Gradeless Fall 2024

2025-05-08

```
library(tidyverse)
```

```
g9gf_2024 <- read_csv("Downloads/G9GF_2024.csv")
```

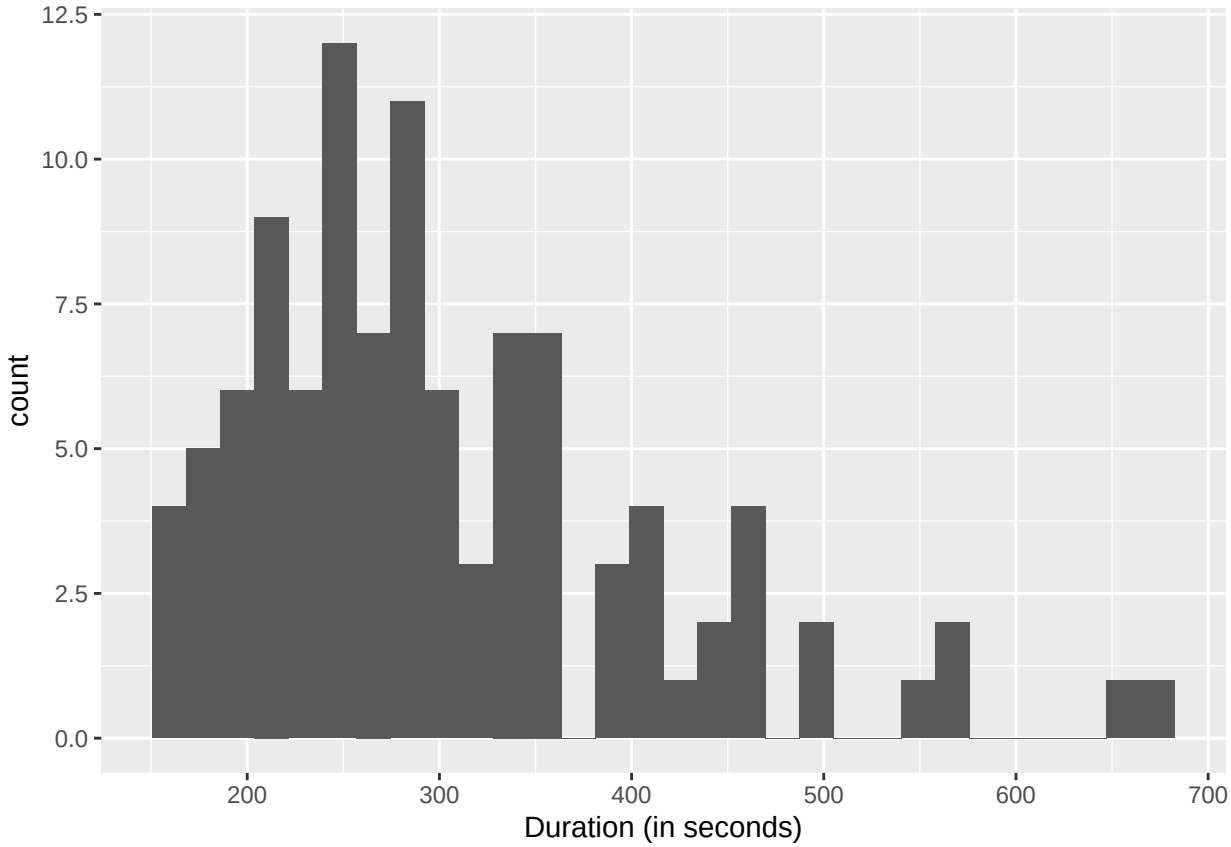
```
# completed surveys
g9gf_2024 %>%
  select(Progress) %>%
  mutate(Complete = Progress == 100) %>%
  summarize(complete = sum(Complete)/n()) #103/104
```

```
## # A tibble: 1 x 1
##   complete
##      <dbl>
## 1    0.990
```

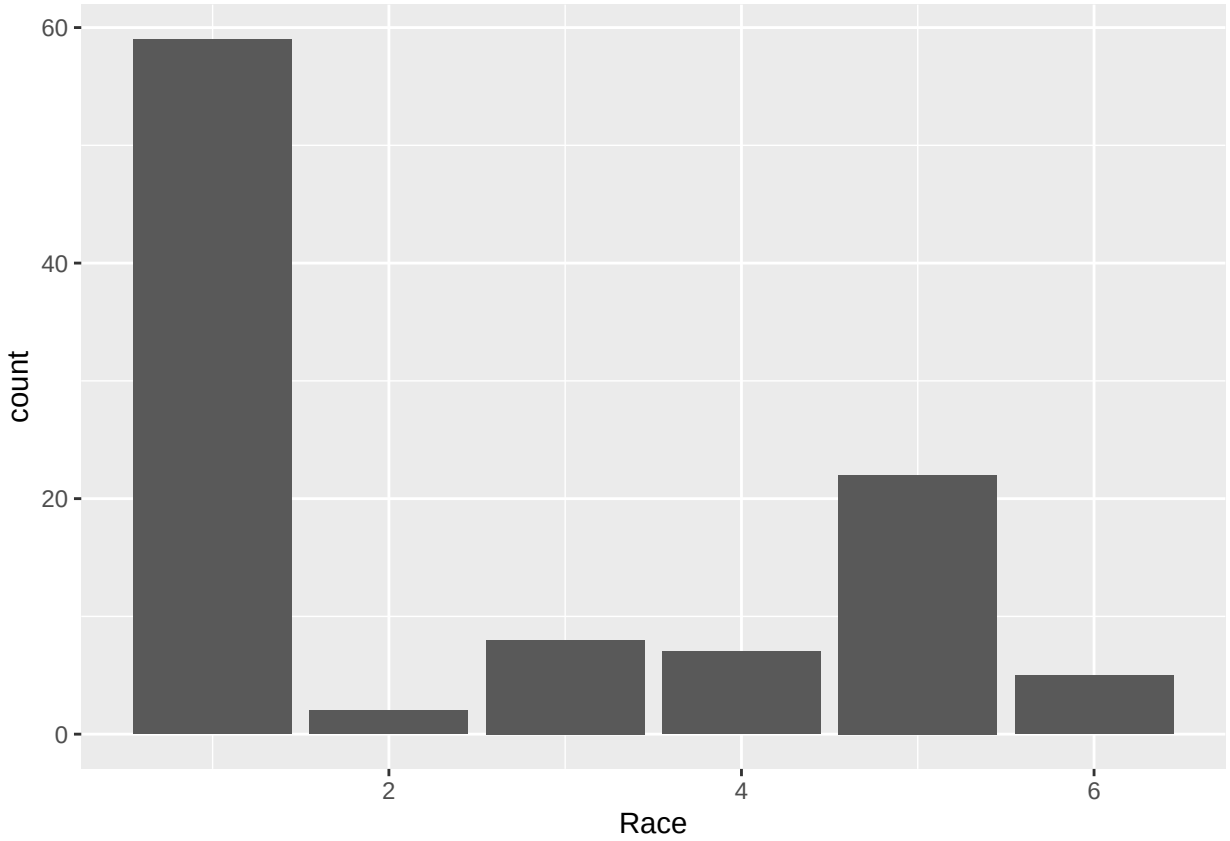
```
# average length
g9gf_2024 %>%
  select(`Duration (in seconds)`) %>%
  summarize(average_time = mean(`Duration (in seconds)`))
```

```
## # A tibble: 1 x 1
##   average_time
##          <dbl>
## 1         303.
```

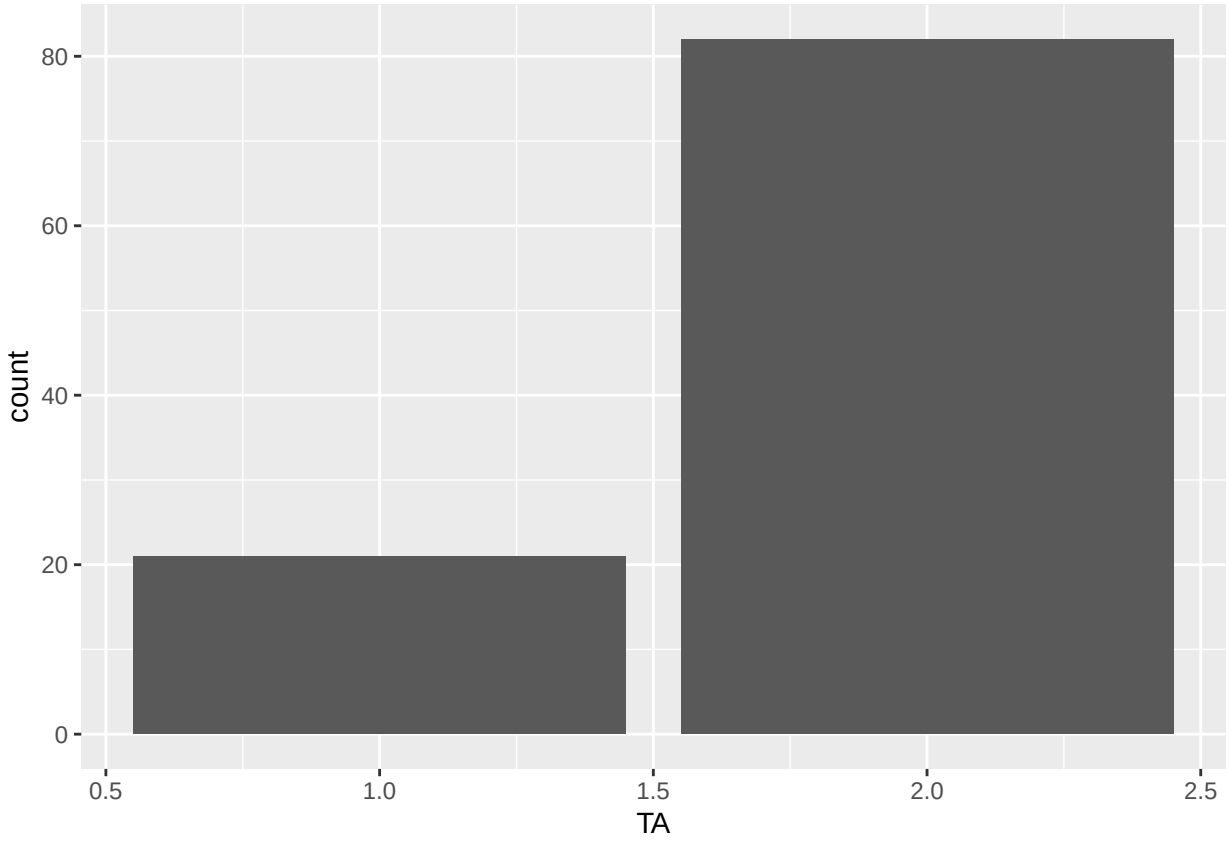
```
g9gf_2024 %>%
  ggplot(aes(x=`Duration (in seconds)`)) +
  geom_histogram()
```



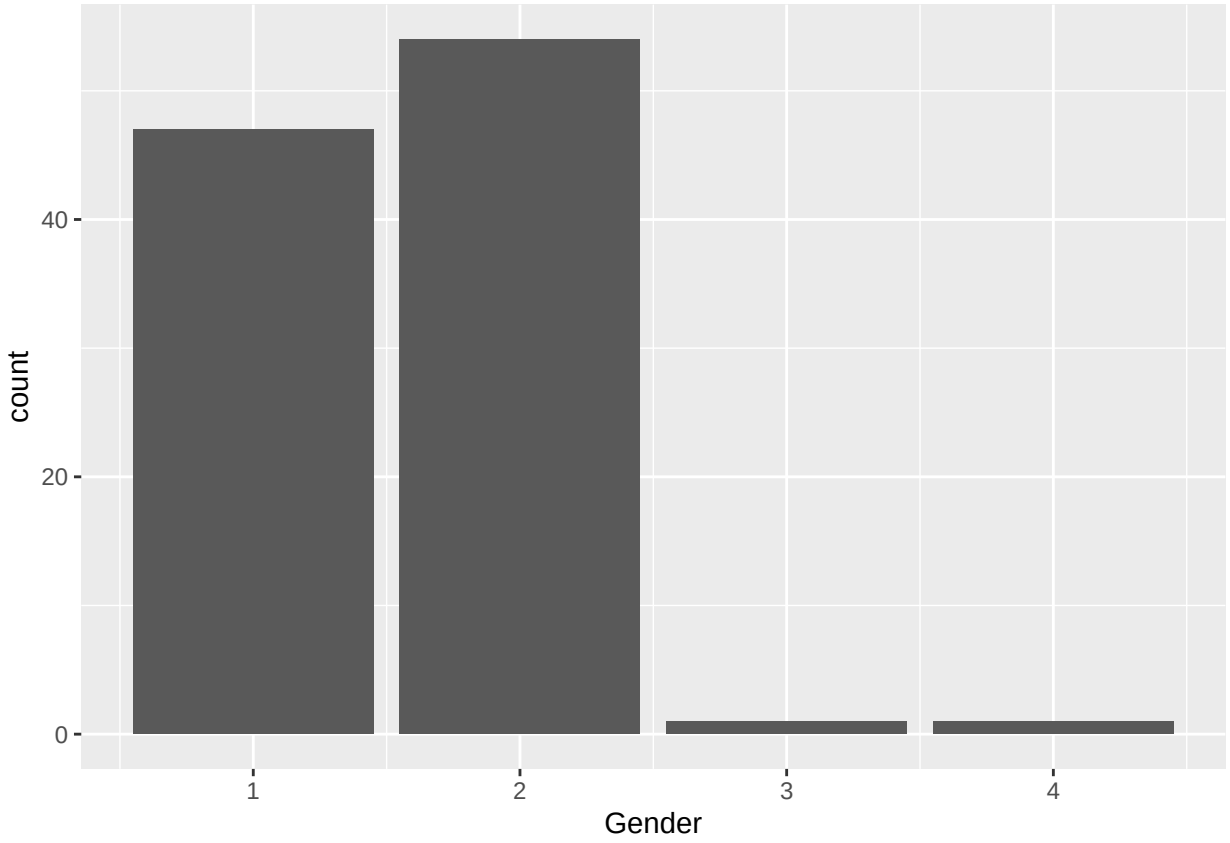

```
# demographics
g9gf_2024 %>%
  ggplot(aes(x=`Race`)) +
  geom_bar()
```



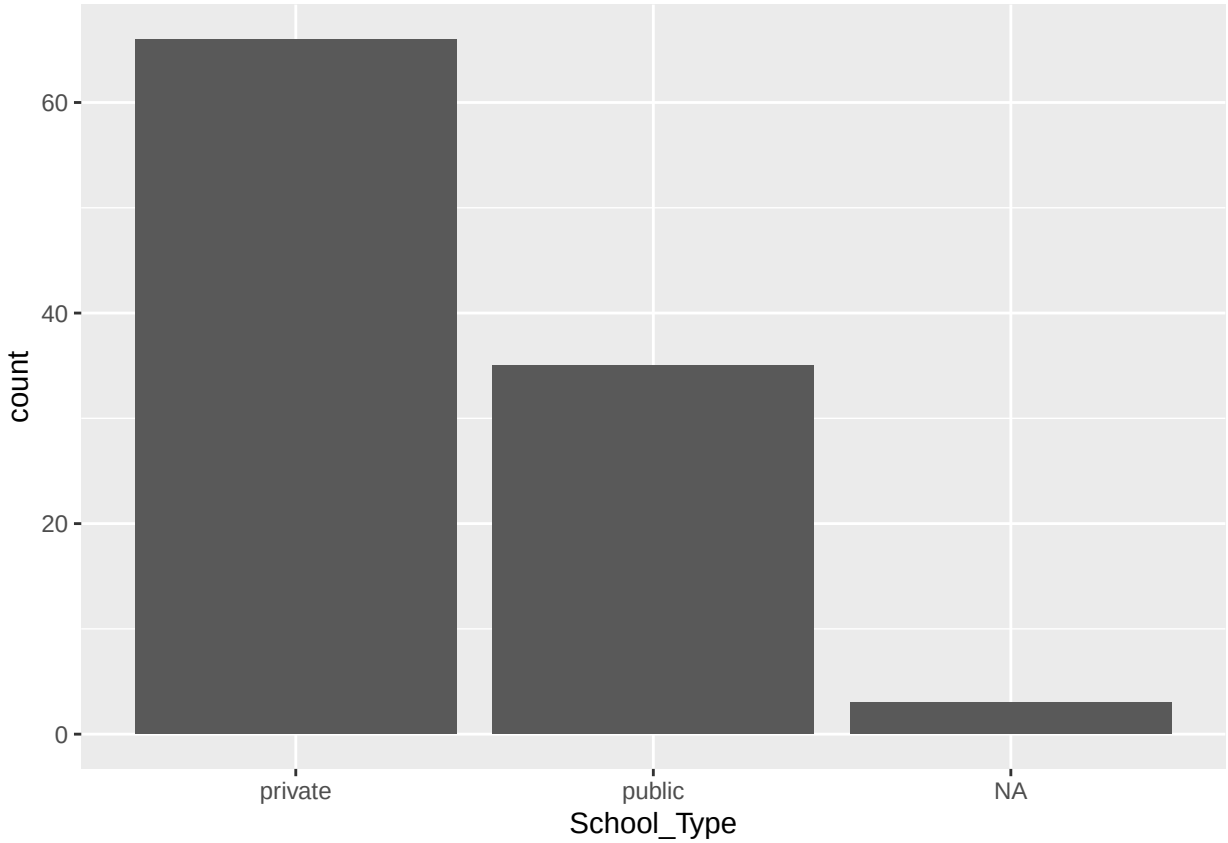

```
g9gf_2024 %>%
  ggplot(aes(x=`TA`)) +
  geom_bar()
```




```
g9gf_2024 %>%
  ggplot(aes(x=`Gender`)) +
  geom_bar()
```



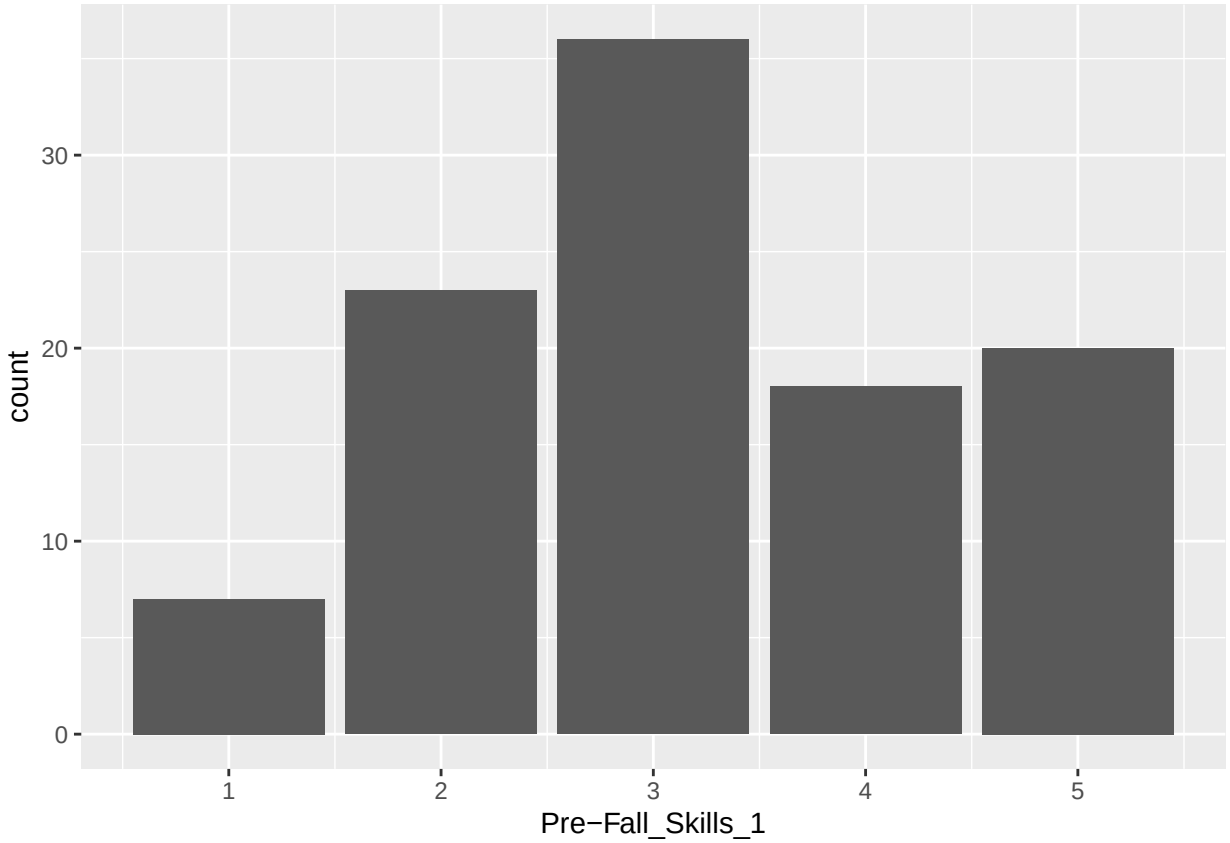

```
g9gf_2024 %>%
  ggplot(aes(x=`School_Type`)) +
  geom_bar()
```



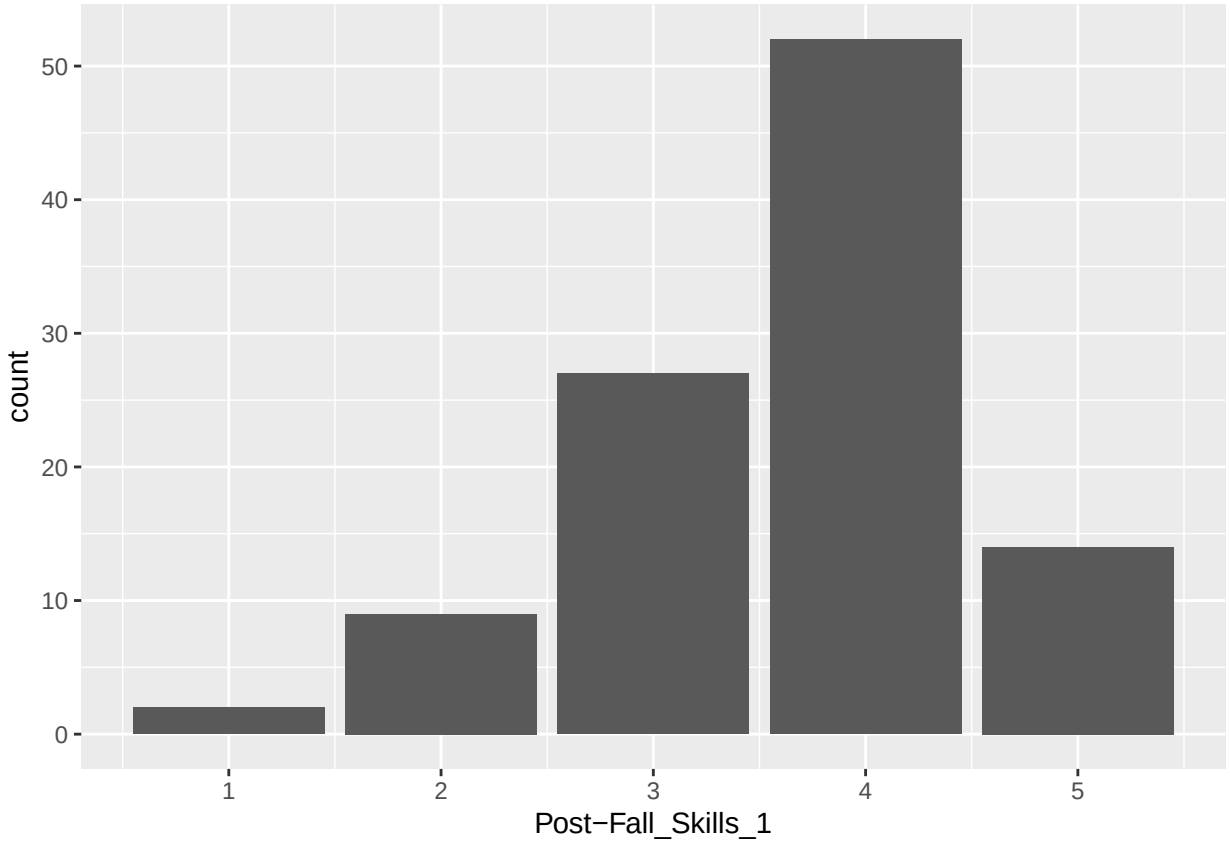
Skills Analysis

Skills Analysis Overall

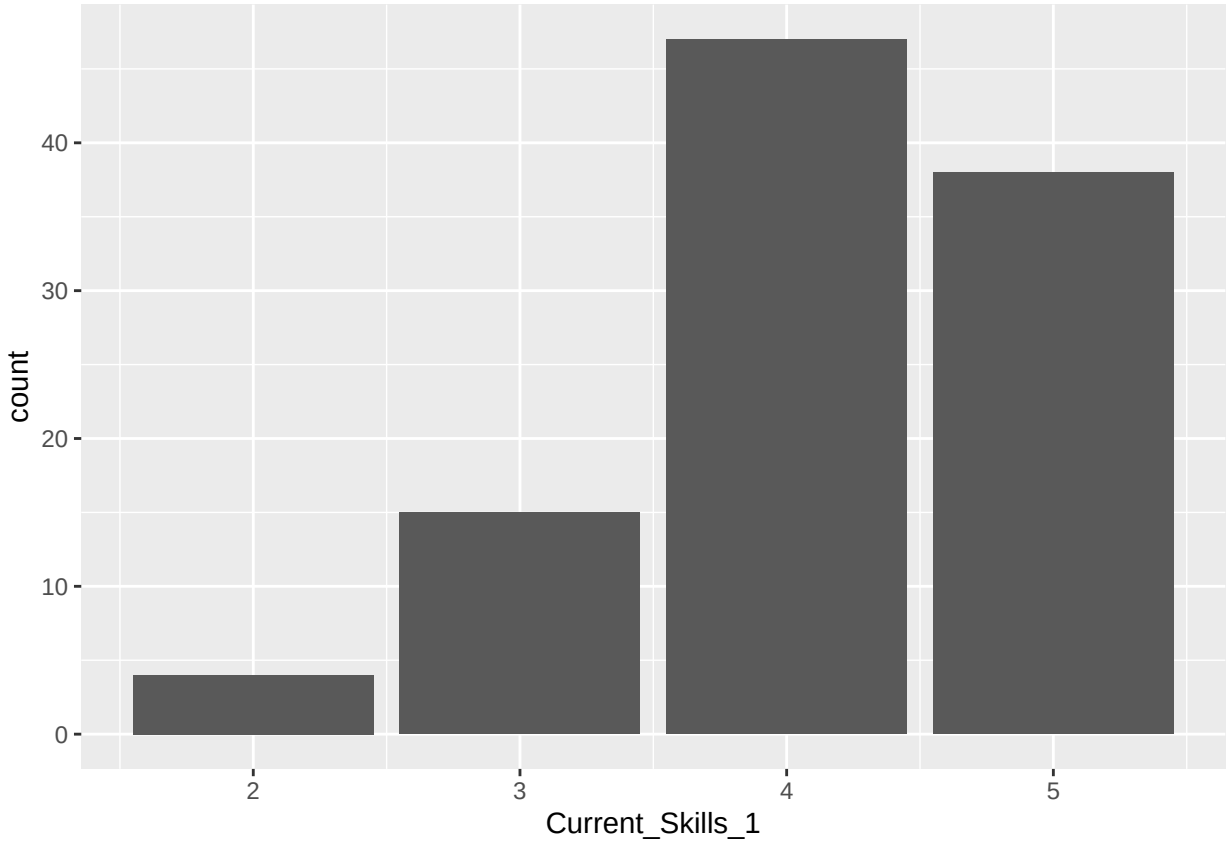
```
g9gf_2024 %>%
  ggplot(aes(x=`Pre-Fall_Skills_1`)) +
  geom_bar()
```




```
g9gf_2024 %>%
  ggplot(aes(x=`Post-Fall_Skills_1`)) +
  geom_bar()
```




```
g9gf_2024 %>%
  ggplot(aes(x=`Current_Skills_1`)) +
  geom_bar()
```




```
wilcox.test(g9gf_2024$`Post-Fall_Skills_1`, g9gf_2024$`Pre-Fall_Skills_1`, paired = TRUE, alternative =
```

```
##
##  Wilcoxon signed rank test with continuity correction
##
## data:  g9gf_2024$‘Post-Fall_Skills_1‘ and g9gf_2024$‘Pre-Fall_Skills_1‘
## V = 1766.5, p-value = 7.331e-05
## alternative hypothesis: true location shift is greater than 0
```

```
wilcox.test(g9gf_2024$`Current_Skills_1`, g9gf_2024$`Post-Fall_Skills_1`, paired = TRUE, alternative =
```

```
##
##  Wilcoxon signed rank test with continuity correction
##
## data:  g9gf_2024$Current_Skills_1 and g9gf_2024$‘Post-Fall_Skills_1‘
## V = 1116, p-value = 3.24e-09
## alternative hypothesis: true location shift is greater than 0
```

```
t.test(g9gf_2024$`Post-Fall_Skills_1`, g9gf_2024$`Pre-Fall_Skills_1`, paired = TRUE, alternative = "grea
```

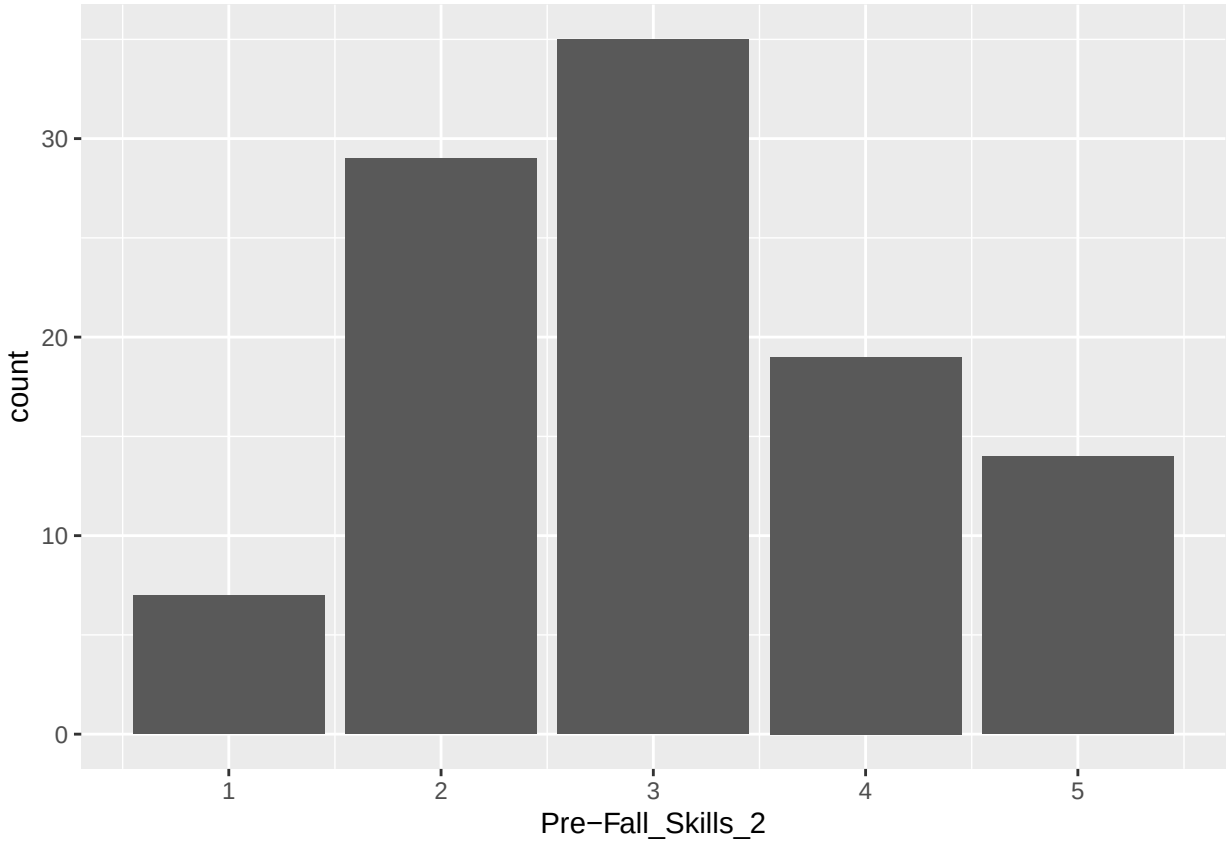
```
##
##  Paired t-test
##
## data:  g9gf_2024$‘Post-Fall_Skills_1‘ and g9gf_2024$‘Pre-Fall_Skills_1‘
```

```
## t = 4.0518, df = 103, p-value = 4.939e-05
## alternative hypothesis: true mean difference is greater than 0
## 95 percent confidence interval:
##  0.2611183       Inf
## sample estimates:
## mean difference
##       0.4423077
```

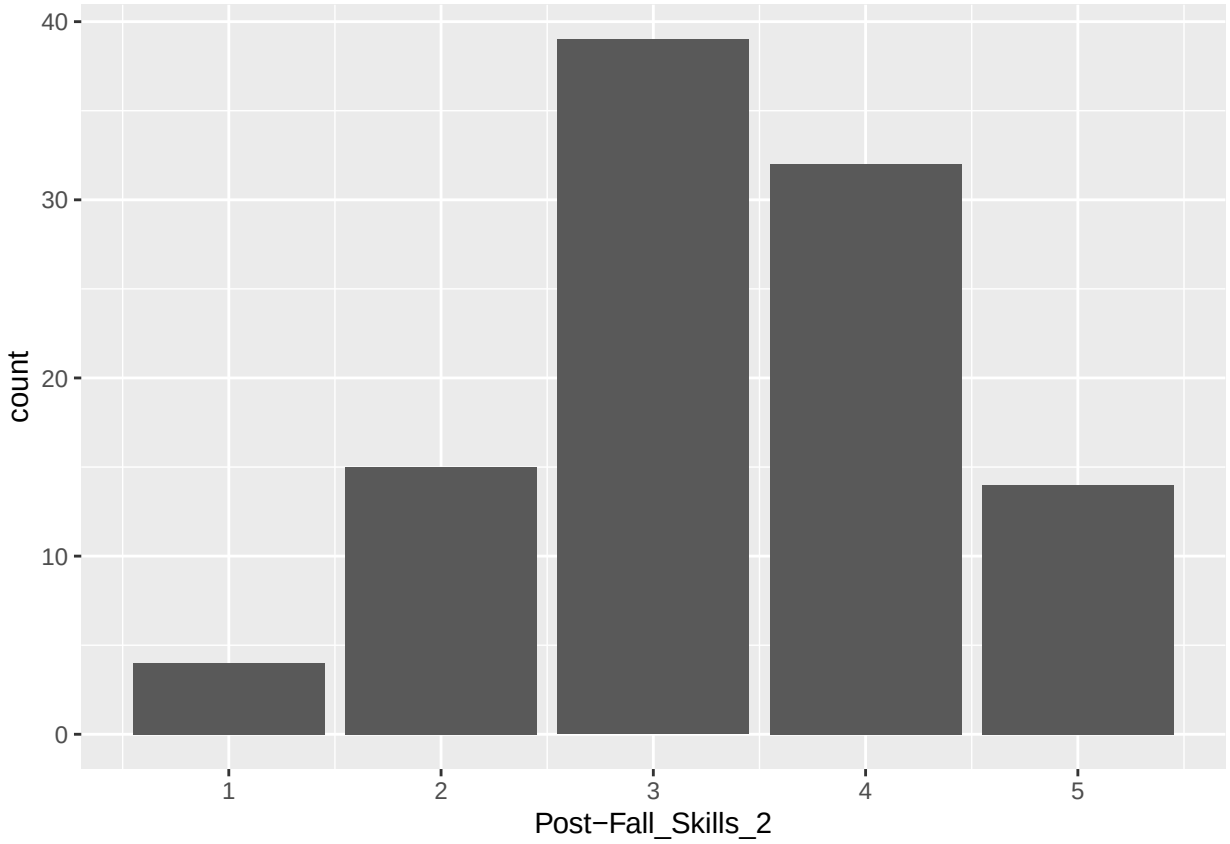
```
t.test(g9gf_2024$`Current_Skills_1`, g9gf_2024$`Post-Fall_Skills_1`, paired = TRUE, alternative = "grea
```

```
##
##  Paired t-test
##
## data:  g9gf_2024$Current_Skills_1 and g9gf_2024$`Post-Fall_Skills_1`
## t = 7.0422, df = 103, p-value = 1.093e-10
## alternative hypothesis: true mean difference is greater than 0
## 95 percent confidence interval:
##  0.3821546       Inf
## sample estimates:
## mean difference
##             0.5
```

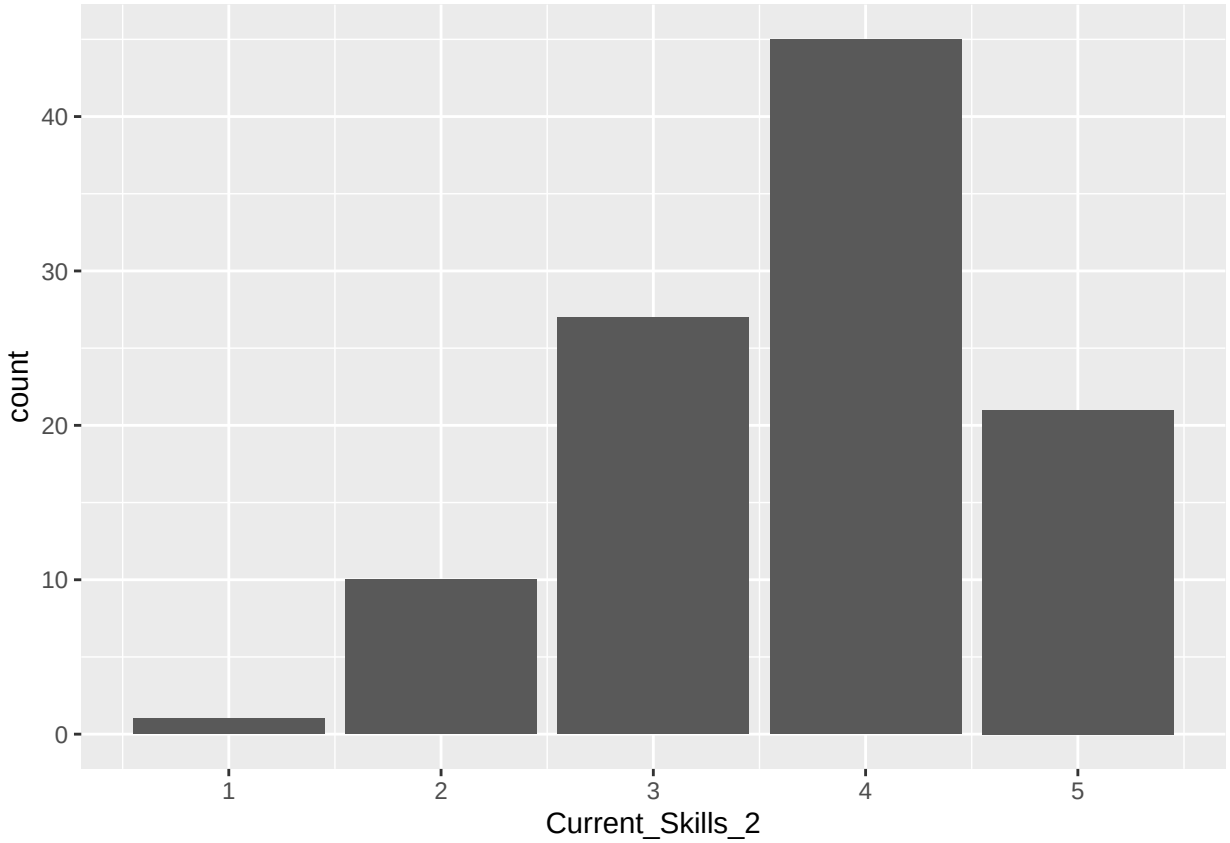
```
g9gf_2024 %>%
  ggplot(aes(x=`Pre-Fall_Skills_2`)) +
  geom_bar()
```



```
g9gf_2024 %>%
  ggplot(aes(x=`Post-Fall_Skills_2`)) +
  geom_bar()
```




```
g9gf_2024 %>%
  ggplot(aes(x=`Current_Skills_2`)) +
  geom_bar()
```




```
wilcox.test(g9gf_2024$`Post-Fall_Skills_2`, g9gf_2024$`Pre-Fall_Skills_2`, paired = TRUE, alternative =
```

```
##
##  Wilcoxon signed rank test with continuity correction
##
## data:  g9gf_2024$‘Post-Fall_Skills_2‘ and g9gf_2024$‘Pre-Fall_Skills_2‘
## V = 1302.5, p-value = 0.001425
## alternative hypothesis: true location shift is greater than 0
```

```
wilcox.test(g9gf_2024$`Current_Skills_2`, g9gf_2024$`Post-Fall_Skills_2`, paired = TRUE, alternative =
```

```
##
##  Wilcoxon signed rank test with continuity correction
##
## data:  g9gf_2024$Current_Skills_2 and g9gf_2024$‘Post-Fall_Skills_2‘
## V = 1163.5, p-value = 5.465e-05
## alternative hypothesis: true location shift is greater than 0
```

```
t.test(g9gf_2024$`Post-Fall_Skills_2`, g9gf_2024$`Pre-Fall_Skills_2`, paired = TRUE, alternative = "grea
```

