP2


40
30
20
10
0
count
28
30
32
34
36
Gamble's Expected Payoff
Gamble
Expected
Payoff
Exp_Payoffs_G1
Exp_Payoffs_G2



The Wilcox test shows that the difference is significant at 10% when analyzing the hypothesis that Gamble 2 is greater.

```
wilcox.test(x = ExperienceRisk$diff_Exp_Payoffs,alternative = "greater")
```

```
##
##  Wilcoxon signed rank test with continuity correction
##
## data:  ExperienceRisk$diff_Exp_Payoffs
## V = 843.5, p-value = 0.07127
## alternative hypothesis: true location is greater than 0
```

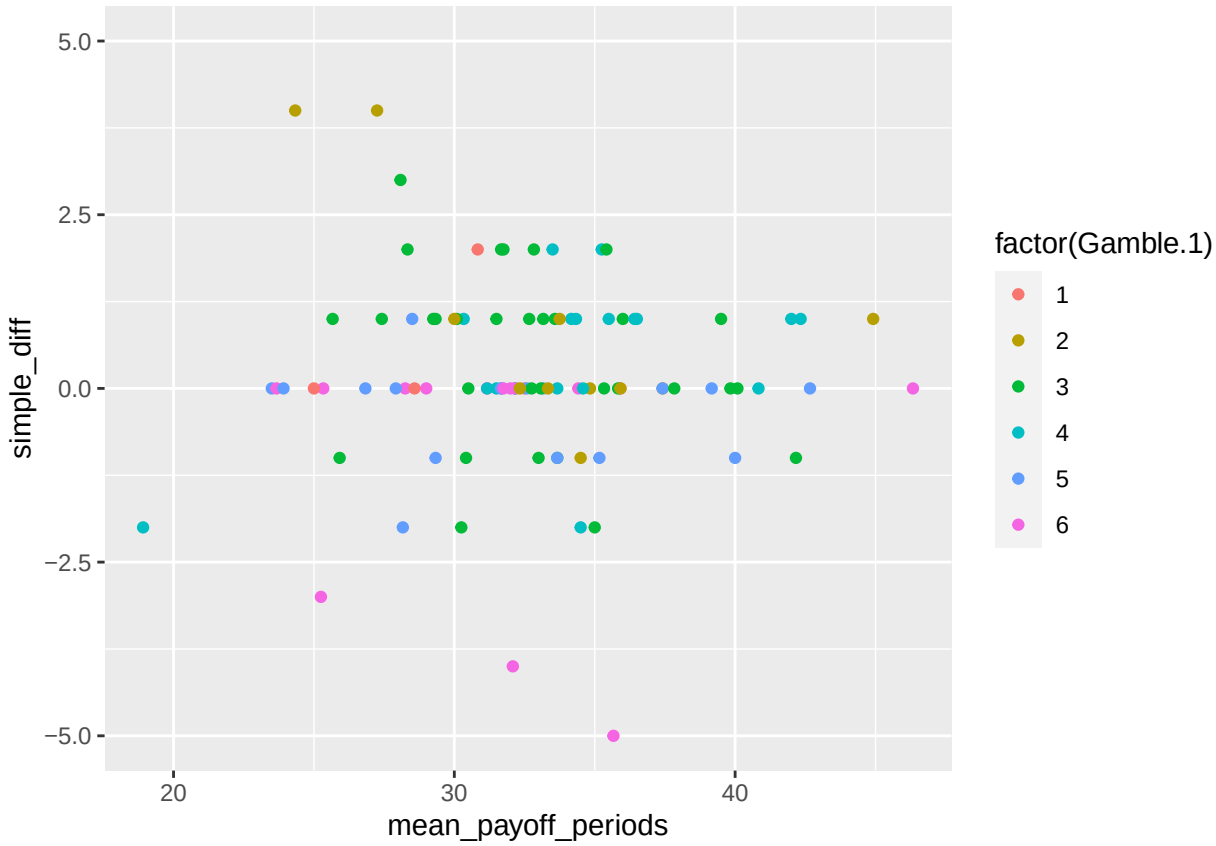
```
ExperienceRisk %>% tabyl(Gamble.1,Gamble.2)
```

```
##  Gamble.1 1 2 3  4  5  6
##         1 4 0 1  0  0  1
##         2 1 5 3  0  0  2
##         3 2 5 8 12  5  1
##         4 0 2 0  6  8  2
##         5 0 0 1  4 11  1
##         6 1 1 1  0  0 11
```

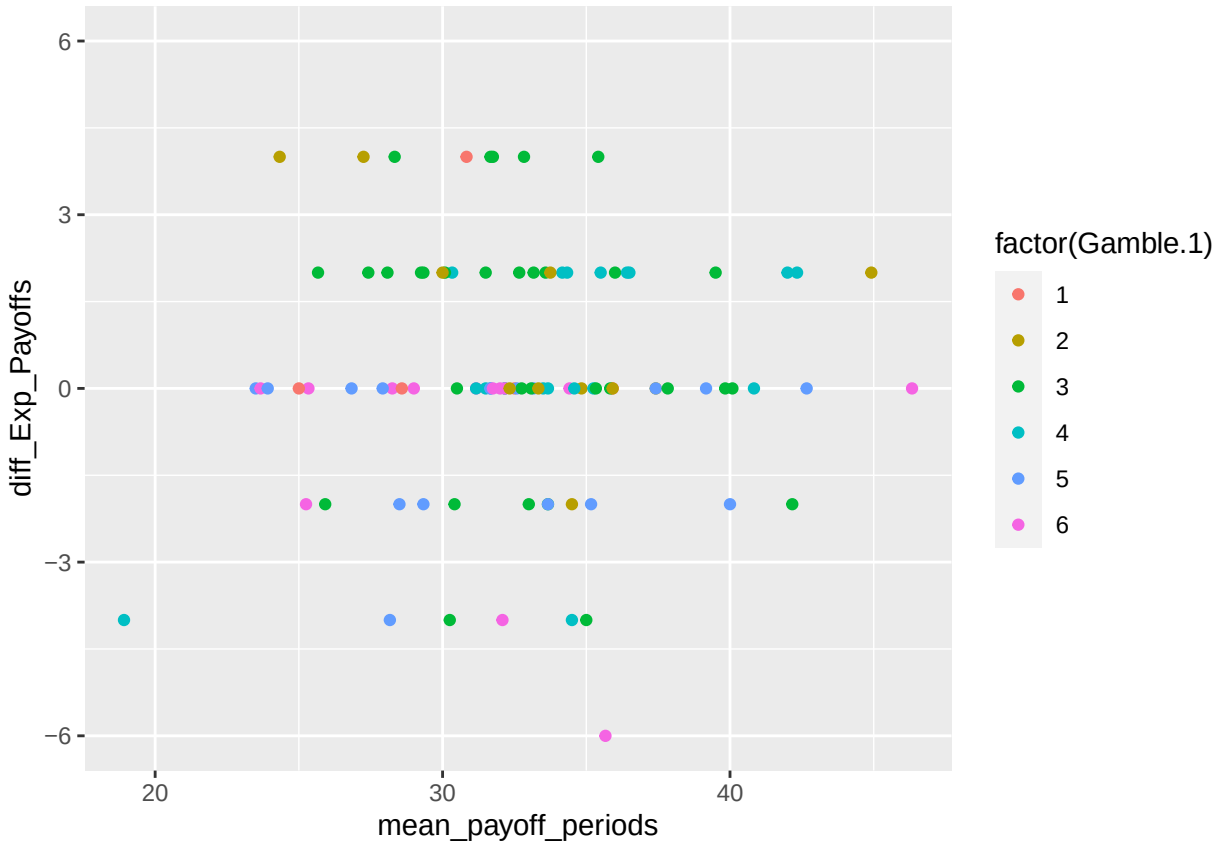
Effects of history

It seems that the final average payoff in the previous periods is not explaining the change in risk attitudes.

```
## Warning: Removed 2 rows containing missing values (geom_point).
```




```
## Warning: Removed 2 rows containing missing values (geom_point).
```



There is no significant effect of the final payoff on the change in the gamble chosen.

```
m1 <- lm(simple_diff ~
           mean_payoff_periods,
         data = ExperienceRisk )
summary(m1)
```

```
##
## Call:
## lm(formula = simple_diff ~ mean_payoff_periods, data = ExperienceRisk)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -5.1648 -0.2197 -0.1725  0.8139  3.7756
##
## Coefficients:
##                      Estimate Std. Error t value Pr(>|t|)
## (Intercept)          0.417435   0.923363   0.452    0.652
## mean_payoff_periods -0.007083   0.027893  -0.254    0.800
##
## Residual standard error: 1.348 on 95 degrees of freedom
##   (2 observations deleted due to missingness)
## Multiple R-squared:  0.0006782,  Adjusted R-squared:  -0.009841
## F-statistic: 0.06447 on 1 and 95 DF,  p-value: 0.8001
```

```
m1 <- lm(diff_Exp_Payoffs ~
           mean_payoff_periods,
         data = ExperienceRisk )
```

```
summary(m1)
```

```
##
## Call:
## lm(formula = diff_Exp_Payoffs ~ mean_payoff_periods, data = ExperienceRisk)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -6.2777 -0.3139 -0.2398  1.7189  3.8394
##
## Coefficients:
##                     Estimate Std. Error t value Pr(>|t|)
## (Intercept)         -0.09087    1.39498  -0.065    0.948
## mean_payoff_periods  0.01033    0.04214   0.245    0.807
##
## Residual standard error: 2.036 on 95 degrees of freedom
##   (2 observations deleted due to missingness)
## Multiple R-squared:  0.0006325,  Adjusted R-squared:  -0.009887
## F-statistic: 0.06013 on 1 and 95 DF,  p-value: 0.8068
```

When conditioning on the people that choose gamble 3 at the beginning (the most common choice), the effect p-value is better, but still not significant. An interesting fact is that the coefficient is negative. This could be evidence of gambler's fallacy; after observing an array of good luck with risky choices, people prefer to play safe at the end. This is consistent with the negative coefficients observed in the effect of the number of even numbers.

```
m1 <- lm(simple_diff ~
           mean_payoff_periods,
         data = ExperienceRisk %>% filter(Gamble.1==3))
summary(m1)
```

```
##
## Call:
## lm(formula = simple_diff ~ mean_payoff_periods, data = ExperienceRisk %>%
##     filter(Gamble.1 == 3))
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -2.65112 -0.51638  0.09228  0.62271  2.19820
##
## Coefficients:
##                     Estimate Std. Error t value Pr(>|t|)
## (Intercept)          2.75484    1.74359   1.580    0.125
## mean_payoff_periods -0.06954    0.05264  -1.321    0.196
##
## Residual standard error: 1.203 on 30 degrees of freedom
##   (1 observation deleted due to missingness)
## Multiple R-squared:  0.05497,    Adjusted R-squared:  0.02347
## F-statistic: 1.745 on 1 and 30 DF,  p-value: 0.1965
```

```
m1 <- lm(diff_Exp_Payoffs ~
           mean_payoff_periods,
         data = ExperienceRisk %>% filter(Gamble.1==3))
summary(m1)
```

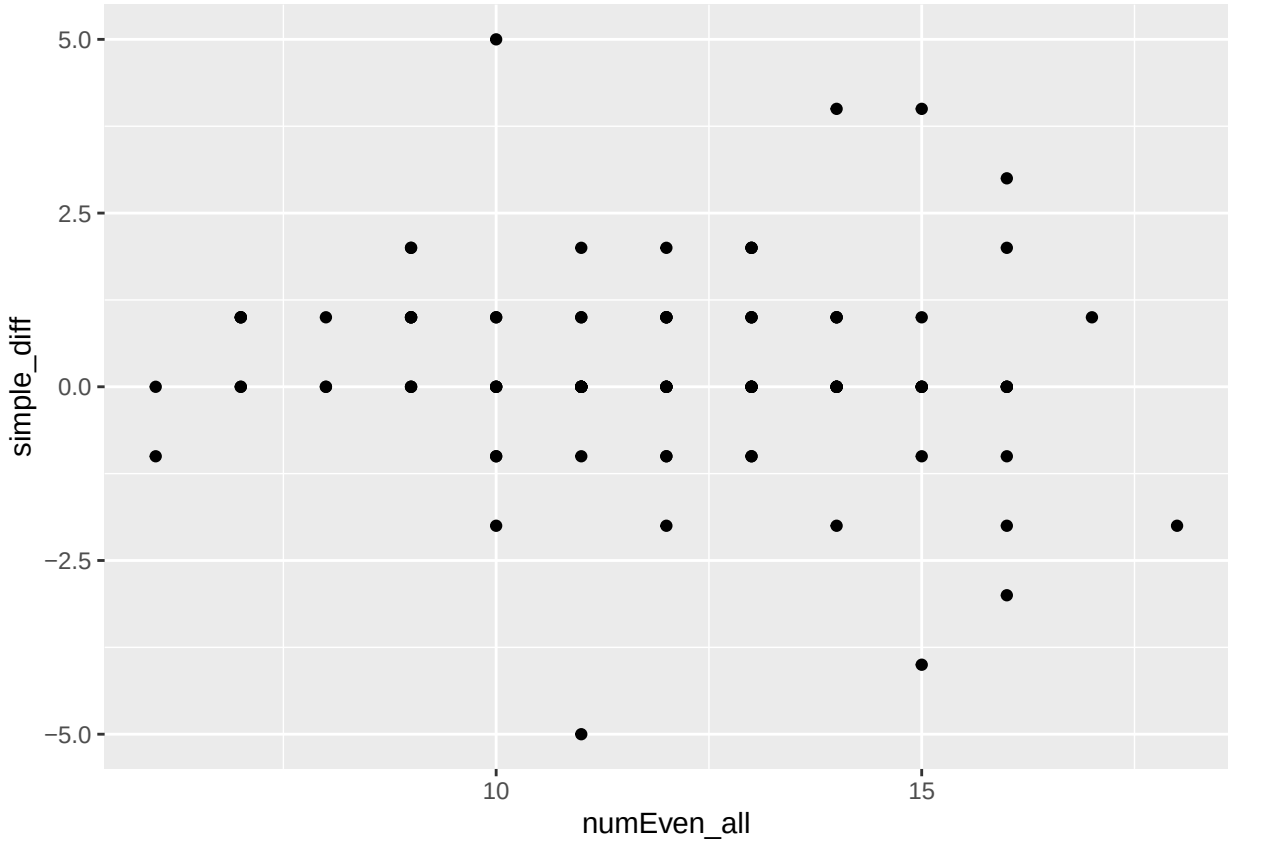
```
##
```

```
## Call:
## lm(formula = diff_Exp_Payoffs ~ mean_payoff_periods, data = ExperienceRisk %>%
##     filter(Gamble.1 == 3))
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -5.0811 -0.8827  0.5391  1.2283  3.4481
##
## Coefficients:
##                      Estimate Std. Error t value Pr(>|t|)
## (Intercept)           4.17946    3.27638   1.276    0.212
## mean_payoff_periods -0.10243    0.09892  -1.035    0.309
##
## Residual standard error: 2.261 on 30 degrees of freedom
##   (1 observation deleted due to missingness)
## Multiple R-squared:  0.0345, Adjusted R-squared:  0.002318
## F-statistic: 1.072 on 1 and 30 DF,  p-value: 0.3088
```