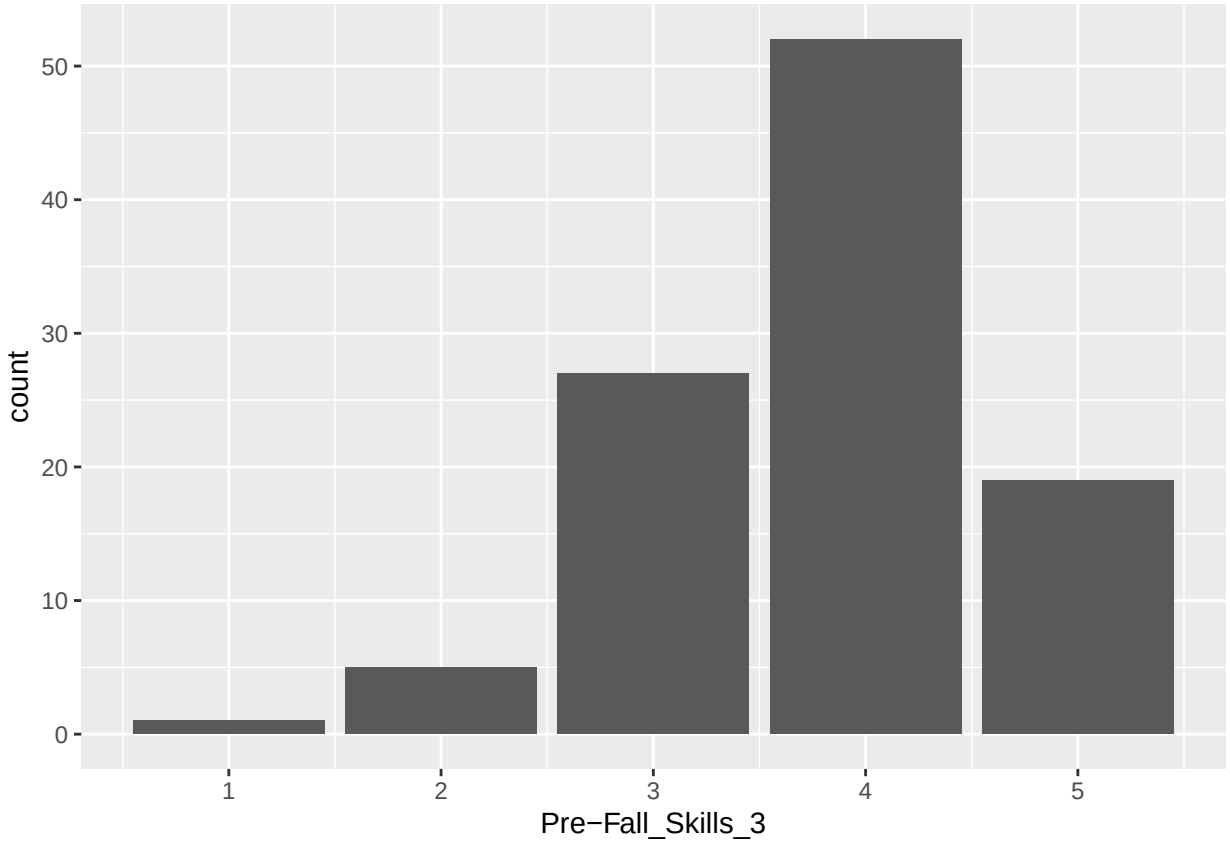
```
##
##  Paired t-test
##
## data:  g9gf_2024$‘Post-Fall_Skills_2‘ and g9gf_2024$‘Pre-Fall_Skills_2‘
```

```
## t = 2.9914, df = 103, p-value = 0.001738
## alternative hypothesis: true mean difference is greater than 0
## 95 percent confidence interval:
##  0.1412474       Inf
## sample estimates:
## mean difference
##       0.3173077
```

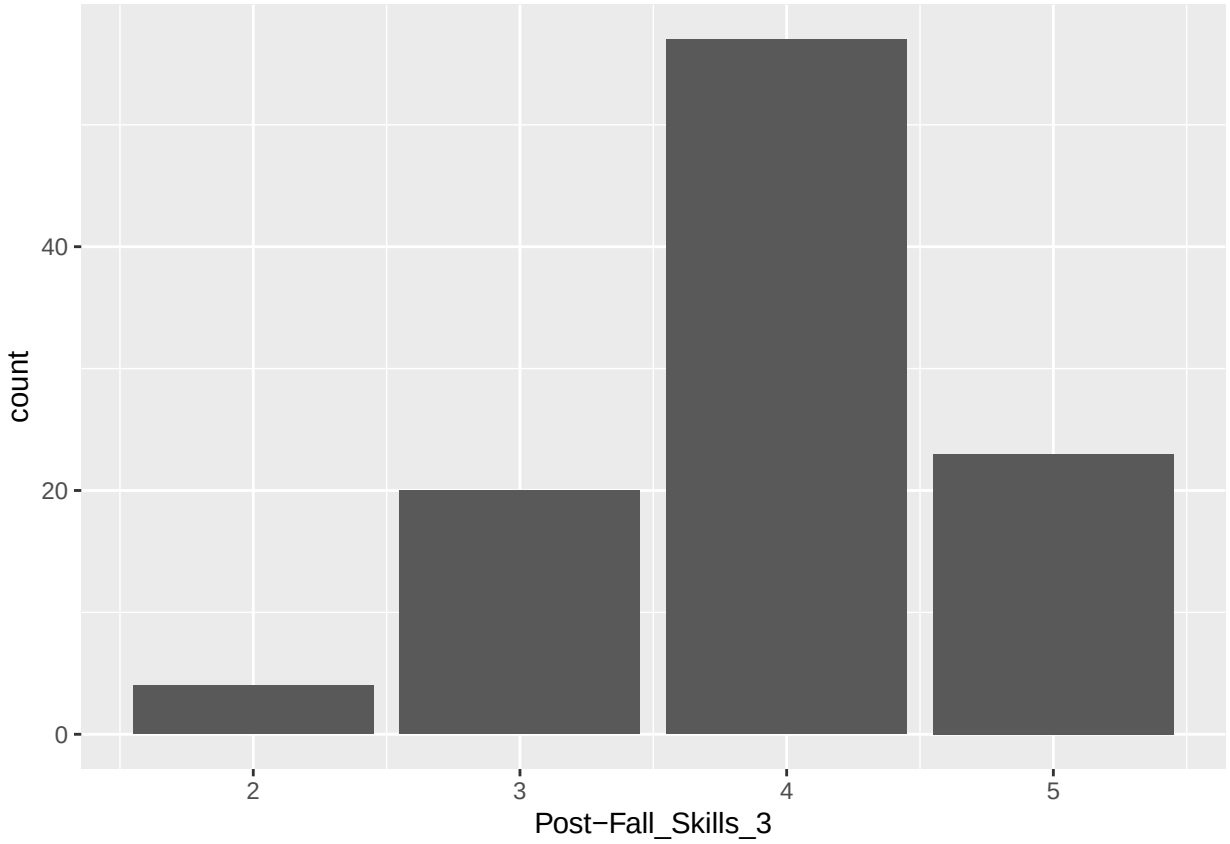
```
t.test(g9gf_2024$`Current_Skills_2`, g9gf_2024$`Post-Fall_Skills_2`, paired = TRUE, alternative = "grea
```

```
##
##  Paired t-test
##
## data:  g9gf_2024$Current_Skills_2 and g9gf_2024$`Post-Fall_Skills_2`
## t = 4.2788, df = 103, p-value = 2.109e-05
## alternative hypothesis: true mean difference is greater than 0
## 95 percent confidence interval:
##  0.2236473       Inf
## sample estimates:
## mean difference
##       0.3653846
```

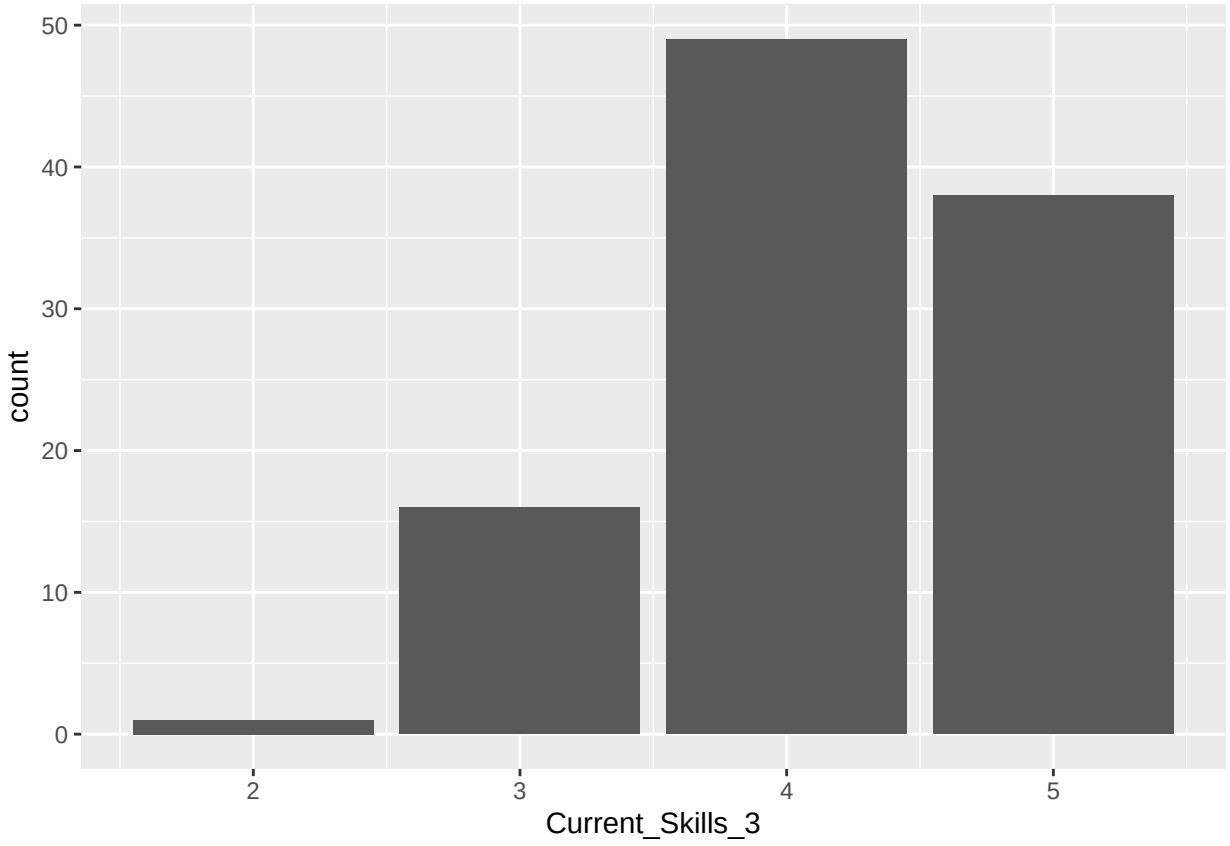
```
g9gf_2024 %>%
  ggplot(aes(x=`Pre-Fall_Skills_3`)) +
  geom_bar()
```



```
g9gf_2024 %>%
  ggplot(aes(x=`Post-Fall_Skills_3`)) +
  geom_bar()
```




```
g9gf_2024 %>%
  ggplot(aes(x=`Current_Skills_3`)) +
  geom_bar()
```




```
wilcox.test(g9gf_2024$`Post-Fall_Skills_3`, g9gf_2024$`Pre-Fall_Skills_3`, paired = TRUE, alternative =
```

```
##
##  Wilcoxon signed rank test with continuity correction
##
## data:  g9gf_2024$‘Post-Fall_Skills_3‘ and g9gf_2024$‘Pre-Fall_Skills_3‘
## V = 480, p-value = 0.01993
## alternative hypothesis: true location shift is greater than 0
```

```
wilcox.test(g9gf_2024$`Current_Skills_3`, g9gf_2024$`Post-Fall_Skills_3`, paired = TRUE, alternative =
```

```
##
##  Wilcoxon signed rank test with continuity correction
##
## data:  g9gf_2024$Current_Skills_3 and g9gf_2024$‘Post-Fall_Skills_3‘
## V = 393, p-value = 1.285e-05
## alternative hypothesis: true location shift is greater than 0
```

```
t.test(g9gf_2024$`Post-Fall_Skills_3`, g9gf_2024$`Pre-Fall_Skills_3`, paired = TRUE, alternative = "grea
```

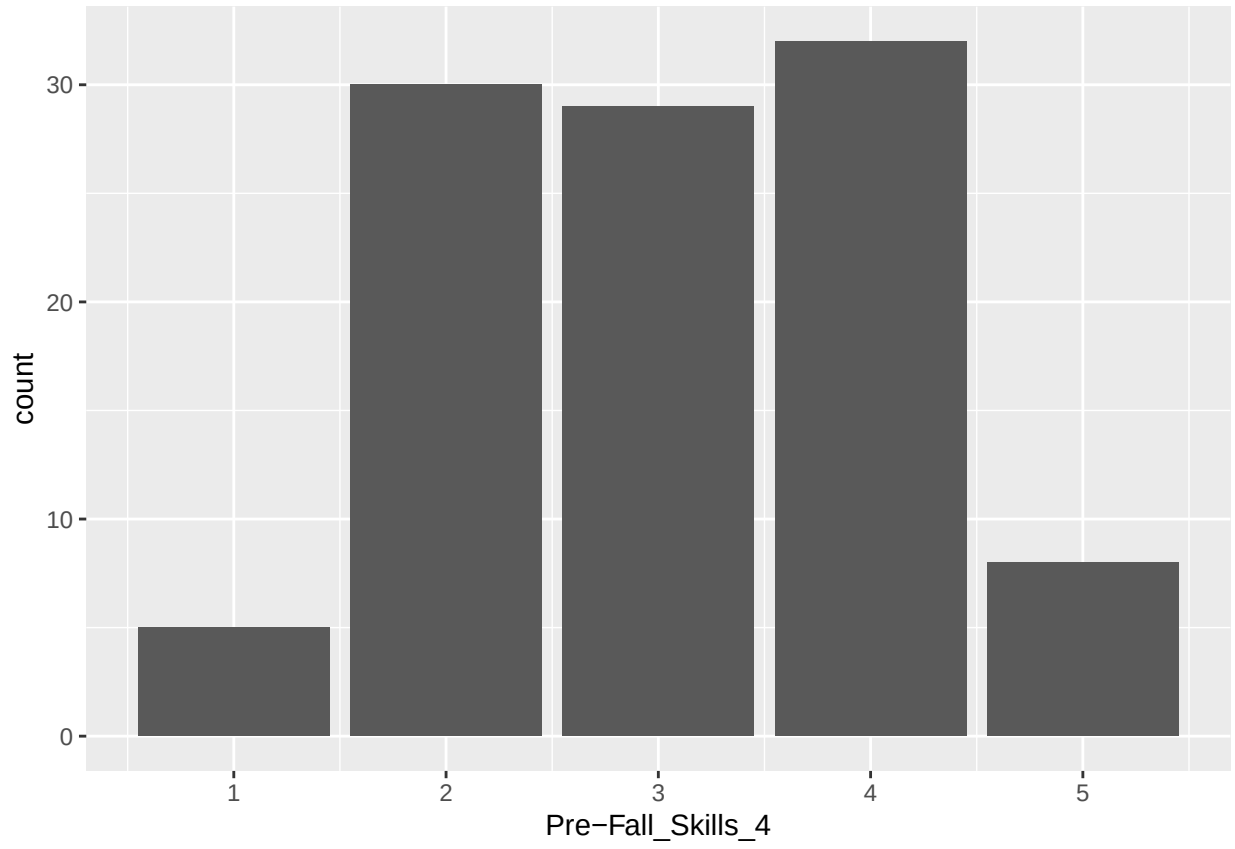
```
##
##  Paired t-test
##
## data:  g9gf_2024$‘Post-Fall_Skills_3‘ and g9gf_2024$‘Pre-Fall_Skills_3‘
```

```
## t = 1.9976, df = 103, p-value = 0.0242
## alternative hypothesis: true mean difference is greater than 0
## 95 percent confidence interval:
##  0.02601574        Inf
## sample estimates:
## mean difference
##       0.1538462
```

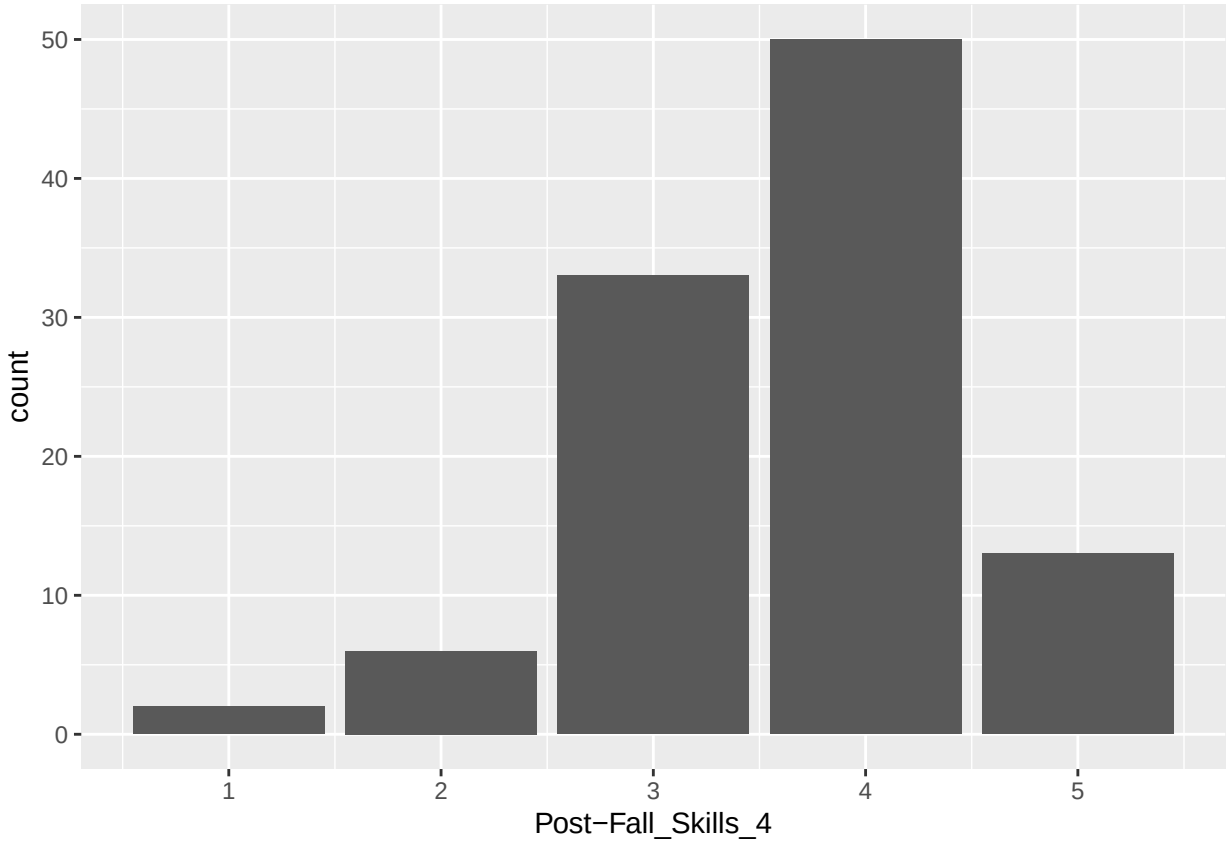
```
t.test(g9gf_2024$`Current_Skills_3`, g9gf_2024$`Post-Fall_Skills_3`, paired = TRUE, alternative = "grea
```

```
##
##  Paired t-test
##
## data:  g9gf_2024$Current_Skills_3 and g9gf_2024$`Post-Fall_Skills_3`
## t = 4.6208, df = 103, p-value = 5.553e-06
## alternative hypothesis: true mean difference is greater than 0
## 95 percent confidence interval:
##  0.1540385       Inf
## sample estimates:
## mean difference
##       0.2403846
```

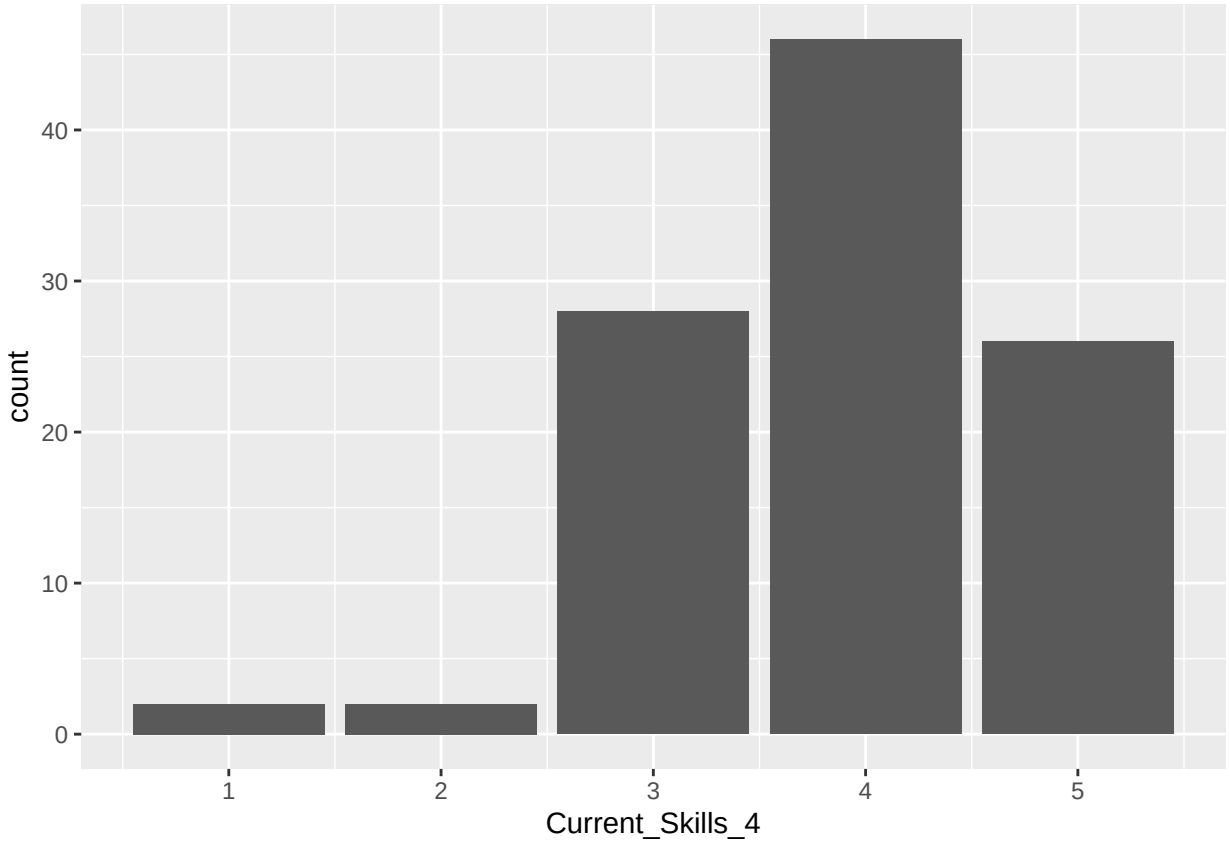
```
g9gf_2024 %>%
  ggplot(aes(x=`Pre-Fall_Skills_4`)) +
  geom_bar()
```



```
g9gf_2024 %>%
  ggplot(aes(x=`Post-Fall_Skills_4`)) +
  geom_bar()
```




```
g9gf_2024 %>%
  ggplot(aes(x=`Current_Skills_4`)) +
  geom_bar()
```




```
wilcox.test(g9gf_2024$`Post-Fall_Skills_4`, g9gf_2024$`Pre-Fall_Skills_4`, paired = TRUE, alternative =
```

```
##
##  Wilcoxon signed rank test with continuity correction
##
## data:  g9gf_2024$‘Post-Fall_Skills_4‘ and g9gf_2024$‘Pre-Fall_Skills_4‘
## V = 1681, p-value = 7.978e-09
## alternative hypothesis: true location shift is greater than 0
```

```
wilcox.test(g9gf_2024$`Current_Skills_4`, g9gf_2024$`Post-Fall_Skills_4`, paired = TRUE, alternative =
```

```
##
##  Wilcoxon signed rank test with continuity correction
##
## data:  g9gf_2024$Current_Skills_4 and g9gf_2024$‘Post-Fall_Skills_4‘
## V = 512.5, p-value = 2.079e-05
## alternative hypothesis: true location shift is greater than 0
```

```
t.test(g9gf_2024$`Post-Fall_Skills_4`, g9gf_2024$`Pre-Fall_Skills_4`, paired = TRUE, alternative = "grea
```

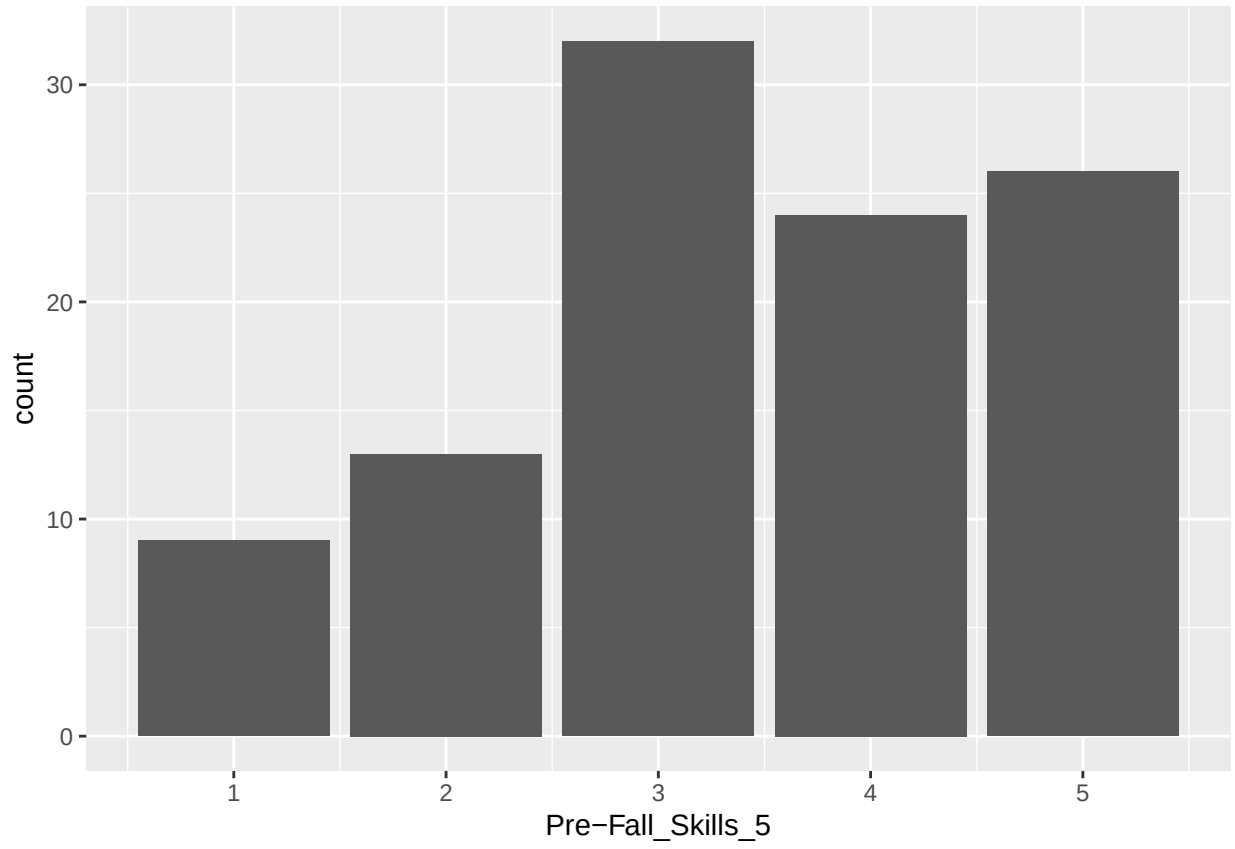
```
##
##  Paired t-test
##
## data:  g9gf_2024$‘Post-Fall_Skills_4‘ and g9gf_2024$‘Pre-Fall_Skills_4‘
```

```
## t = 6.4674, df = 103, p-value = 1.702e-09
## alternative hypothesis: true mean difference is greater than 0
## 95 percent confidence interval:
##  0.4145661       Inf
## sample estimates:
## mean difference
##       0.5576923
```

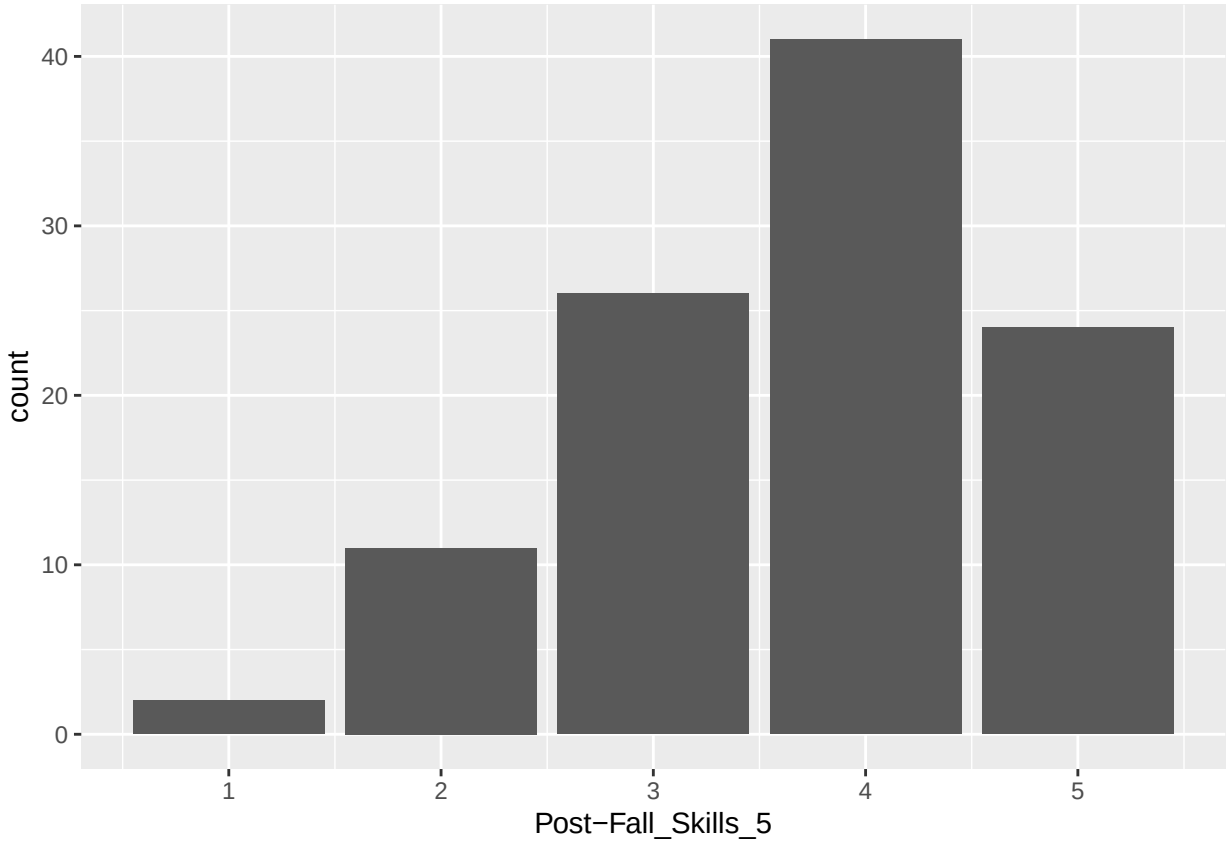
```
t.test(g9gf_2024$`Current_Skills_4`, g9gf_2024$`Post-Fall_Skills_4`, paired = TRUE, alternative = "grea
```

```
##
##  Paired t-test
##
## data:  g9gf_2024$Current_Skills_4 and g9gf_2024$`Post-Fall_Skills_4`
## t = 4.4705, df = 103, p-value = 1.006e-05
## alternative hypothesis: true mean difference is greater than 0
## 95 percent confidence interval:
##  0.1571807       Inf
## sample estimates:
## mean difference
##            0.25
```

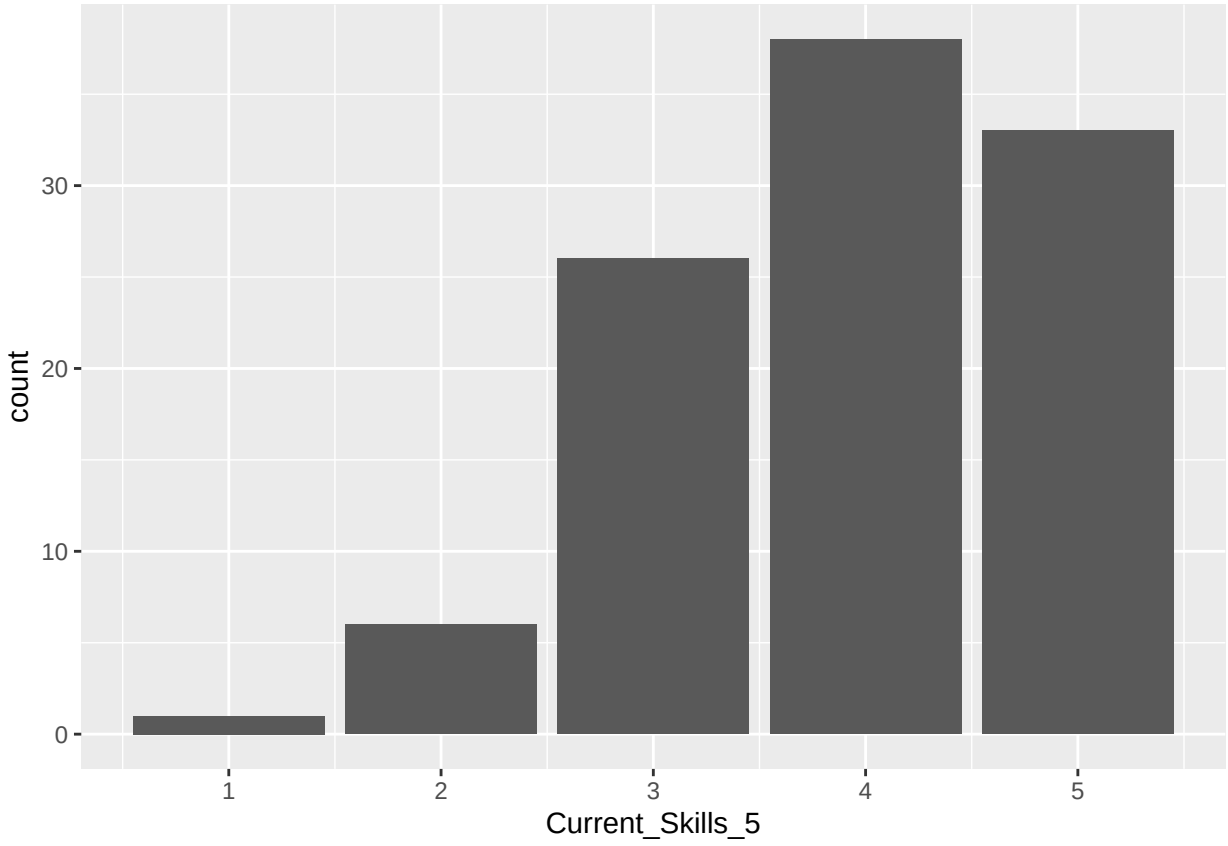
```
g9gf_2024 %>%
  ggplot(aes(x=`Pre-Fall_Skills_5`)) +
  geom_bar()
```



```
g9gf_2024 %>%
  ggplot(aes(x=`Post-Fall_Skills_5`)) +
  geom_bar()
```




```
g9gf_2024 %>%
  ggplot(aes(x=`Current_Skills_5`)) +
  geom_bar()
```




```
wilcox.test(g9gf_2024$`Post-Fall_Skills_5`, g9gf_2024$`Pre-Fall_Skills_5`, paired = TRUE, alternative =
```

```
##
##  Wilcoxon signed rank test with continuity correction
##
## data:  g9gf_2024$‘Post-Fall_Skills_5‘ and g9gf_2024$‘Pre-Fall_Skills_5‘
## V = 838.5, p-value = 0.001106
## alternative hypothesis: true location shift is greater than 0
```

```
wilcox.test(g9gf_2024$`Current_Skills_5`, g9gf_2024$`Post-Fall_Skills_5`, paired = TRUE, alternative =
```

```
##
##  Wilcoxon signed rank test with continuity correction
##
## data:  g9gf_2024$Current_Skills_5 and g9gf_2024$‘Post-Fall_Skills_5‘
## V = 409, p-value = 0.0002661
## alternative hypothesis: true location shift is greater than 0
```

```
t.test(g9gf_2024$`Post-Fall_Skills_5`, g9gf_2024$`Pre-Fall_Skills_5`, paired = TRUE, alternative = "grea
```

```
##
##  Paired t-test
##
## data:  g9gf_2024$‘Post-Fall_Skills_5‘ and g9gf_2024$‘Pre-Fall_Skills_5‘
```

```
## t = 3.1319, df = 103, p-value = 0.001131
## alternative hypothesis: true mean difference is greater than 0
## 95 percent confidence interval:
##  0.1310701       Inf
## sample estimates:
## mean difference
##       0.2788462
```

```
t.test(g9gf_2024$`Current_Skills_5`, g9gf_2024$`Post-Fall_Skills_5`, paired = TRUE, alternative = "grea
```

```
##
##  Paired t-test
##
## data:  g9gf_2024$Current_Skills_5 and g9gf_2024$‘Post-Fall_Skills_5‘
## t = 3.6826, df = 103, p-value = 0.0001849
## alternative hypothesis: true mean difference is greater than 0
## 95 percent confidence interval:
##  0.1161959       Inf
## sample estimates:
## mean difference
##       0.2115385
```