Larger number of Even events will make people changing downwards

Gamble 1 - Gamble 2 There is no significant effect of the overall number of events on the difference between Gamble 1 and 2.

```
ggplot(data = ExperienceRisk) +
  geom_point(aes(x=numEven_all,y=simple_diff))
```




```
m1 <- lm(simple_diff ~
           numEven_all,
```

```
        data = ExperienceRisk)
summary(m1)
```

```
##
## Call:
## lm(formula = simple_diff ~ numEven_all, data = ExperienceRisk)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -5.2898 -0.3865 -0.1448  0.7102  4.6619
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)  0.82157    0.65065   1.263    0.210
## numEven_all -0.04834    0.05300  -0.912    0.364
##
## Residual standard error: 1.416 on 97 degrees of freedom
## Multiple R-squared:  0.008505,   Adjusted R-squared:  -0.001716
## F-statistic: 0.8321 on 1 and 97 DF,  p-value: 0.3639
```

This can be also be seen in the correlation:

```
cor.test(ExperienceRisk$mean_payoff_periods,ExperienceRisk$simple_diff,use = "na.or.complete")
```

```
##
##  Pearson's product-moment correlation
##
## data:  ExperienceRisk$mean_payoff_periods and ExperienceRisk$simple_diff
## t = -0.25392, df = 95, p-value = 0.8001
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  -0.2243226  0.1743083
## sample estimates:
##         cor
## -0.02604243
```

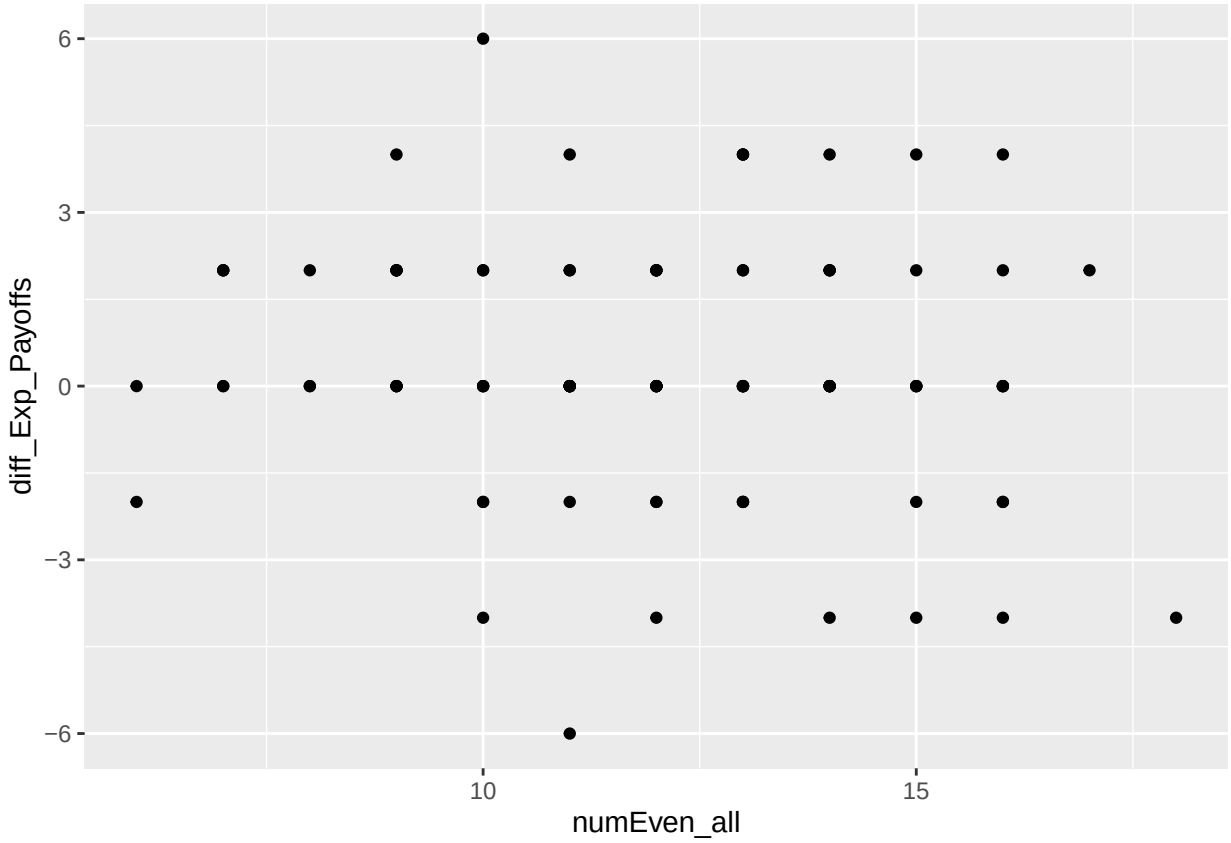
This also happens for people that had more than 18 correct answers out of the 24 experience trials. The final sample was 73 and control for people that didn't put attention, and the first session where the realization were too fast and people didn't have enough time to record their answers.

```
m1 <- lm(simple_diff ~
           numEven_all,
         data = ExperienceRisk %>% filter(sum_correct_payoffs>18) )
summary(m1)
```

```
##
## Call:
## lm(formula = simple_diff ~ numEven_all, data = ExperienceRisk %>%
##     filter(sum_correct_payoffs > 18))
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -5.0565 -0.0634 -0.0531  0.9401  3.9504
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
```

```
## (Intercept)  0.075413   0.663716   0.114    0.910
## numEven_all -0.001718   0.053839  -0.032    0.975
##
## Residual standard error: 1.299 on 71 degrees of freedom
## Multiple R-squared:  1.434e-05,  Adjusted R-squared:  -0.01407
## F-statistic: 0.001018 on 1 and 71 DF,  p-value: 0.9746
```

Excpected Payoff 1 - Expected Payoff 2 There is also no significant effect of the overall number of events on the difference between Expected Payoffs in Gamble 1 and 2.




```
##
## Call:
## lm(formula = diff_Exp_Payoffs ~ numEven_all, data = ExperienceRisk)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -6.4129 -0.5960 -0.2298  1.4498  5.4955
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)  1.41982    0.96026   1.479    0.142
## numEven_all -0.09154    0.07822  -1.170    0.245
##
## Residual standard error: 2.09 on 97 degrees of freedom
## Multiple R-squared:  0.01392,    Adjusted R-squared:  0.003758
## F-statistic:  1.37 on 1 and 97 DF,  p-value: 0.2447
```

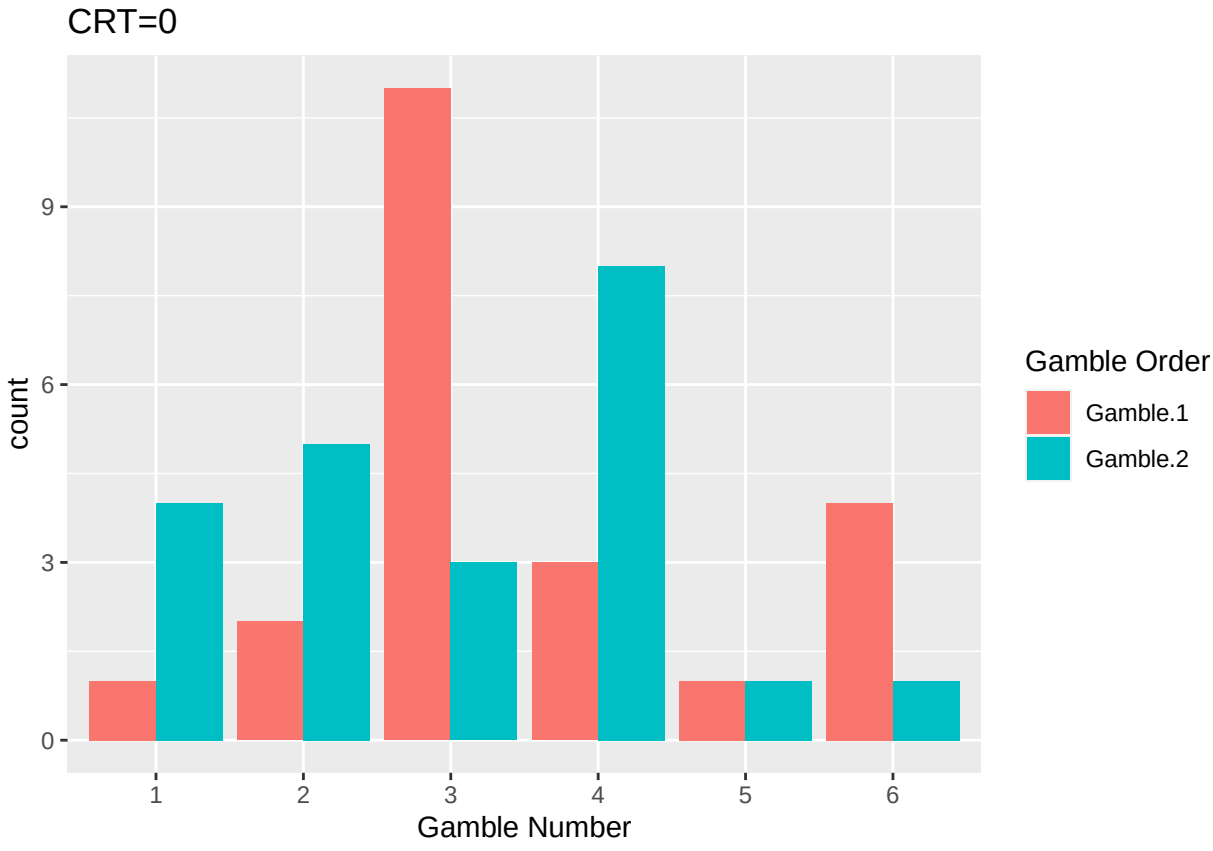
Reinforcement

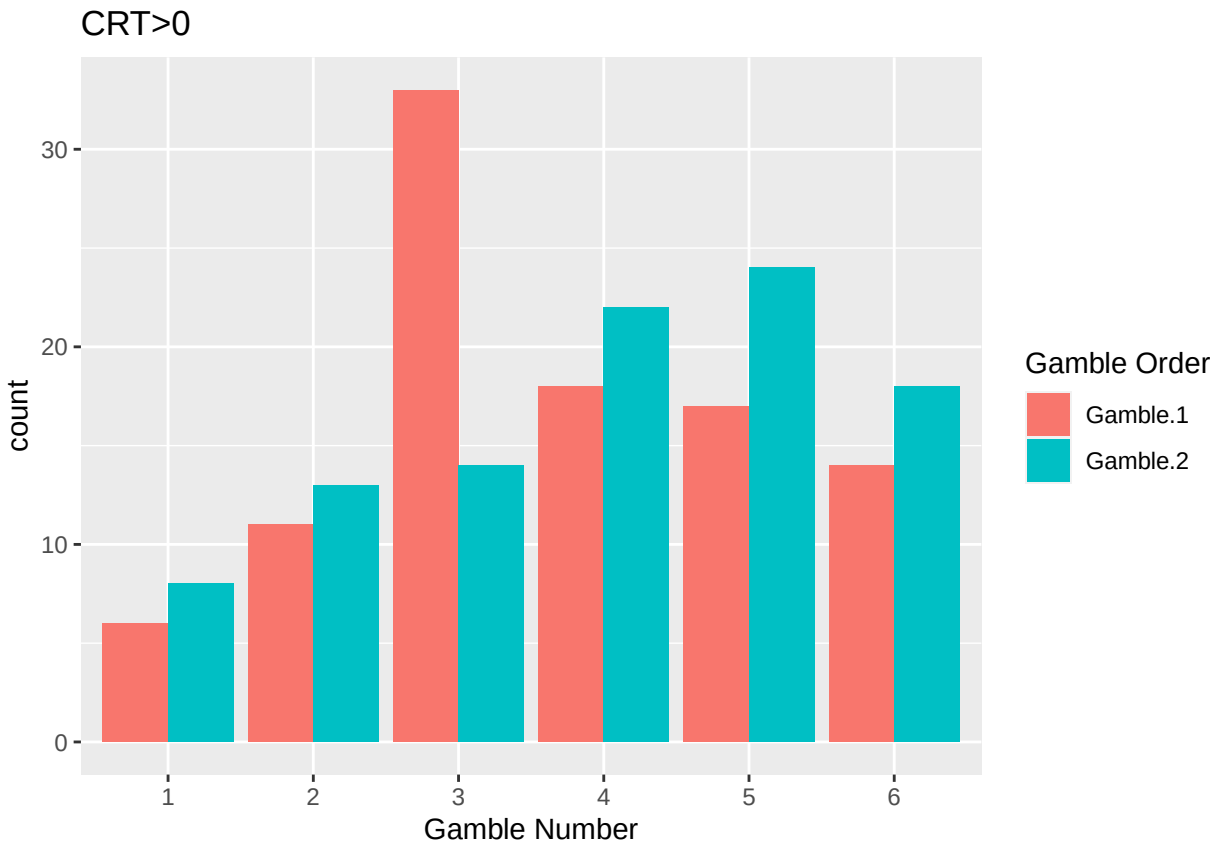
The final average payment might not be that informative. It is possible that the same final payment could have been reached with two different histories. Even when the final average is informative about the magnitude and frequency of reinforcements for risk behavior: higher final payment are achieved by risk takers with good luck, and lower final payments are due to risk takers with bad luck. However, for people with similar final payoffs the history might be quite different.

CR predicting more changes

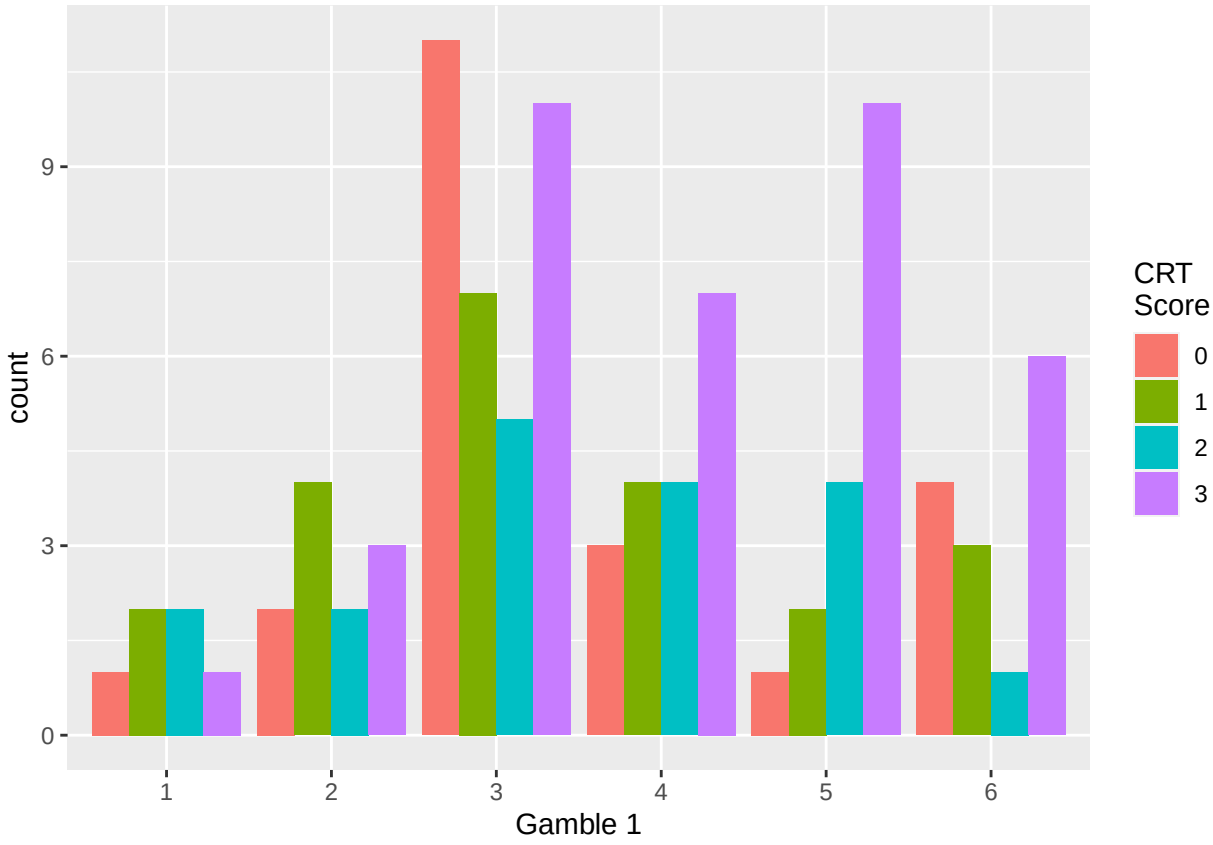
```
ExperienceRisk %>%
  mutate(G1 = factor(Gamble.1),
         CRT = factor(CR.Payoff)) %>%
  tabyl(G1,CRT)
```

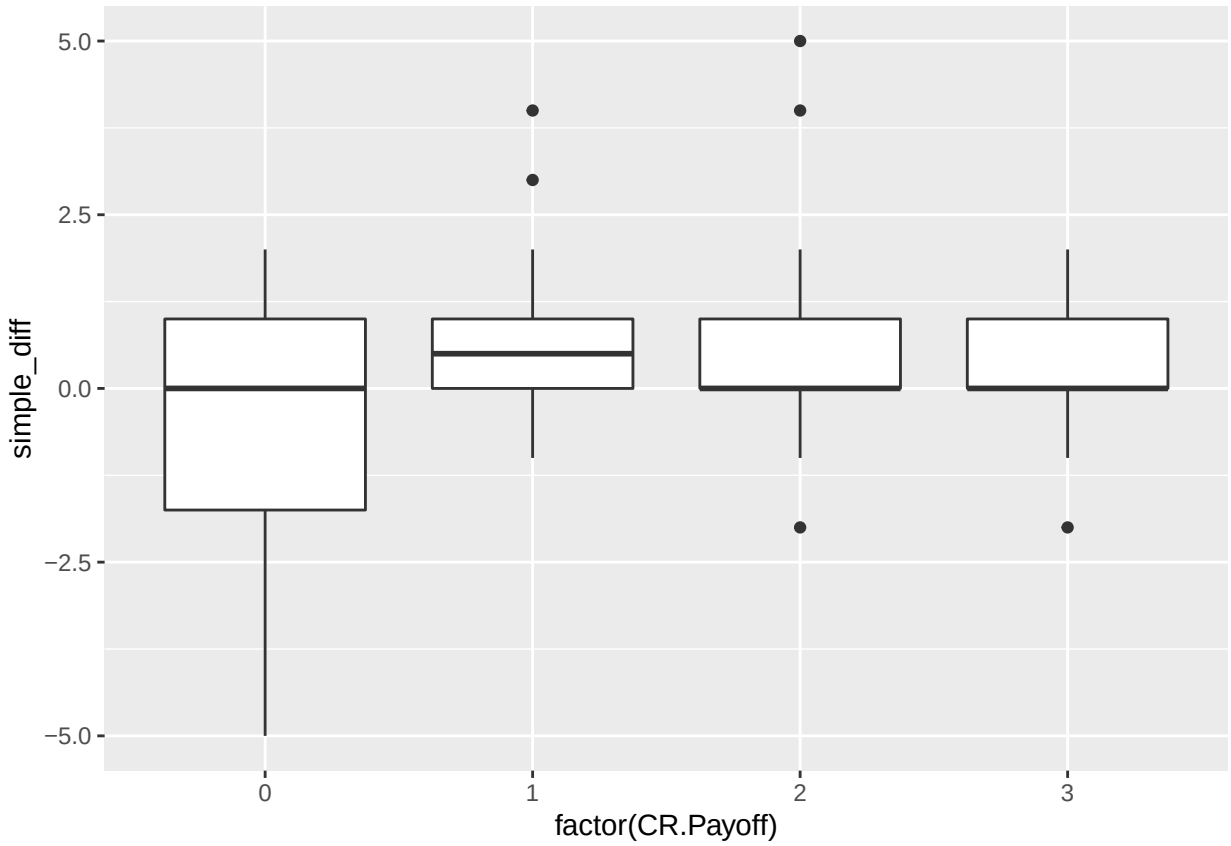
```
##  G1  0 1 2  3
##   1  1 2 2  1
##   2  2 4 2  3
##   3 11 7 5 10
##   4  3 4 4  7
##   5  1 2 4 10
##   6  4 3 1  6
```




CRT>0
count
30
20
10
0
1
2
3
4
5
6
Gamble Number
Gamble Order
Gamble.1
Gamble.2

G2 - G1





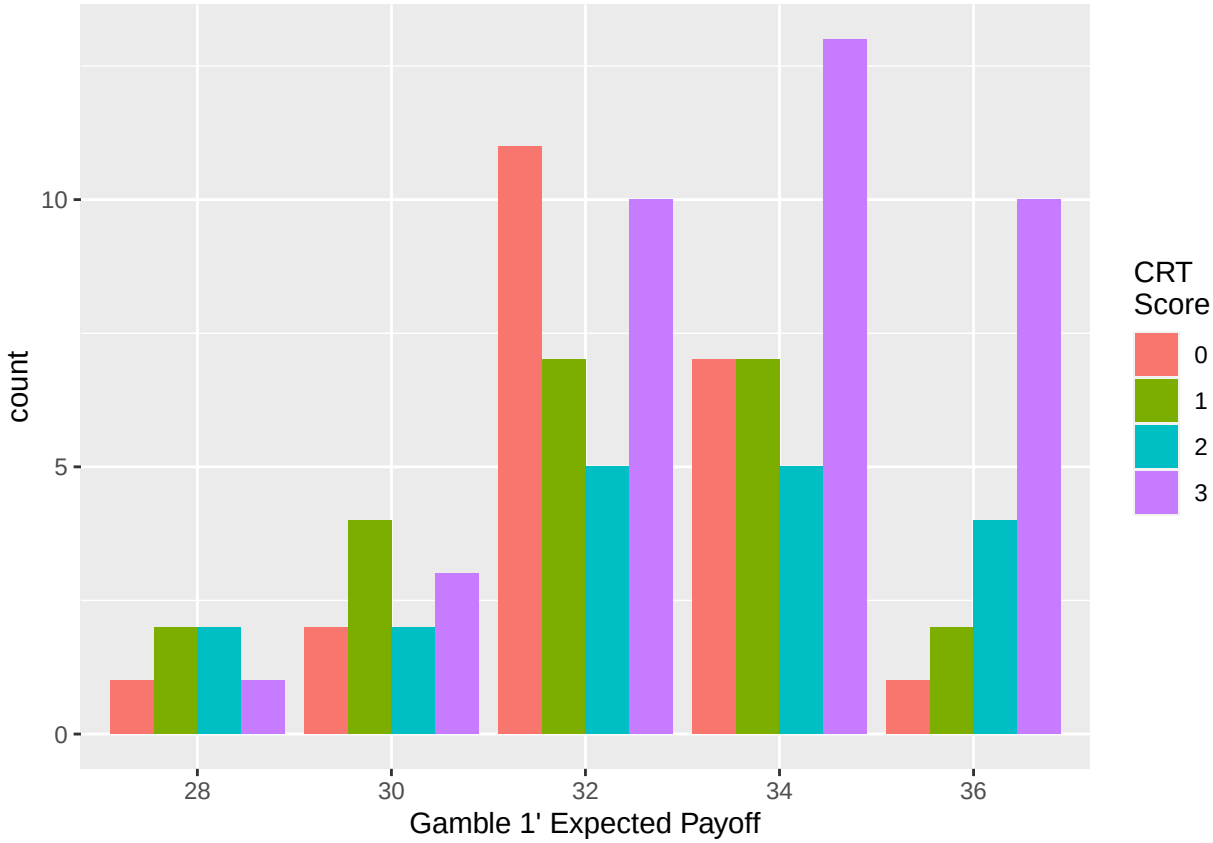

```
##
## Call:
## lm(formula = simple_diff ~ CR.Payoff > 0, data = ExperienceRisk)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -4.4091 -0.4805 -0.4805  0.5195  4.5195
##
## Coefficients:
##                   Estimate Std. Error t value Pr(>|t|)
## (Intercept)        -0.5909     0.2876  -2.054  0.04262 *
## CR.Payoff > 0TRUE   1.0714     0.3261   3.285  0.00142 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1.349 on 97 degrees of freedom
## Multiple R-squared:  0.1001, Adjusted R-squared:  0.09085
## F-statistic: 10.79 on 1 and 97 DF,  p-value: 0.001419
```

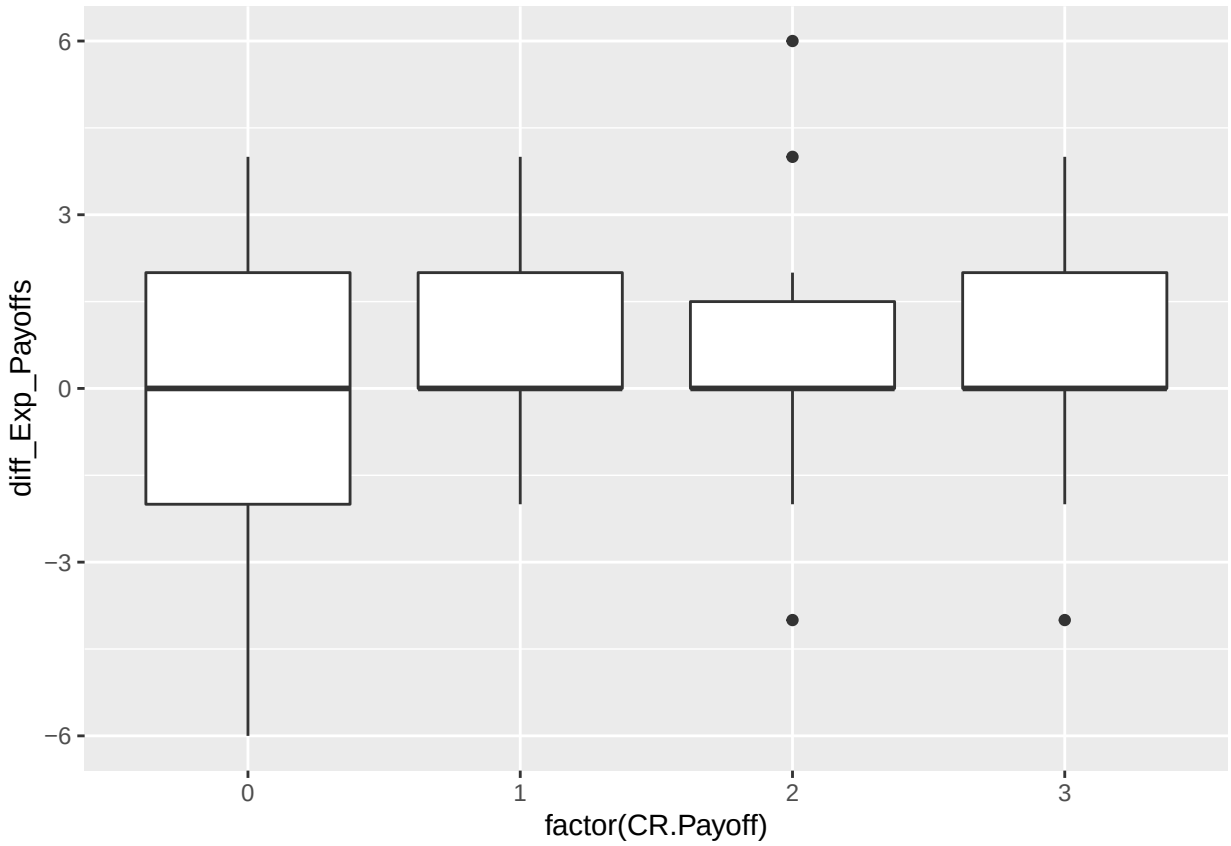
There is an effect of the CR when considering a dummy for having achieved at least one point in the test. If people got at least one point, they will increase by one the number of the gamble they chose. This effect in not longer significant if the regression include all the levels of CRT as regressors.

```
##
## Call:
## lm(formula = simple_diff ~ CR.Payoff, data = ExperienceRisk)
##
## Residuals:
```

```
##     Min      1Q  Median      3Q     Max
## -4.9463 -0.4667 -0.1197  0.7068  4.7068
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept) -0.05375    0.24828  -0.216    0.829
## CR.Payoff    0.17350    0.11955   1.451    0.150
##
## Residual standard error: 1.407 on 97 degrees of freedom
## Multiple R-squared:  0.02125,    Adjusted R-squared:  0.01116
## F-statistic: 2.106 on 1 and 97 DF,  p-value: 0.1499
```