Skills Analysis by Gender

```
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  mutate(FallDiff1 = `Post-Fall_Skills_1` - `Pre-Fall_Skills_1`) %>%
  group_by(Gender) %>%
  select(FallDiff1) %>%
  summarize(avg1 = mean(FallDiff1))
```

```
## # A tibble: 2 x 2
##   Gender  avg1
##    <dbl> <dbl>
## 1      1 0.319
## 2      2 0.574
```

```
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  mutate(FallDiff2 = `Post-Fall_Skills_2` - `Pre-Fall_Skills_2`) %>%
  group_by(Gender) %>%
  select(FallDiff2) %>%
  summarize(avg2 = mean(FallDiff2))
```

```
## # A tibble: 2 x 2
##   Gender  avg2
##    <dbl> <dbl>
## 1      1 0.383
## 2      2 0.296
```

```r
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  mutate(FallDiff3 = `Post-Fall_Skills_3` - `Pre-Fall_Skills_3`) %>%
  group_by(Gender) %>%
  select(FallDiff3) %>%
  summarize(avg3 = mean(FallDiff3))
```

```
## # A tibble: 2 x 2
##   Gender   avg3
##    <dbl>  <dbl>
## 1      1 0.0426
## 2      2 0.241
```

```r
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  mutate(FallDiff4 = `Post-Fall_Skills_4` - `Pre-Fall_Skills_4`) %>%
  group_by(Gender) %>%
  select(FallDiff4) %>%
  summarize(avg4 = mean(FallDiff4))
```

```
## # A tibble: 2 x 2
##   Gender  avg4
##    <dbl> <dbl>
## 1      1 0.574
## 2      2 0.556
```

```r
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  mutate(FallDiff5 = `Post-Fall_Skills_5` - `Pre-Fall_Skills_5`) %>%
  group_by(Gender) %>%
  select(FallDiff5) %>%
  summarize(avg5 = mean(FallDiff5))
```

```
## # A tibble: 2 x 2
##   Gender  avg5
##    <dbl> <dbl>
## 1      1 0.319
## 2      2 0.222
```

```r
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  mutate(FallTotal = ((`Post-Fall_Skills_1` - `Pre-Fall_Skills_1`)+(`Post-Fall_Skills_2` - `Pre-Fall_Sk
  group_by(Gender) %>%
  select(FallTotal) %>%
  summarize(avg = mean(FallTotal), count = n())
```

```
## # A tibble: 2 x 3
##   Gender   avg count
##    <dbl> <dbl> <int>
## 1      1 0.328    47
## 2      2 0.378    54
```

Skills Analysis by Race

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  mutate(FallDiff1 = `Post-Fall_Skills_1` - `Pre-Fall_Skills_1`) %>%
  group_by(POC) %>%
  select(FallDiff1) %>%
  summarize(avg1 = mean(FallDiff1), count = n())
```

```
## # A tibble: 2 x 3
##   POC    avg1 count
##   <chr> <dbl> <int>
## 1 POC   0.341    44
## 2 White 0.525    59
```

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  mutate(FallDiff2 = `Post-Fall_Skills_2` - `Pre-Fall_Skills_2`) %>%
  group_by(POC) %>%
  select(FallDiff2) %>%
  summarize(avg2 = mean(FallDiff2), count = n())
```

```
## # A tibble: 2 x 3
##   POC    avg2 count
##   <chr> <dbl> <int>
## 1 POC   0.386    44
## 2 White 0.305    59
```

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  mutate(FallDiff3 = `Post-Fall_Skills_3` - `Pre-Fall_Skills_3`) %>%
  group_by(POC) %>%
  select(FallDiff3) %>%
  summarize(avg1 = mean(FallDiff3), count = n())
```

```
## # A tibble: 2 x 3
##   POC     avg1 count
##   <chr>  <dbl> <int>
## 1 POC   0.0909    44
## 2 White 0.203     59
```

```r
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  mutate(FallDiff4 = `Post-Fall_Skills_4` - `Pre-Fall_Skills_4`) %>%
  group_by(POC) %>%
  select(FallDiff4) %>%
  summarize(avg4 = mean(FallDiff4), count = n())
```

```
## # A tibble: 2 x 3
##   POC    avg4 count
##   <chr> <dbl> <int>
## 1 POC   0.409    44
## 2 White 0.678    59
```

```r
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  mutate(FallDiff5 = `Post-Fall_Skills_5` - `Pre-Fall_Skills_5`) %>%
  group_by(POC) %>%
  select(FallDiff5) %>%
  summarize(avg5 = mean(FallDiff5), count = n())
```

```
## # A tibble: 2 x 3
##   POC    avg5 count
##   <chr> <dbl> <int>
## 1 POC   0.205    44
## 2 White 0.339    59
```

```r
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  mutate(FallTotal = ((`Post-Fall_Skills_1` - `Pre-Fall_Skills_1`)+(`Post-Fall_Skills_2` - `Pre-Fall_Ski
  group_by(POC) %>%
  select(FallTotal) %>%
  summarize(avg = mean(FallTotal), count = n())
```

```
## # A tibble: 2 x 3
##   POC     avg count
##   <chr> <dbl> <int>
## 1 POC   0.286    44
## 2 White 0.410    59
```

Skills Analysis by TA

```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  mutate(FallDiff1 = `Post-Fall_Skills_1` - `Pre-Fall_Skills_1`) %>%
  group_by(TA) %>%
  select(FallDiff1) %>%
  summarize(avg1 = mean(FallDiff1), count = n())
```

```
## # A tibble: 2 x 3
##      TA  avg1 count
##   <dbl> <dbl> <int>
## 1     1 0.619    21
## 2     2 0.402    82
```

```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  mutate(FallDiff2 = `Post-Fall_Skills_2` - `Pre-Fall_Skills_2`) %>%
  group_by(TA) %>%
  select(FallDiff2) %>%
  summarize(avg2 = mean(FallDiff2), count = n())
```

```
## # A tibble: 2 x 3
##      TA  avg2 count
##   <dbl> <dbl> <int>
## 1     1 0.238    21
## 2     2 0.366    82
```

```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  mutate(FallDiff3 = `Post-Fall_Skills_3` - `Pre-Fall_Skills_3`) %>%
  group_by(TA) %>%
  select(FallDiff3) %>%
  summarize(avg3 = mean(FallDiff3), count = n())
```

```
## # A tibble: 2 x 3
##      TA  avg3 count
##   <dbl> <dbl> <int>
## 1     1 0.238    21
## 2     2 0.134    82
```

```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  mutate(FallDiff4 = `Post-Fall_Skills_4` - `Pre-Fall_Skills_4`) %>%
  group_by(TA) %>%
  select(FallDiff4) %>%
  summarize(avg4 = mean(FallDiff4), count = n())
```

```
## # A tibble: 2 x 3
##      TA  avg4 count
```

```
##   <dbl> <dbl> <int>
## 1     1 0.333    21
## 2     2 0.622    82
```

```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  mutate(FallDiff5 = `Post-Fall_Skills_5` - `Pre-Fall_Skills_5`) %>%
  group_by(TA) %>%
  select(FallDiff5) %>%
  summarize(avg5 = mean(FallDiff5), count = n())
```

```
## # A tibble: 2 x 3
##      TA    avg5 count
##   <dbl>   <dbl> <int>
## 1     1 -0.0476    21
## 2     2  0.366     82
```

```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  mutate(FallTotal = ((`Post-Fall_Skills_1` - `Pre-Fall_Skills_1`)+(`Post-Fall_Skills_2` - `Pre-Fall_Ski
  group_by(TA) %>%
  select(FallTotal) %>%
  summarize(avg = mean(FallTotal), count = n())
```

```
## # A tibble: 2 x 3
##      TA   avg count
##   <dbl> <dbl> <int>
## 1     1 0.276    21
## 2     2 0.378    82
```

Skills Analysis by School Type

```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  mutate(FallDiff1 = `Post-Fall_Skills_1` - `Pre-Fall_Skills_1`) %>%
  group_by(School_Type) %>%
  select(FallDiff1) %>%
  summarize(avg1 = mean(FallDiff1), count = n())
```

```
## # A tibble: 2 x 3
##   School_Type  avg1 count
##   <chr>       <dbl> <int>
## 1 private     0.318    66
## 2 public      0.657    35
```

```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  mutate(FallDiff2 = `Post-Fall_Skills_2` - `Pre-Fall_Skills_2`) %>%
  group_by(School_Type) %>%
  select(FallDiff2) %>%
  summarize(avg2 = mean(FallDiff2), count = n())
```

```
## # A tibble: 2 x 3
##   School_Type  avg2 count
##   <chr>       <dbl> <int>
## 1 private     0.455    66
## 2 public      0.143    35
```

```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  mutate(FallDiff3 = `Post-Fall_Skills_3` - `Pre-Fall_Skills_3`) %>%
  group_by(School_Type) %>%
  select(FallDiff3) %>%
  summarize(avg3 = mean(FallDiff3), count = n())
```

```
## # A tibble: 2 x 3
##   School_Type  avg3 count
##   <chr>       <dbl> <int>
## 1 private     0.167    66
## 2 public      0.114    35
```

```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  mutate(FallDiff4 = `Post-Fall_Skills_4` - `Pre-Fall_Skills_4`) %>%
  group_by(School_Type) %>%
  select(FallDiff4) %>%
  summarize(avg4 = mean(FallDiff4), count = n())
```

```
## # A tibble: 2 x 3
##   School_Type  avg4 count
##   <chr>       <dbl> <int>
## 1 private     0.636    66
## 2 public      0.429    35
```

```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  mutate(FallDiff5 = `Post-Fall_Skills_5` - `Pre-Fall_Skills_5`) %>%
  group_by(School_Type) %>%
  select(FallDiff5) %>%
  summarize(avg5 = mean(FallDiff5), count = n())
```

```
## # A tibble: 2 x 3
##   School_Type   avg5 count
##   <chr>        <dbl> <int>
## 1 private     0.409     66
## 2 public      0.0857    35
```

```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  mutate(FallTotal = ((`Post-Fall_Skills_1` - `Pre-Fall_Skills_1`)+(`Post-Fall_Skills_2` - `Pre-Fall_Ski
  group_by(School_Type) %>%
  select(FallTotal) %>%
  summarize(avg = mean(FallTotal), count = n())
```

```
## # A tibble: 2 x 3
##   School_Type   avg count
##   <chr>       <dbl> <int>
## 1 private     0.397    66
## 2 public      0.286    35
```

Skills Analysis by Race + Gender

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC) & Gender <= 2) %>%
  mutate(FallDiff1 = `Post-Fall_Skills_1` - `Pre-Fall_Skills_1`) %>%
  group_by(POC, Gender) %>%
  select(FallDiff1) %>%
  summarize(avg1 = mean(FallDiff1), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   POC [2]
##   POC   Gender   avg1 count
##   <chr>  <dbl>  <dbl> <int>
## 1 POC        1 -0.111    18
## 2 POC        2  0.654    26
## 3 White      1  0.586    29
## 4 White      2  0.5      28
```

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC) & Gender <= 2) %>%
  mutate(FallDiff2 = `Post-Fall_Skills_2` - `Pre-Fall_Skills_2`) %>%
  group_by(POC, Gender) %>%
  select(FallDiff2) %>%
  summarize(avg2 = mean(FallDiff2), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   POC [2]
##   POC   Gender  avg2 count
##   <chr>  <dbl> <dbl> <int>
## 1 POC        1 0.389    18
## 2 POC        2 0.385    26
## 3 White      1 0.379    29
## 4 White      2 0.214    28
```

```
g9gf_2024 %>%
  mutate(POC = case_when(
```

```
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC) & Gender <= 2) %>%
  mutate(FallDiff3 = `Post-Fall_Skills_3` - `Pre-Fall_Skills_3`) %>%
  group_by(POC, Gender) %>%
  select(FallDiff3) %>%
  summarize(avg3 = mean(FallDiff3), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   POC [2]
##   POC   Gender   avg3 count
##   <chr>  <dbl>  <dbl> <int>
## 1 POC        1 -0.111    18
## 2 POC        2  0.231    26
## 3 White      1  0.138    29
## 4 White      2  0.25     28
```

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC) & Gender <= 2) %>%
  mutate(FallDiff4 = `Post-Fall_Skills_4` - `Pre-Fall_Skills_4`) %>%
  group_by(POC, Gender) %>%
  select(FallDiff4) %>%
  summarize(avg4 = mean(FallDiff4), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   POC [2]
##   POC   Gender  avg4 count
##   <chr>  <dbl> <dbl> <int>
## 1 POC        1 0.167    18
## 2 POC        2 0.577    26
## 3 White      1 0.828    29
## 4 White      2 0.536    28
```

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC) & Gender <= 2) %>%
  mutate(FallDiff5 = `Post-Fall_Skills_5` - `Pre-Fall_Skills_5`) %>%
  group_by(POC, Gender) %>%
  select(FallDiff5) %>%
  summarize(avg5 = mean(FallDiff5), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   POC [2]
##   POC   Gender  avg5 count
```

```
##   <chr>  <dbl> <dbl> <int>
## 1 POC        1 0.222    18
## 2 POC        2 0.192    26
## 3 White      1 0.379    29
## 4 White      2 0.25     28
```

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC) & Gender <= 2) %>%
  mutate(FallTotal = ((`Post-Fall_Skills_1` - `Pre-Fall_Skills_1`)+(`Post-Fall_Skills_2` - `Pre-Fall_Ski
  group_by(POC, Gender) %>%
  select(FallTotal) %>%
  summarize(avg = mean(FallTotal), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   POC [2]
##   POC   Gender   avg count
##   <chr>  <dbl> <dbl> <int>
## 1 POC        1 0.111    18
## 2 POC        2 0.408    26
## 3 White      1 0.462    29
## 4 White      2 0.35     28
```

Skills Analysis by Race + TA

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC) & !is.na(TA)) %>%
  mutate(FallDiff1 = `Post-Fall_Skills_1` - `Pre-Fall_Skills_1`) %>%
  group_by(POC, TA) %>%
  select(FallDiff1) %>%
  summarize(avg1 = mean(FallDiff1), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   POC [2]
##   POC      TA  avg1 count
##   <chr> <dbl> <dbl> <int>
## 1 POC       1 0.706    17
## 2 POC       2 0.111    27
## 3 White     1 0.25      4
## 4 White     2 0.545    55
```

```
g9gf_2024 %>%
  mutate(POC = case_when(
```

```
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC) & !is.na(TA)) %>%
  mutate(FallDiff2 = `Post-Fall_Skills_2` - `Pre-Fall_Skills_2`) %>%
  group_by(POC, TA) %>%
  select(FallDiff2) %>%
  summarize(avg2 = mean(FallDiff2), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   POC [2]
##   POC      TA  avg2 count
##   <chr> <dbl> <dbl> <int>
## 1 POC       1 0.294    17
## 2 POC       2 0.444    27
## 3 White     1 0         4
## 4 White     2 0.327    55
```

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC) & !is.na(TA)) %>%
  mutate(FallDiff3 = `Post-Fall_Skills_3` - `Pre-Fall_Skills_3`) %>%
  group_by(POC, TA) %>%
  select(FallDiff3) %>%
  summarize(avg3 = mean(FallDiff3), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   POC [2]
##   POC      TA  avg3 count
##   <chr> <dbl> <dbl> <int>
## 1 POC       1 0.235    17
## 2 POC       2 0        27
## 3 White     1 0.25      4
## 4 White     2 0.2      55
```

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC) & !is.na(TA)) %>%
  mutate(FallDiff4 = `Post-Fall_Skills_4` - `Pre-Fall_Skills_4`) %>%
  group_by(POC, TA) %>%
  select(FallDiff4) %>%
  summarize(avg4 = mean(FallDiff4), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   POC [2]
##   POC      TA  avg4 count
```

```
##   <chr> <dbl> <dbl> <int>
## 1 POC       1 0.176    17
## 2 POC       2 0.556    27
## 3 White     1 1         4
## 4 White     2 0.655    55
```

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC) & !is.na(TA)) %>%
  mutate(FallDiff5 = `Post-Fall_Skills_5` - `Pre-Fall_Skills_5`) %>%
  group_by(POC, TA) %>%
  select(FallDiff5) %>%
  summarize(avg5 = mean(FallDiff5), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   POC [2]
##   POC      TA   avg5 count
##   <chr> <dbl>  <dbl> <int>
## 1 POC       1 -0.176    17
## 2 POC       2  0.444    27
## 3 White     1  0.5       4
## 4 White     2  0.327    55
```

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC) & !is.na(TA)) %>%
  mutate(FallTotal = ((`Post-Fall_Skills_1` - `Pre-Fall_Skills_1`)+(`Post-Fall_Skills_2` - `Pre-Fall_Sk
  group_by(POC, TA) %>%
  select(FallTotal) %>%
  summarize(avg = mean(FallTotal), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   POC [2]
##   POC      TA   avg count
##   <chr> <dbl> <dbl> <int>
## 1 POC       1 0.247    17
## 2 POC       2 0.311    27
## 3 White     1 0.4       4
## 4 White     2 0.411    55
```

Skills Analysis by Race + School Type

```
g9gf_2024 %>%
  mutate(POC = case_when(
```

```
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC) & !is.na(School_Type)) %>%
  mutate(FallDiff1 = `Post-Fall_Skills_1` - `Pre-Fall_Skills_1`) %>%
  group_by(POC, School_Type) %>%
  select(FallDiff1) %>%
  summarize(avg1 = mean(FallDiff1), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   POC [2]
##   POC   School_Type  avg1 count
##   <chr> <chr>       <dbl> <int>
## 1 POC   private     0.12     25
## 2 POC   public      0.588    17
## 3 White private     0.439    41
## 4 White public      0.722    18
```

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC) & !is.na(School_Type)) %>%
  mutate(FallDiff2 = `Post-Fall_Skills_2` - `Pre-Fall_Skills_2`) %>%
  group_by(POC, School_Type) %>%
  select(FallDiff2) %>%
  summarize(avg2 = mean(FallDiff2), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   POC [2]
##   POC   School_Type   avg2 count
##   <chr> <chr>        <dbl> <int>
## 1 POC   private     0.52      25
## 2 POC   public      0.235     17
## 3 White private     0.415     41
## 4 White public      0.0556    18
```

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC) & !is.na(School_Type)) %>%
  mutate(FallDiff3 = `Post-Fall_Skills_3` - `Pre-Fall_Skills_3`) %>%
  group_by(POC, School_Type) %>%
  select(FallDiff3) %>%
  summarize(avg3 = mean(FallDiff3), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   POC [2]
##   POC   School_Type   avg3 count
```

```
##   <chr> <chr>         <dbl> <int>
## 1 POC   private     0.0400    25
## 2 POC   public      0.118     17
## 3 White private     0.244     41
## 4 White public      0.111     18
```

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC) & !is.na(School_Type)) %>%
  mutate(FallDiff4 = `Post-Fall_Skills_4` - `Pre-Fall_Skills_4`) %>%
  group_by(POC, School_Type) %>%
  select(FallDiff4) %>%
  summarize(avg4 = mean(FallDiff4), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   POC [2]
##   POC   School_Type  avg4 count
##   <chr> <chr>       <dbl> <int>
## 1 POC   private     0.6      25
## 2 POC   public      0.118    17
## 3 White private     0.659    41
## 4 White public      0.722    18
```

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC) & !is.na(School_Type)) %>%
  mutate(FallDiff5 = `Post-Fall_Skills_5` - `Pre-Fall_Skills_5`) %>%
  group_by(POC, School_Type) %>%
  select(FallDiff5) %>%
  summarize(avg5 = mean(FallDiff5), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   POC [2]
##   POC   School_Type   avg5 count
##   <chr> <chr>        <dbl> <int>
## 1 POC   private      0.48     25
## 2 POC   public      -0.118    17
## 3 White private      0.366    41
## 4 White public       0.278    18
```

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC) & !is.na(School_Type)) %>%
```

```
  mutate(FallTotal = ((`Post-Fall_Skills_1` - `Pre-Fall_Skills_1`)+(`Post-Fall_Skills_2` - `Pre-Fall_Ski
  group_by(POC, School_Type) %>%
  select(FallTotal) %>%
  summarize(avg = mean(FallTotal), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   POC [2]
##   POC   School_Type   avg count
##   <chr> <chr>       <dbl> <int>
## 1 POC   private     0.352    25
## 2 POC   public      0.188    17
## 3 White private     0.424    41
## 4 White public      0.378    18
```

Skills Analysis by Gender + TA

```
g9gf_2024 %>%
  filter(Gender <= 2 & !is.na(TA)) %>%
  mutate(FallDiff1 = `Post-Fall_Skills_1` - `Pre-Fall_Skills_1`) %>%
  group_by(Gender, TA) %>%
  select(FallDiff1) %>%
  summarize(avg1 = mean(FallDiff1), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   Gender [2]
##   Gender    TA  avg1 count
##    <dbl> <dbl> <dbl> <int>
## 1      1     1 0.3      10
## 2      1     2 0.324    37
## 3      2     1 0.909    11
## 4      2     2 0.488    43
```

```
g9gf_2024 %>%
  filter(Gender <= 2 & !is.na(TA)) %>%
  mutate(FallDiff2 = `Post-Fall_Skills_2` - `Pre-Fall_Skills_2`) %>%
  group_by(Gender, TA) %>%
  select(FallDiff2) %>%
  summarize(avg2 = mean(FallDiff2), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   Gender [2]
##   Gender    TA  avg2 count
##    <dbl> <dbl> <dbl> <int>
## 1      1     1 0.1      10
## 2      1     2 0.459    37
## 3      2     1 0.364    11
## 4      2     2 0.279    43
```

```
g9gf_2024 %>%
  filter(Gender <= 2 & !is.na(TA)) %>%
  mutate(FallDiff3 = `Post-Fall_Skills_3` - `Pre-Fall_Skills_3`) %>%
  group_by(Gender, TA) %>%
  select(FallDiff3) %>%
  summarize(avg3 = mean(FallDiff3), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   Gender [2]
##   Gender    TA  avg3 count
##    <dbl> <dbl> <dbl> <int>
## 1      1     1 0.2      10
## 2      1     2 0        37
## 3      2     1 0.273    11
## 4      2     2 0.233    43
```

```
g9gf_2024 %>%
  filter(Gender <= 2 & !is.na(TA)) %>%
  mutate(FallDiff4 = `Post-Fall_Skills_4` - `Pre-Fall_Skills_4`) %>%
  group_by(Gender, TA) %>%
  select(FallDiff4) %>%
  summarize(avg4 = mean(FallDiff4), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   Gender [2]
##   Gender    TA  avg4 count
##    <dbl> <dbl> <dbl> <int>
## 1      1     1 0.2      10
## 2      1     2 0.676    37
## 3      2     1 0.455    11
## 4      2     2 0.581    43
```

```
g9gf_2024 %>%
  filter(Gender <= 2 & !is.na(TA)) %>%
  mutate(FallDiff5 = `Post-Fall_Skills_5` - `Pre-Fall_Skills_5`) %>%
  group_by(Gender, TA) %>%
  select(FallDiff5) %>%
  summarize(avg5 = mean(FallDiff5), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   Gender [2]
##   Gender    TA    avg5 count
##    <dbl> <dbl>   <dbl> <int>
## 1      1     1  0         10
## 2      1     2  0.405     37
## 3      2     1 -0.0909    11
## 4      2     2  0.302     43
```

```
g9gf_2024 %>%
  filter(Gender <= 2 & !is.na(TA)) %>%
  mutate(FallTotal = ((`Post-Fall_Skills_1` - `Pre-Fall_Skills_1`)+(`Post-Fall_Skills_2` - `Pre-Fall_Ski
```

```
  group_by(Gender, TA) %>%
  select(FallTotal) %>%
  summarize(avg = mean(FallTotal), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   Gender [2]
##   Gender    TA   avg count
##    <dbl> <dbl> <dbl> <int>
## 1      1     1 0.16     10
## 2      1     2 0.373    37
## 3      2     1 0.382    11
## 4      2     2 0.377    43
```

Skills Analysis by Gender + School Type

```
g9gf_2024 %>%
  filter(Gender <= 2 & !is.na(School_Type)) %>%
  mutate(FallDiff1 = `Post-Fall_Skills_1` - `Pre-Fall_Skills_1`) %>%
  group_by(Gender, School_Type) %>%
  select(FallDiff1) %>%
  summarize(avg1 = mean(FallDiff1), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   Gender [2]
##   Gender School_Type  avg1 count
##    <dbl> <chr>       <dbl> <int>
## 1      1 private     0.219    32
## 2      1 public      0.533    15
## 3      2 private     0.438    32
## 4      2 public      0.75     20
```

```
g9gf_2024 %>%
  filter(Gender <= 2 & !is.na(School_Type)) %>%
  mutate(FallDiff2 = `Post-Fall_Skills_2` - `Pre-Fall_Skills_2`) %>%
  group_by(Gender, School_Type) %>%
  select(FallDiff2) %>%
  summarize(avg2 = mean(FallDiff2), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   Gender [2]
##   Gender School_Type  avg2 count
##    <dbl> <chr>       <dbl> <int>
## 1      1 private     0.562    32
## 2      1 public      0        15
## 3      2 private     0.344    32
## 4      2 public      0.25     20
```

```
g9gf_2024 %>%
  filter(Gender <= 2 & !is.na(School_Type)) %>%
```

```
  mutate(FallDiff3 = `Post-Fall_Skills_3` - `Pre-Fall_Skills_3`) %>%
  group_by(Gender, School_Type) %>%
  select(FallDiff3) %>%
  summarize(avg3 = mean(FallDiff3), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   Gender [2]
##   Gender School_Type   avg3 count
##    <dbl> <chr>         <dbl> <int>
## 1      1 private     0.0625    32
## 2      1 public      0         15
## 3      2 private     0.25      32
## 4      2 public      0.2       20
```

```
g9gf_2024 %>%
  filter(Gender <= 2 & !is.na(School_Type)) %>%
  mutate(FallDiff4 = `Post-Fall_Skills_4` - `Pre-Fall_Skills_4`) %>%
  group_by(Gender, School_Type) %>%
  select(FallDiff4) %>%
  summarize(avg4 = mean(FallDiff4), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   Gender [2]
##   Gender School_Type  avg4 count
##    <dbl> <chr>       <dbl> <int>
## 1      1 private     0.688    32
## 2      1 public      0.333    15
## 3      2 private     0.594    32
## 4      2 public      0.5      20
```

```
g9gf_2024 %>%
  filter(Gender <= 2 & !is.na(School_Type)) %>%
  mutate(FallDiff5 = `Post-Fall_Skills_5` - `Pre-Fall_Skills_5`) %>%
  group_by(Gender, School_Type) %>%
  select(FallDiff5) %>%
  summarize(avg5 = mean(FallDiff5), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   Gender [2]
##   Gender School_Type   avg5 count
##    <dbl> <chr>         <dbl> <int>
## 1      1 private     0.438     32
## 2      1 public      0.0667    15
## 3      2 private     0.344     32
## 4      2 public      0.1       20
```

```
g9gf_2024 %>%
  filter(Gender <= 2 & !is.na(School_Type)) %>%
  mutate(FallTotal = ((`Post-Fall_Skills_1` - `Pre-Fall_Skills_1`)+(`Post-Fall_Skills_2` - `Pre-Fall_Ski
  group_by(Gender, School_Type) %>%
  select(FallTotal) %>%
  summarize(avg = mean(FallTotal), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   Gender [2]
##   Gender School_Type   avg count
##    <dbl> <chr>       <dbl> <int>
## 1      1 private     0.394    32
## 2      1 public      0.187    15
## 3      2 private     0.394    32
## 4      2 public      0.36     20
```

Skills Analysis by TA + School Type

```
g9gf_2024 %>%
  filter(!is.na(TA) & !is.na(School_Type)) %>%
  mutate(FallDiff1 = `Post-Fall_Skills_1` - `Pre-Fall_Skills_1`) %>%
  group_by(TA, School_Type) %>%
  select(FallDiff1) %>%
  summarize(avg1 = mean(FallDiff1), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   TA [2]
##      TA School_Type  avg1 count
##   <dbl> <chr>       <dbl> <int>
## 1     1 private     0.5      10
## 2     1 public      0.6      10
## 3     2 private     0.286    56
## 4     2 public      0.68     25
```

```
g9gf_2024 %>%
  filter(!is.na(TA) & !is.na(School_Type)) %>%
  mutate(FallDiff2 = `Post-Fall_Skills_2` - `Pre-Fall_Skills_2`) %>%
  group_by(TA, School_Type) %>%
  select(FallDiff2) %>%
  summarize(avg2 = mean(FallDiff2), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   TA [2]
##      TA School_Type  avg2 count
##   <dbl> <chr>       <dbl> <int>
## 1     1 private      0.2     10
## 2     1 public       0.3     10
## 3     2 private      0.5     56
## 4     2 public       0.08    25
```

```
g9gf_2024 %>%
  filter(!is.na(TA) & !is.na(School_Type)) %>%
  mutate(FallDiff3 = `Post-Fall_Skills_3` - `Pre-Fall_Skills_3`) %>%
  group_by(TA, School_Type) %>%
  select(FallDiff3) %>%
  summarize(avg3 = mean(FallDiff3), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   TA [2]
##      TA School_Type  avg3 count
##   <dbl> <chr>       <dbl> <int>
## 1     1 private     0.2      10
## 2     1 public      0.2      10
## 3     2 private     0.161    56
## 4     2 public      0.08     25
```

```
g9gf_2024 %>%
  filter(!is.na(TA) & !is.na(School_Type)) %>%
  mutate(FallDiff4 = `Post-Fall_Skills_4` - `Pre-Fall_Skills_4`) %>%
  group_by(TA, School_Type) %>%
  select(FallDiff4) %>%
  summarize(avg4 = mean(FallDiff4), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   TA [2]
##      TA School_Type  avg4 count
##   <dbl> <chr>       <dbl> <int>
## 1     1 private     0.6      10
## 2     1 public      0        10
## 3     2 private     0.643    56
## 4     2 public      0.6      25
```

```
g9gf_2024 %>%
  filter(!is.na(TA) & !is.na(School_Type)) %>%
  mutate(FallDiff5 = `Post-Fall_Skills_5` - `Pre-Fall_Skills_5`) %>%
  group_by(TA, School_Type) %>%
  select(FallDiff5) %>%
  summarize(avg5 = mean(FallDiff5), count = n())
```

```
## # A tibble: 4 x 4
## # Groups:   TA [2]
##      TA School_Type  avg5 count
##   <dbl> <chr>       <dbl> <int>
## 1     1 private     0        10
## 2     1 public      0        10
## 3     2 private     0.482    56
## 4     2 public      0.12     25
```

```
g9gf_2024 %>%
  filter(!is.na(TA) & !is.na(School_Type)) %>%
  mutate(FallTotal = ((`Post-Fall_Skills_1` - `Pre-Fall_Skills_1`)+(`Post-Fall_Skills_2` - `Pre-Fall_Sk
  group_by(TA, School_Type) %>%
  select(FallTotal) %>%
  summarize(avg = mean(FallTotal), count = n())
```

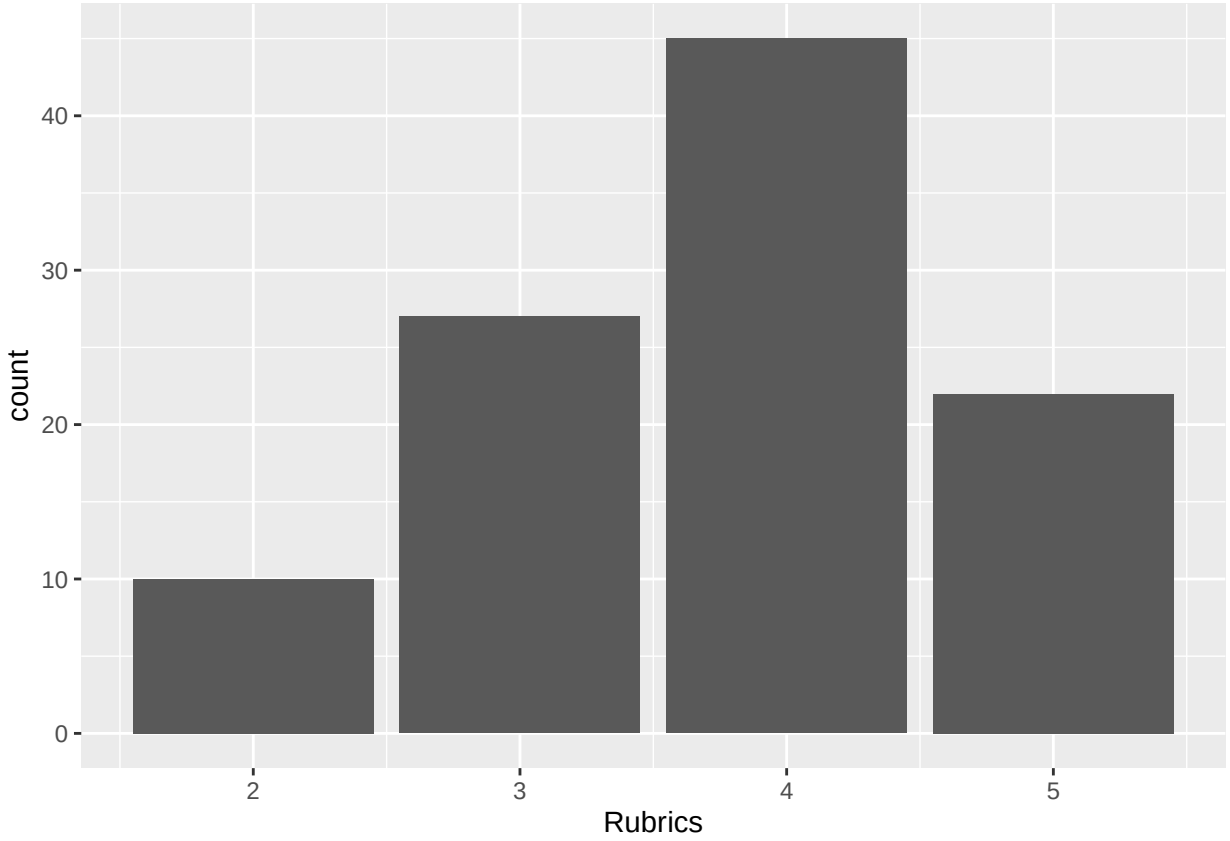
```
## # A tibble: 4 x 4
## # Groups:   TA [2]
##      TA School_Type   avg count
##   <dbl> <chr>       <dbl> <int>
```

```
## 1      1 private      0.3      10
## 2      1 public       0.22     10
## 3      2 private      0.414    56
## 4      2 public       0.312    25
```

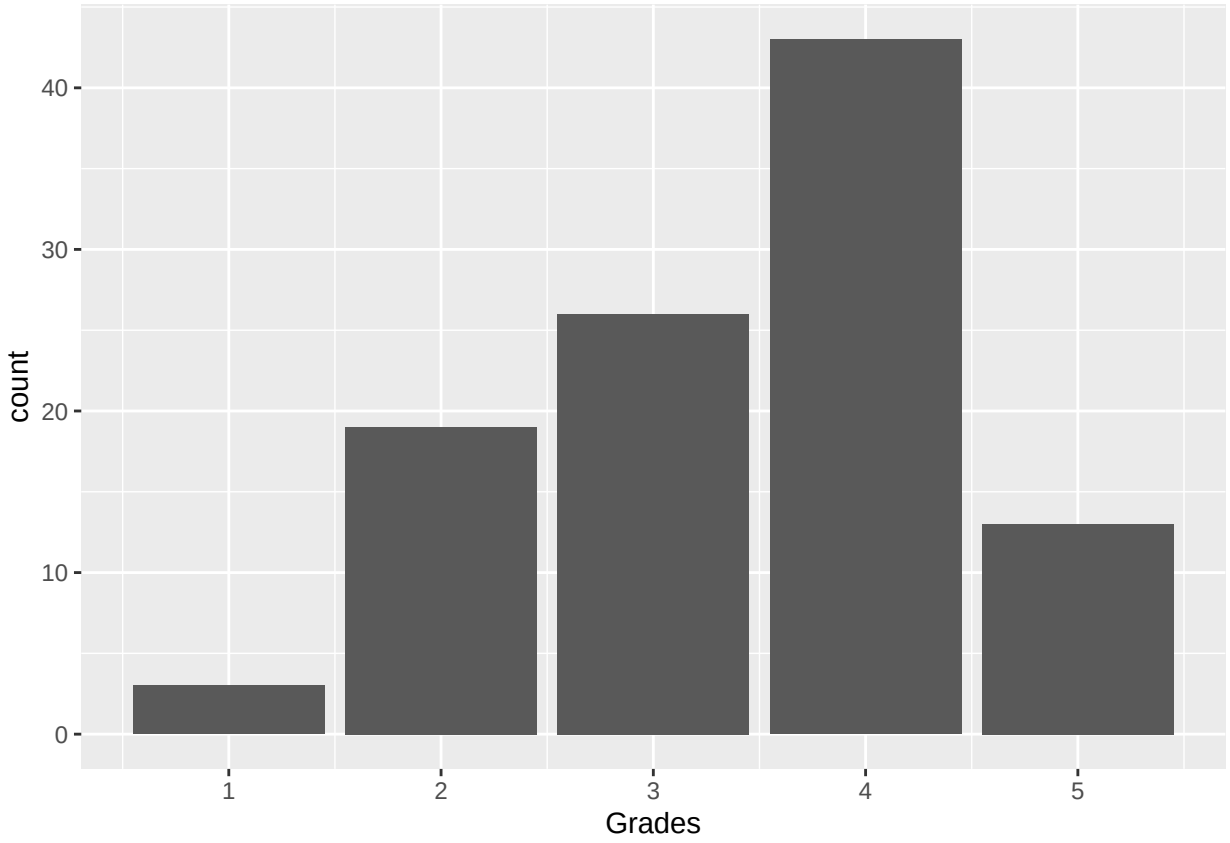
Assessment

Assessment Overall

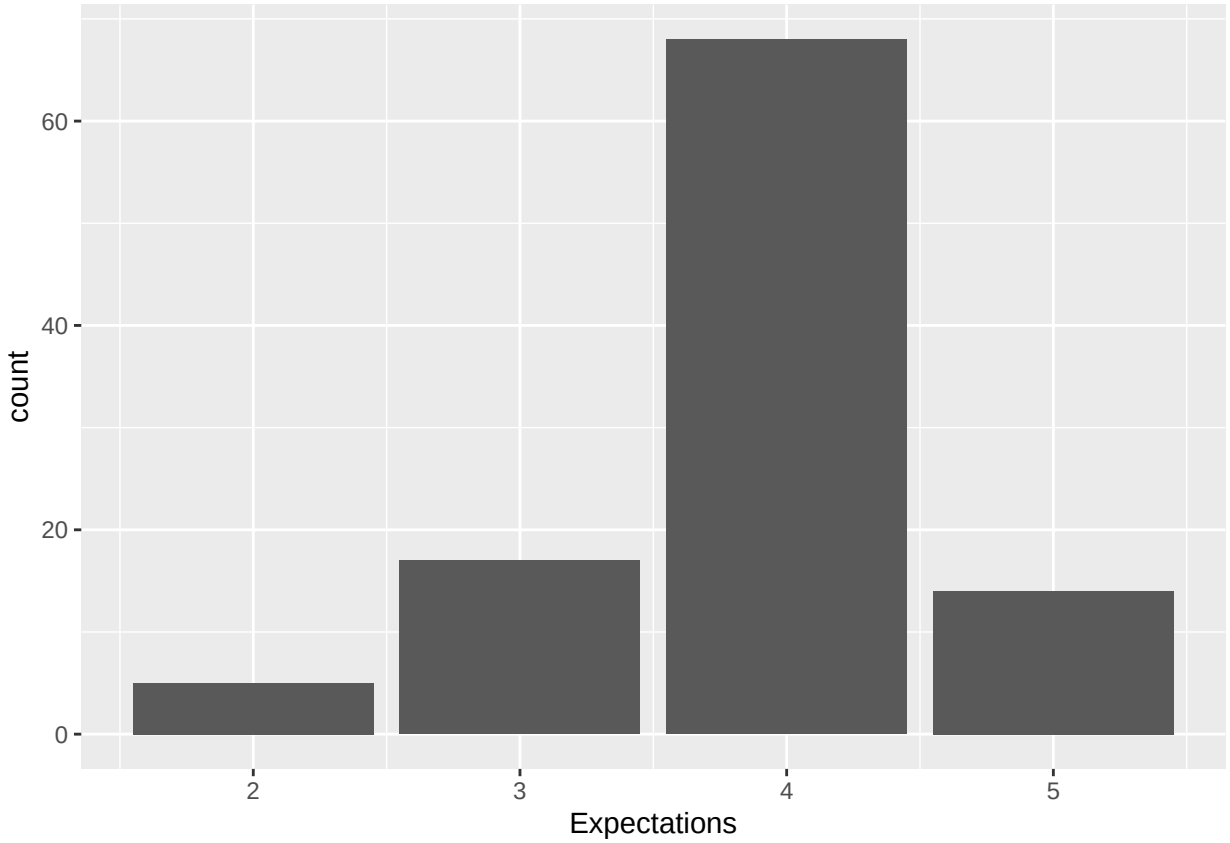
```
g9gf_2024 %>%
  ggplot(aes(x=`Rubrics`)) +
  geom_bar()
```