EP2 - EP1






```
##
## Call:
## lm(formula = diff_Exp_Payoffs ~ CR.Payoff > 0, data = ExperienceRisk)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -5.3636 -0.5974 -0.5974  1.4026  5.4026
##
## Coefficients:
##                   Estimate Std. Error t value Pr(>|t|)
## (Intercept)        -0.6364     0.4349  -1.463    0.147
## CR.Payoff > 0TRUE   1.2338     0.4931   2.502    0.014 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 2.04 on 97 degrees of freedom
## Multiple R-squared:  0.06062,    Adjusted R-squared:  0.05094
## F-statistic:  6.26 on 1 and 97 DF,  p-value: 0.01403
```

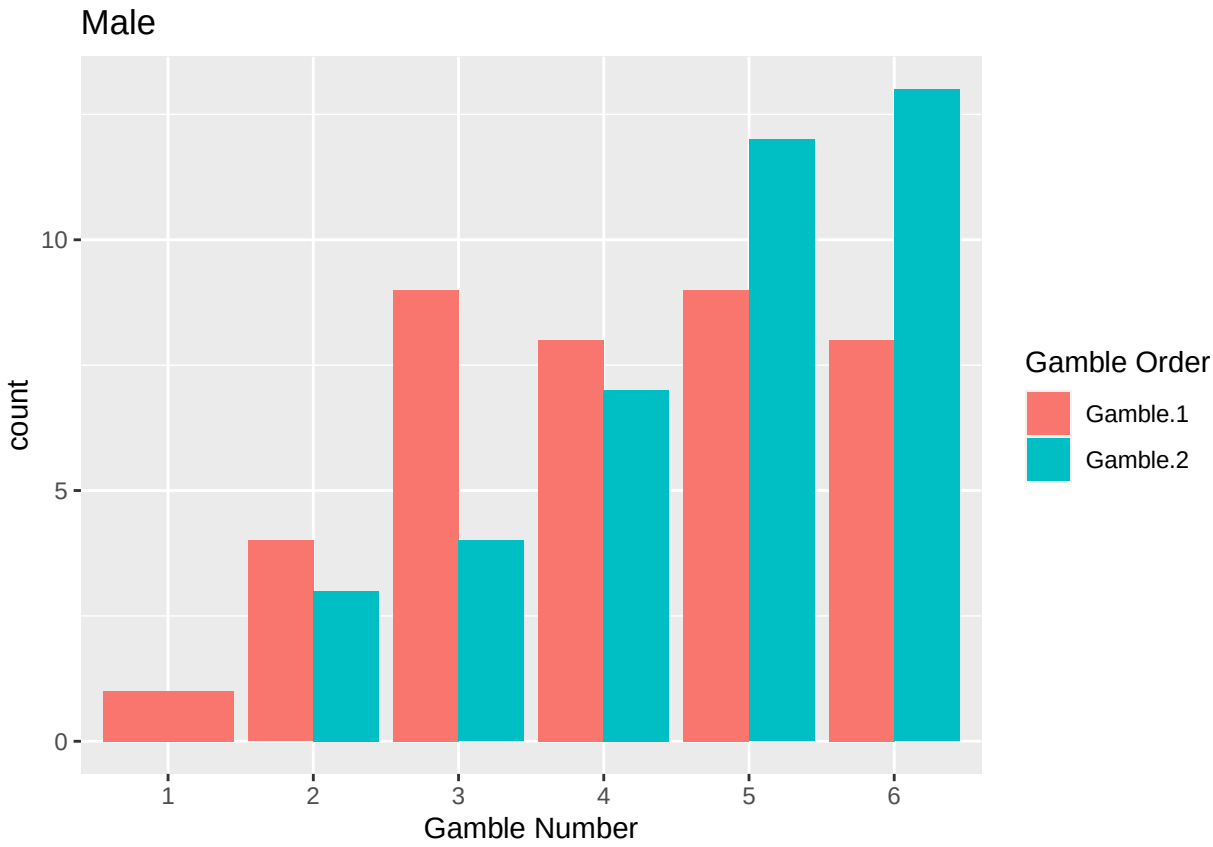
Like in the difference between the gamble chosen first and second, there is an effect of the CR when considering a dummy for having achieved at least one point in the test. If people got at least one point, they will increase by one the number of the gamble they chose.

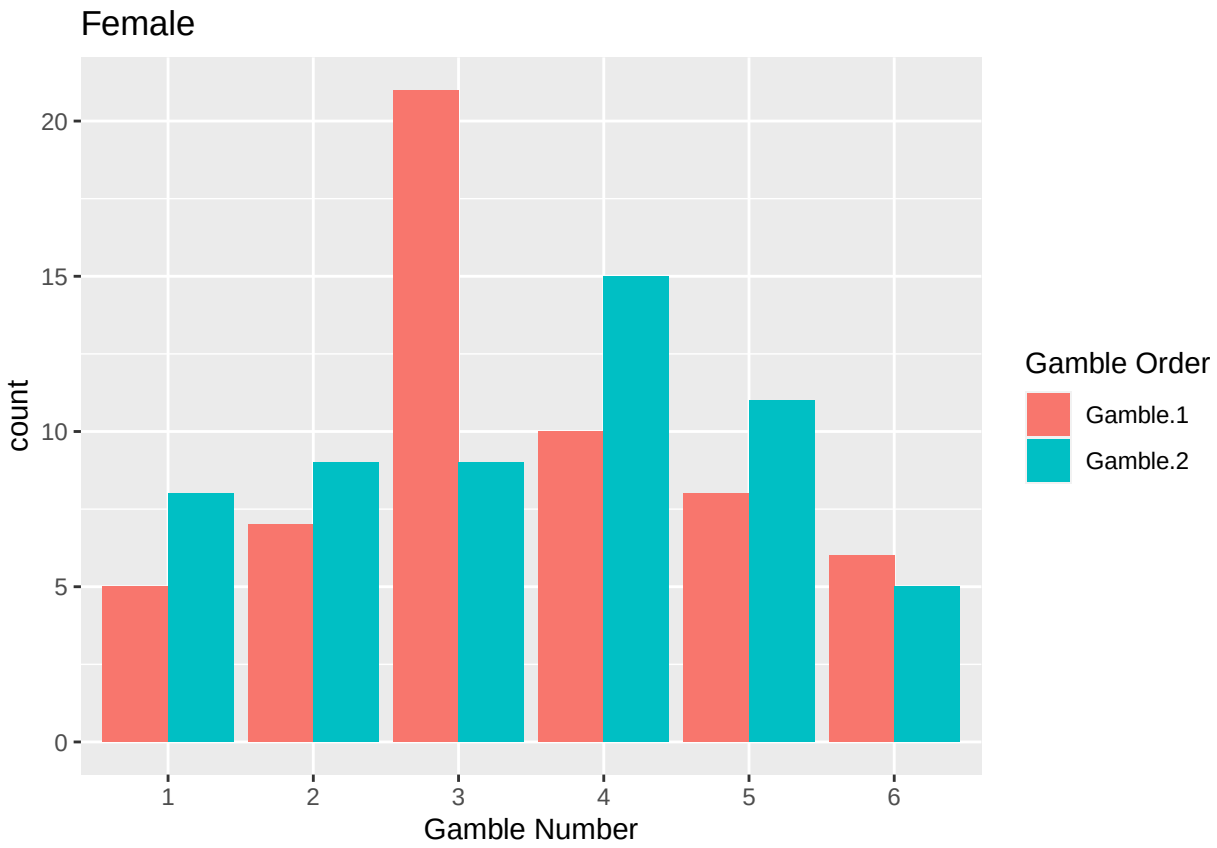
Gender differences

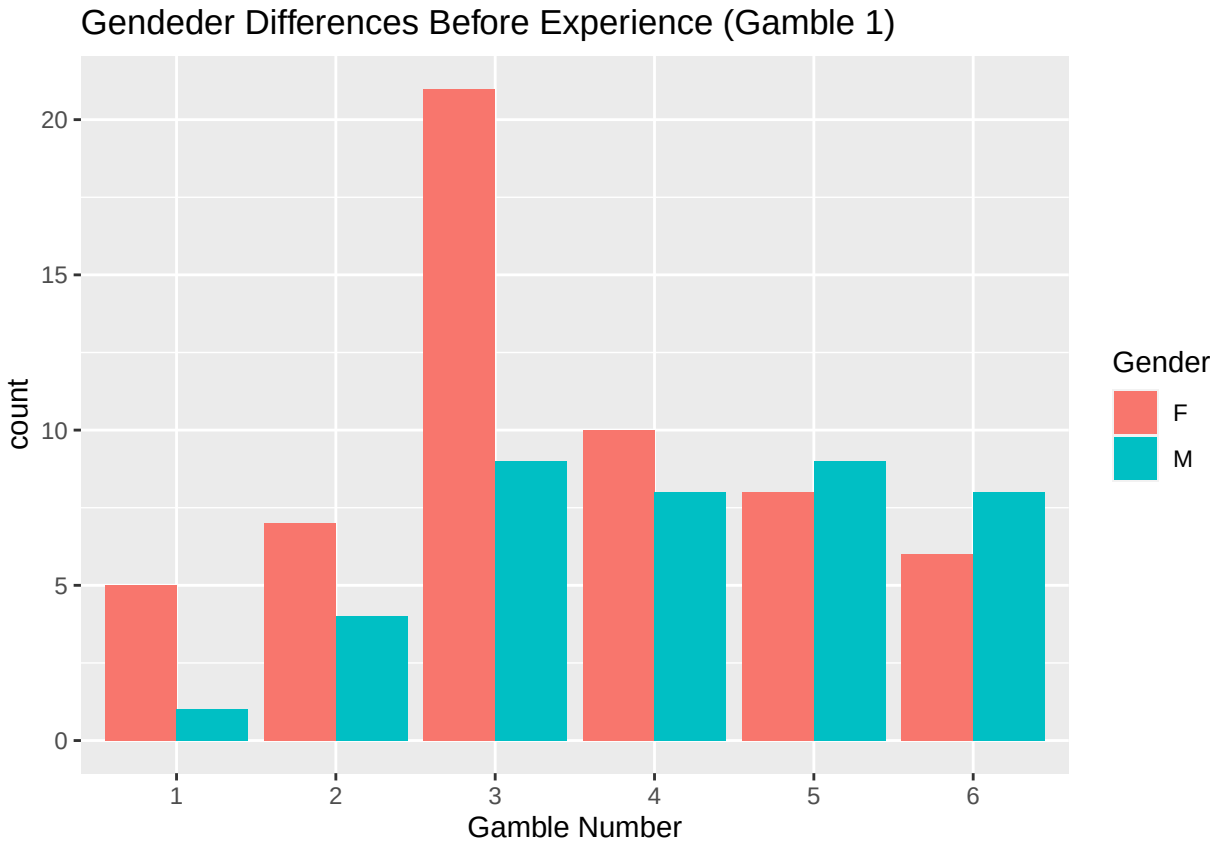
Male and Female participants moved in the expected direction; both moved towards higher gambles. However, both distributions are different.

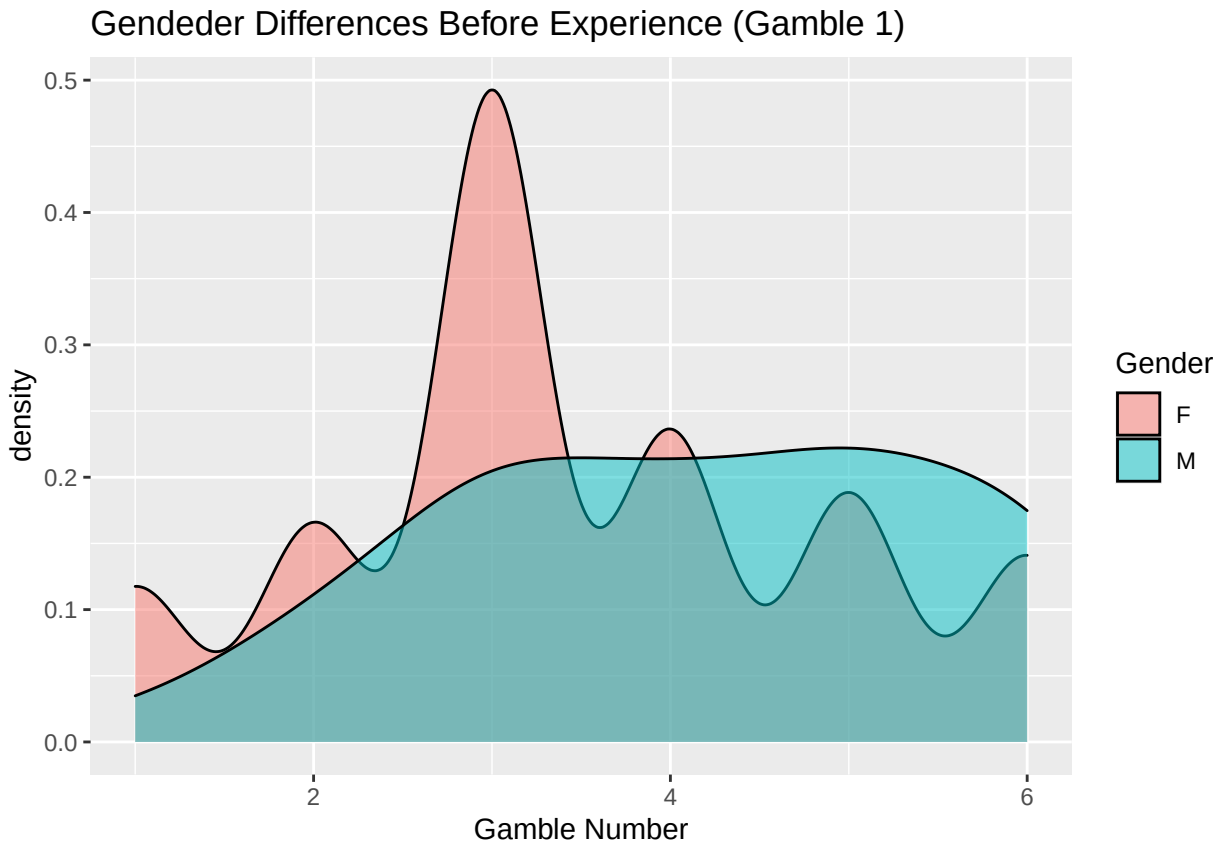
The distribution of gamble choices among men changes towards gamble 6; risk loving. At the beginning, before the experience the distribution was more or less homogeneous between gambles 3 to 6.

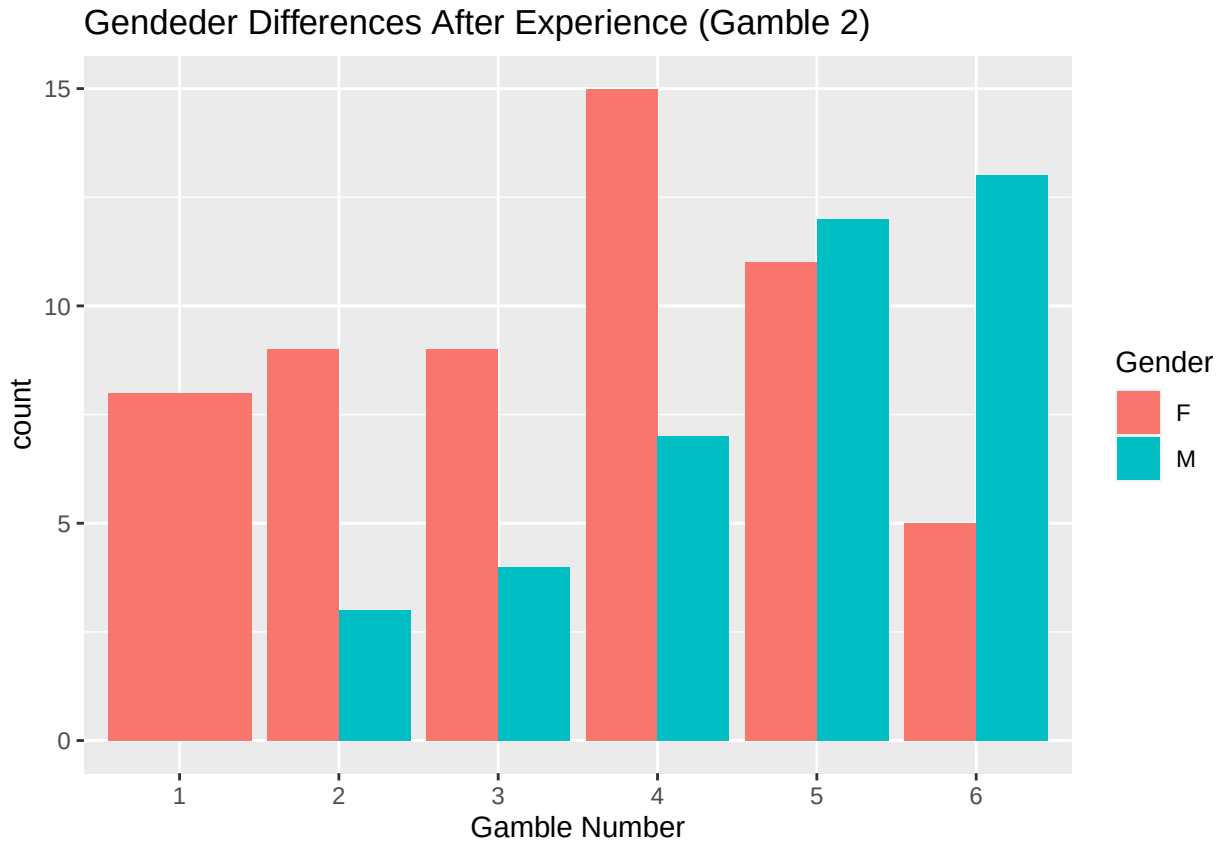
Differences in choices

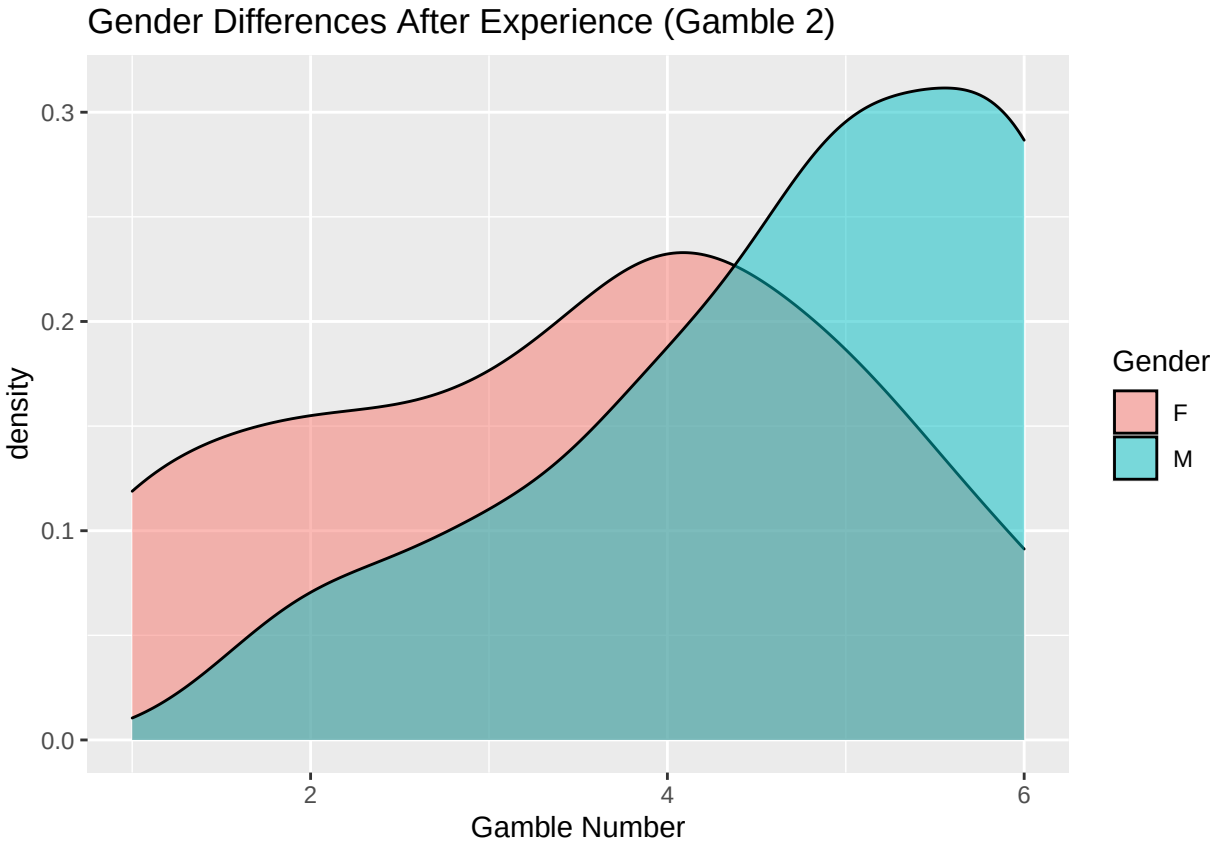



Female
count
20
15
10
5
0
1
2
3
4
5
6
Gamble Number
Gamble Order
Gamble.1
Gamble.2


Gendeder Differences Before Experience (Gamble 1)
count
20
15
10
5
0
1
2
3
4
5
6
Gamble Number
Gender
F
M

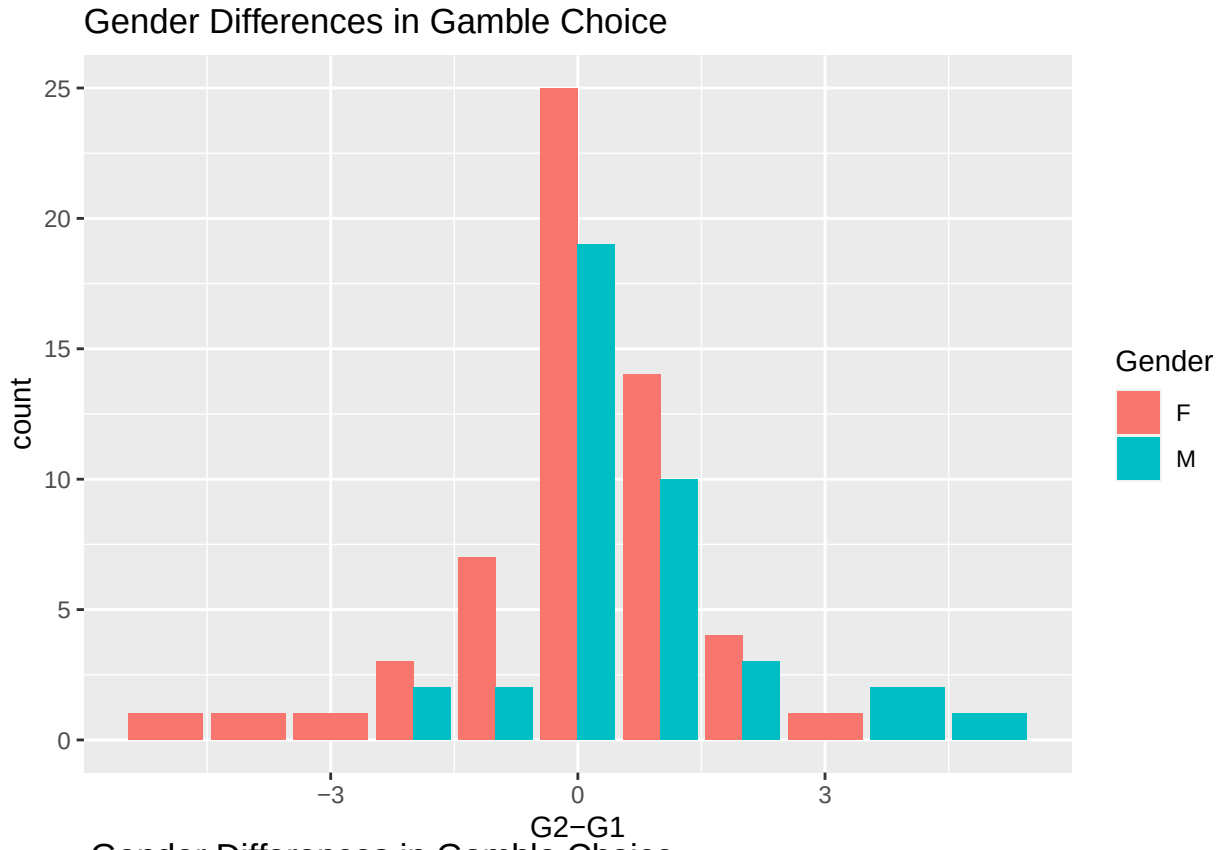

Gendeder Differences Before Experience (Gamble 1)
density
0.5
0.4
0.3
0.2
0.1
0.0
2
4
6
Gamble Number
Gender
F
M

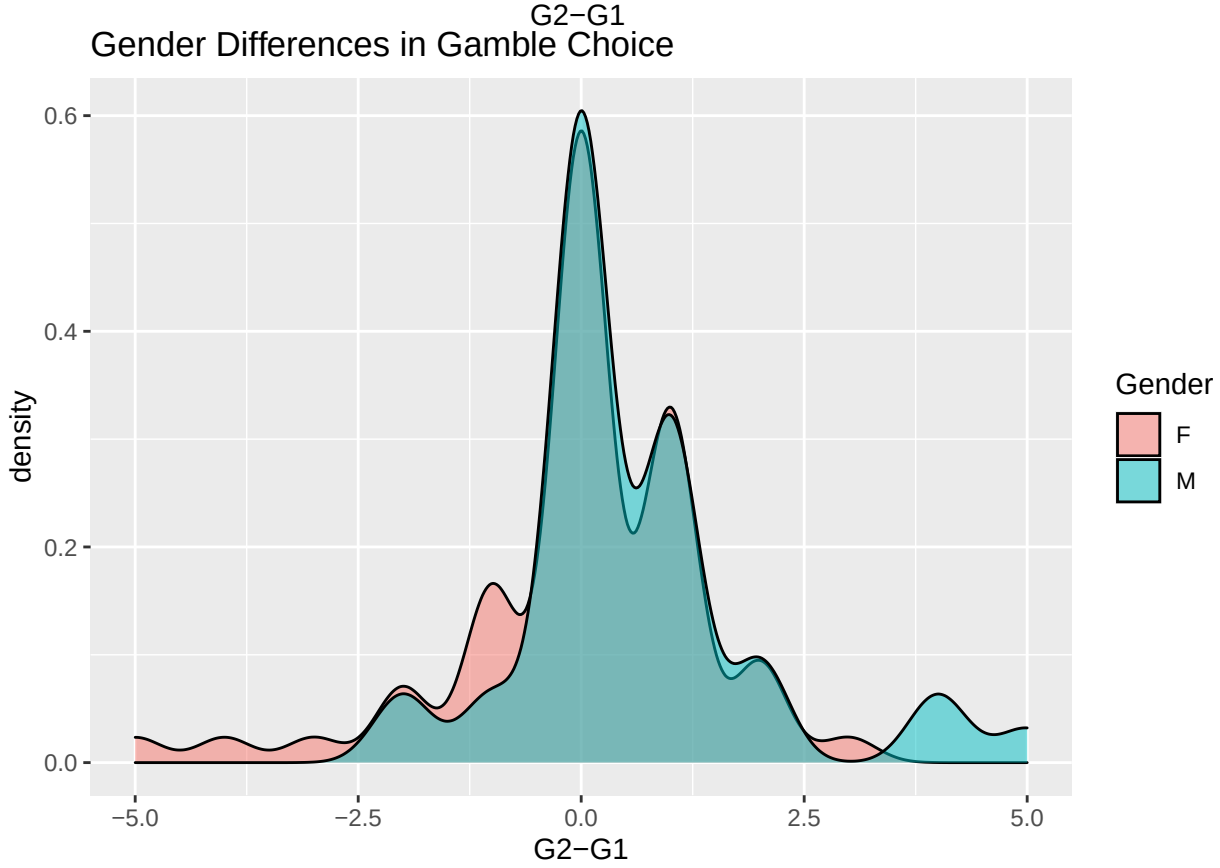

Gendeder Differences After Experience (Gamble 2)
count
15
10
5
0
1
2
3
4
5
6
Gamble Number
Gender
F
M