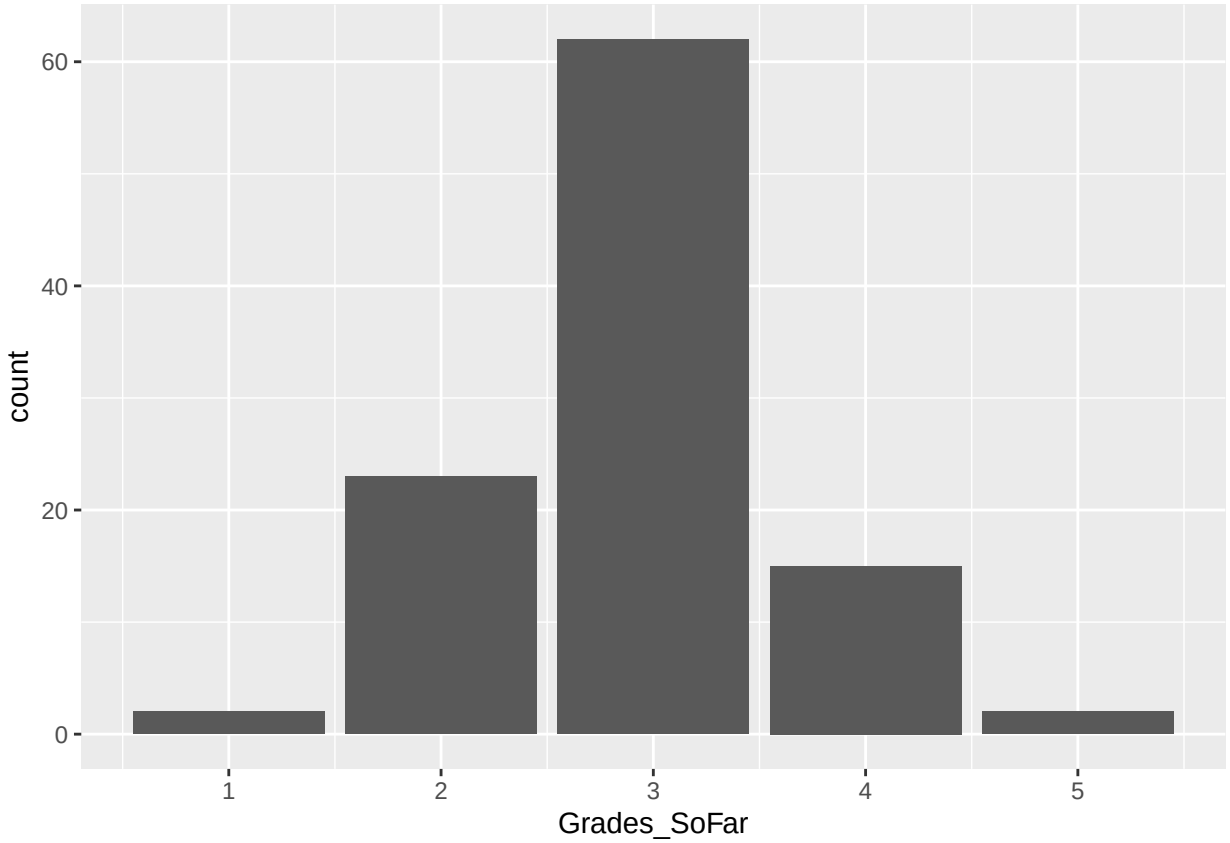

```
g9gf_2024 %>%
  ggplot(aes(x=`Grades`)) +
  geom_bar()
```




```
g9gf_2024 %>%
  ggplot(aes(x=`Expectations`)) +
  geom_bar()
```

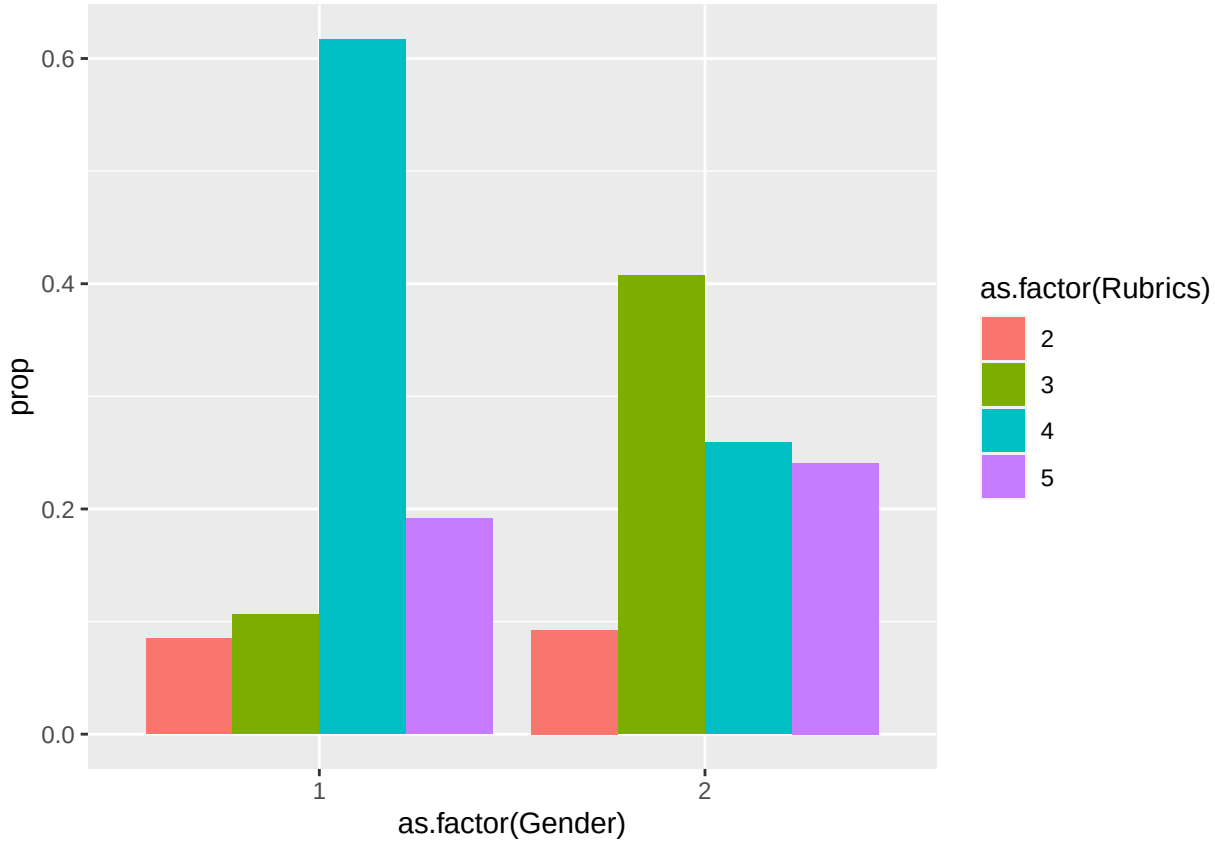



```
g9gf_2024 %>%
  ggplot(aes(x=`Grades_SoFar`)) +
  geom_bar()
```

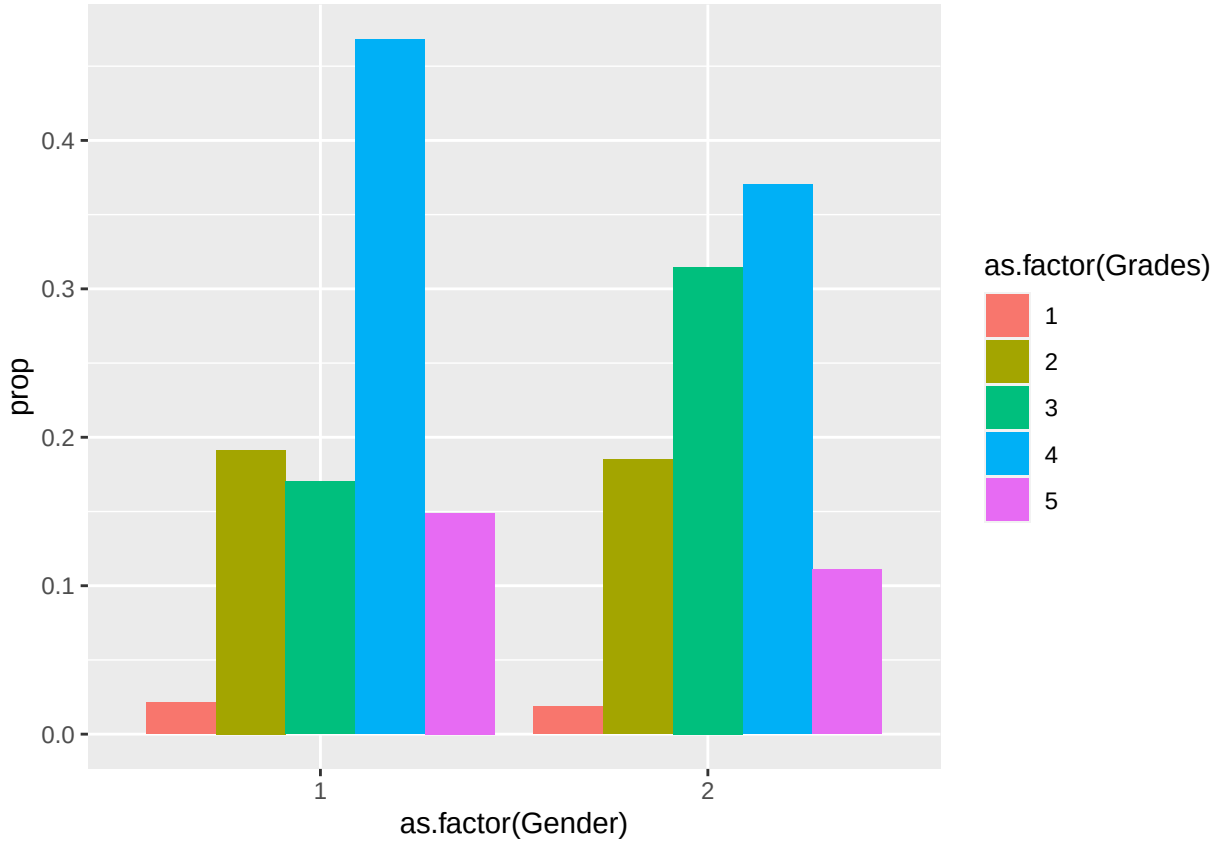


Assessment by Gender

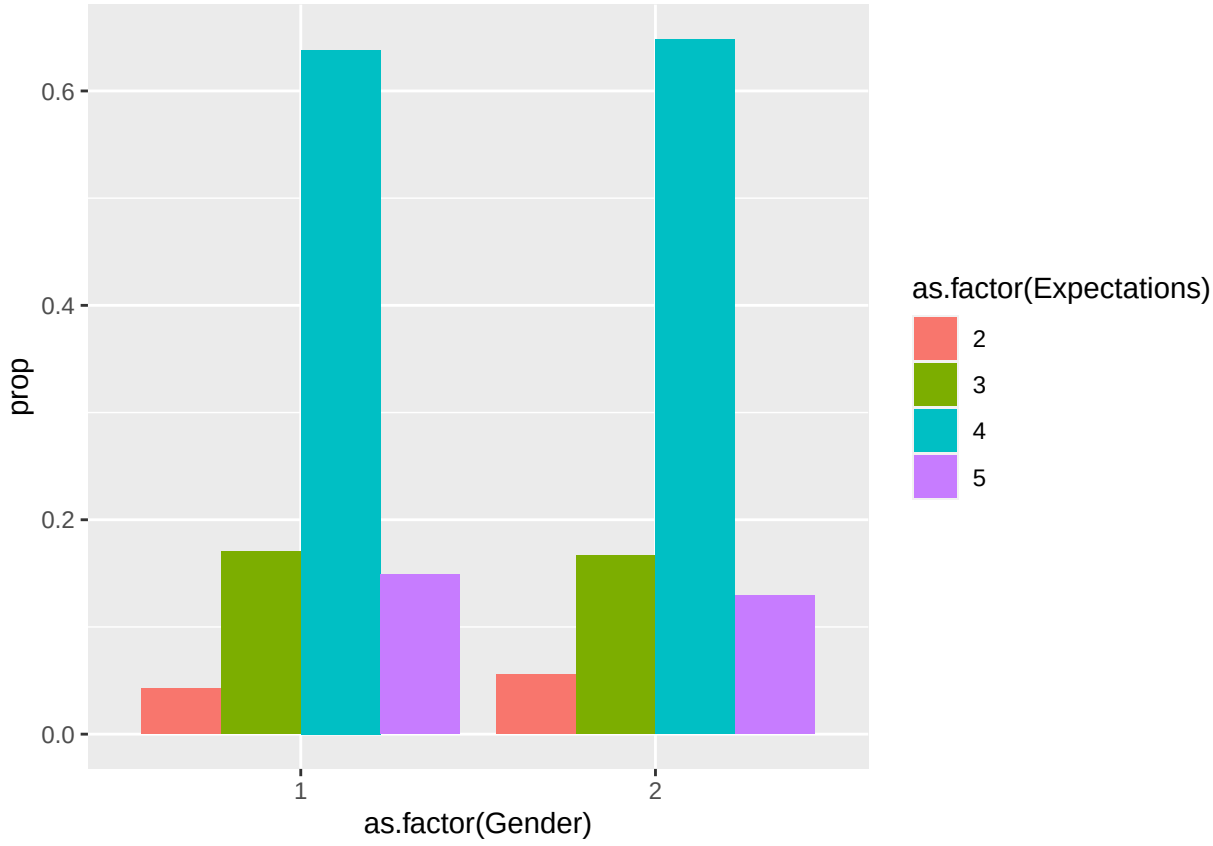
```
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  group_by(Gender, Rubrics) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(Gender), y = `prop`, fill = as.factor(Rubrics))) +
  geom_col(position = "dodge")
```



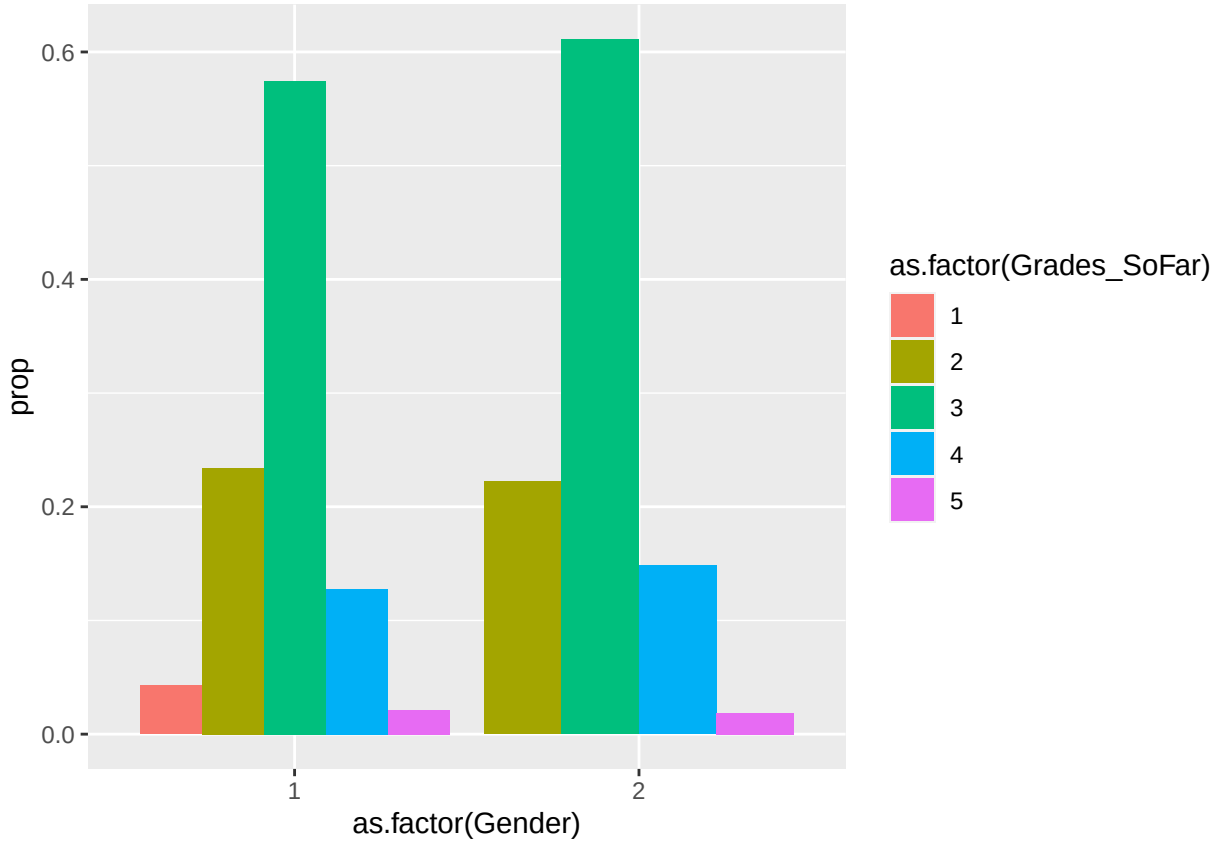

```
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  group_by(Gender, Grades) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(Gender), y = `prop`, fill = as.factor(Grades))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  group_by(Gender, Expectations) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(Gender), y = `prop`, fill = as.factor(Expectations))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  group_by(Gender, Grades_SoFar) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(Gender), y = `prop`, fill = as.factor(Grades_SoFar))) +
  geom_col(position = "dodge")
```

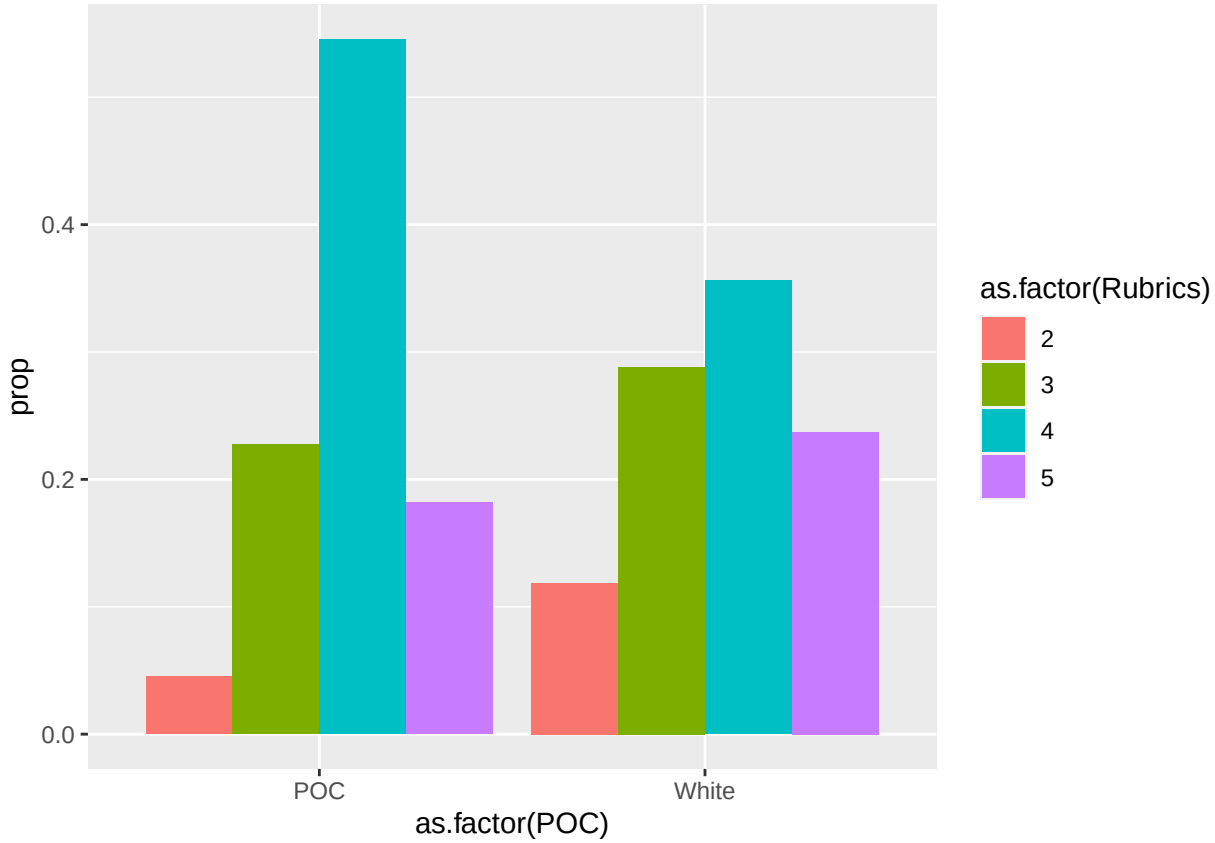



```
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  group_by(Gender) %>%
  summarize(avg_Rubrics = mean(Rubrics), avg_Grades = mean(Grades), avg_Expect = mean(Expectations), avg
```

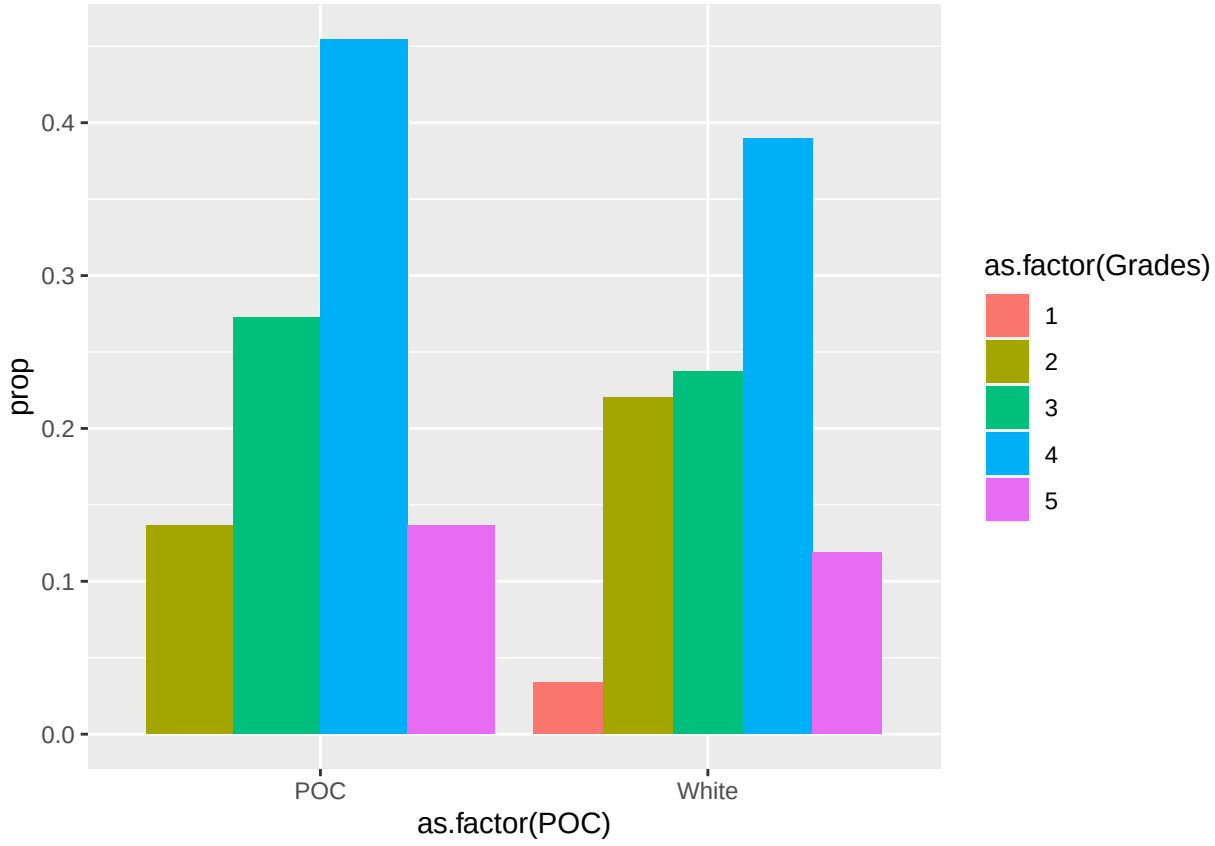
```
## # A tibble: 2 x 6
##   Gender avg_Rubrics avg_Grades avg_Expect avg_gsf count
##    <dbl>       <dbl>      <dbl>      <dbl>   <dbl> <int>
## 1      1        3.91       3.53       3.89    2.85    47
## 2      2        3.65       3.37       3.85    2.96    54
```

Assessment by Race

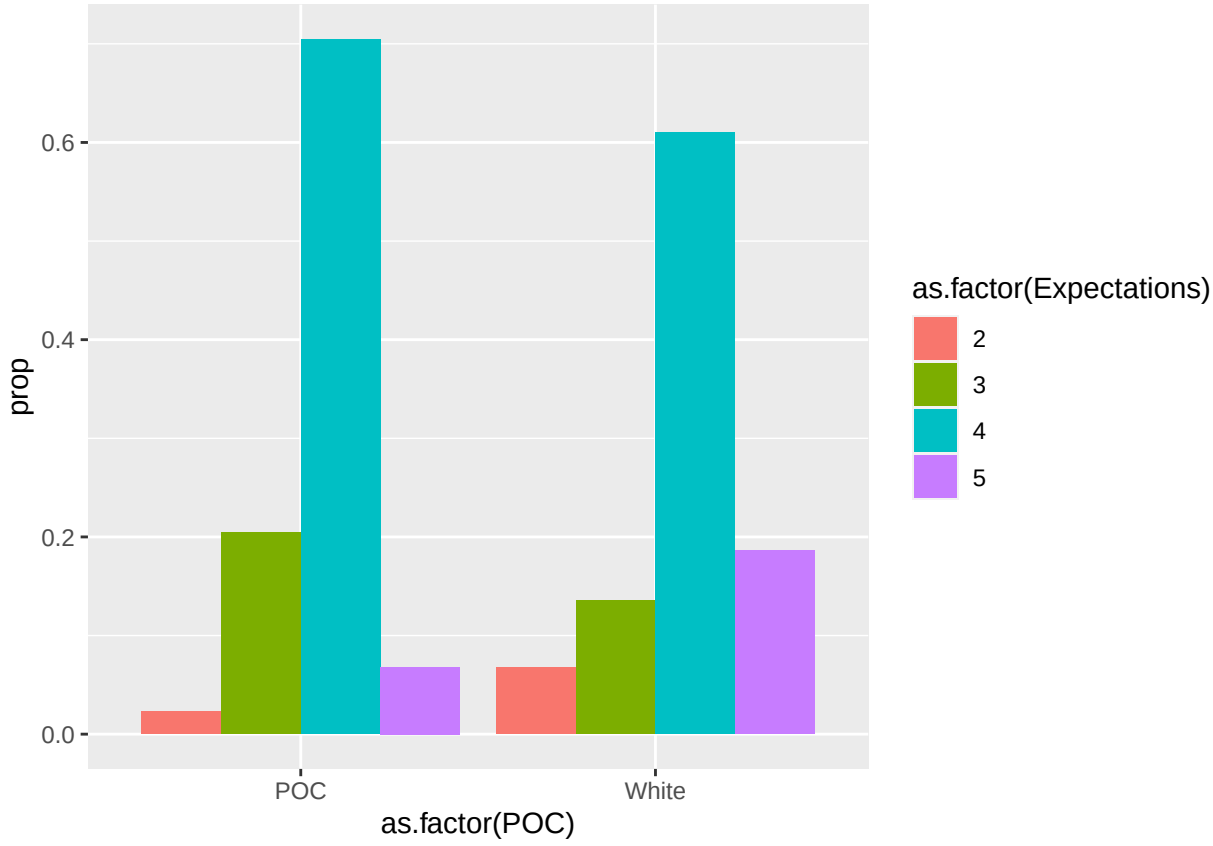
```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  group_by(POC, Rubrics) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(POC), y = `prop`, fill = as.factor(Rubrics))) +
  geom_col(position = "dodge")
```



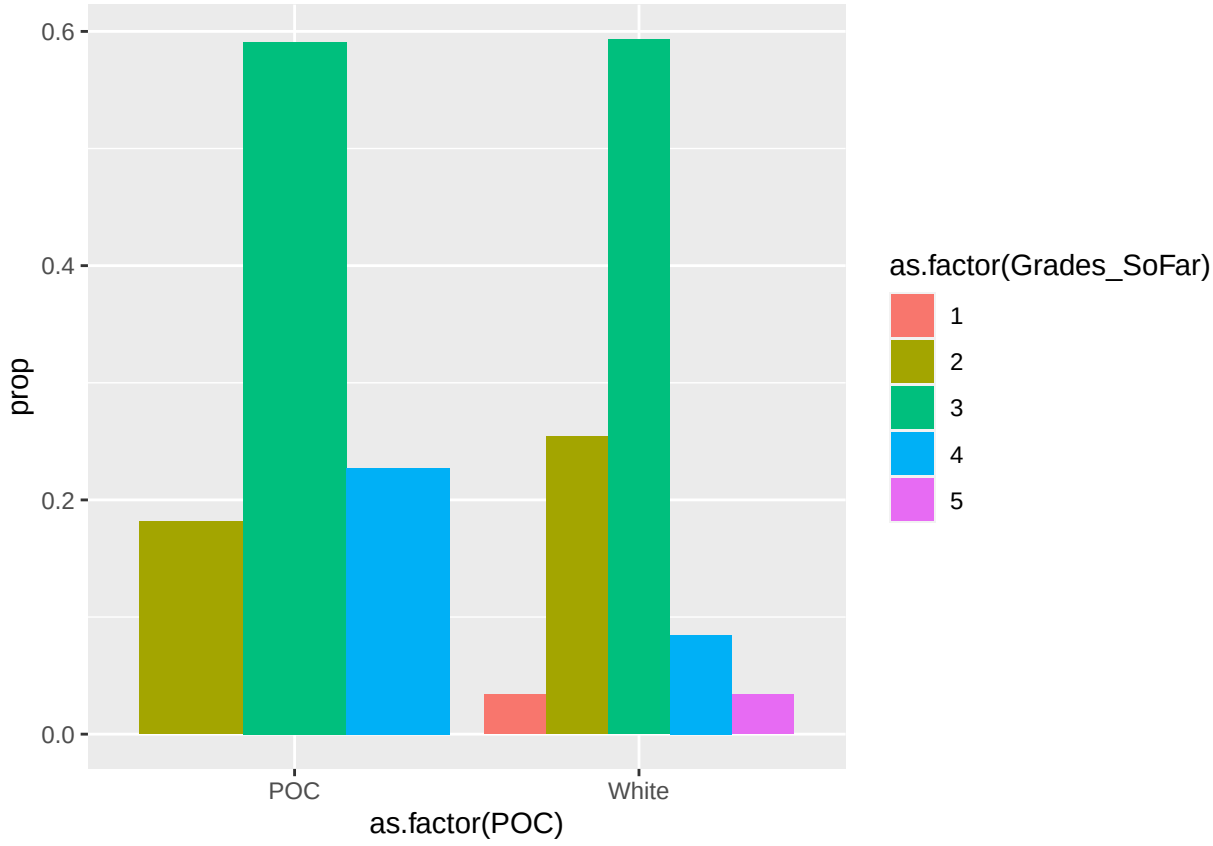

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  group_by(POC, Grades) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(POC), y = `prop`, fill = as.factor(Grades))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  group_by(POC, Expectations) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(POC), y = `prop`, fill = as.factor(Expectations))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  group_by(POC, Grades_SoFar) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(POC), y = `prop`, fill = as.factor(Grades_SoFar))) +
  geom_col(position = "dodge")
```

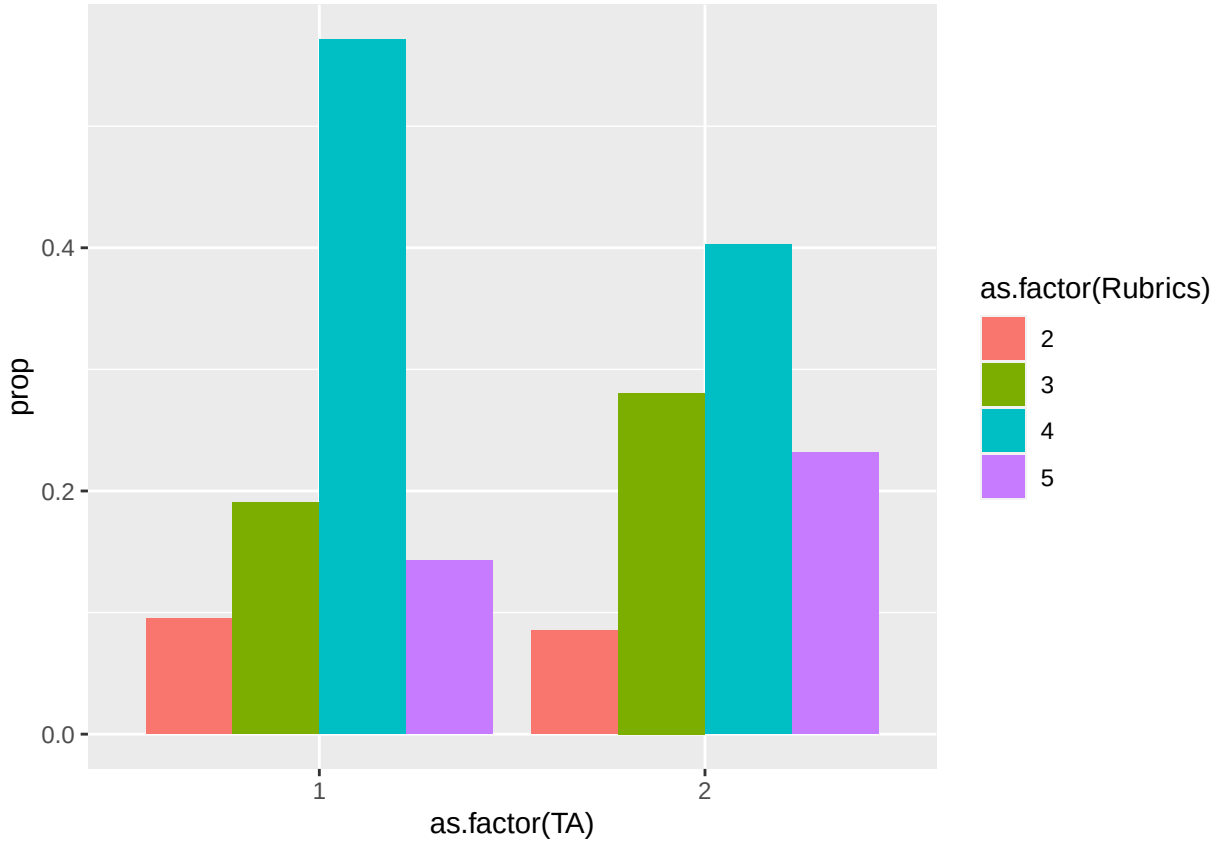



```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  group_by(POC) %>%
  summarize(avg_Rubrics = mean(Rubrics), avg_Grades = mean(Grades), avg_Expect = mean(Expectations), avg
```

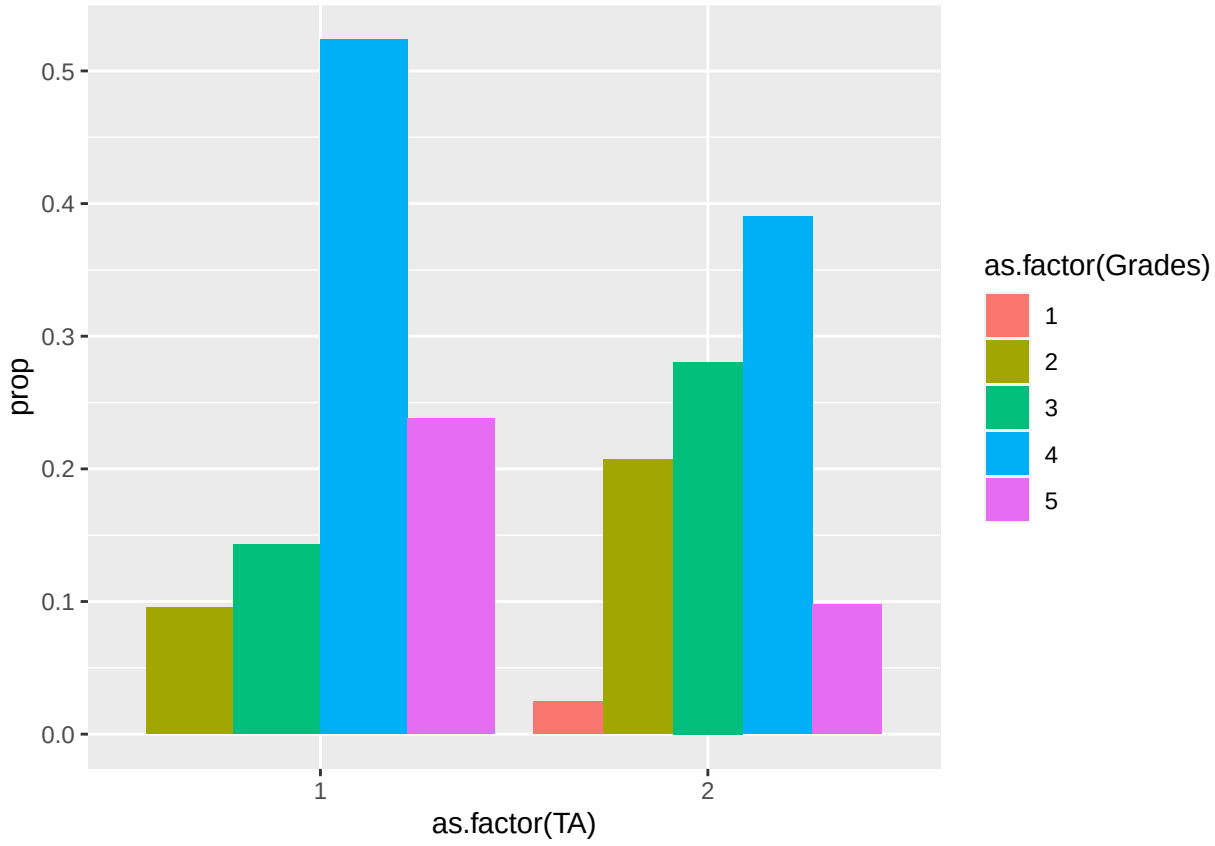
```
## # A tibble: 2 x 6
##   POC   avg_Rubrics avg_Grades avg_Expect avg_gsf count
##   <chr>       <dbl>      <dbl>      <dbl>   <dbl> <int>
## 1 POC          3.86       3.59       3.82    3.05    44
## 2 White        3.71       3.34       3.92    2.83    59
```

Assessment by TA

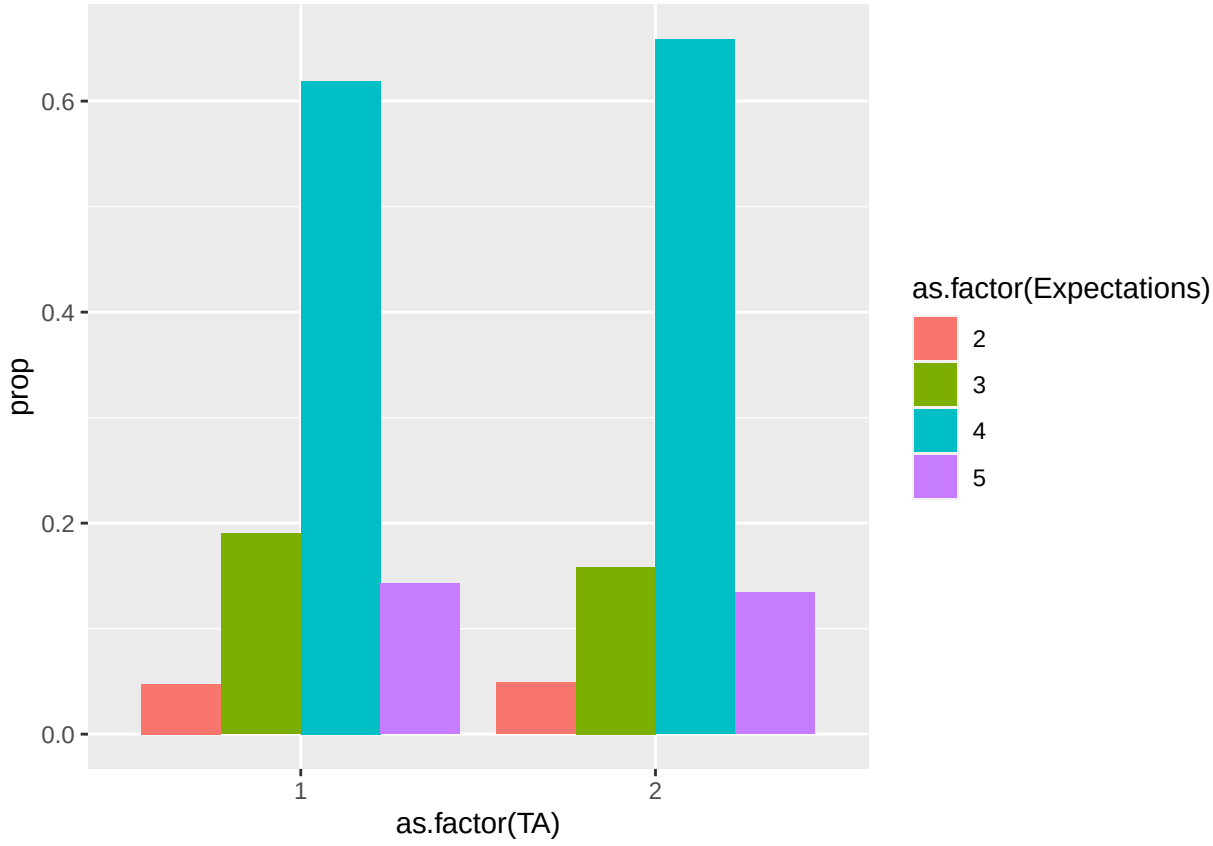
```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  group_by(TA, Rubrics) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(TA), y = `prop`, fill = as.factor(Rubrics))) +
  geom_col(position = "dodge")
```



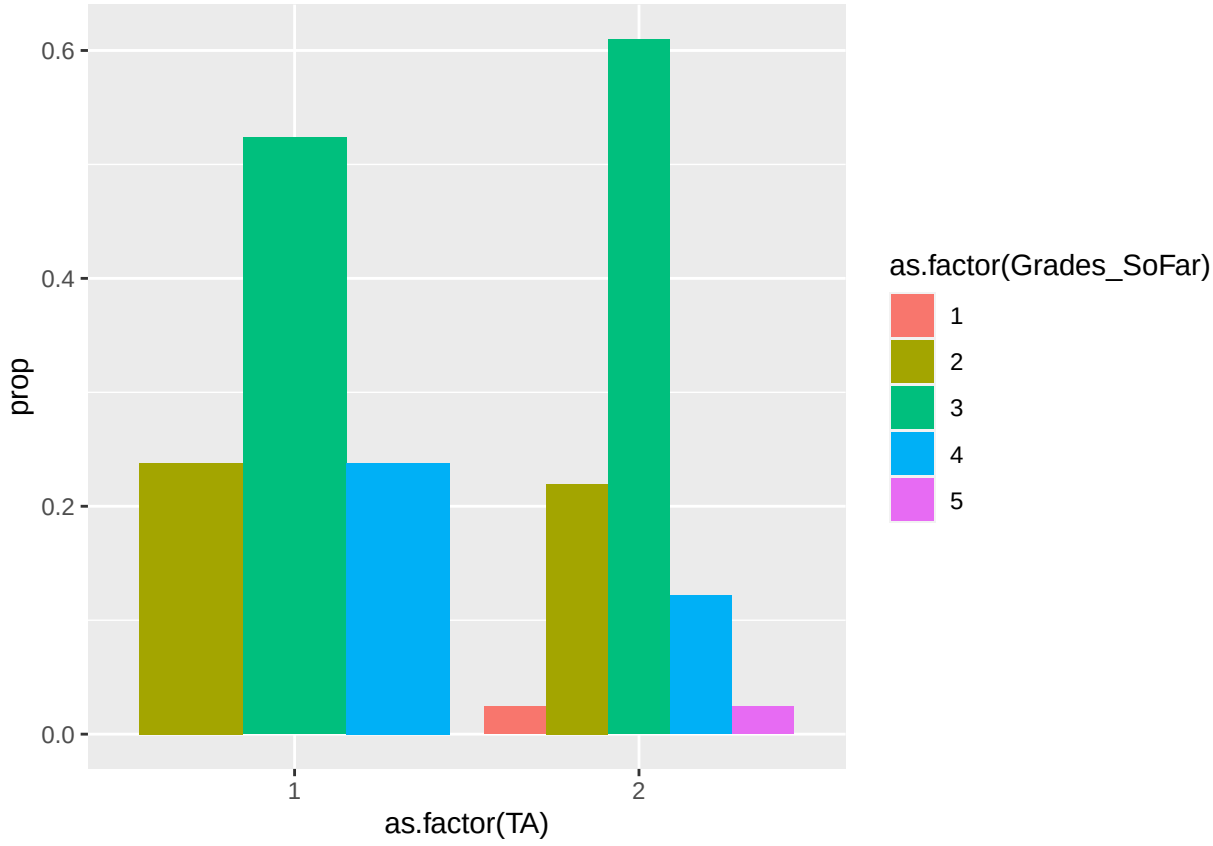