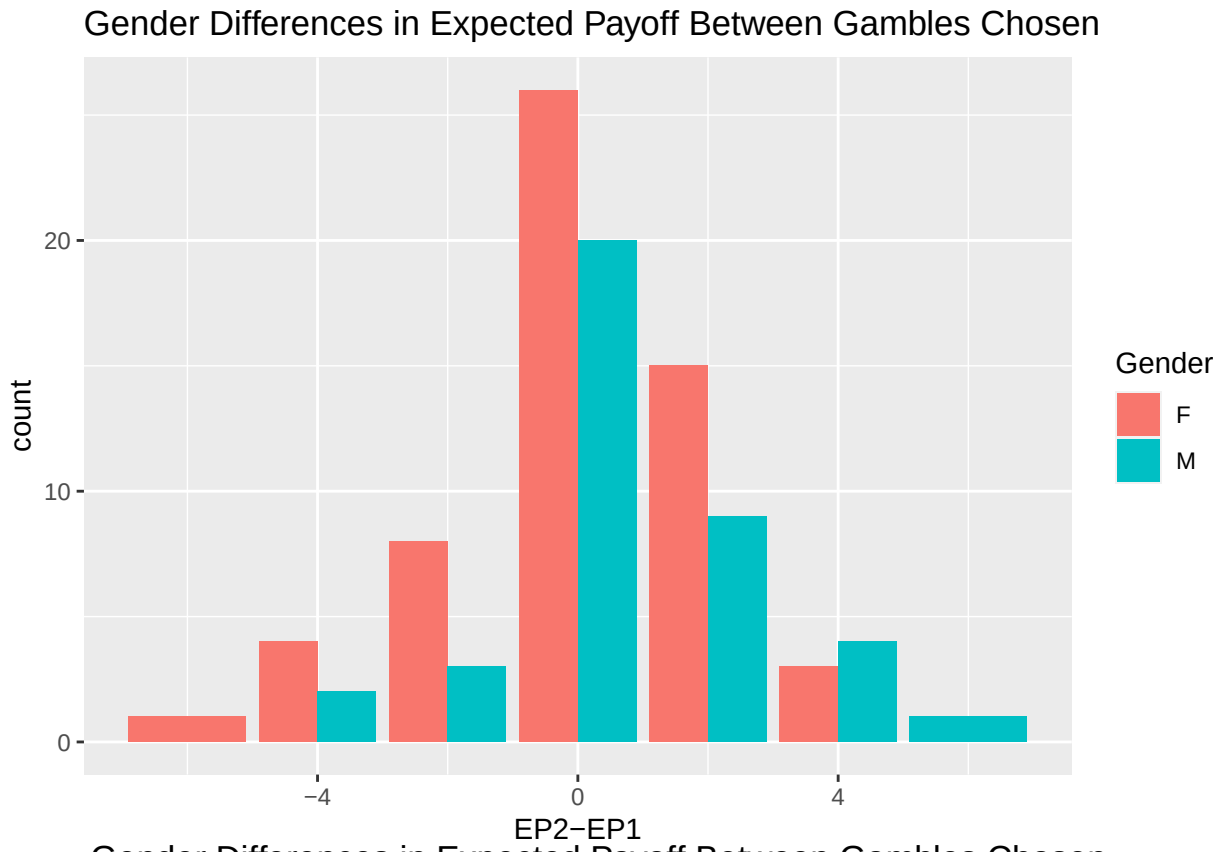


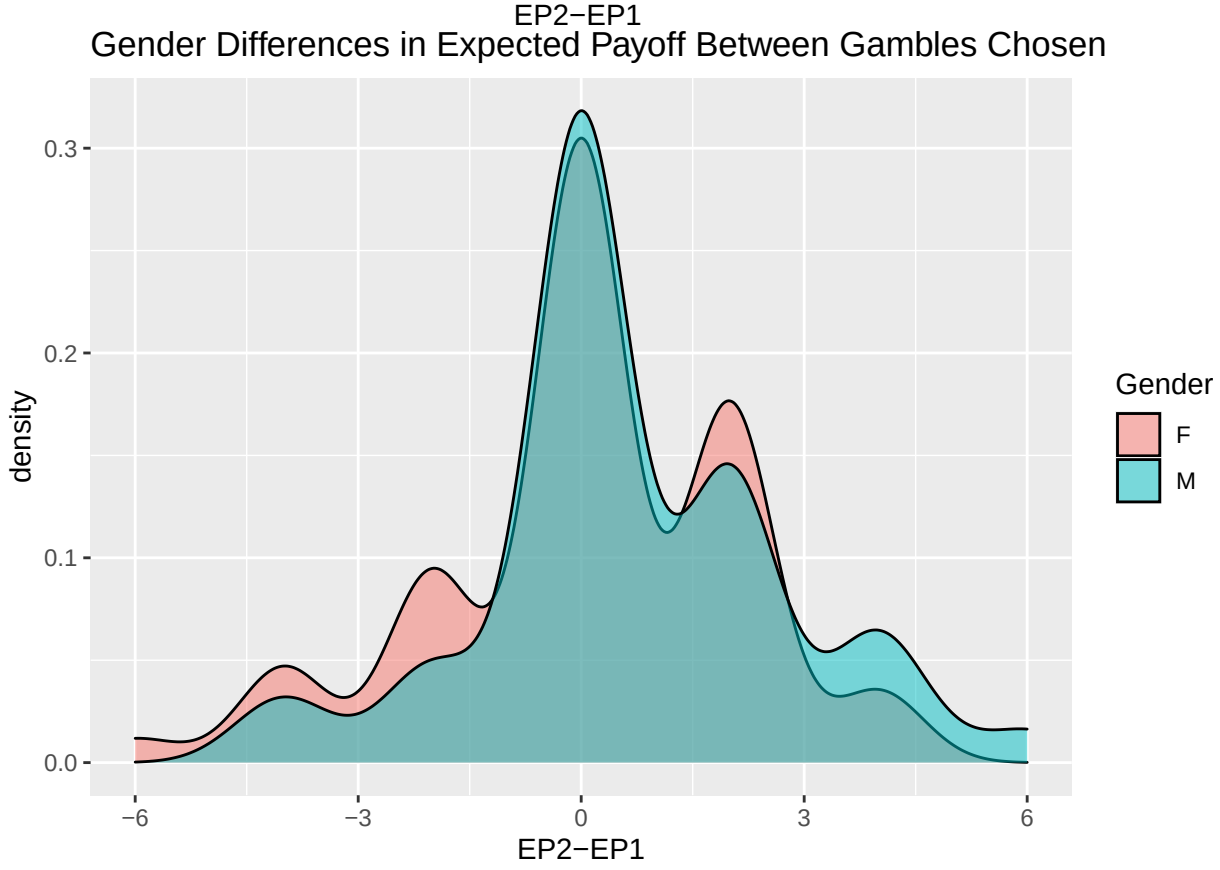
Differences in learning

Even when they start with different choices, the effect of the experience is not different between genders. The differences in risk attitudes seems consistent with the literature, and the experience with the task performed in this experiment does not change this gap.


Gender Differences in Gamble Choice
count
G2−G1
Gender
F
M


Gender Differences in Gamble Choice
density
G2−G1
Gender
F
M


Gender Differences in Expected Payoff Between Gambles Chosen
count
20
10
0
−4
0
4
EP2−EP1
Gender
F
M


Gender Differences in Expected Payoff Between Gambles Chosen
density
0.3
0.2
0.1
0.0
−6
−3
0
3
6
EP2−EP1
Gender
F
M

Regression

G2- G1

Table 1:

	Dependent variable:	
	simple_diff	
	(1)	(2)
Gamble.1	−0.502***	−0.531***
	(0.095)	(0.087)
GenderM	0.675**	0.846***
	(0.273)	(0.252)
CR.Payoff	0.231**	0.268**
	(0.113)	(0.104)
sum_correct_payoffs	−0.049*	−0.061***
	(0.028)	(0.021)
numEven_all	−0.119	
	(0.100)	
explore	−0.324	
	(0.378)	
mean_payoff_periods	−0.070	
	(0.055)	
Session	−0.003	
	(0.098)	
Constant	6.417**	2.656***
	(2.984)	(0.571)
Observations	94	96
R^2	0.320	0.358
Adjusted R^2	0.256	0.330
Residual Std. Error	1.159 (df = 85)	1.162 (df = 91)
F Statistic	5.003*** (df = 8; 85)	12.690*** (df = 4; 91)
Note:		*p<0.1; **p<0.05; ***p<0.01

EP2- EP1

CRT = 0

```
ggplot(data = ExperienceRisk %>%
         filter(CR.Payoff!=0) %>%
         select(Gamble.1,Gamble.2) %>%
         gather("Gamble_Order","Gamble") ) +
```

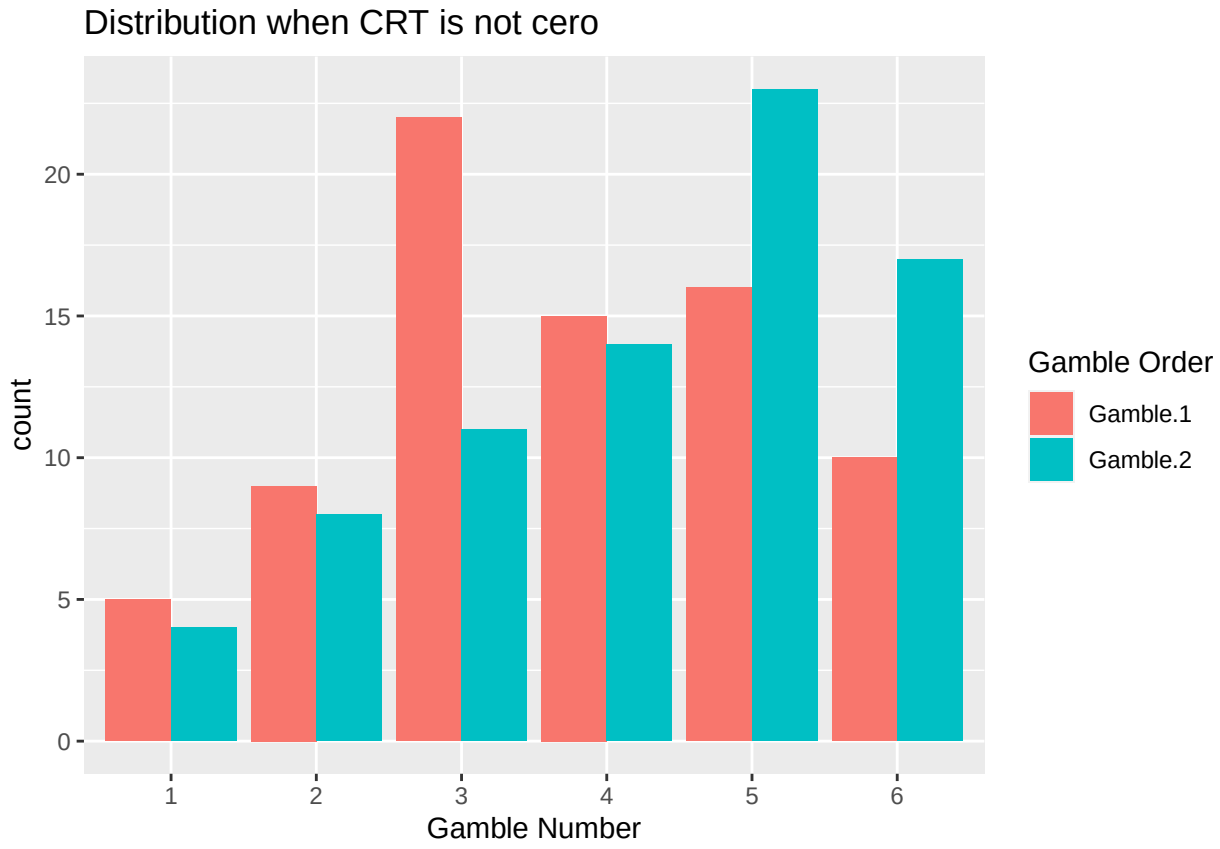
Table 2:

	Dependent variable:
	Gamble.2
middle	0.520^{***}
	(0.091)
GenderM	2.120^{**}
	(0.877)
CR.Payoff1	1.967^{***}
	(0.742)
CR.Payoff2	2.520^{***}
	(0.770)
CR.Payoff3	2.280^{***}
	(0.679)
even1	1.420^{**}
	(0.663)
GenderM:CR.Payoff1	-1.227
	(1.286)
GenderM:CR.Payoff2	-1.620
	(1.175)
GenderM:CR.Payoff3	-1.533
	(1.059)
GenderM:even1	-2.400^{*}
	(1.242)
CR.Payoff1:even1	-0.867
	(0.908)
CR.Payoff2:even1	-2.620^{**}
	(1.077)
CR.Payoff3:even1	-1.691^{**}
	(0.849)
GenderM:CR.Payoff1:even1	2.803
	(1.689)
GenderM:CR.Payoff2:even1	3.113^{*}
	(1.708)
GenderM:CR.Payoff3:even1	2.546^{*}
	(1.470)
Constant	1.360^{**}
	(0.578)
Observations	96
R^2	0.543
Adjusted R^2	0.451
Residual Std. Error	1.148 (df = 79)

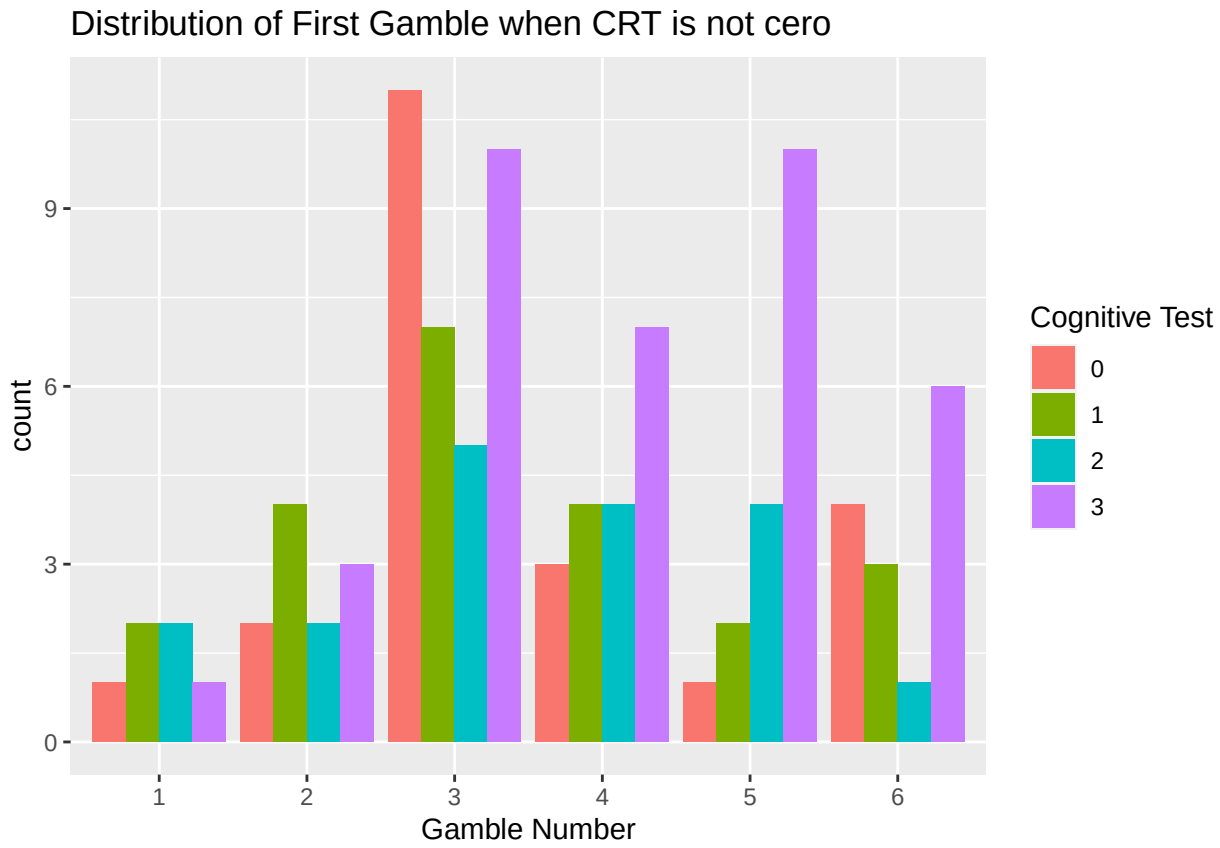
Table 3:

	Dependent variable:	
	diff_Exp_Payoffs	
	(1)	(2)
Gamble.1	-0.772^{***}	-0.593^{***}
	(0.142)	(0.136)
GenderF	-2.235	
	(1.998)	
GenderM	-1.445	
	(2.027)	
GenderPNTS	-3.529	
	(2.382)	
CR.Payoff	0.276	
	(0.171)	
sum_correct_payoffs	-0.082^{**}	-0.079^{**}
	(0.041)	(0.032)
numEven_all	-0.048	
	(0.069)	
explore	-0.830	
	(0.580)	
Session	-0.011	
	(0.150)	
Constant	7.611^{***}	4.121^{***}
	(2.129)	(0.871)
Observations	99	99
R^2	0.328	0.197
Adjusted R^2	0.261	0.181
Residual Std. Error	1.801 (df = 89)	1.895 (df = 96)
F Statistic	4.837^{***} (df = 9; 89)	11.803^{***} (df = 2; 96)
Note:		*p<0.1; **p<0.05; ***p<0.01

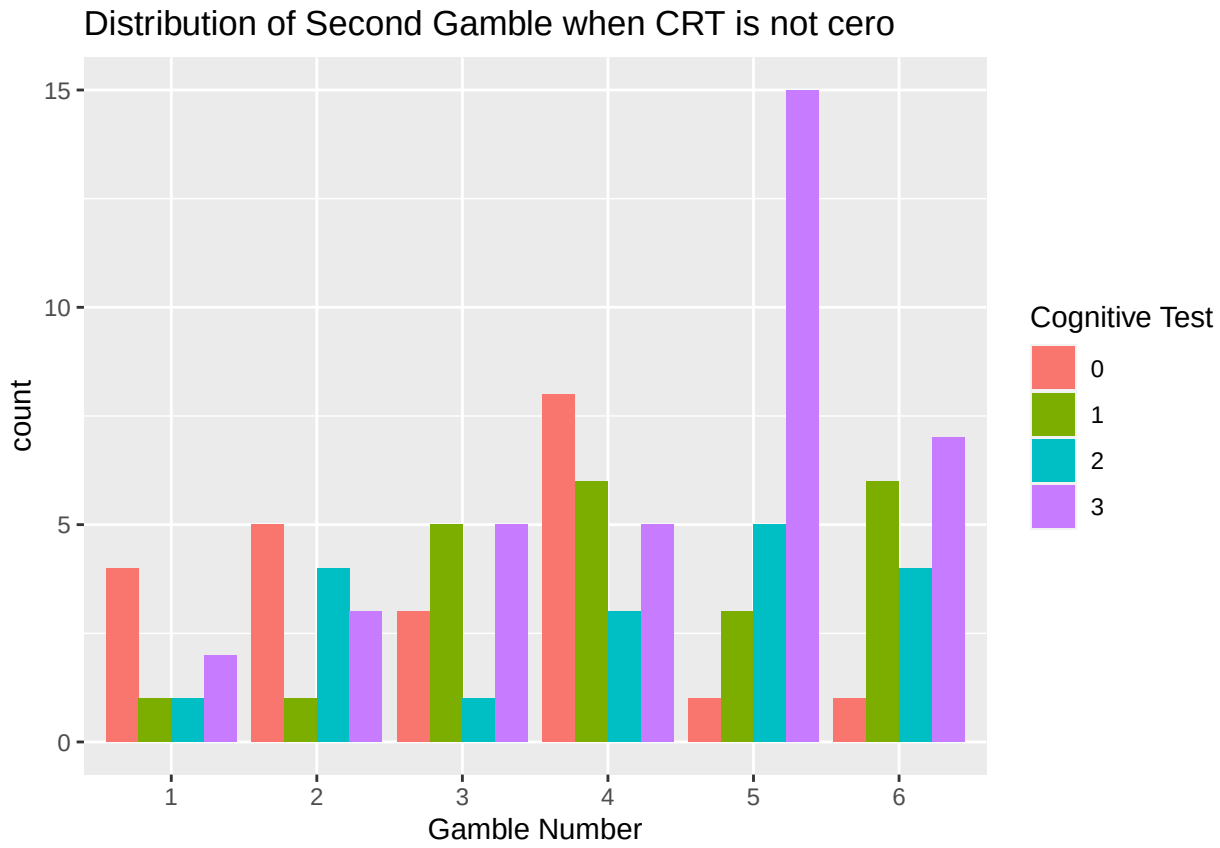
```
  geom_bar(aes(x = factor(Gamble),fill = Gamble_Order),position="dodge")+
  labs(x = "Gamble Number", fill = "Gamble Order",title="Distribution when CRT is not cero")
```




```
ggplot(data = ExperienceRisk %>%
         select(Gamble.1,CR.Payoff) ) +
  geom_bar(aes(x = factor(Gamble.1),
               fill = factor(CR.Payoff)),
           position="dodge") +
  labs(x = "Gamble Number",
       fill = "Cognitive Test",
       title ="Distribution of First Gamble when CRT is not cero")
```




```
ggplot(data = ExperienceRisk %>%
         select(Gamble.2,CR.Payoff) ) +
  geom_bar(aes(x = factor(Gamble.2),
               fill = factor(CR.Payoff)),
           position="dodge") +
  labs(x = "Gamble Number",
       fill = "Cognitive Test",
       title ="Distribution of Second Gamble when CRT is not cero")
```




```
ggplot(data = ExperienceRisk %>%
         select(simple_diff,CR.Payoff) ) +
  geom_density(aes(x = simple_diff,
                   fill = factor(CR.Payoff==0)),
               alpha=0.5)+
  labs(x = "G2-G1",
       fill = "CRT=0",
       title="Distribution of Change when CRT is not cero")
```

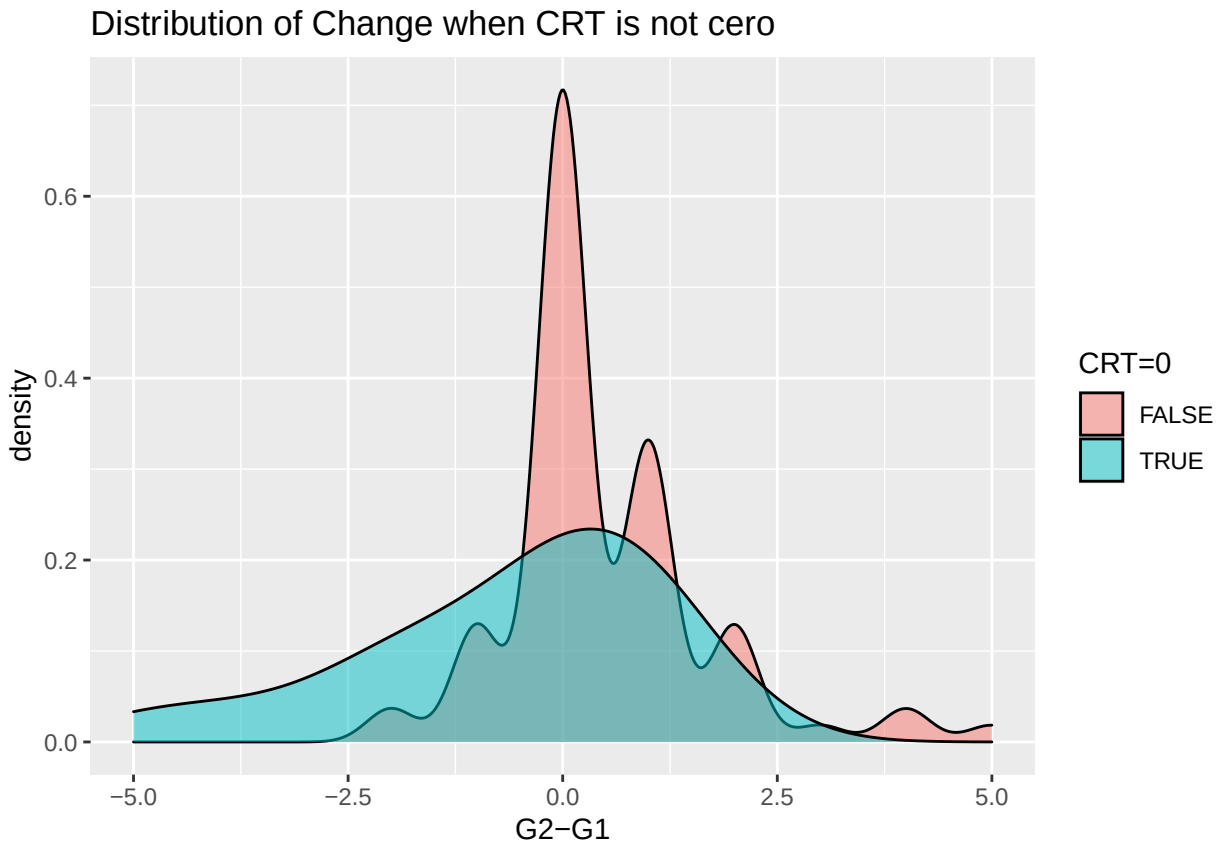


Table 4: Expected Payoff among Females with CRT=0

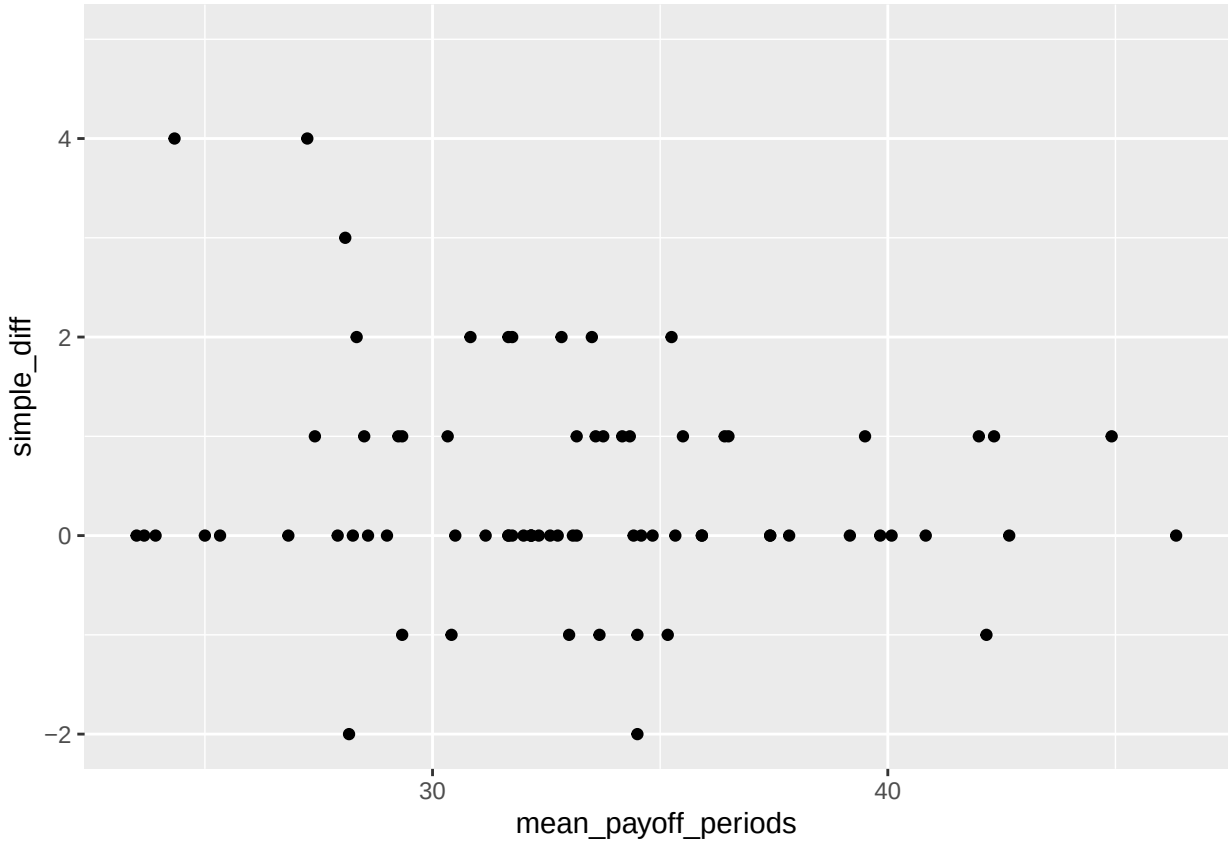
	Dependent variable:
	diff_Exp_Payoffs
Gamble.1	−0.692*
	(0.352)
less_than_12_even	−2.551*
	(1.217)
Constant	2.145
	(1.402)
Observations	16
R^2	0.400
Adjusted R^2	0.308
Residual Std. Error	2.105 (df = 13)
F Statistic	4.332** (df = 2; 13)
Note:	*p<0.1; **p<0.05; ***p<0.01

effect of history

```
ggplot(data = ExperienceRisk %>%
         filter(CR.Payoff!=0) ) +
```