```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  group_by(TA, Grades) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(TA), y = `prop`, fill = as.factor(Grades))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  group_by(TA, Expectations) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(TA), y = `prop`, fill = as.factor(Expectations))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  group_by(TA, Grades_SoFar) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(TA), y = `prop`, fill = as.factor(Grades_SoFar))) +
  geom_col(position = "dodge")
```

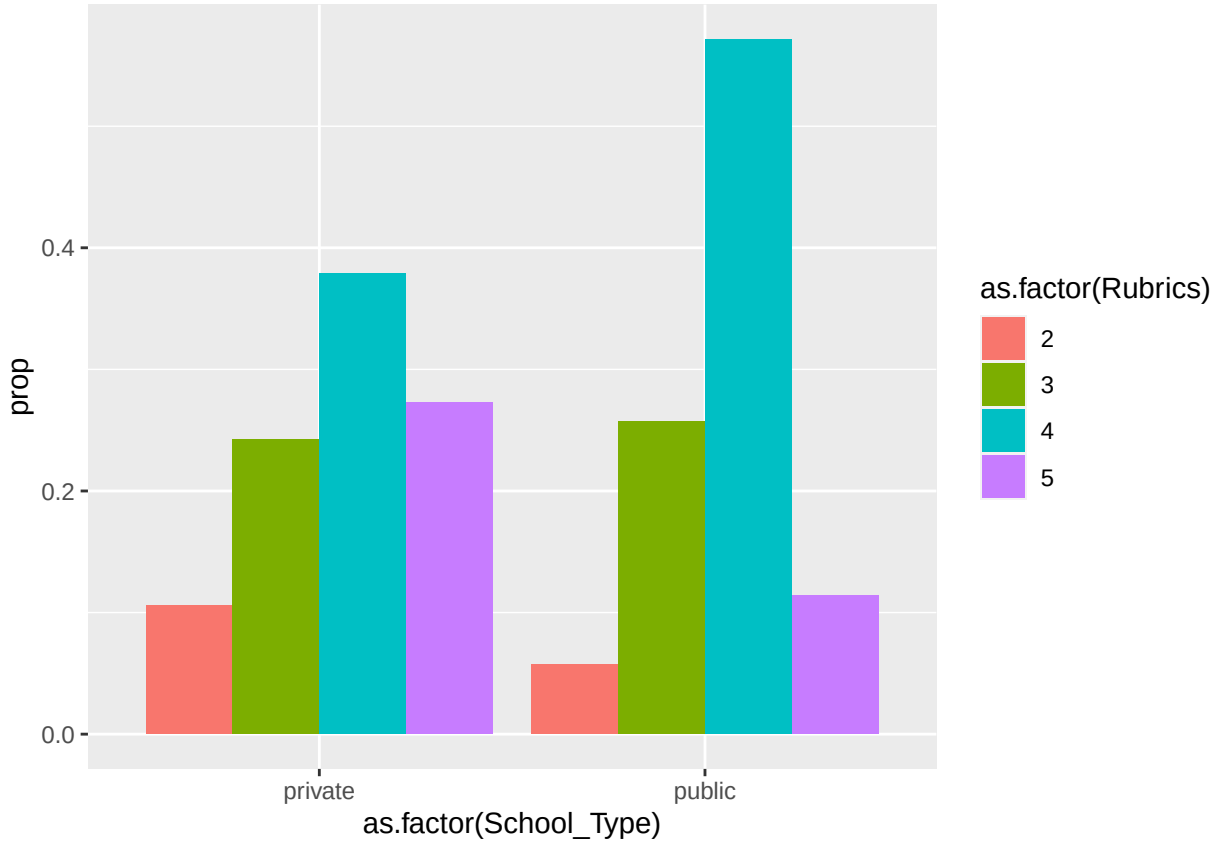



```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  group_by(TA) %>%
  summarize(avg_Rubrics = mean(Rubrics), avg_Grades = mean(Grades), avg_Expect = mean(Expectations), avg
```

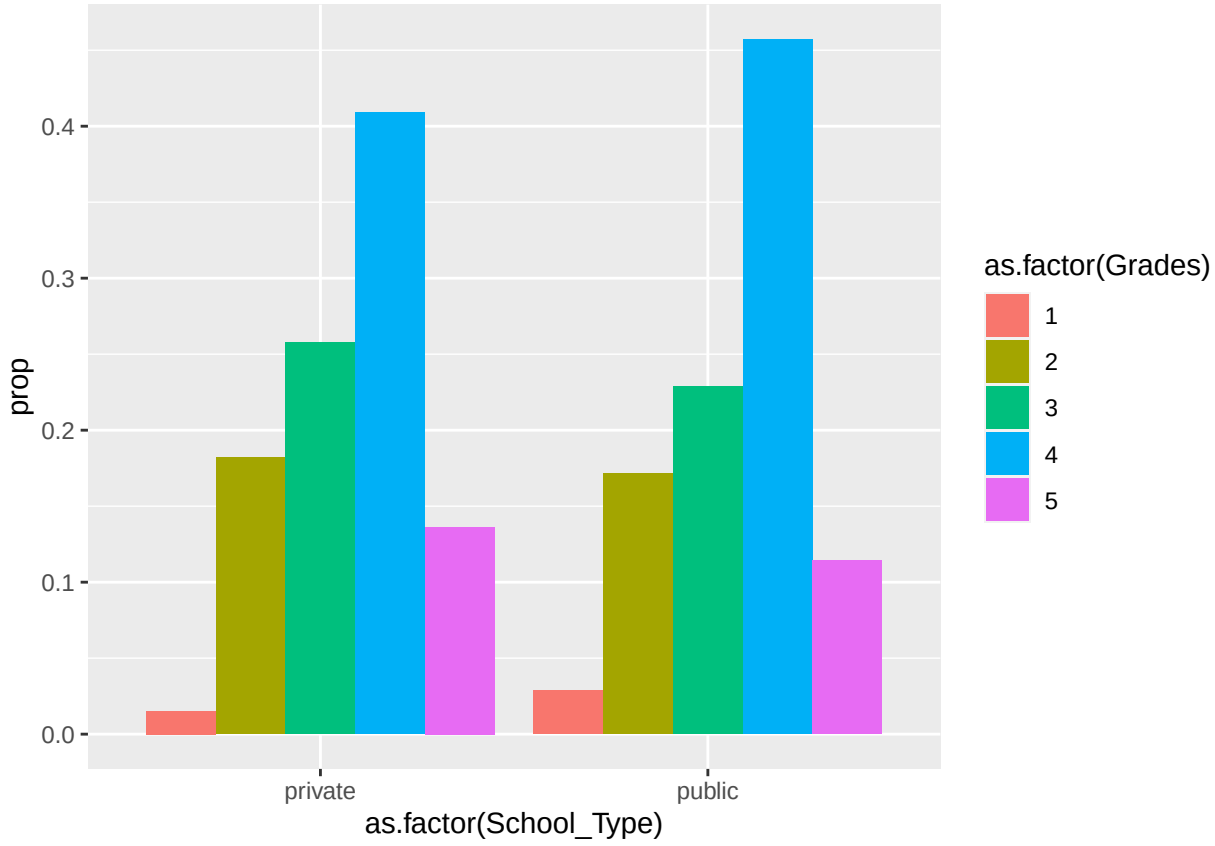
```
## # A tibble: 2 x 6
##      TA avg_Rubrics avg_Grades avg_Expect avg_gsf count
##   <dbl>       <dbl>      <dbl>      <dbl>   <dbl> <int>
## 1     1        3.76       3.90       3.86    3       21
## 2     2        3.78       3.33       3.88    2.90    82
```

Assessment by School Type

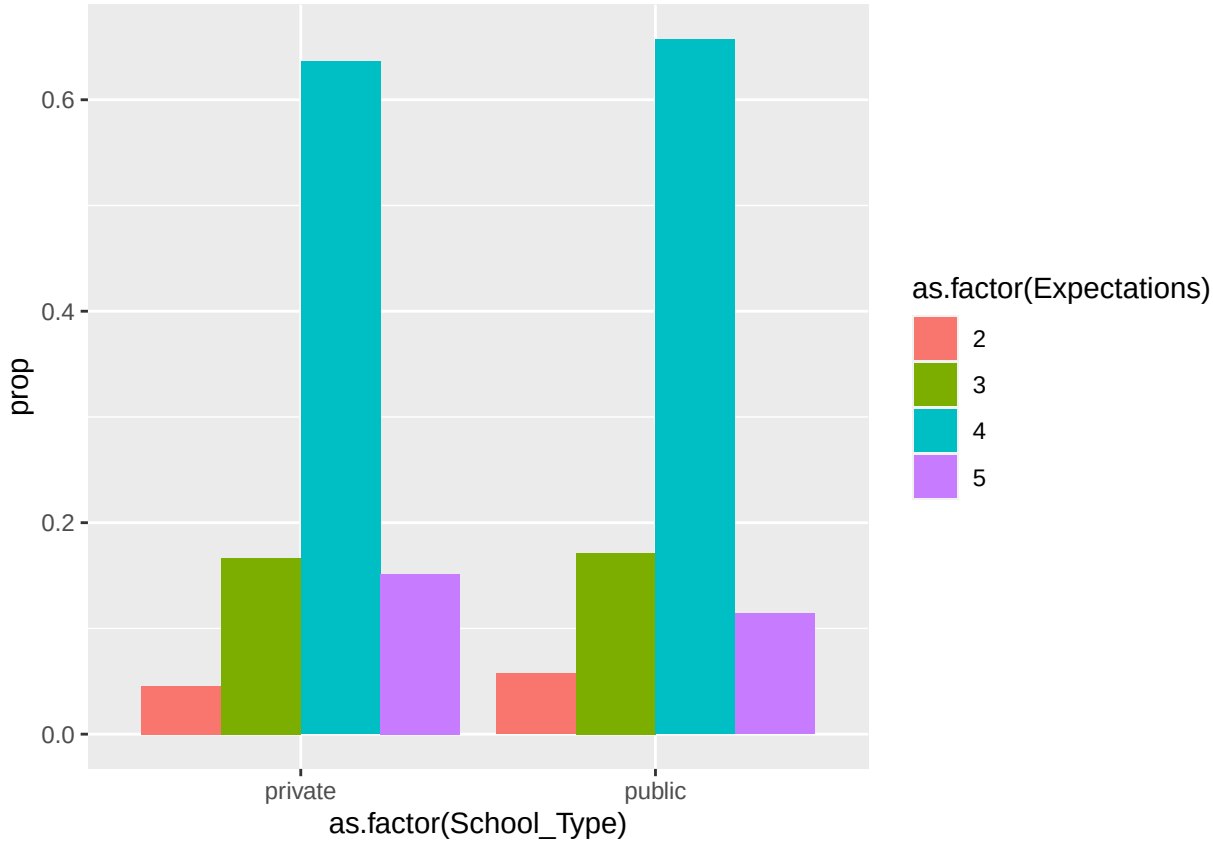
```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  group_by(School_Type, Rubrics) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(School_Type), y = `prop`, fill = as.factor(Rubrics))) +
  geom_col(position = "dodge")
```



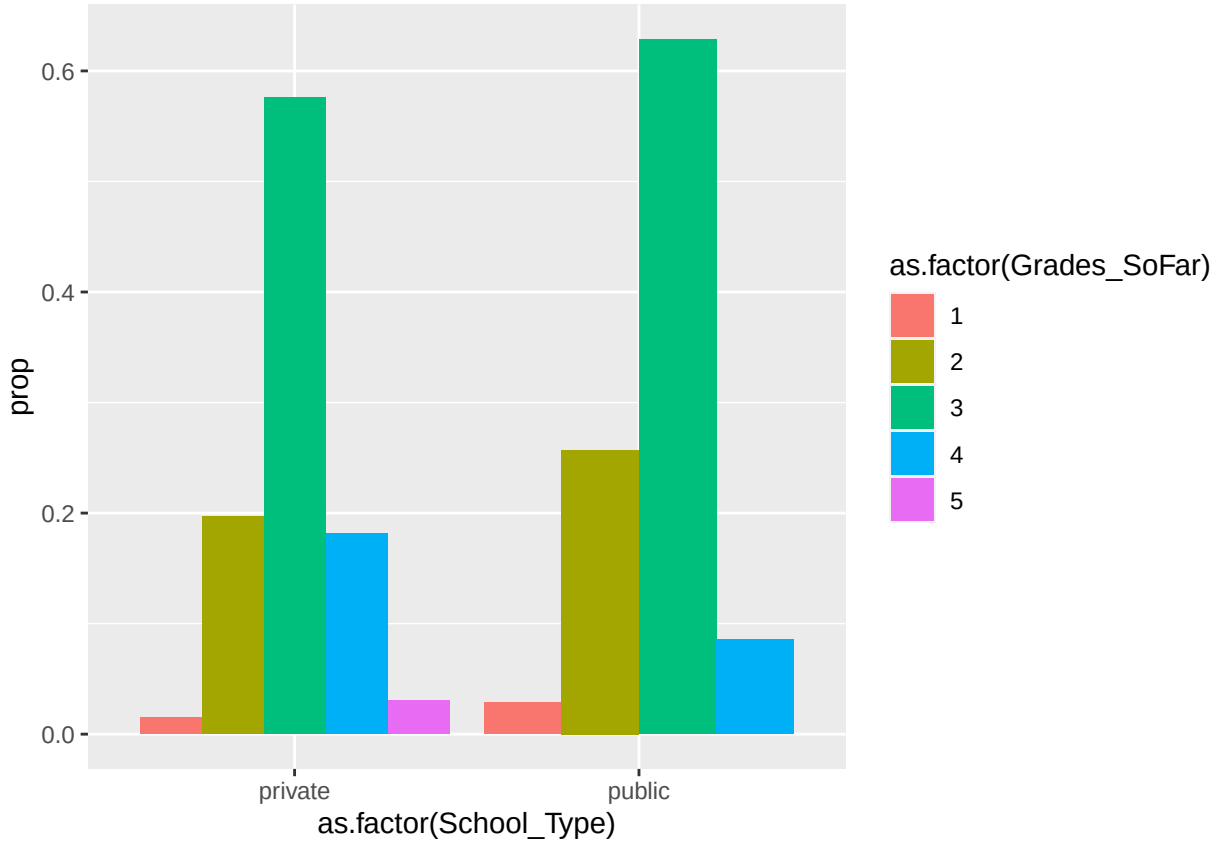

```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  group_by(School_Type, Grades) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(School_Type), y = `prop`, fill = as.factor(Grades))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  group_by(School_Type, Expectations) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(School_Type), y = `prop`, fill = as.factor(Expectations))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  group_by(School_Type, Grades_SoFar) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(School_Type), y = `prop`, fill = as.factor(Grades_SoFar))) +
  geom_col(position = "dodge")
```



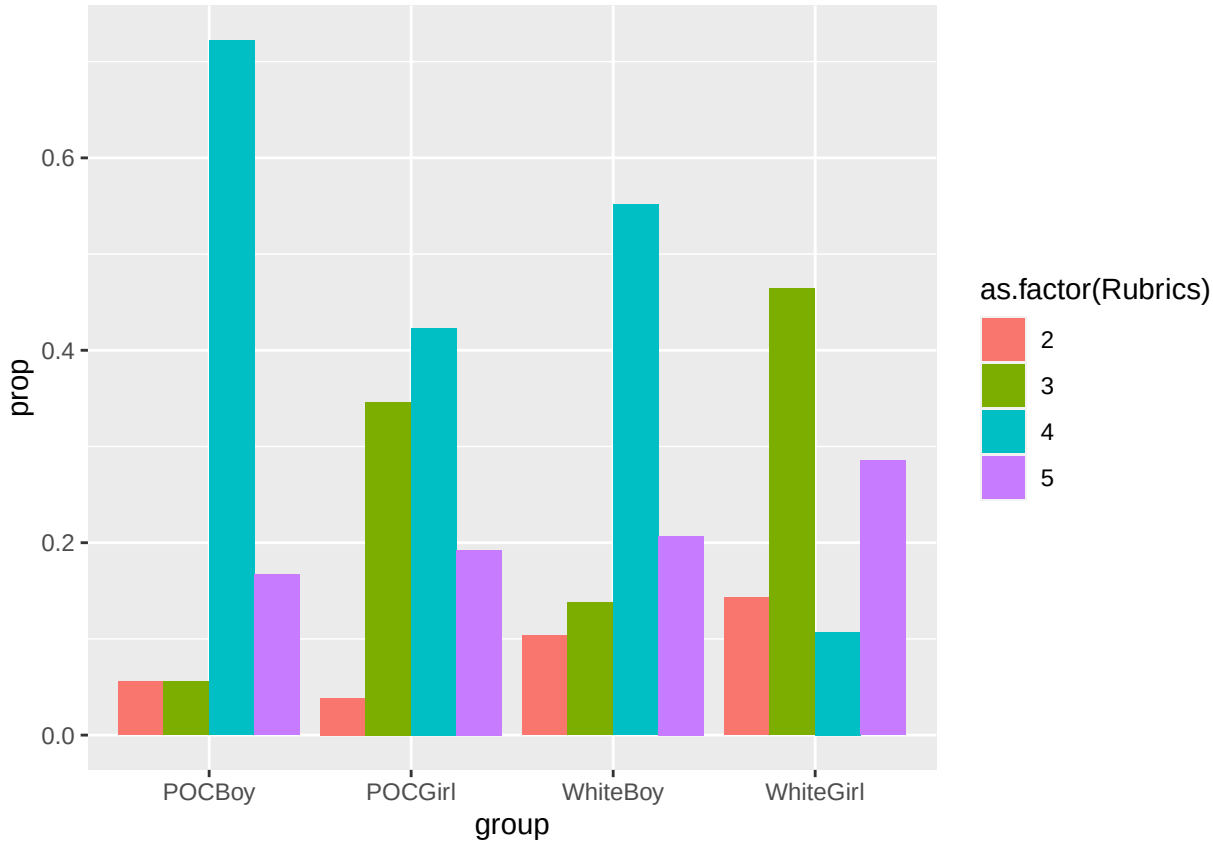

```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  group_by(School_Type) %>%
  summarize(avg_Rubrics = mean(Rubrics), avg_Grades = mean(Grades), avg_Expect = mean(Expectations), avg
```

```
## # A tibble: 2 x 6
##   School_Type avg_Rubrics avg_Grades avg_Expect avg_gsf count
##   <chr>             <dbl>      <dbl>      <dbl>   <dbl> <int>
## 1 private            3.82       3.47       3.89    3.02    66
## 2 public             3.74       3.46       3.83    2.77    35
```

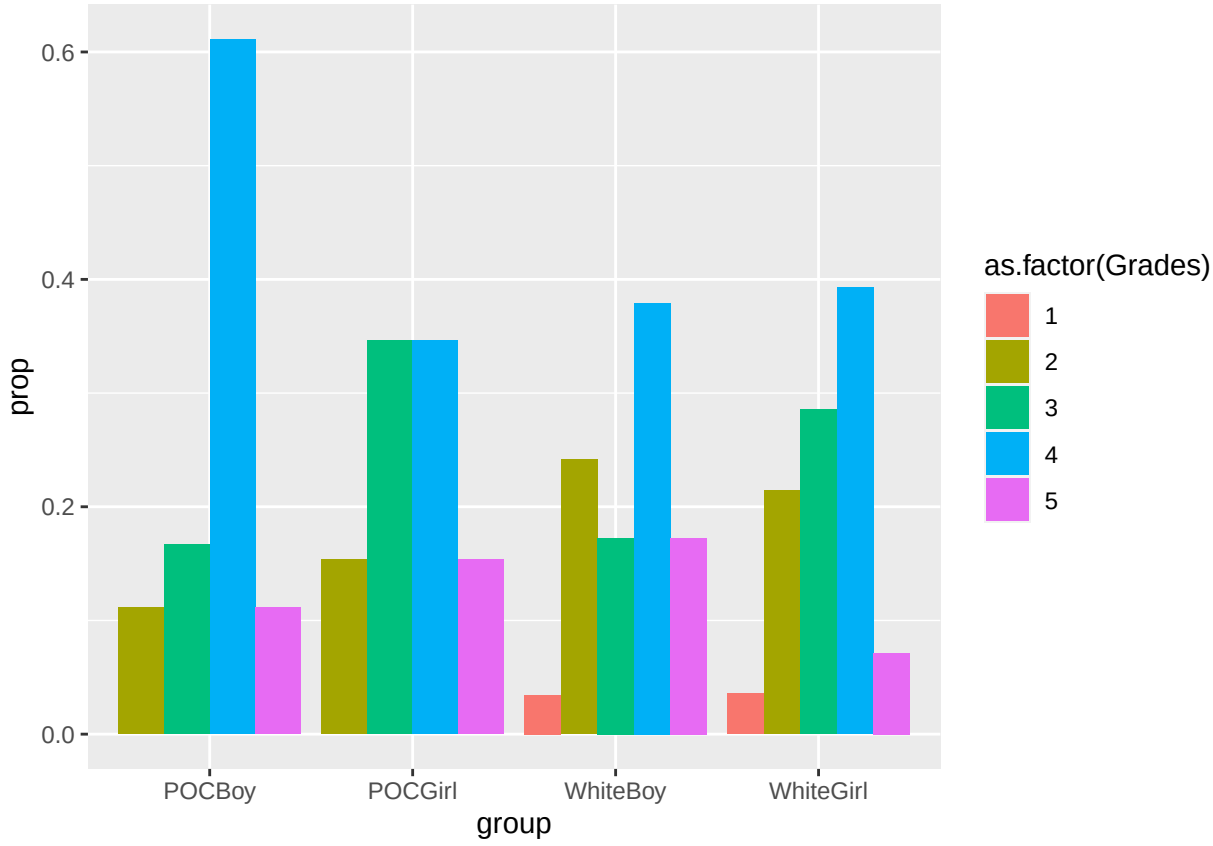
Assessment by Race + Gender

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), Gender <= 2) %>%
  group_by(POC, Gender, Rubrics) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
```

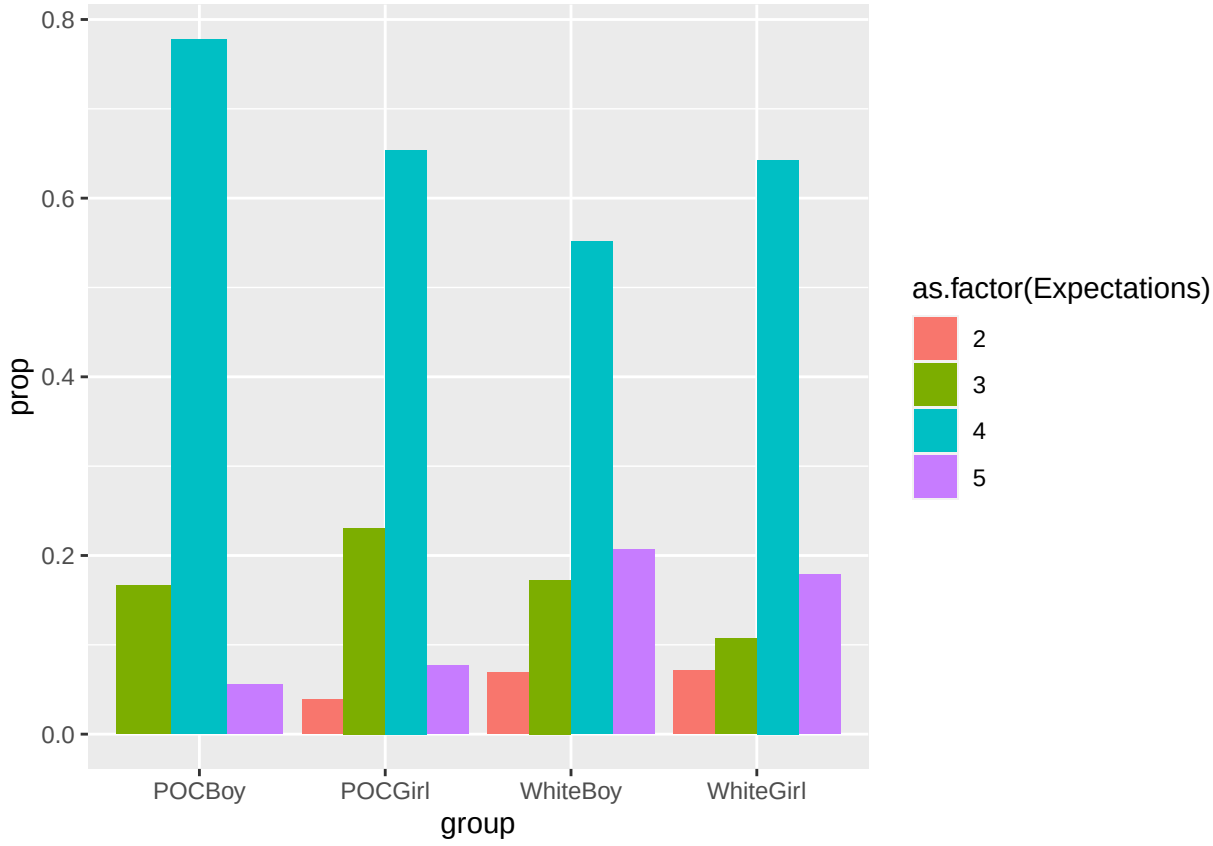
```
    POC == "White" & Gender == 1 ~ "WhiteBoy",
    POC == "White" & Gender == 2 ~ "WhiteGirl",
    POC == "POC" & Gender == 1 ~ "POCBoy",
    POC == "POC" & Gender == 2 ~ "POCGirl"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Rubrics))) +
  geom_col(position = "dodge")
```



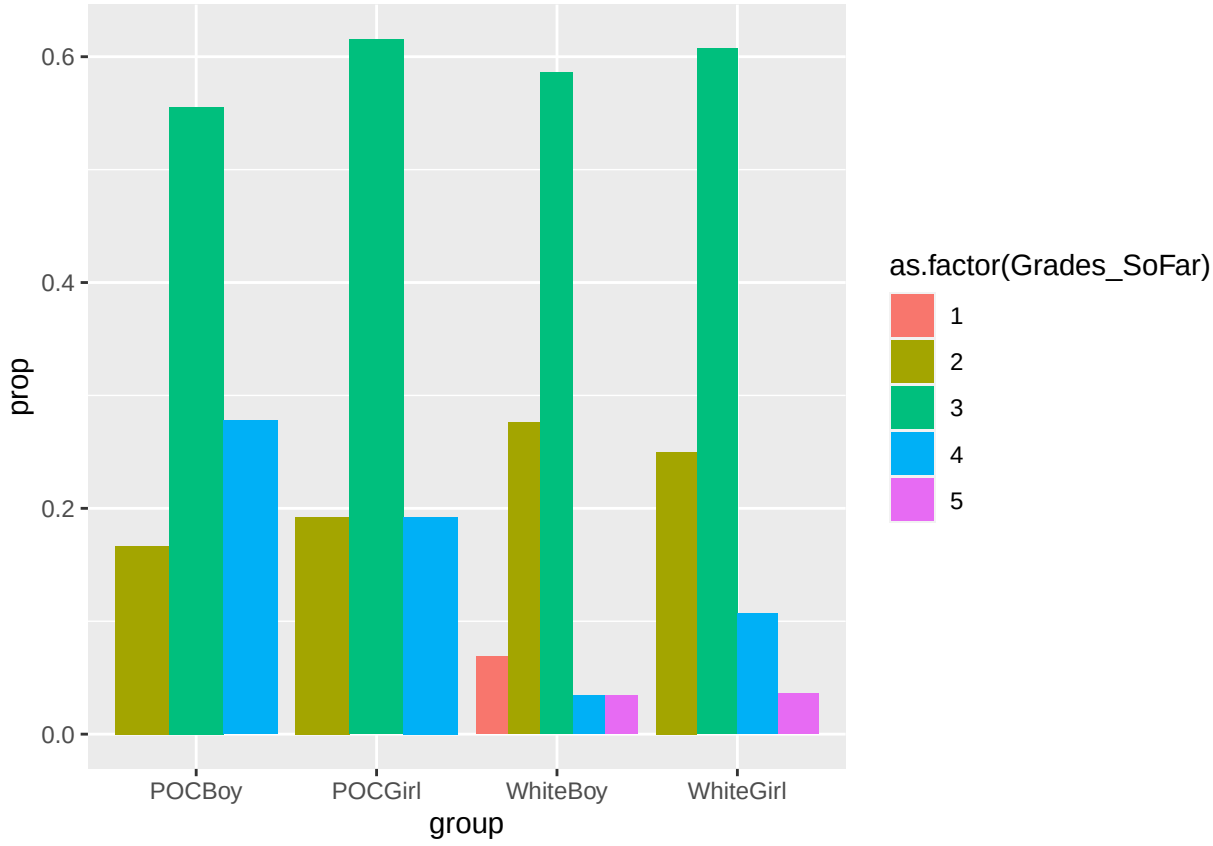

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), Gender <= 2) %>%
  group_by(POC, Gender, Grades) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & Gender == 1 ~ "WhiteBoy",
    POC == "White" & Gender == 2 ~ "WhiteGirl",
    POC == "POC" & Gender == 1 ~ "POCBoy",
    POC == "POC" & Gender == 2 ~ "POCGirl"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Grades))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), Gender <= 2) %>%
  group_by(POC, Gender, Expectations) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & Gender == 1 ~ "WhiteBoy",
    POC == "White" & Gender == 2 ~ "WhiteGirl",
    POC == "POC" & Gender == 1 ~ "POCBoy",
    POC == "POC" & Gender == 2 ~ "POCGirl"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Expectations))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), Gender <= 2) %>%
  group_by(POC, Gender, Grades_SoFar) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & Gender == 1 ~ "WhiteBoy",
    POC == "White" & Gender == 2 ~ "WhiteGirl",
    POC == "POC" & Gender == 1 ~ "POCBoy",
    POC == "POC" & Gender == 2 ~ "POCGirl"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Grades_SoFar))) +
  geom_col(position = "dodge")
```



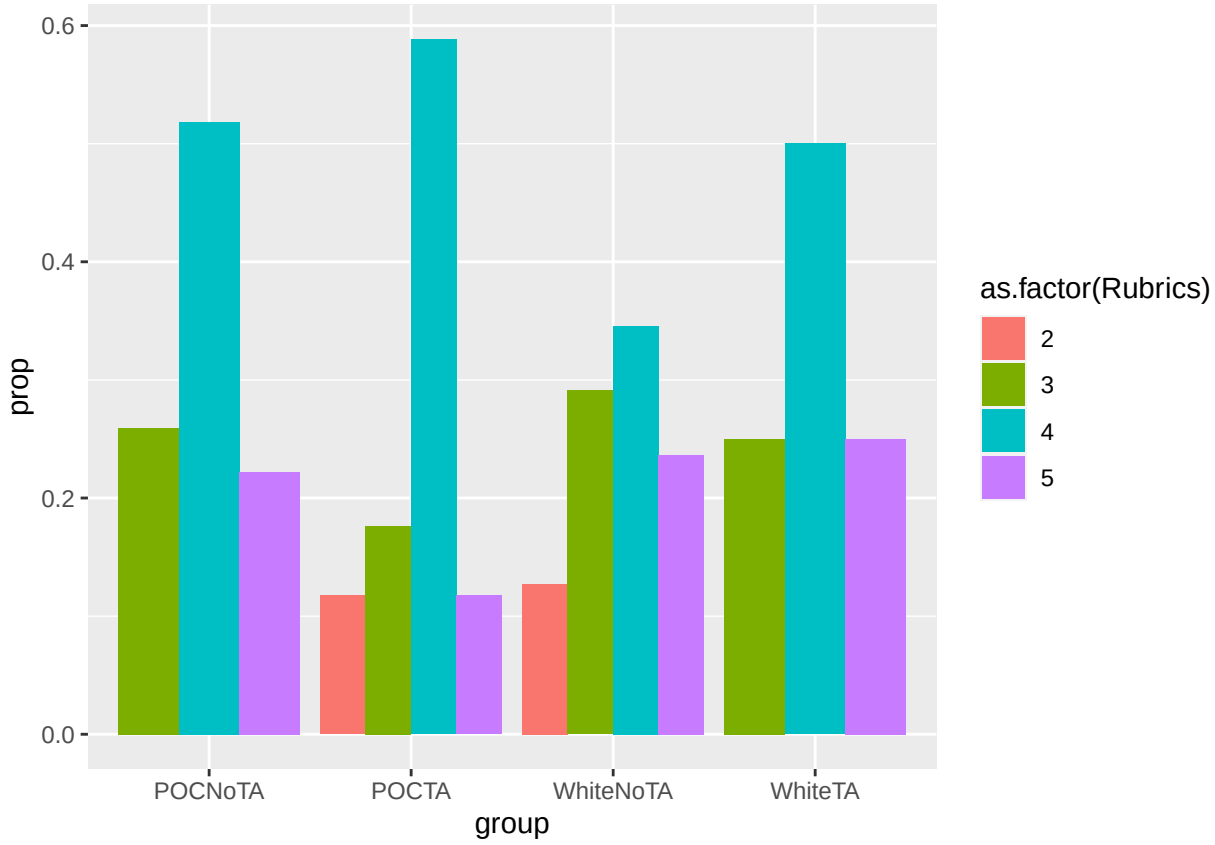

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), Gender <= 2) %>%
  group_by(POC, Gender) %>%
  summarize(avg_Rubrics = mean(Rubrics), avg_Grades = mean(Grades), avg_Expect = mean(Expectations), avg
```

```
## # A tibble: 4 x 7
## # Groups:   POC [2]
##   POC   Gender avg_Rubrics avg_Grades avg_Expect avg_gsf count
##   <chr>  <dbl>       <dbl>      <dbl>      <dbl>   <dbl> <int>
## 1 POC        1        4          3.72       3.89    3.11    18
## 2 POC        2        3.77       3.5        3.77    3       26
## 3 White      1        3.86       3.41       3.90    2.69    29
## 4 White      2        3.54       3.25       3.93    2.93    28
```

Assessment by Race + TA

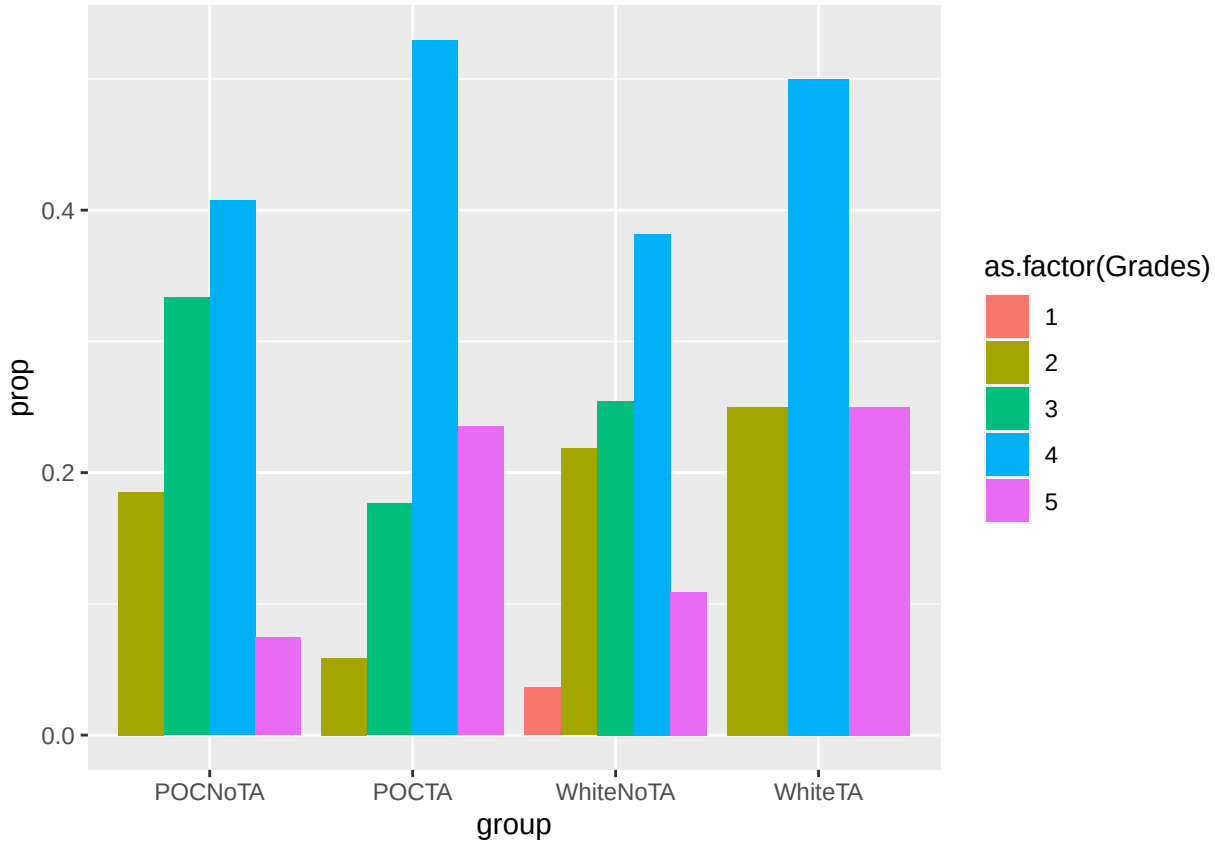
```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
```

```
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(TA)) %>%
  group_by(POC, TA, Rubrics) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & TA == 1 ~ "WhiteTA",
    POC == "White" & TA == 2 ~ "WhiteNoTA",
    POC == "POC" & TA == 1 ~ "POCTA",
    POC == "POC" & TA == 2 ~ "POCNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Rubrics))) +
  geom_col(position = "dodge")
```

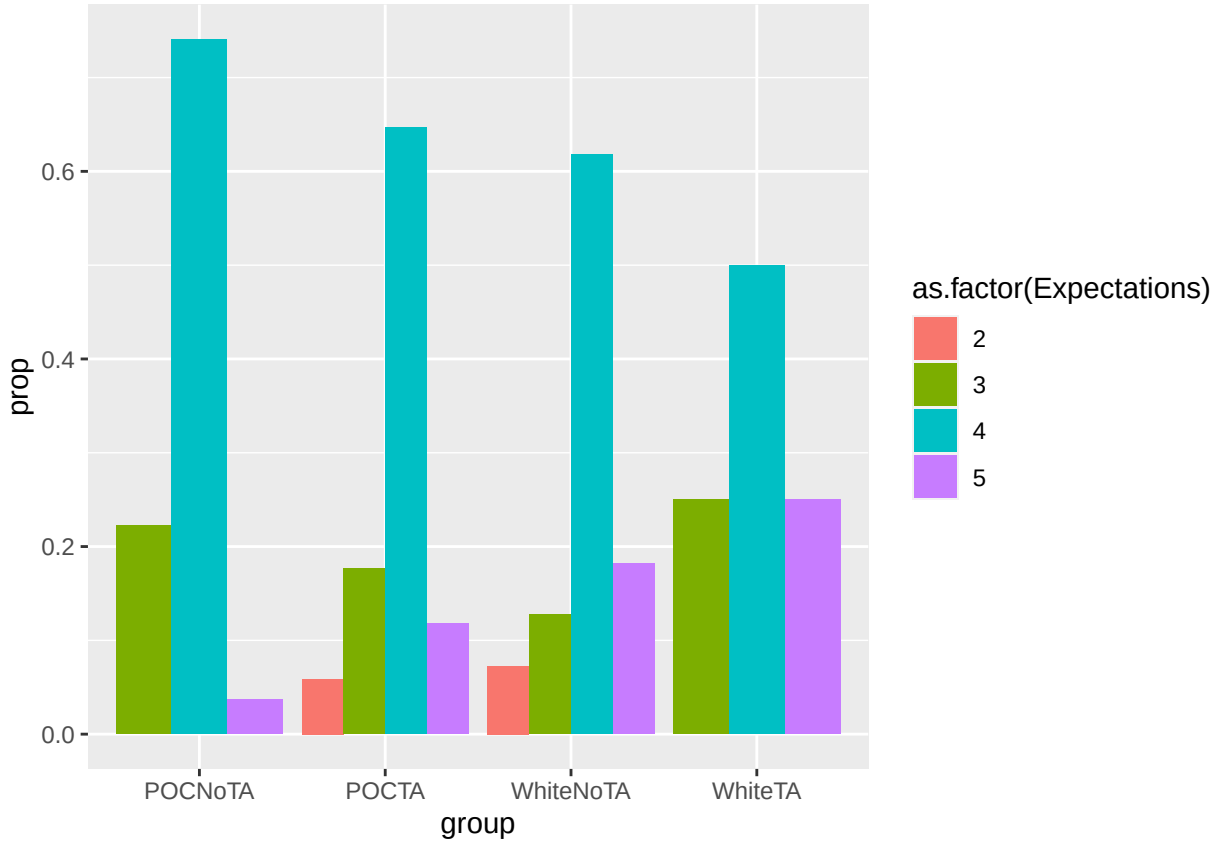



```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(TA)) %>%
  group_by(POC, TA, Grades) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
```

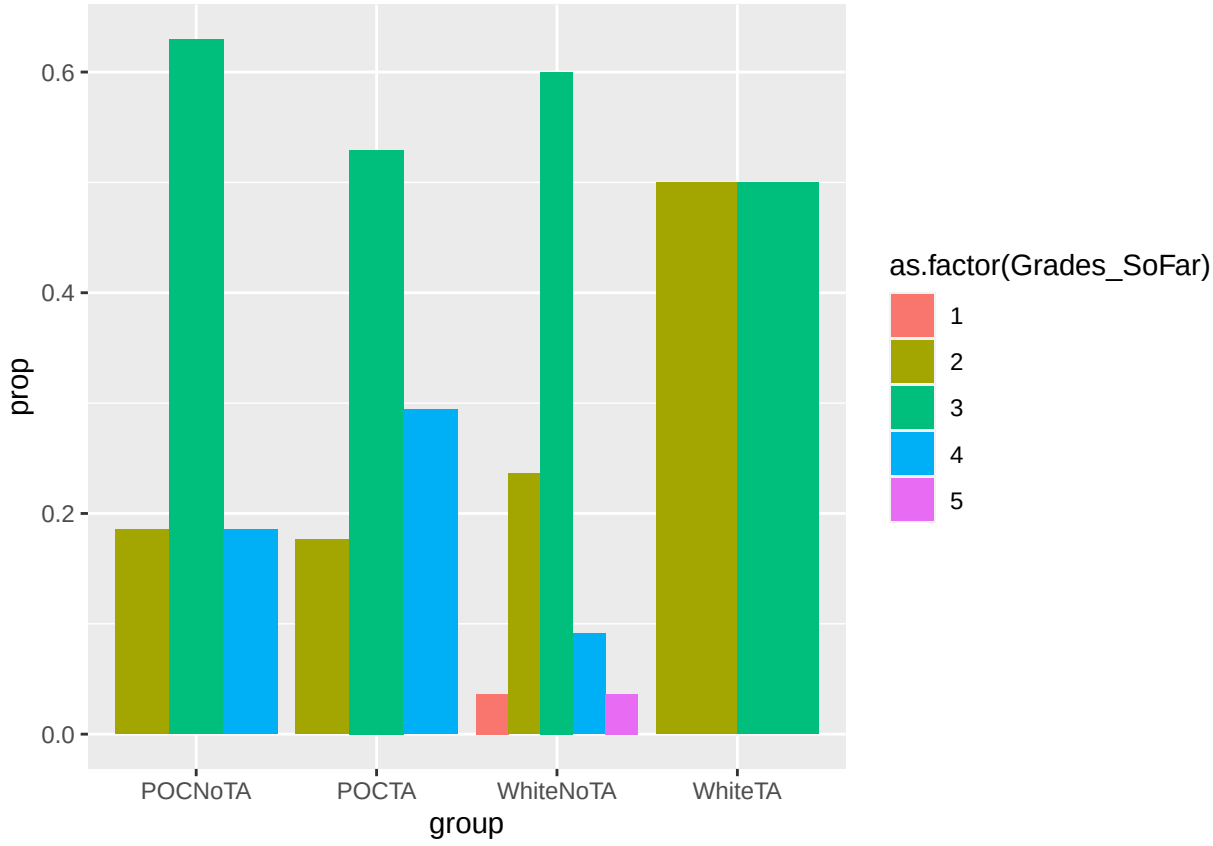
```
    POC == "White" & TA == 1 ~ "WhiteTA",
    POC == "White" & TA == 2 ~ "WhiteNoTA",
    POC == "POC" & TA == 1 ~ "POCTA",
    POC == "POC" & TA == 2 ~ "POCNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Grades))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(TA)) %>%
  group_by(POC, TA, Expectations) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & TA == 1 ~ "WhiteTA",
    POC == "White" & TA == 2 ~ "WhiteNoTA",
    POC == "POC" & TA == 1 ~ "POCTA",
    POC == "POC" & TA == 2 ~ "POCNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Expectations))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(TA)) %>%
  group_by(POC, TA, Grades_SoFar) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & TA == 1 ~ "WhiteTA",
    POC == "White" & TA == 2 ~ "WhiteNoTA",
    POC == "POC" & TA == 1 ~ "POCTA",
    POC == "POC" & TA == 2 ~ "POCNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Grades_SoFar))) +
  geom_col(position = "dodge")
```



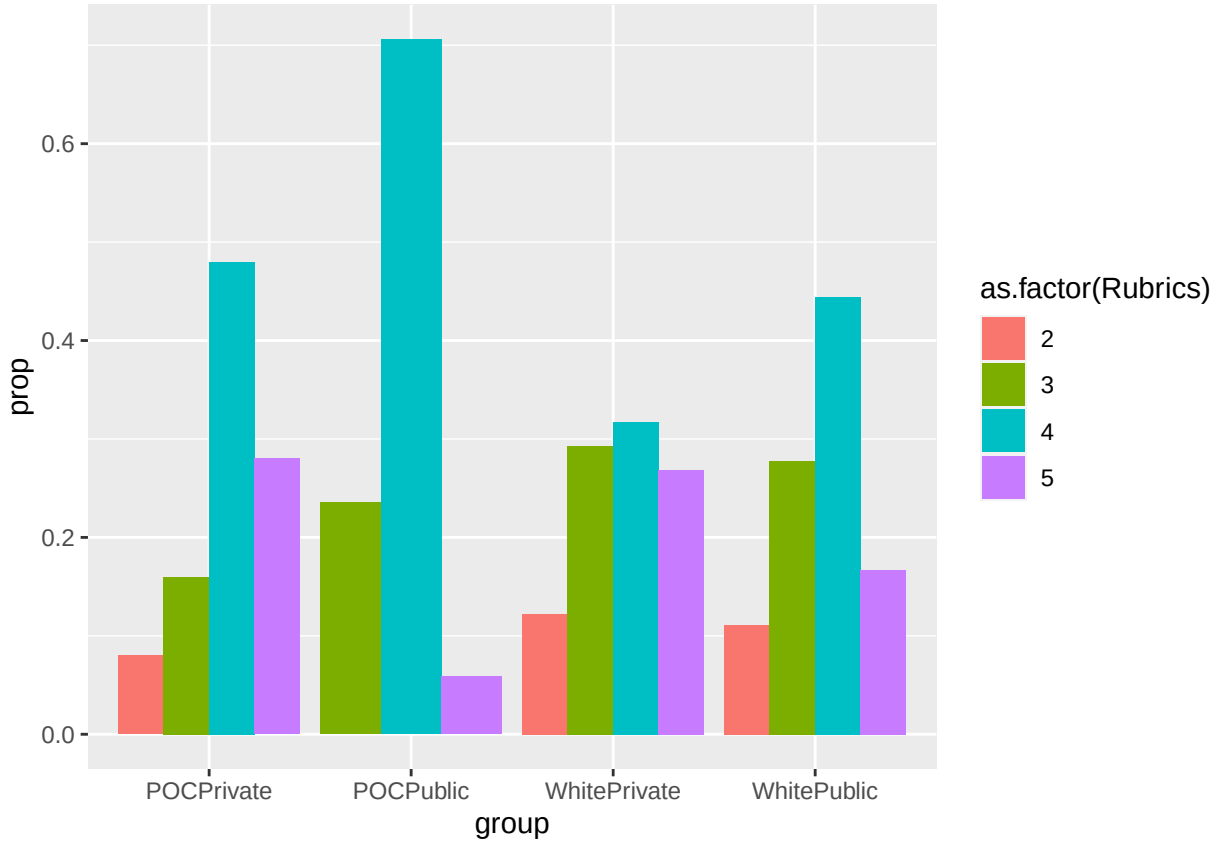

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(TA)) %>%
  group_by(POC, TA) %>%
  summarize(avg_Rubrics = mean(Rubrics), avg_Grades = mean(Grades), avg_Expect = mean(Expectations), avg
```

```
## # A tibble: 4 x 7
## # Groups:   POC [2]
##   POC      TA avg_Rubrics avg_Grades avg_Expect avg_gsf count
##   <chr> <dbl>       <dbl>      <dbl>      <dbl>   <dbl> <int>
## 1 POC       1        3.71       3.94       3.82    3.12    17
## 2 POC       2        3.96       3.37       3.81    3       27
## 3 White     1        4          3.75       4       2.5      4
## 4 White     2        3.69       3.31       3.91    2.85    55
```

Assessment by Race + School Type

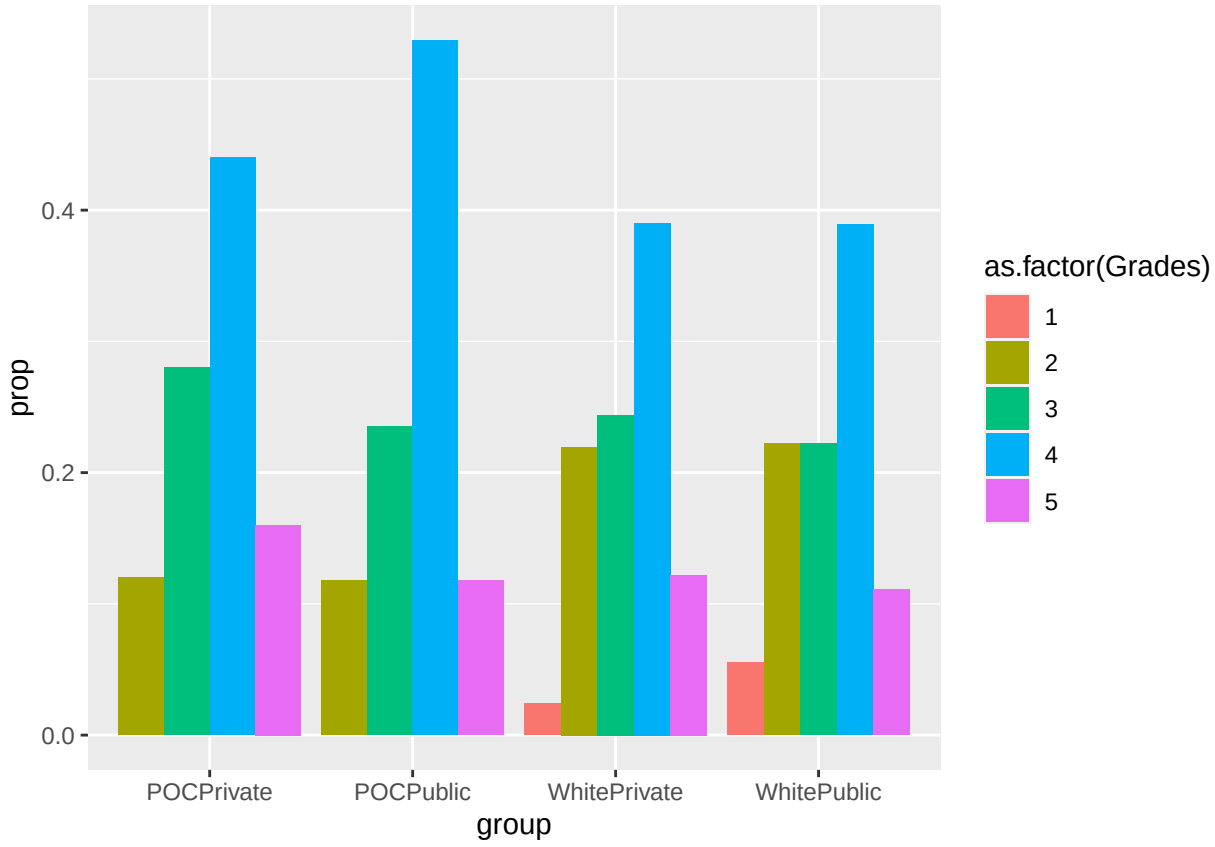
```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
```

```
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(School_Type)) %>%
  group_by(POC, School_Type, Rubrics) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & School_Type == "public" ~ "WhitePublic",
    POC == "White" & School_Type == "private" ~ "WhitePrivate",
    POC == "POC" & School_Type == "public" ~ "POCPublic",
    POC == "POC" & School_Type == "private" ~ "POCPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Rubrics))) +
  geom_col(position = "dodge")
```

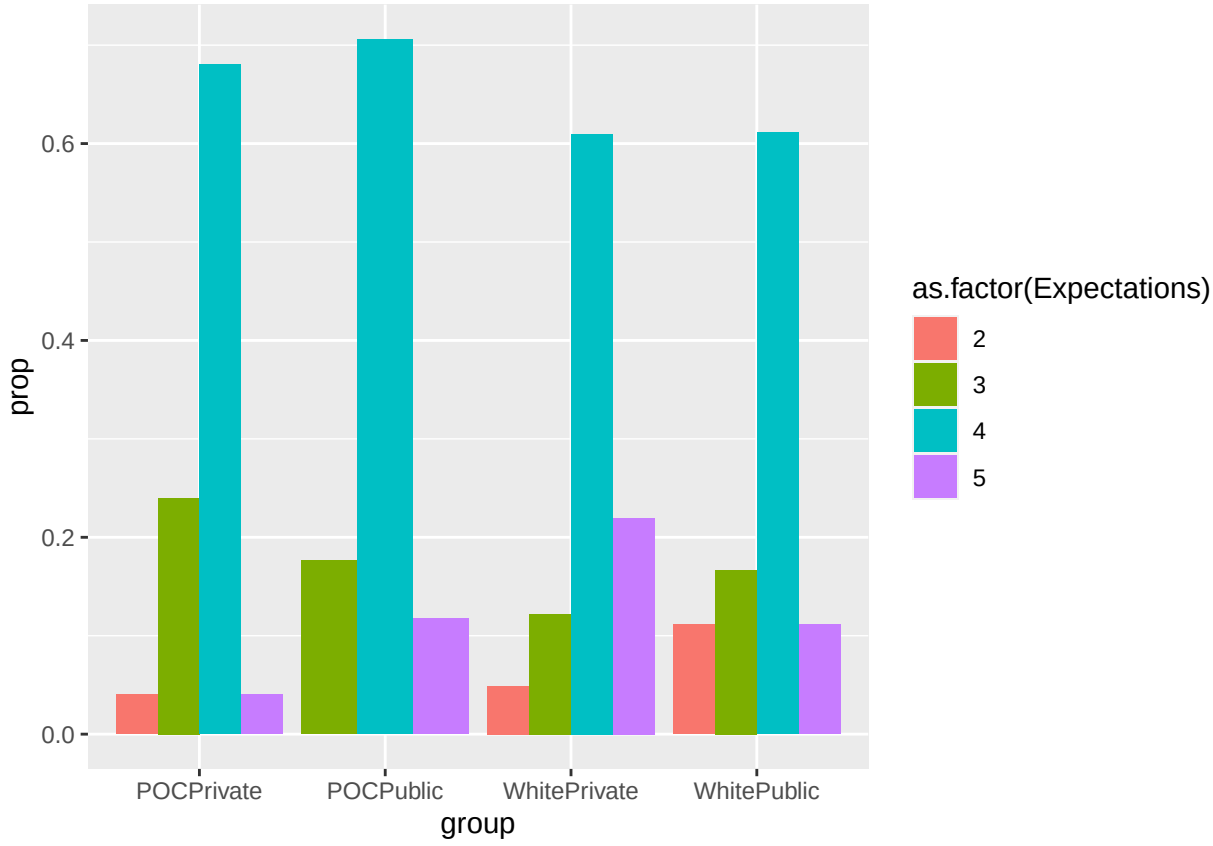



```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(School_Type)) %>%
  group_by(POC, School_Type, Grades) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
```

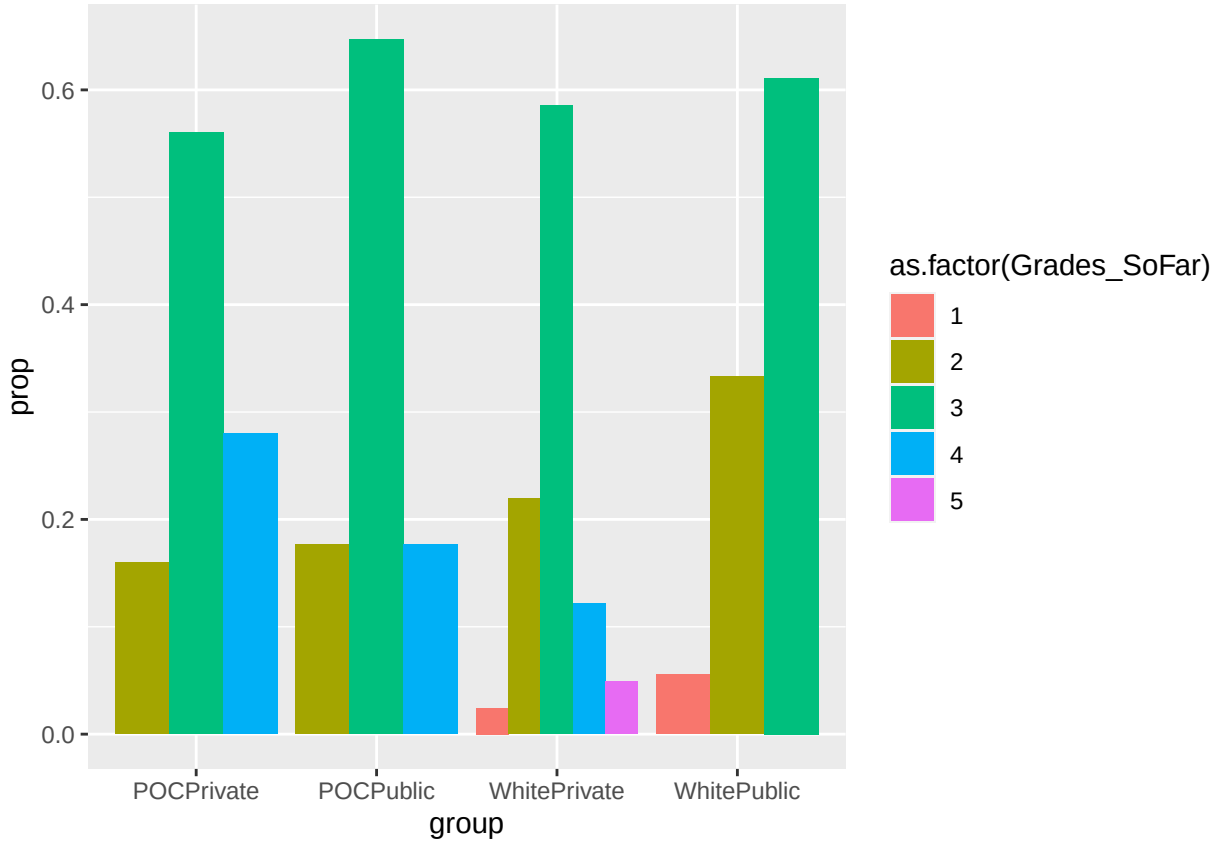
```
    POC == "White" & School_Type == "public" ~ "WhitePublic",
    POC == "White" & School_Type == "private" ~ "WhitePrivate",
    POC == "POC" & School_Type == "public" ~ "POCPublic",
    POC == "POC" & School_Type == "private" ~ "POCPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Grades))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(School_Type)) %>%
  group_by(POC, School_Type, Expectations) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & School_Type == "public" ~ "WhitePublic",
    POC == "White" & School_Type == "private" ~ "WhitePrivate",
    POC == "POC" & School_Type == "public" ~ "POCPublic",
    POC == "POC" & School_Type == "private" ~ "POCPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Expectations))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(School_Type)) %>%
  group_by(POC, School_Type, Grades_SoFar) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & School_Type == "public" ~ "WhitePublic",
    POC == "White" & School_Type == "private" ~ "WhitePrivate",
    POC == "POC" & School_Type == "public" ~ "POCPublic",
    POC == "POC" & School_Type == "private" ~ "POCPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Grades_SoFar))) +
  geom_col(position = "dodge")
```



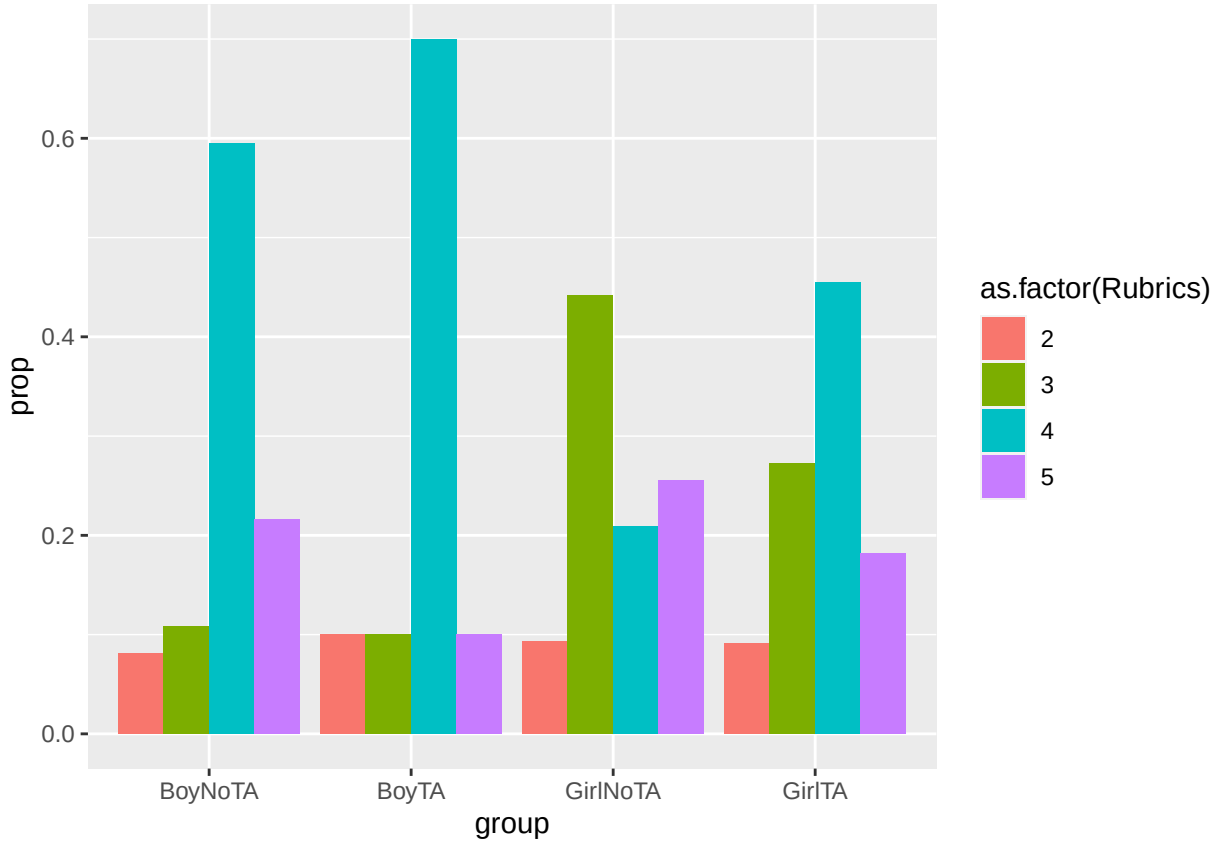

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(School_Type)) %>%
  group_by(POC, School_Type) %>%
  summarize(avg_Rubrics = mean(Rubrics), avg_Grades = mean(Grades), avg_Expect = mean(Expectations), avg
```

```
## # A tibble: 4 x 7
## # Groups:   POC [2]
##   POC   School_Type avg_Rubrics avg_Grades avg_Expect avg_gsf count
##   <chr> <chr>             <dbl>      <dbl>      <dbl>   <dbl> <int>
## 1 POC   private            3.96       3.64       3.72    3.12    25
## 2 POC   public             3.82       3.65       3.94    3       17
## 3 White private            3.73       3.37       4       2.95    41
## 4 White public             3.67       3.28       3.72    2.56    18
```

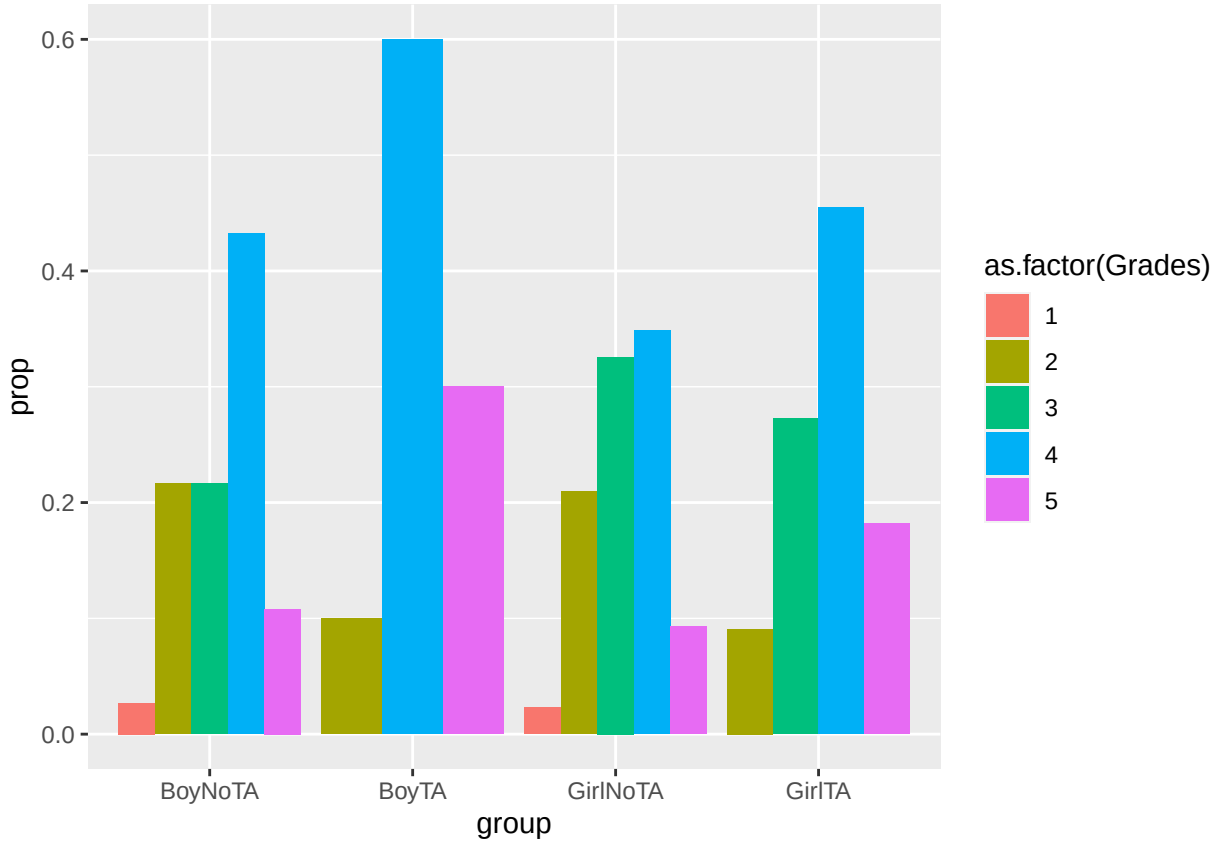
Assessment by Gender + TA

```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(TA)) %>%
  group_by(Gender, TA, Rubrics) %>%
```

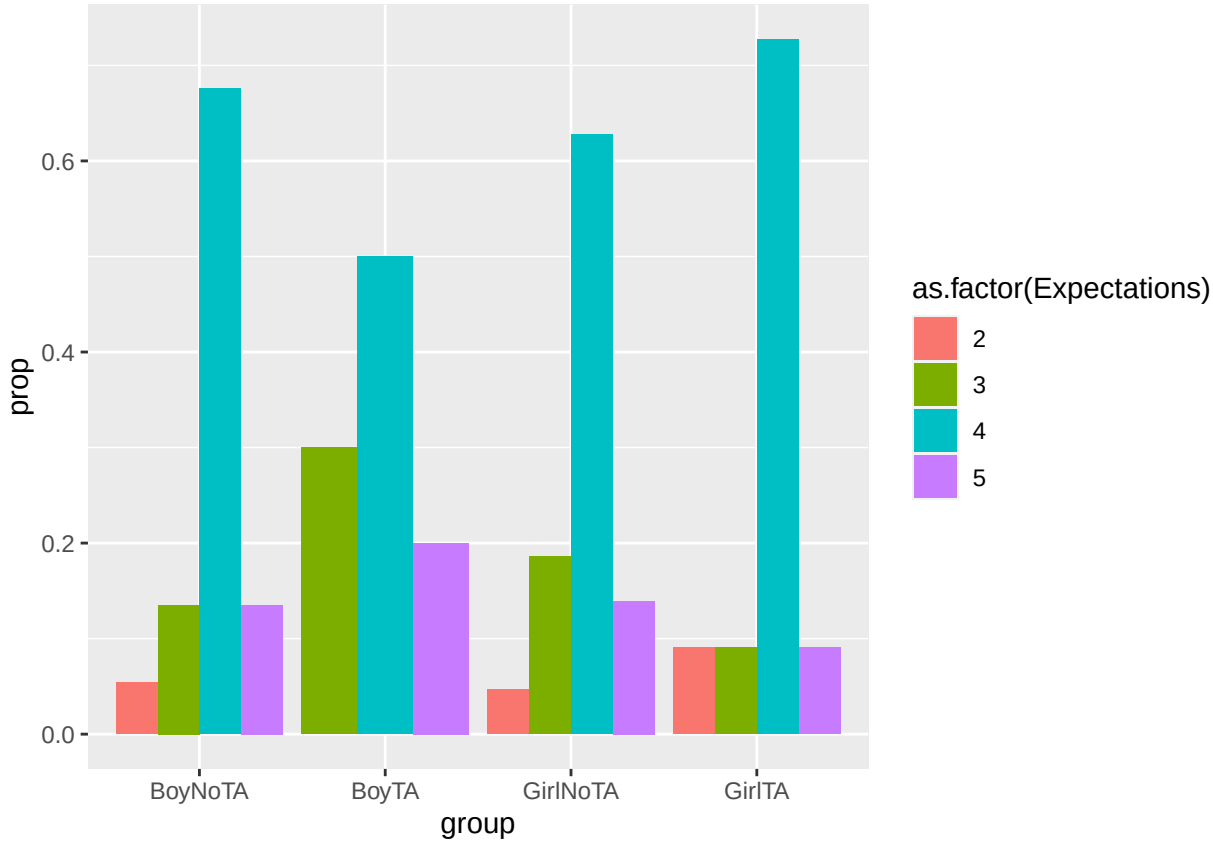
```
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & TA == 1 ~ "BoyTA",
    Gender == 1 & TA == 2 ~ "BoyNoTA",
    Gender == 2 & TA == 1 ~ "GirlTA",
    Gender == 2 & TA == 2 ~ "GirlNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Rubrics))) +
  geom_col(position = "dodge")
```



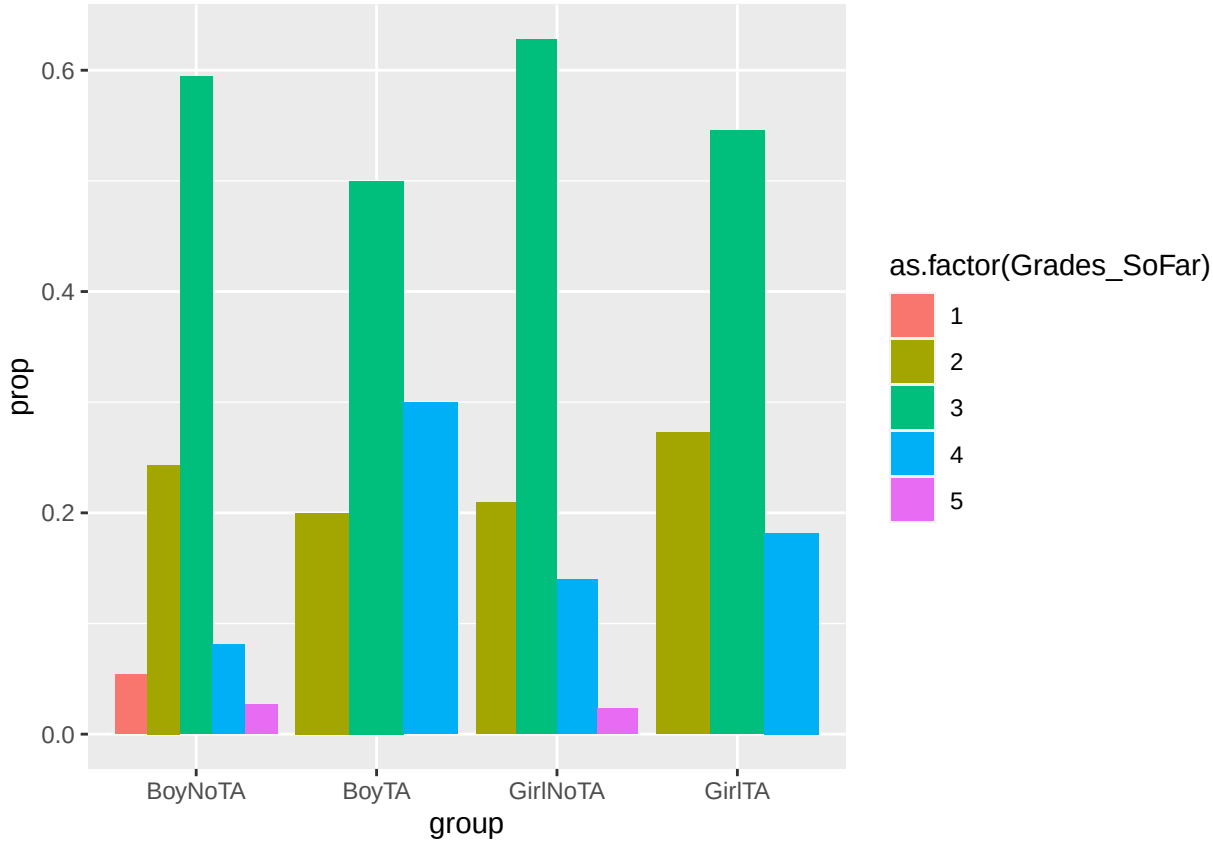

```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(TA)) %>%
  group_by(Gender, TA, Grades) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & TA == 1 ~ "BoyTA",
    Gender == 1 & TA == 2 ~ "BoyNoTA",
    Gender == 2 & TA == 1 ~ "GirlTA",
    Gender == 2 & TA == 2 ~ "GirlNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Grades))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(TA)) %>%
  group_by(Gender, TA, Expectations) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & TA == 1 ~ "BoyTA",
    Gender == 1 & TA == 2 ~ "BoyNoTA",
    Gender == 2 & TA == 1 ~ "GirlTA",
    Gender == 2 & TA == 2 ~ "GirlNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Expectations))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(TA)) %>%
  group_by(Gender, TA, Grades_SoFar) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & TA == 1 ~ "BoyTA",
    Gender == 1 & TA == 2 ~ "BoyNoTA",
    Gender == 2 & TA == 1 ~ "GirlTA",
    Gender == 2 & TA == 2 ~ "GirlNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Grades_SoFar))) +
  geom_col(position = "dodge")
```