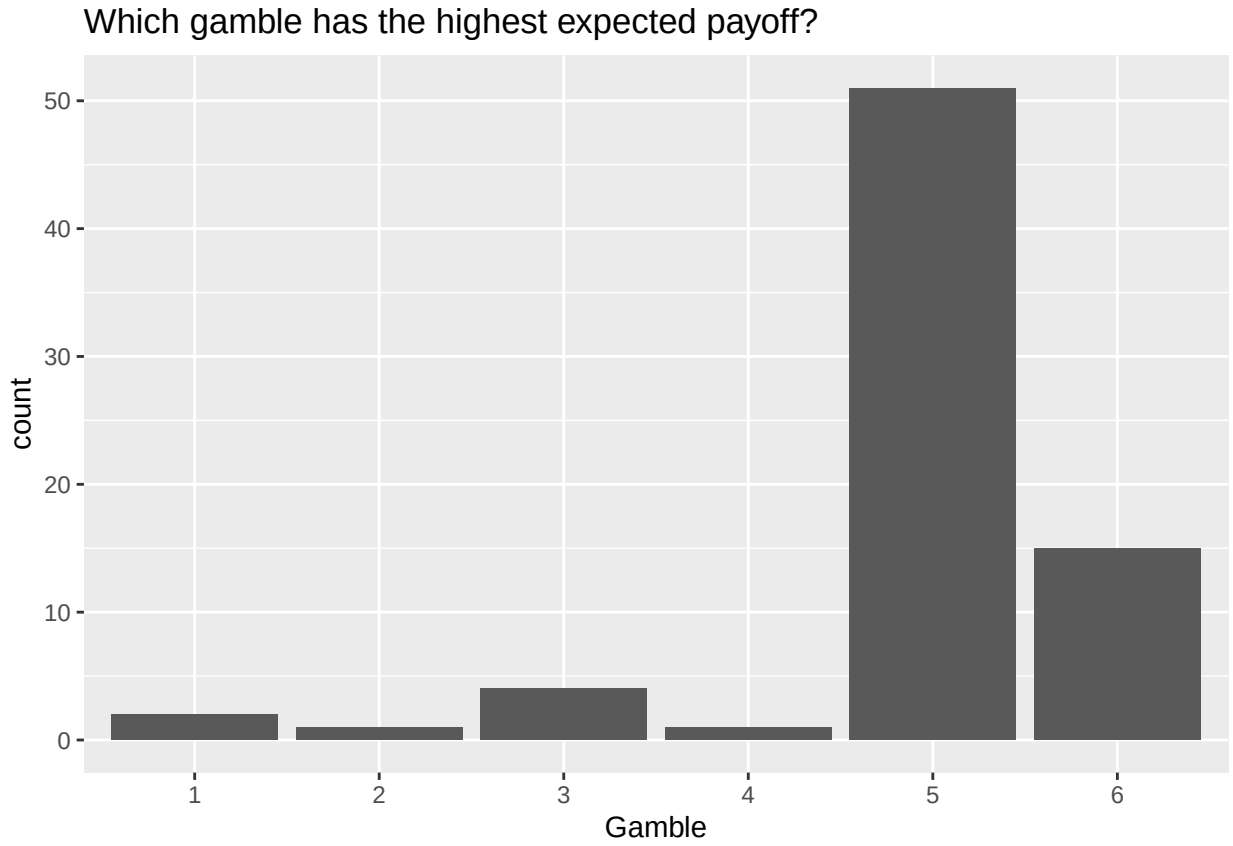
```
  geom_point(aes(x=mean_payoff_periods,y=simple_diff))
```

```
## Warning: Removed 2 rows containing missing values (geom_point).
```



Follow-up survey

```
ggplot(data = ExperienceRisk %>%
         filter(!is.na(max_exp_gamble)))+
  geom_bar(aes(x= factor(max_exp_gamble)))+
  labs(x="Gamble",title = "Which gamble has the highest expected payoff?")
```



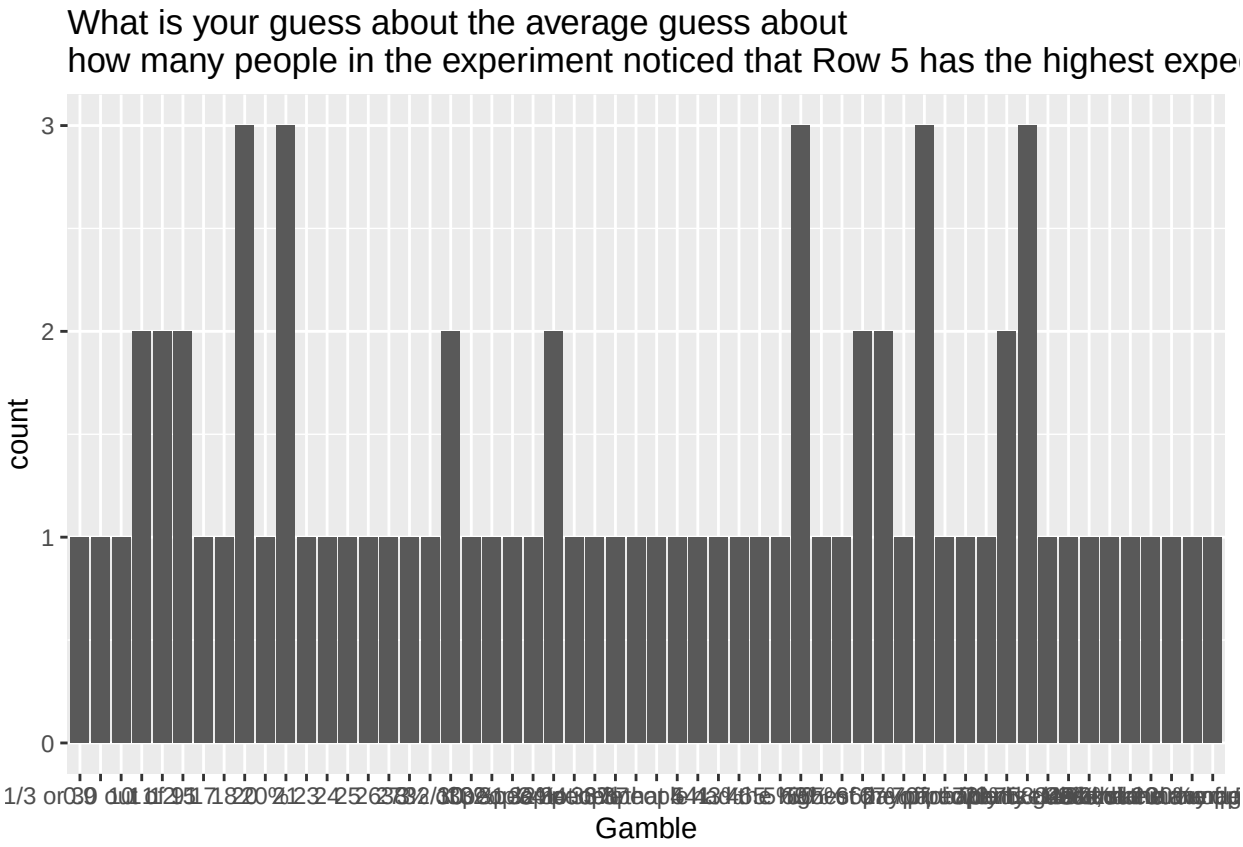

```
ggplot(data = ExperienceRisk %>%
         filter(!is.na(guess_average_5_highest)))+
  geom_bar(aes(x= factor(guess_average_5_highest)))+
  labs(x="Gamble",title = "What is your guess about the average guess about \nhow many people in the ex
```

```
## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <e2>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <80>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <99>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <e2>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <80>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <99>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
```

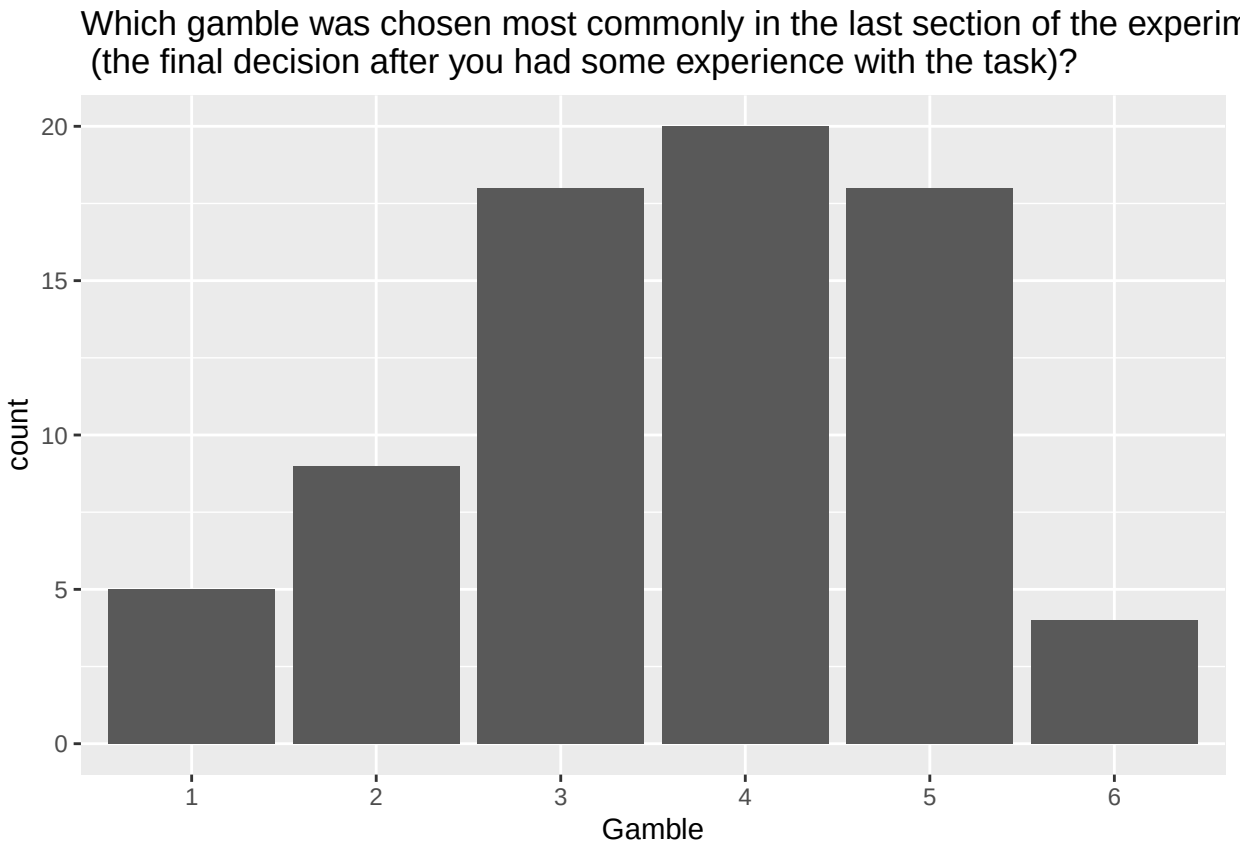
```
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <e2>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <80>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <99>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <e2>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <80>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <99>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <e2>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <80>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <99>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <e2>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <80>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <99>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <e2>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <80>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <99>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
```

```
## substituted for <e2>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don’t understand the question' in 'mbcsToSbcs': dot
## substituted for <80>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don’t understand the question' in 'mbcsToSbcs': dot
## substituted for <99>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don’t understand the question' in 'mbcsToSbcs': dot
## substituted for <e2>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don’t understand the question' in 'mbcsToSbcs': dot
## substituted for <80>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don’t understand the question' in 'mbcsToSbcs': dot
## substituted for <99>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don’t understand the question' in 'mbcsToSbcs': dot
## substituted for <e2>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don’t understand the question' in 'mbcsToSbcs': dot
## substituted for <80>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don’t understand the question' in 'mbcsToSbcs': dot
## substituted for <99>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don’t understand the question' in 'mbcsToSbcs': dot
## substituted for <e2>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don’t understand the question' in 'mbcsToSbcs': dot
## substituted for <80>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don’t understand the question' in 'mbcsToSbcs': dot
## substituted for <99>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don’t understand the question' in 'mbcsToSbcs': dot
## substituted for <e2>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don’t understand the question' in 'mbcsToSbcs': dot
## substituted for <80>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don’t understand the question' in 'mbcsToSbcs': dot
## substituted for <99>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don’t understand the question' in 'mbcsToSbcs': dot
## substituted for <e2>
```

```
## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <80>

## Warning in grid.Call(C_textBounds, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <99>

## Warning in grid.Call.graphics(C_text, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <e2>

## Warning in grid.Call.graphics(C_text, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <80>

## Warning in grid.Call.graphics(C_text, as.graphicsAnnot(x$label), x$x, x$y, :
## conversion failure on 'I don't understand the question' in 'mbcsToSbcs': dot
## substituted for <99>
```




```
ggplot(data = ExperienceRisk %>%
         filter(!is.na(guess_gamble_most_chosen)))+
  geom_bar(aes(x= factor(guess_gamble_most_chosen)))+
  labs(x="Gamble",title = "Which gamble was chosen most commonly in the last section of the experiment
```


Which gamble was chosen most commonly in the last section of the experim
(the final decision after you had some experience with the task)?
count
20
15
10
5
0
1
2
3
4
5
6
Gamble