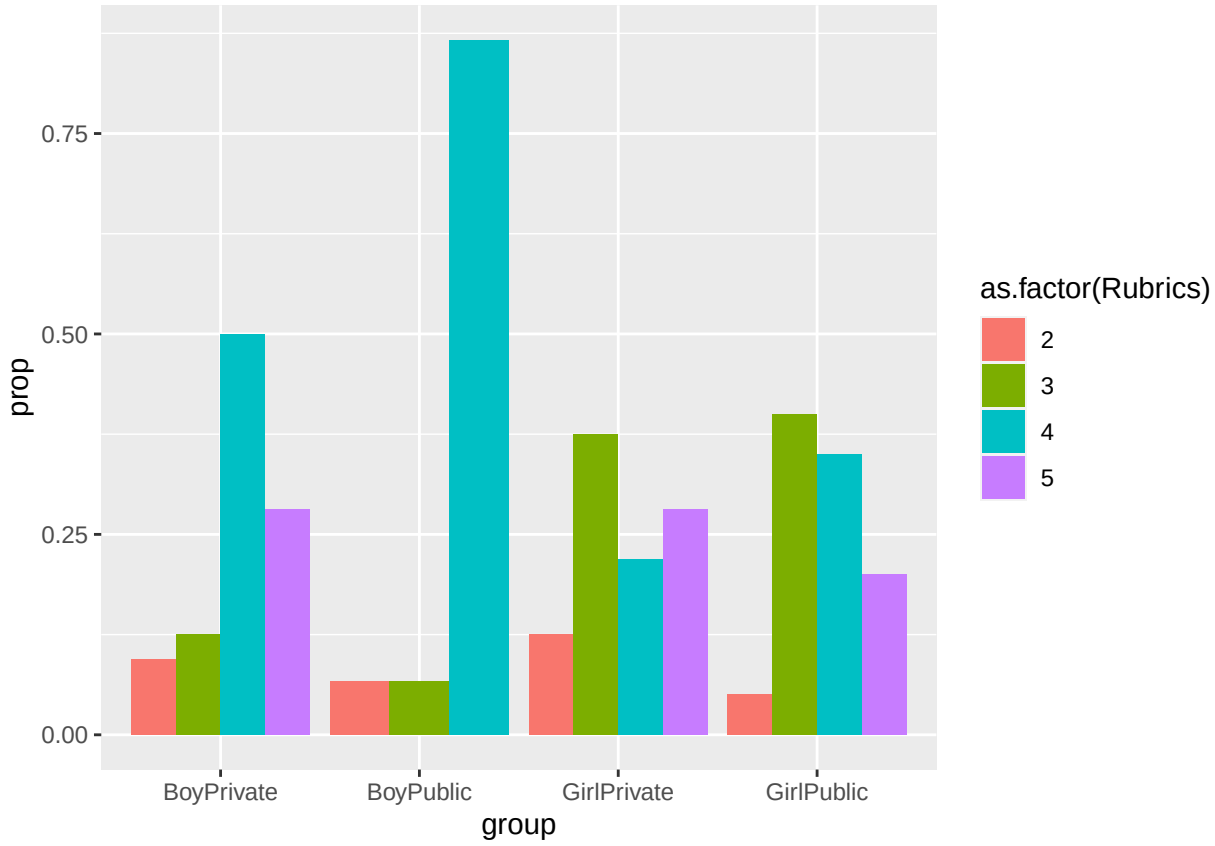

```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(TA)) %>%
  group_by(Gender, TA) %>%
  summarize(avg_Rubrics = mean(Rubrics), avg_Grades = mean(Grades), avg_Expect = mean(Expectations), avg
```

```
## # A tibble: 4 x 7
## # Groups:   Gender [2]
##   Gender    TA avg_Rubrics avg_Grades avg_Expect avg_gsf count
##    <dbl> <dbl>       <dbl>      <dbl>      <dbl>   <dbl> <int>
## 1      1     1        3.8        4.1        3.9     3.1     10
## 2      1     2        3.95       3.38       3.89    2.78    37
## 3      2     1        3.73       3.73       3.82    2.91    11
## 4      2     2        3.63       3.28       3.86    2.98    43
```

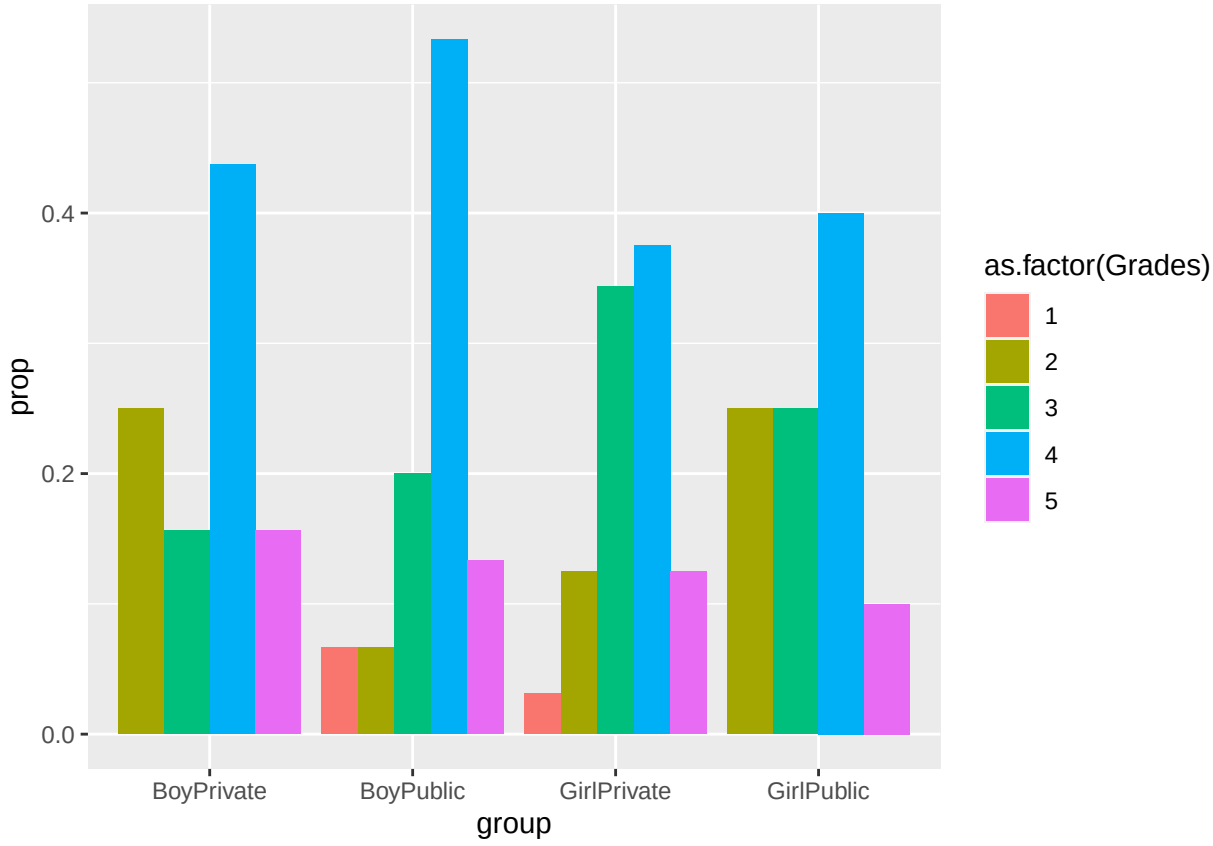
Assessment by Gender + School Type

```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(School_Type)) %>%
  group_by(Gender, School_Type, Rubrics) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & School_Type == "public" ~ "BoyPublic",
```

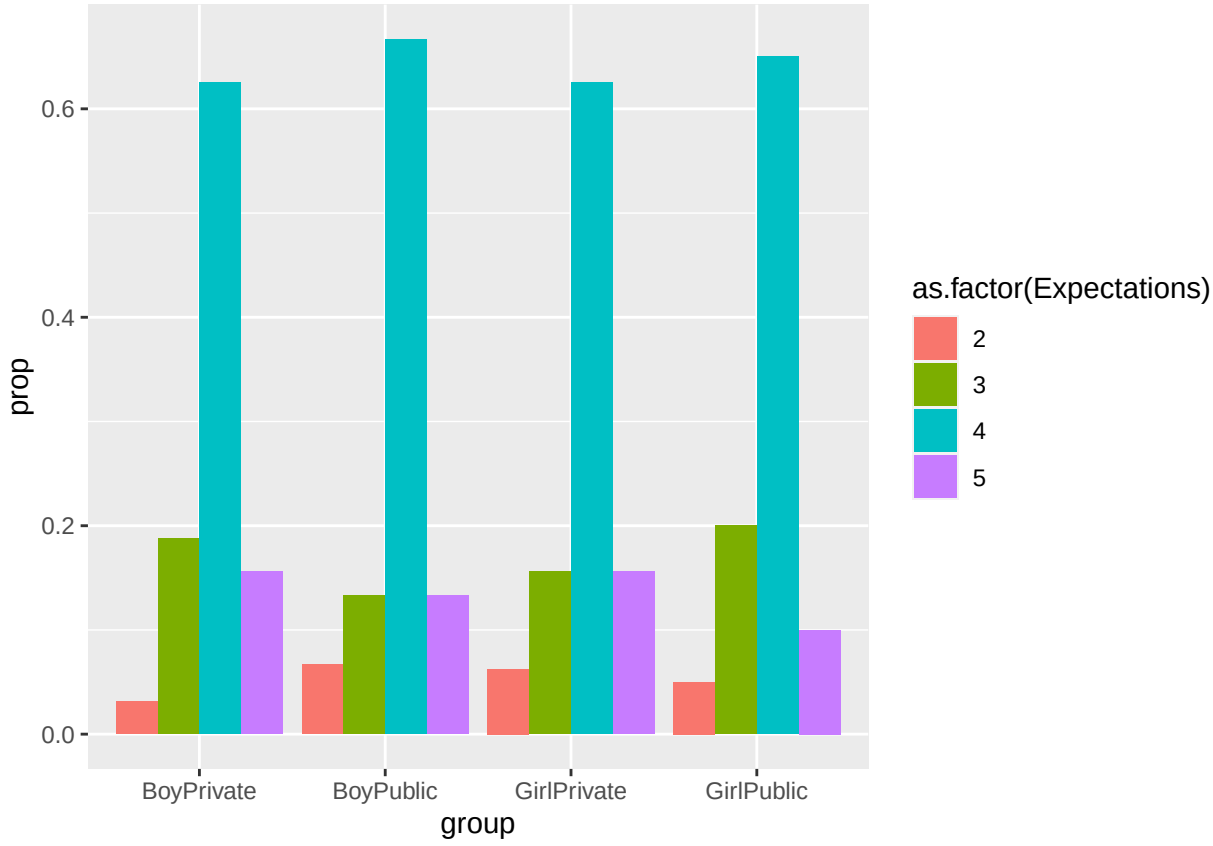
```
    Gender == 1 & School_Type == "private" ~ "BoyPrivate",
    Gender == 2 & School_Type == "public" ~ "GirlPublic",
    Gender == 2 & School_Type == "private" ~ "GirlPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Rubrics))) +
  geom_col(position = "dodge")
```



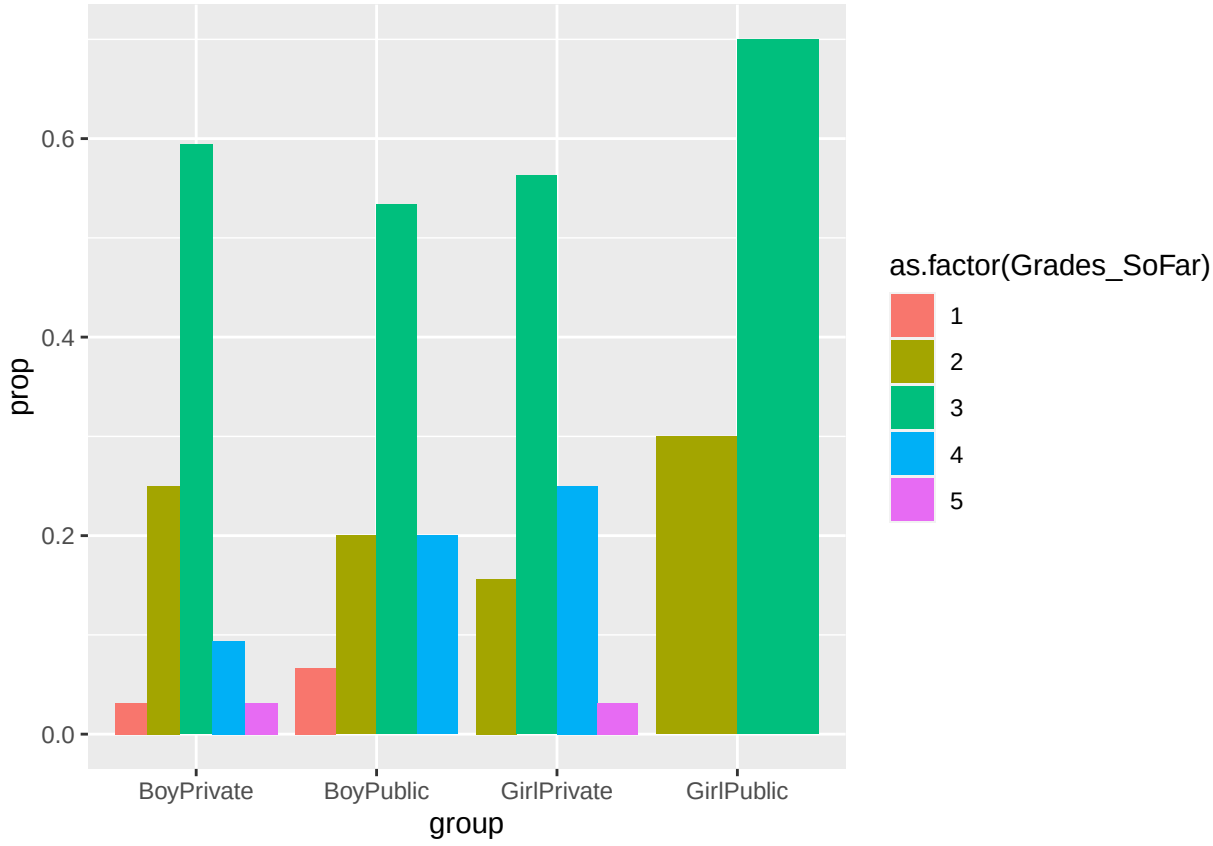

```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(School_Type)) %>%
  group_by(Gender, School_Type, Grades) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & School_Type == "public" ~ "BoyPublic",
    Gender == 1 & School_Type == "private" ~ "BoyPrivate",
    Gender == 2 & School_Type == "public" ~ "GirlPublic",
    Gender == 2 & School_Type == "private" ~ "GirlPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Grades))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(School_Type)) %>%
  group_by(Gender, School_Type, Expectations) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & School_Type == "public" ~ "BoyPublic",
    Gender == 1 & School_Type == "private" ~ "BoyPrivate",
    Gender == 2 & School_Type == "public" ~ "GirlPublic",
    Gender == 2 & School_Type == "private" ~ "GirlPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Expectations))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(School_Type)) %>%
  group_by(Gender, School_Type, Grades_SoFar) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & School_Type == "public" ~ "BoyPublic",
    Gender == 1 & School_Type == "private" ~ "BoyPrivate",
    Gender == 2 & School_Type == "public" ~ "GirlPublic",
    Gender == 2 & School_Type == "private" ~ "GirlPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Grades_SoFar))) +
  geom_col(position = "dodge")
```



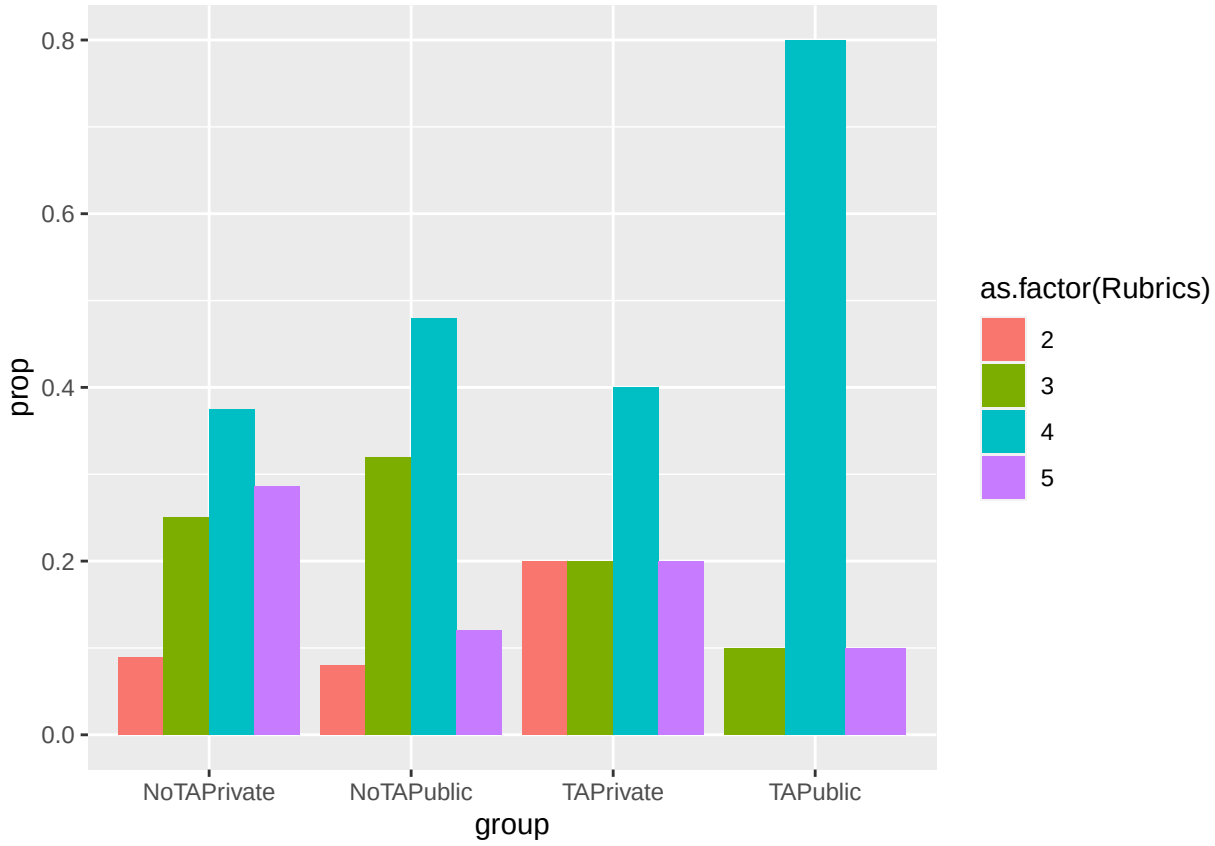

```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(School_Type)) %>%
  group_by(Gender, School_Type) %>%
  summarize(avg_Rubrics = mean(Rubrics), avg_Grades = mean(Grades), avg_Expect = mean(Expectations), avg
```

```
## # A tibble: 4 x 7
## # Groups:   Gender [2]
##   Gender School_Type avg_Rubrics avg_Grades avg_Expect avg_gsf count
##    <dbl> <chr>             <dbl>      <dbl>      <dbl>   <dbl> <int>
## 1      1 private            3.97       3.5        3.91    2.84    32
## 2      1 public             3.8        3.6        3.87    2.87    15
## 3      2 private            3.66       3.44       3.88    3.16    32
## 4      2 public             3.7        3.35       3.8     2.7     20
```

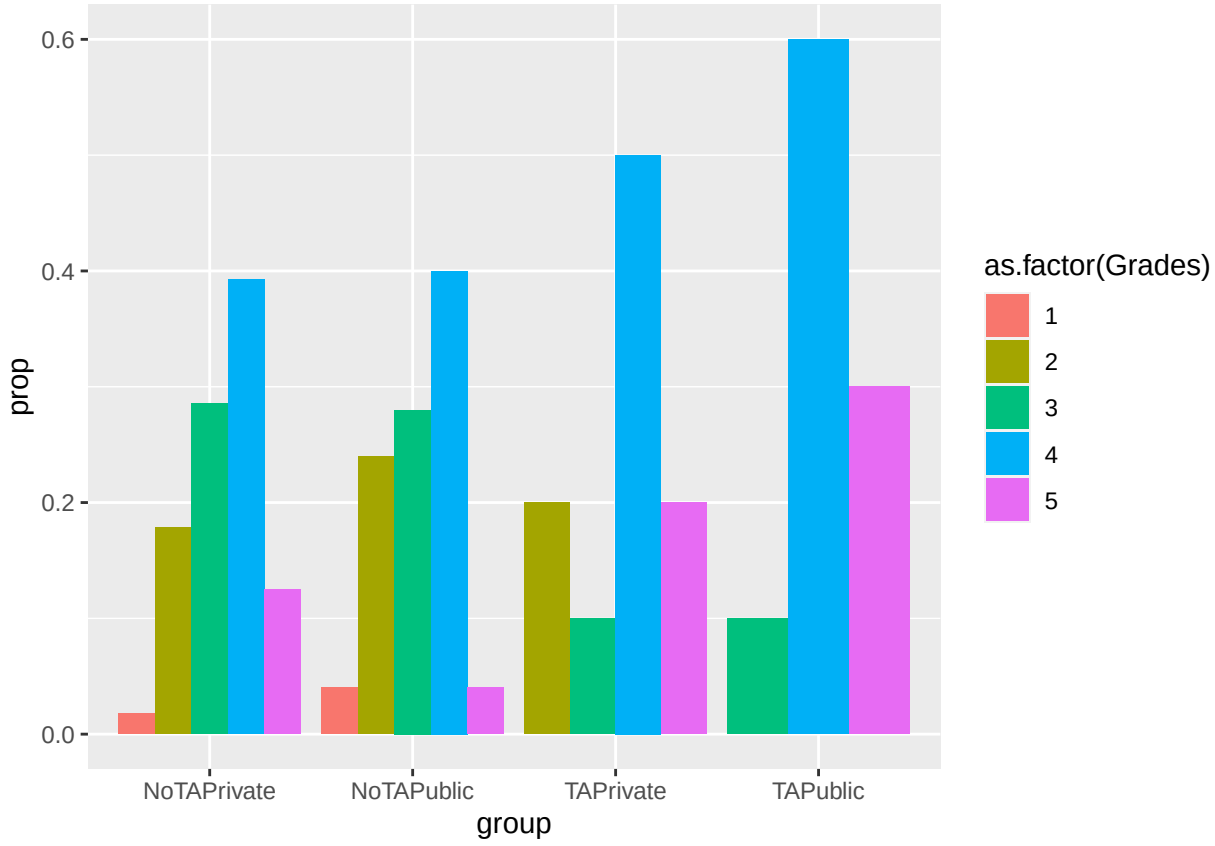
Assessment by TA + School Type

```
g9gf_2024 %>%
  filter(!is.na(TA), !is.na(School_Type)) %>%
  group_by(TA, School_Type, Rubrics) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    TA == 1 & School_Type == "public" ~ "TAPublic",
```

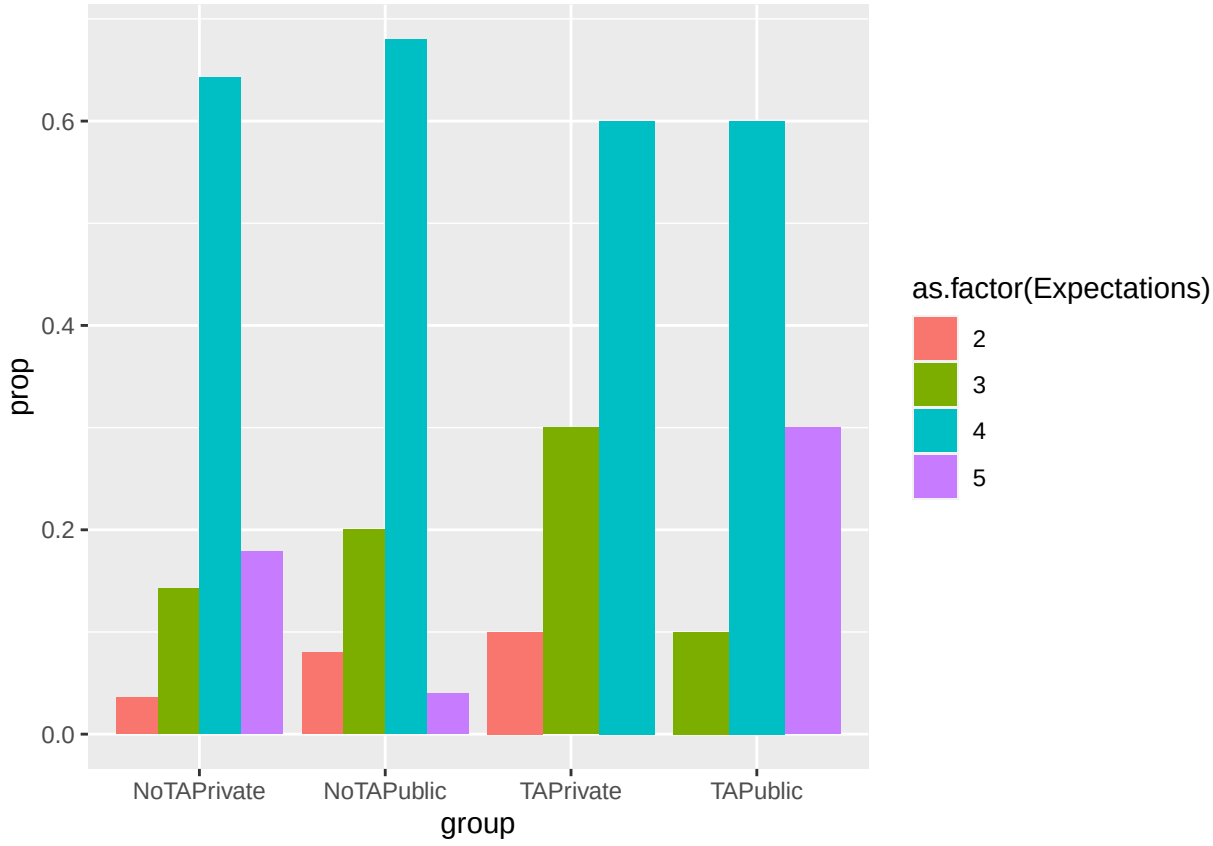
```
    TA == 2 & School_Type == "public" ~ "NoTAPublic",
    TA == 1 & School_Type == "private" ~ "TAPrivate",
    TA == 2 & School_Type == "private" ~ "NoTAPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Rubrics))) +
  geom_col(position = "dodge")
```



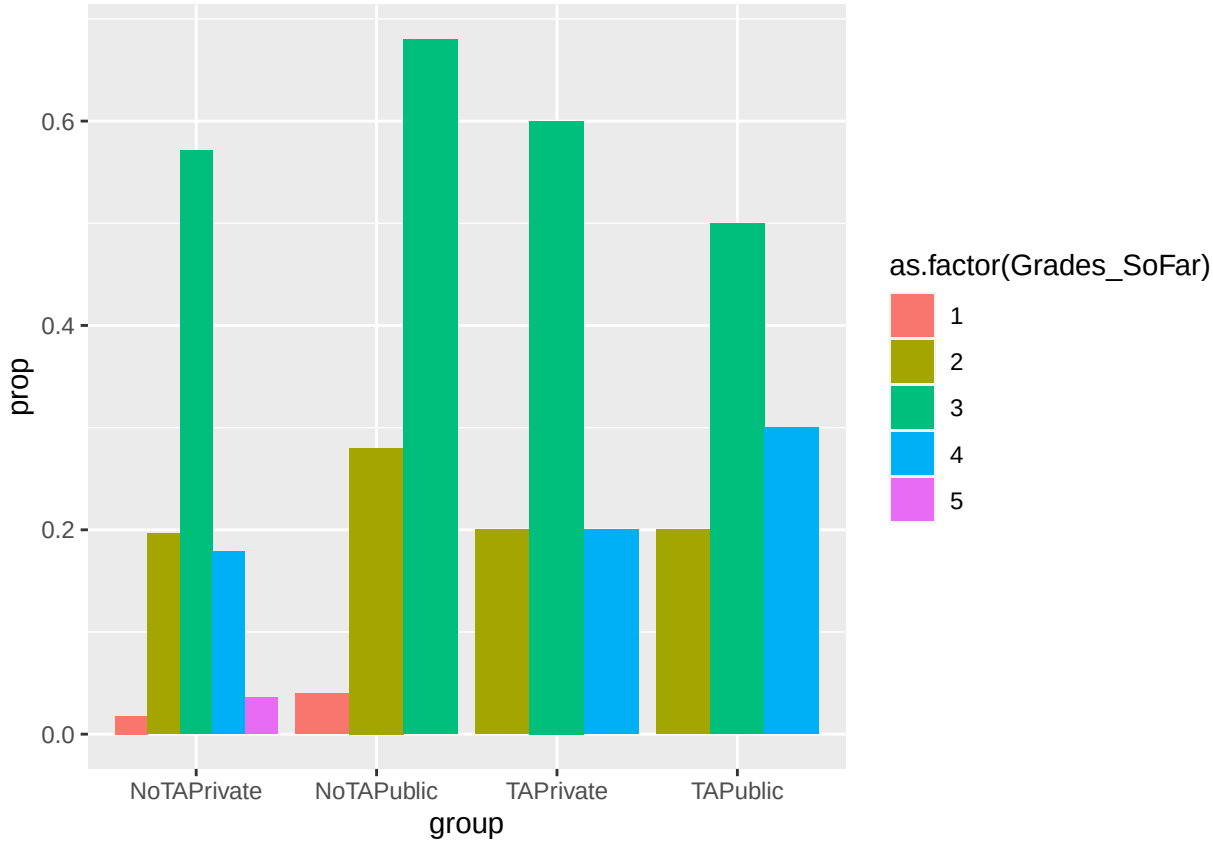

```
g9gf_2024 %>%
  filter(!is.na(TA), !is.na(School_Type)) %>%
  group_by(TA, School_Type, Grades) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    TA == 1 & School_Type == "public" ~ "TAPublic",
    TA == 2 & School_Type == "public" ~ "NoTAPublic",
    TA == 1 & School_Type == "private" ~ "TAPrivate",
    TA == 2 & School_Type == "private" ~ "NoTAPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Grades))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(TA), !is.na(School_Type)) %>%
  group_by(TA, School_Type, Expectations) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    TA == 1 & School_Type == "public" ~ "TAPublic",
    TA == 2 & School_Type == "public" ~ "NoTAPublic",
    TA == 1 & School_Type == "private" ~ "TAPrivate",
    TA == 2 & School_Type == "private" ~ "NoTAPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Expectations))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(TA), !is.na(School_Type)) %>%
  group_by(TA, School_Type, Grades_SoFar) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    TA == 1 & School_Type == "public" ~ "TAPublic",
    TA == 2 & School_Type == "public" ~ "NoTAPublic",
    TA == 1 & School_Type == "private" ~ "TAPrivate",
    TA == 2 & School_Type == "private" ~ "NoTAPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Grades_SoFar))) +
  geom_col(position = "dodge")
```



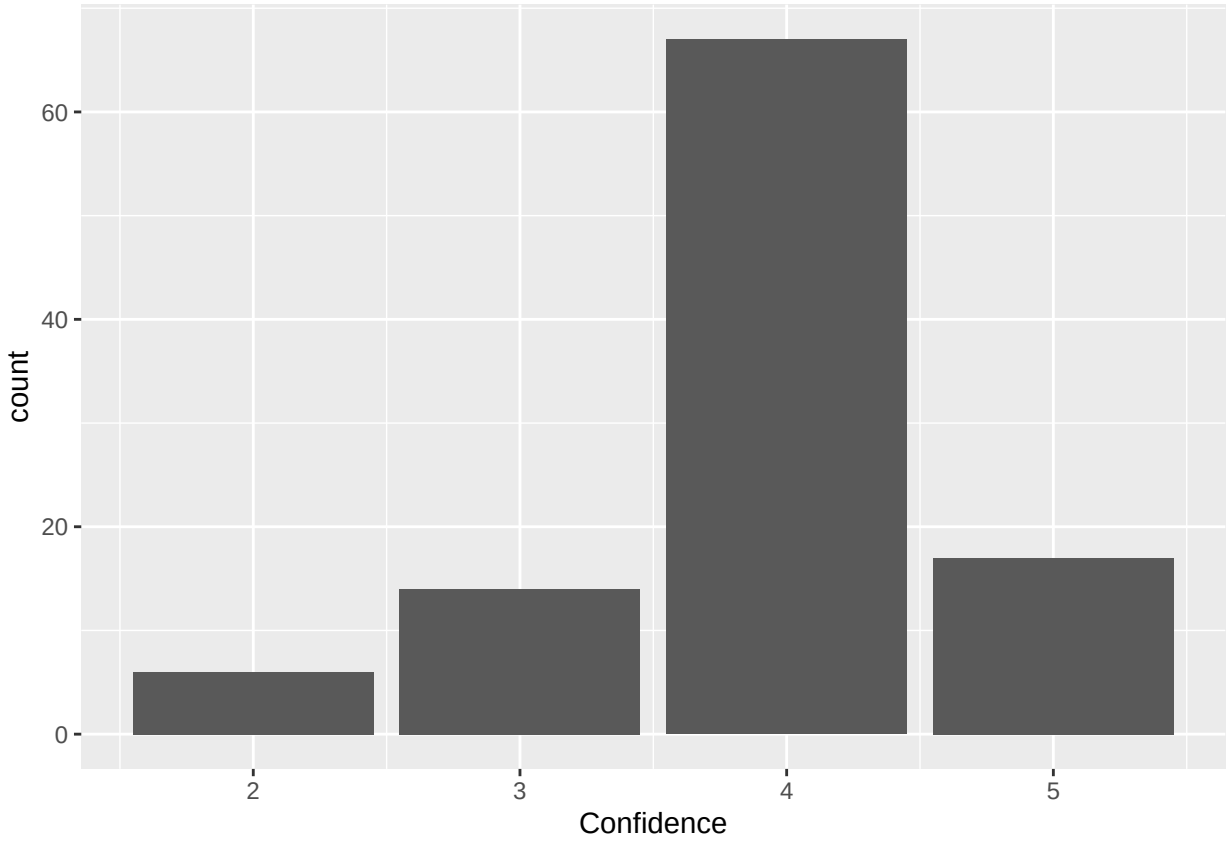

```
g9gf_2024 %>%
  filter(!is.na(TA), !is.na(School_Type)) %>%
  group_by(TA, School_Type) %>%
  summarize(avg_Rubrics = mean(Rubrics), avg_Grades = mean(Grades), avg_Expect = mean(Expectations), avg
```

```
## # A tibble: 4 x 7
## # Groups:   TA [2]
##      TA School_Type avg_Rubrics avg_Grades avg_Expect avg_gsf count
##   <dbl> <chr>              <dbl>      <dbl>      <dbl>   <dbl> <int>
## 1     1 private             3.6        3.7        3.5     3       10
## 2     1 public              4          4.2        4.2     3.1     10
## 3     2 private             3.86       3.43       3.96    3.02    56
## 4     2 public              3.64       3.16       3.68    2.64    25
```

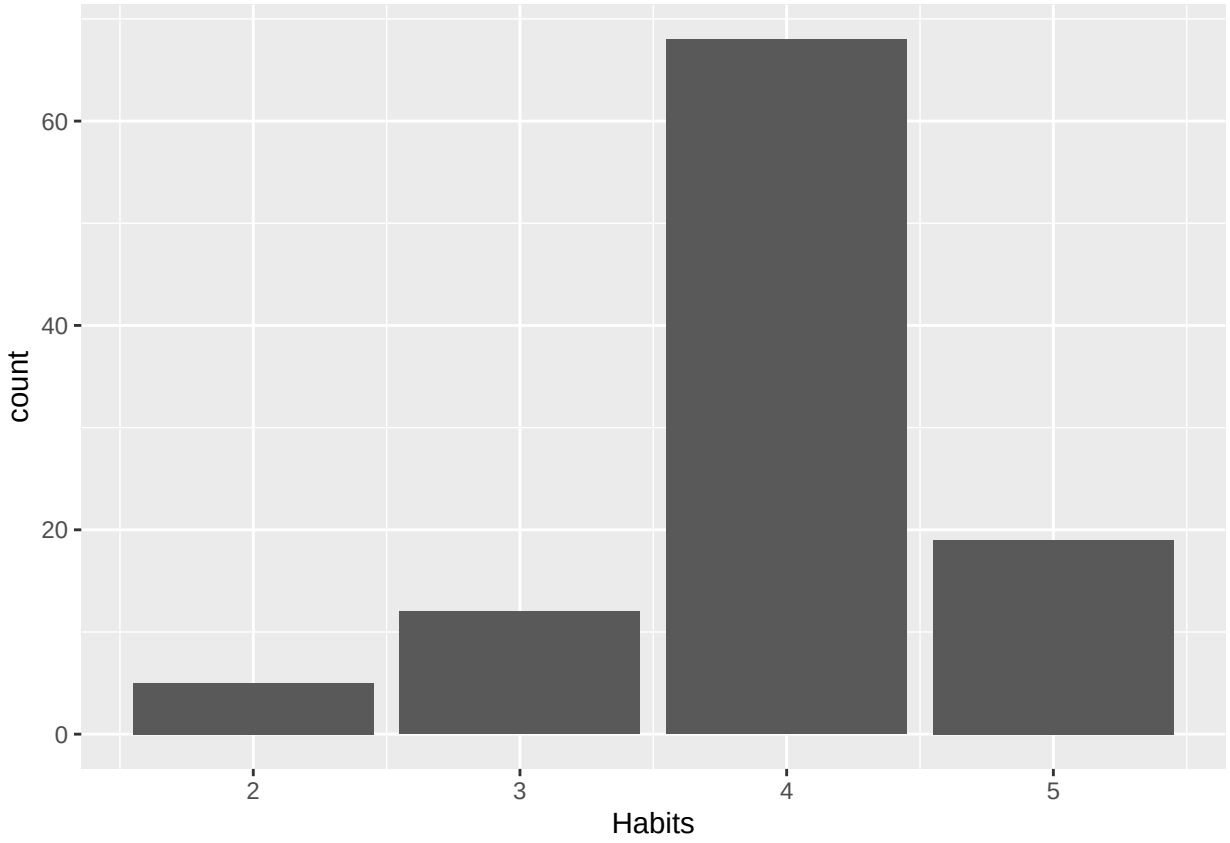
SEL

SEL Overall

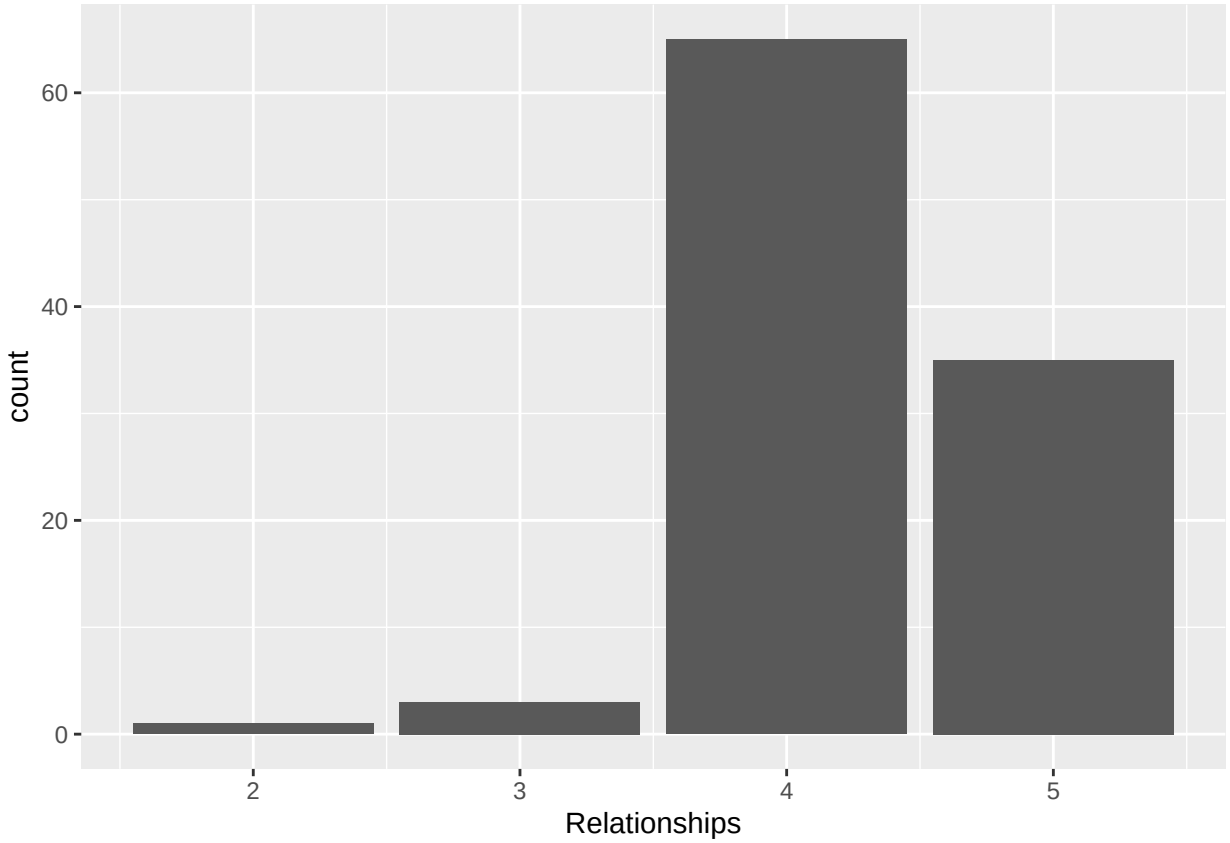
```
g9gf_2024 %>%
  ggplot(aes(x=`Confidence`)) +
  geom_bar()
```




```
g9gf_2024 %>%
  ggplot(aes(x=`Habits`)) +
  geom_bar()
```

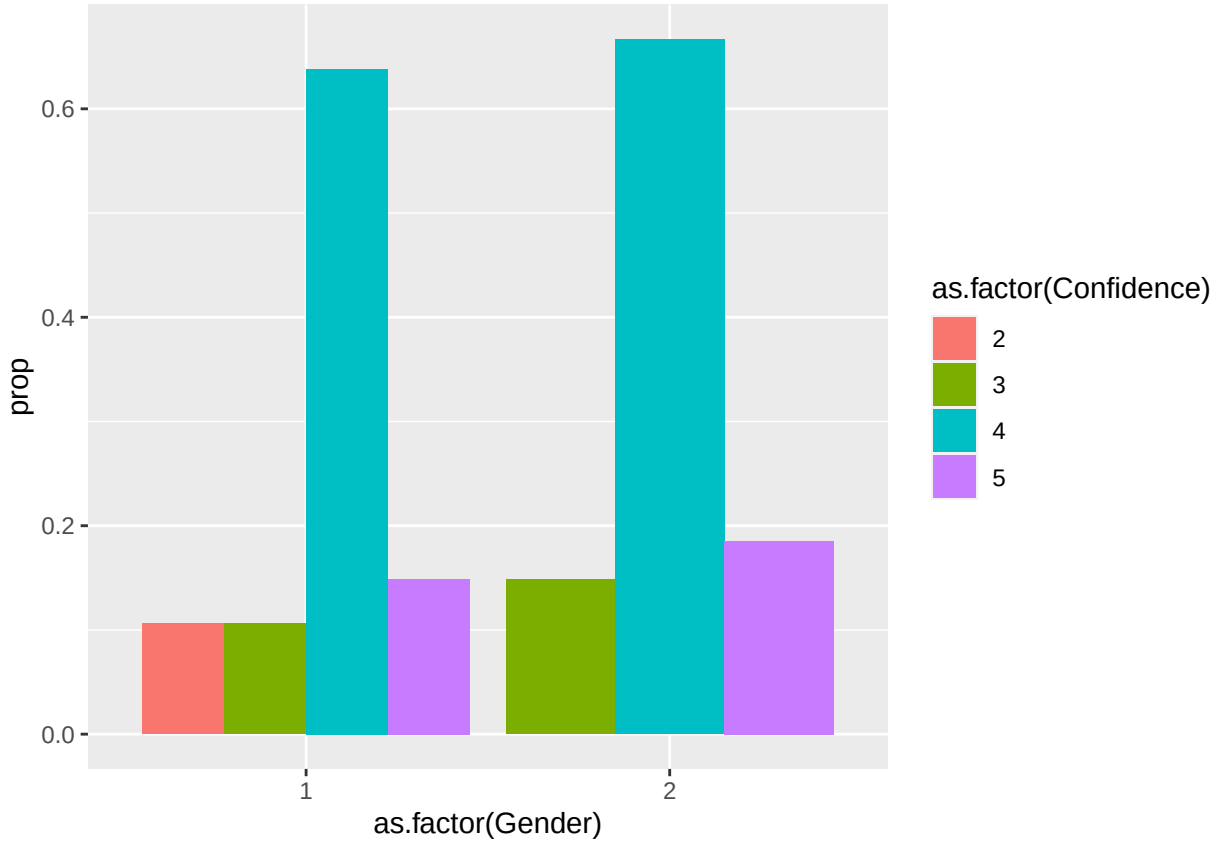



```
g9gf_2024 %>%
  ggplot(aes(x=`Relationships`)) +
  geom_bar()
```

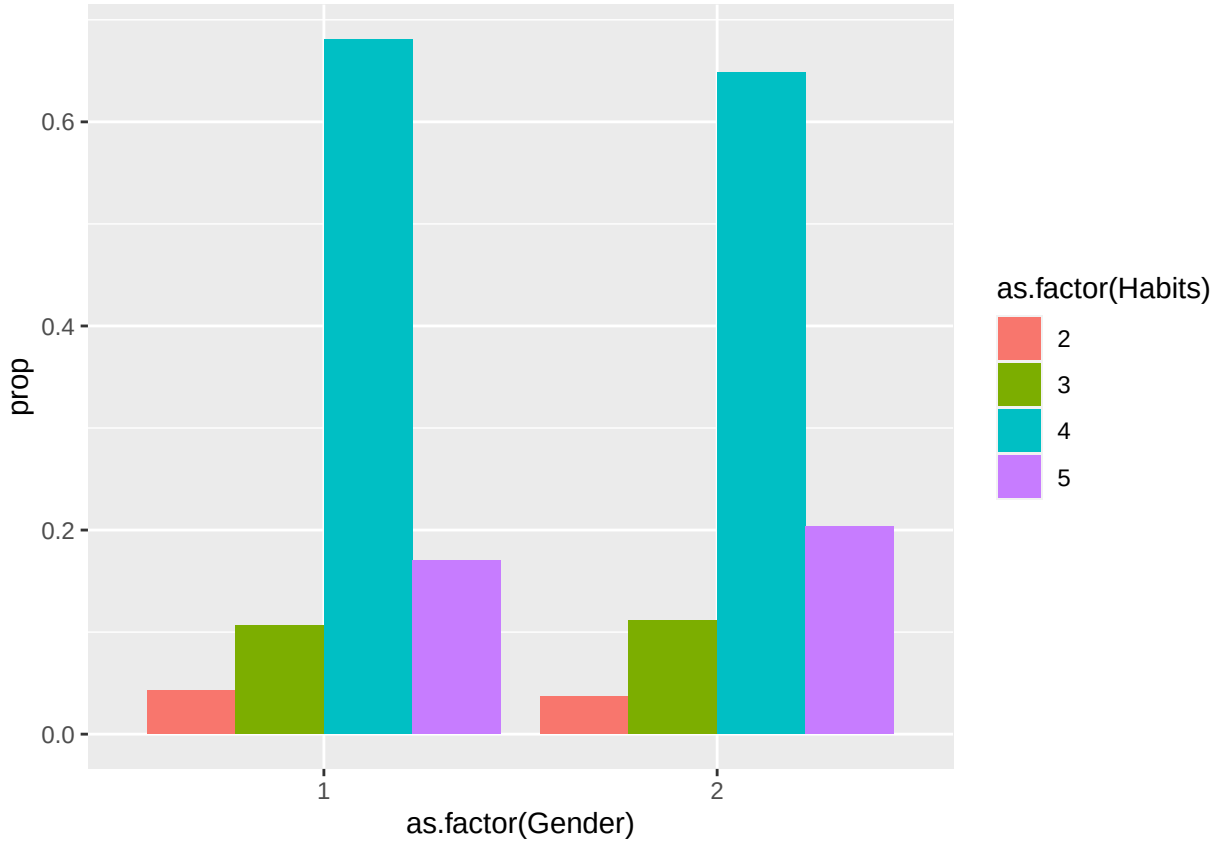


SEL by Gender

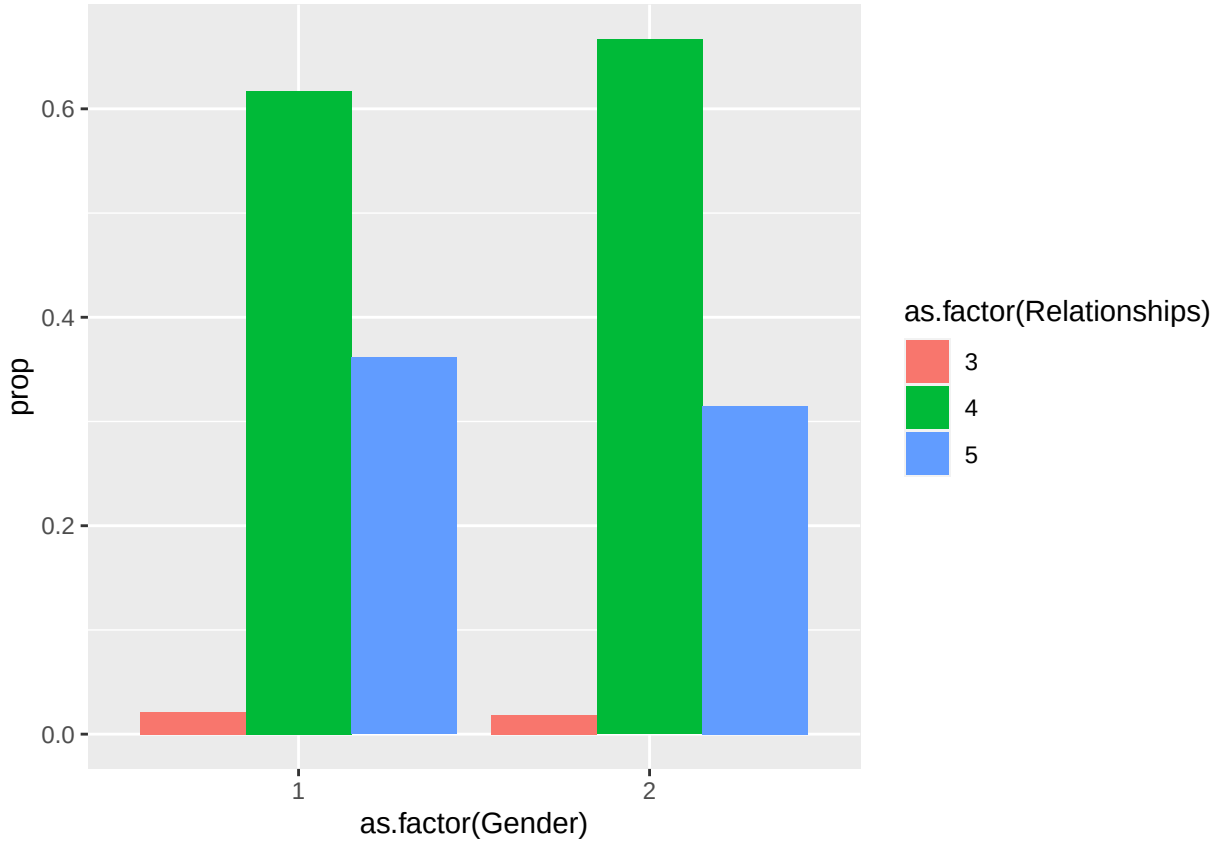
```
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  group_by(Gender, Confidence) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(Gender), y = `prop`, fill = as.factor(Confidence))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  group_by(Gender, Habits) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(Gender), y = `prop`, fill = as.factor(Habits))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  group_by(Gender, Relationships) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(Gender), y = `prop`, fill = as.factor(Relationships))) +
  geom_col(position = "dodge")
```

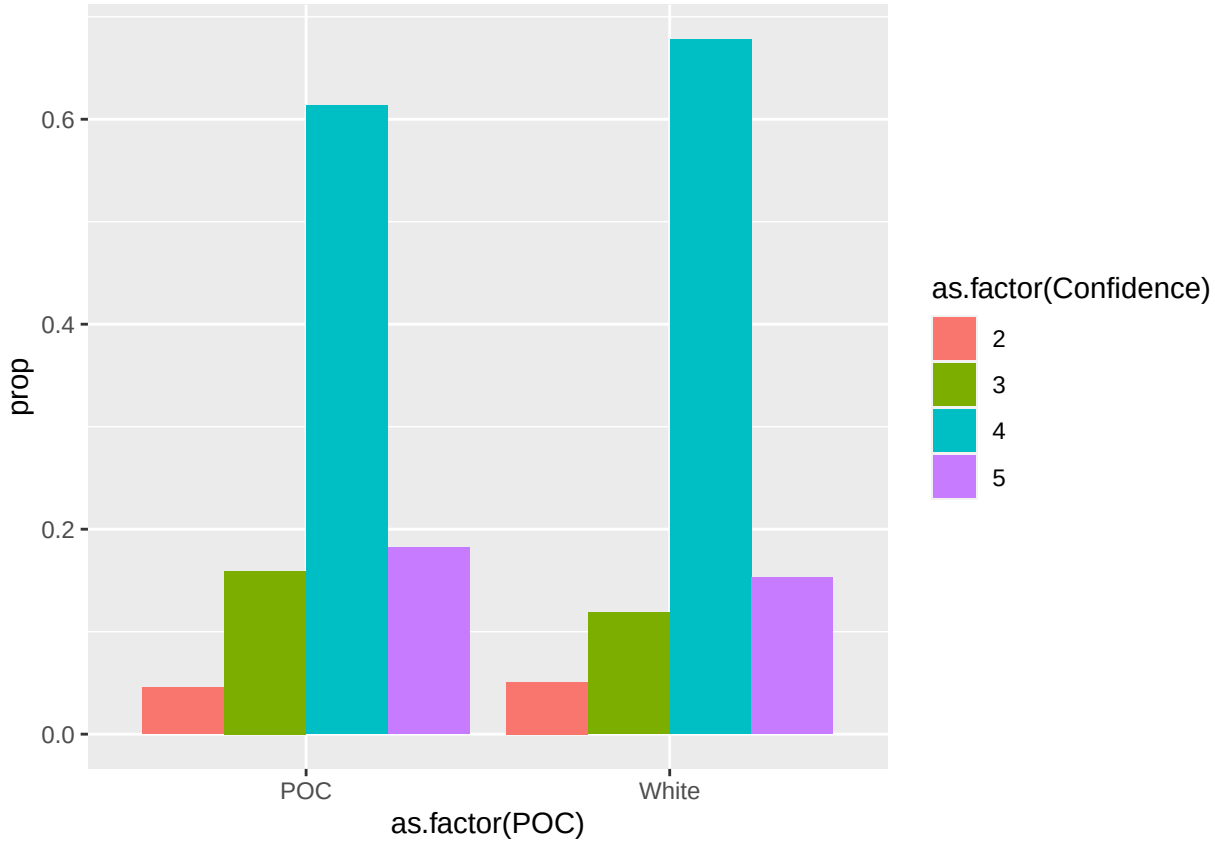



```
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  group_by(Gender) %>%
  summarize(avg_confidence = mean(Confidence), avg_habits = mean(Habits), avg_relationships = mean(Rela
```

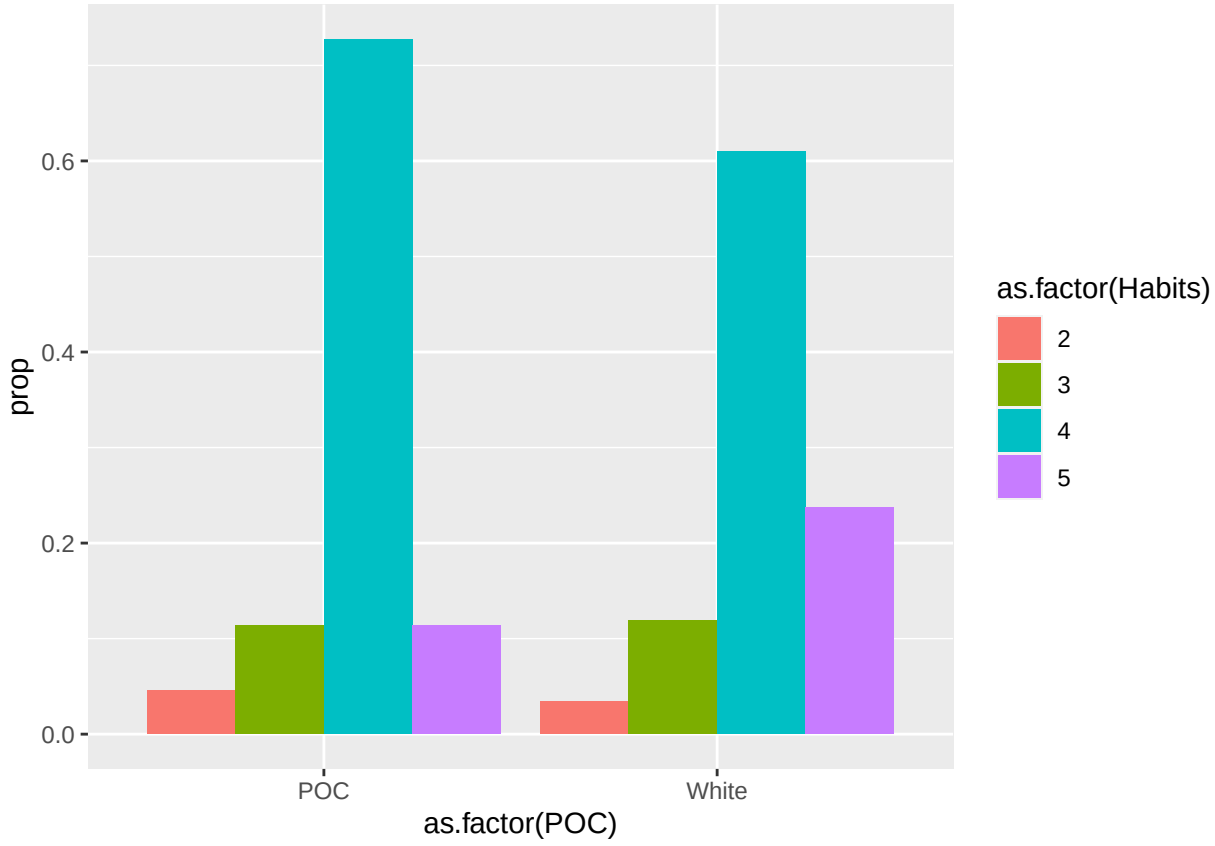
```
## # A tibble: 2 x 5
##   Gender avg_confidence avg_habits avg_relationships count
##    <dbl>          <dbl>      <dbl>              <dbl> <int>
## 1      1           3.83       3.98               4.34    47
## 2      2           4.04       4.02               4.30    54
```

SEL by Race

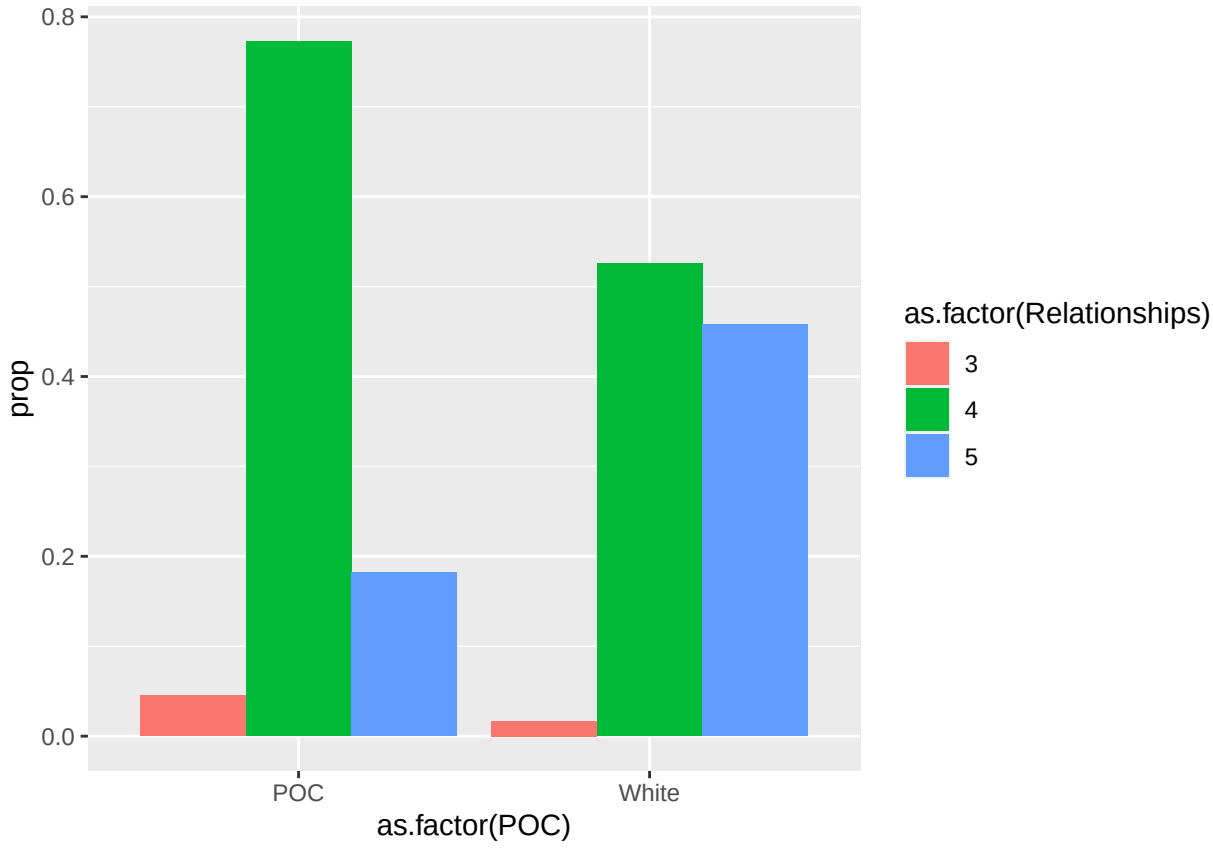
```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  group_by(POC, Confidence) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(POC), y = `prop`, fill = as.factor(Confidence))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  group_by(POC, Habits) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(POC), y = `prop`, fill = as.factor(Habits))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  group_by(POC, Relationships) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(POC), y = `prop`, fill = as.factor(Relationships))) +
  geom_col(position = "dodge")
```

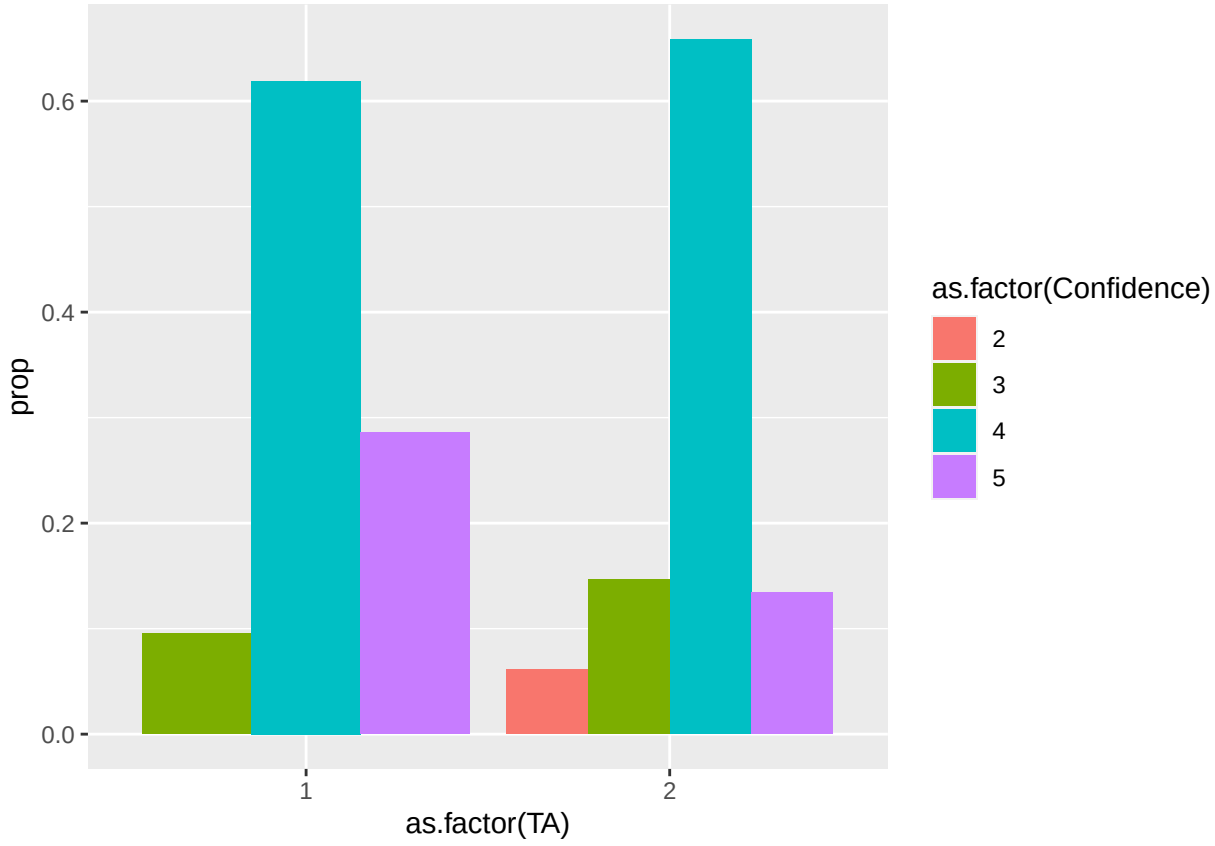



```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  group_by(POC) %>%
  summarize(avg_confidence = mean(Confidence), avg_habits = mean(Habits), avg_relationships = mean(Rela
```

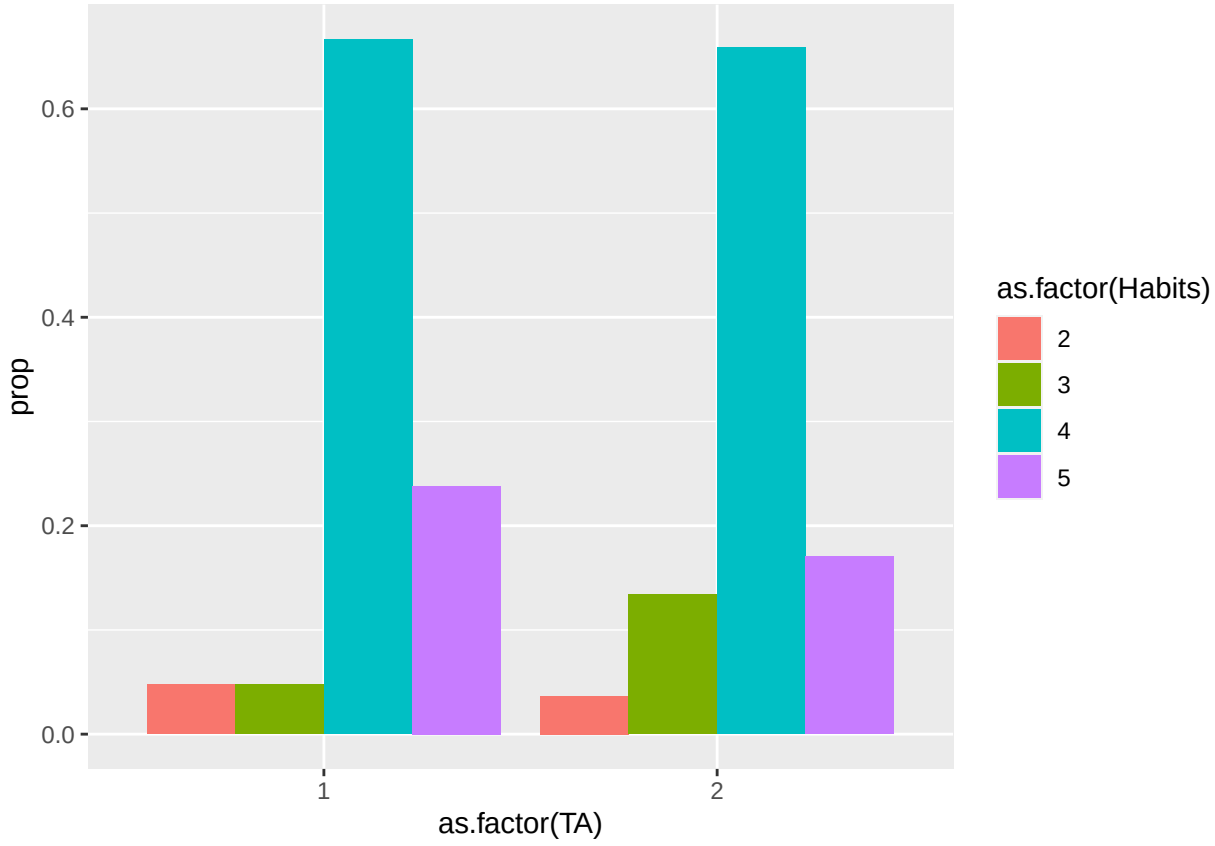
```
## # A tibble: 2 x 5
##   POC   avg_confidence avg_habits avg_relationships count
##   <chr>          <dbl>      <dbl>             <dbl> <int>
## 1 POC             3.93       3.91              4.14    44
## 2 White           3.93       4.05              4.44    59
```

SEL by TA

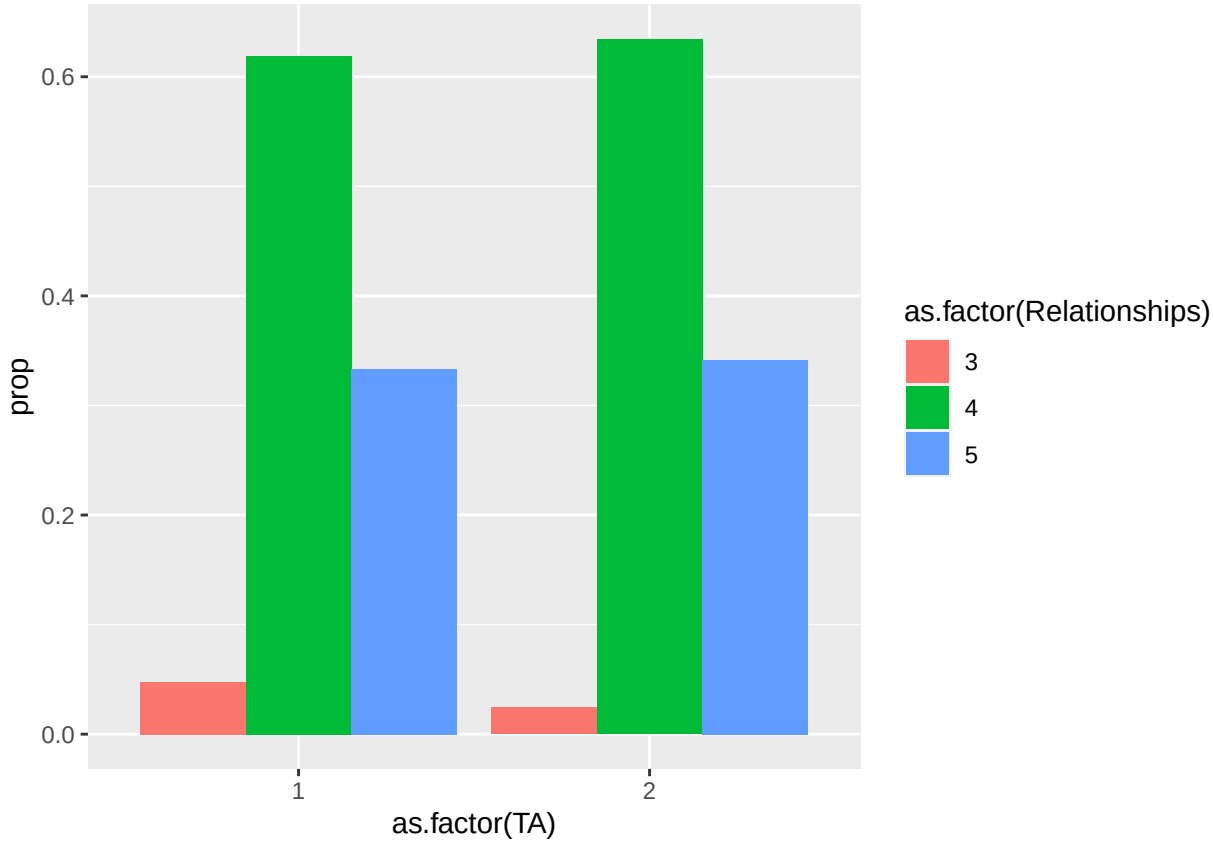
```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  group_by(TA, Confidence) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(TA), y = `prop`, fill = as.factor(Confidence))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  group_by(TA, Habits) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(TA), y = `prop`, fill = as.factor(Habits))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  group_by(TA, Relationships) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(TA), y = `prop`, fill = as.factor(Relationships))) +
  geom_col(position = "dodge")
```

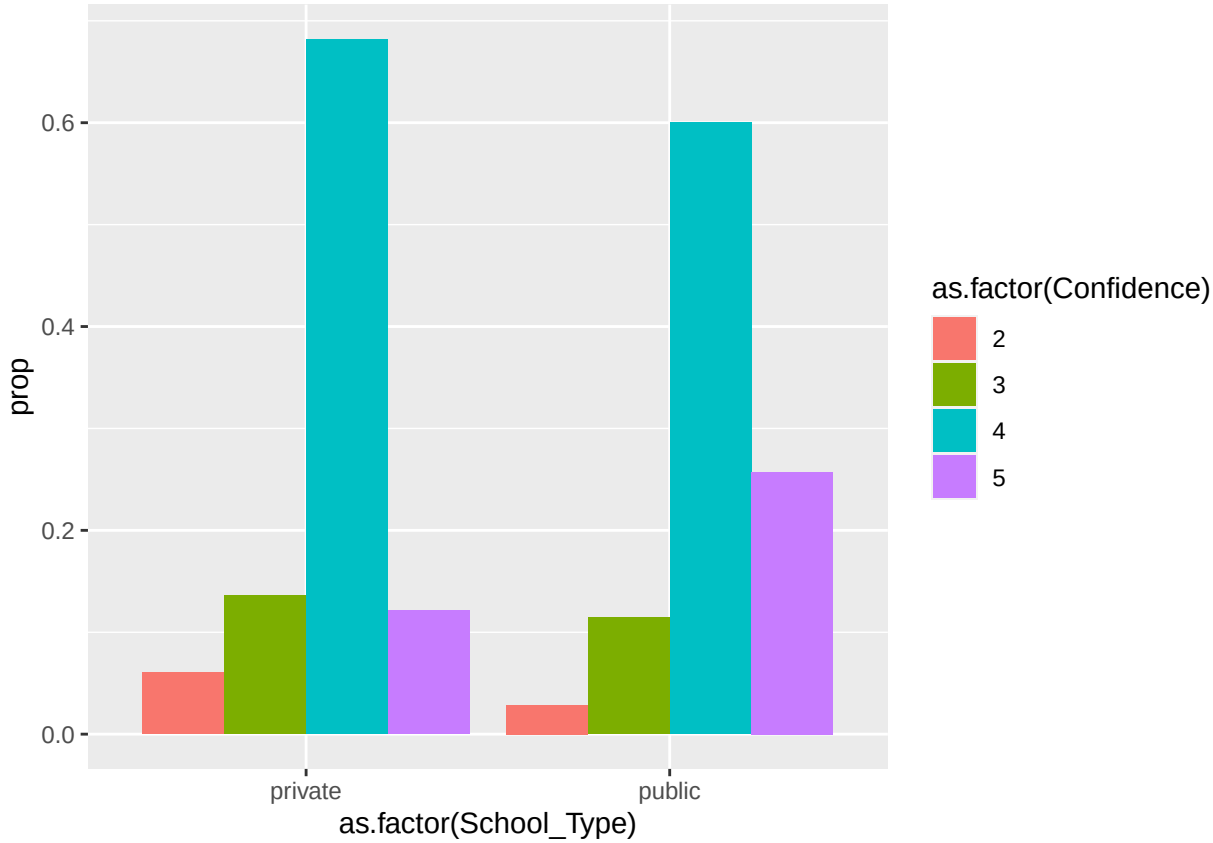



```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  group_by(TA) %>%
  summarize(avg_confidence = mean(Confidence), avg_habits = mean(Habits), avg_relationships = mean(Rela
```

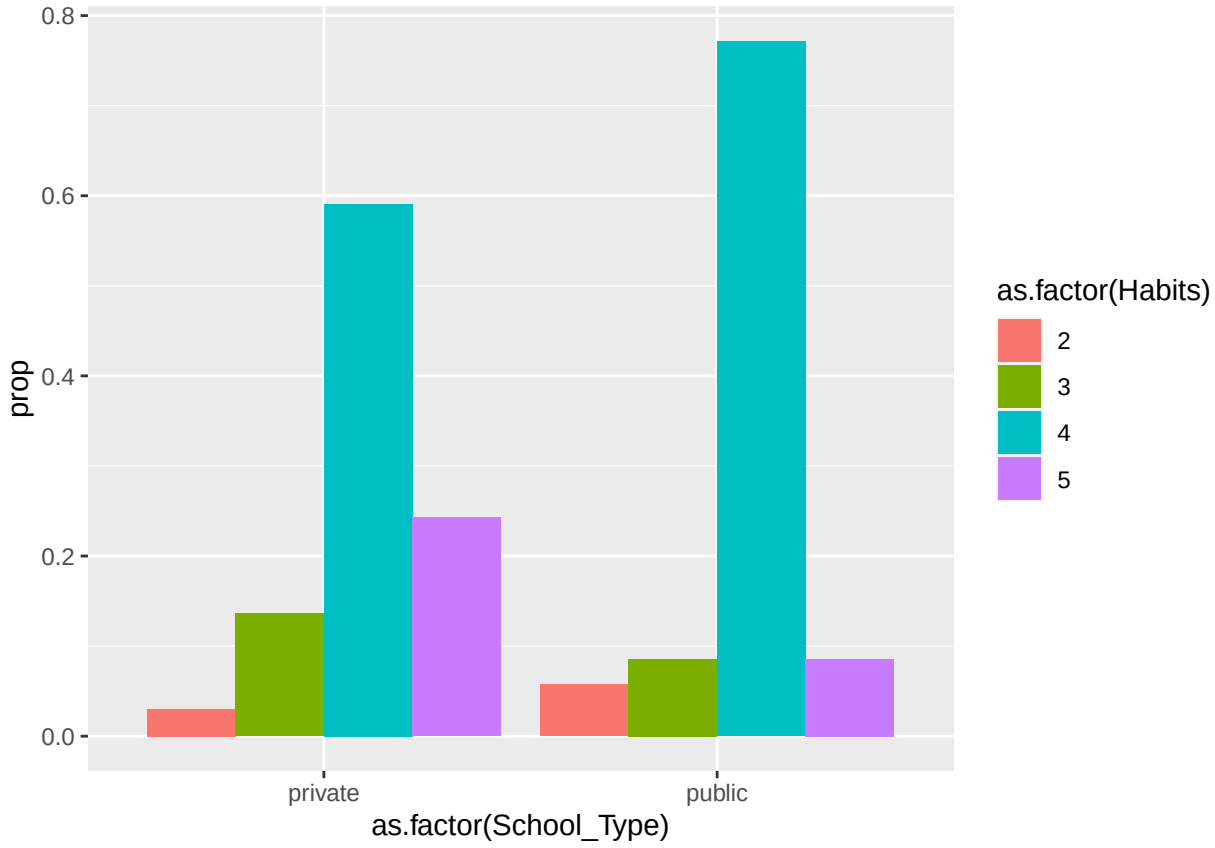
```
## # A tibble: 2 x 5
##      TA avg_confidence avg_habits avg_relationships count
##   <dbl>          <dbl>      <dbl>             <dbl> <int>
## 1     1           4.19       4.10              4.29    21
## 2     2           3.87       3.96              4.32    82
```

SEL by School Type

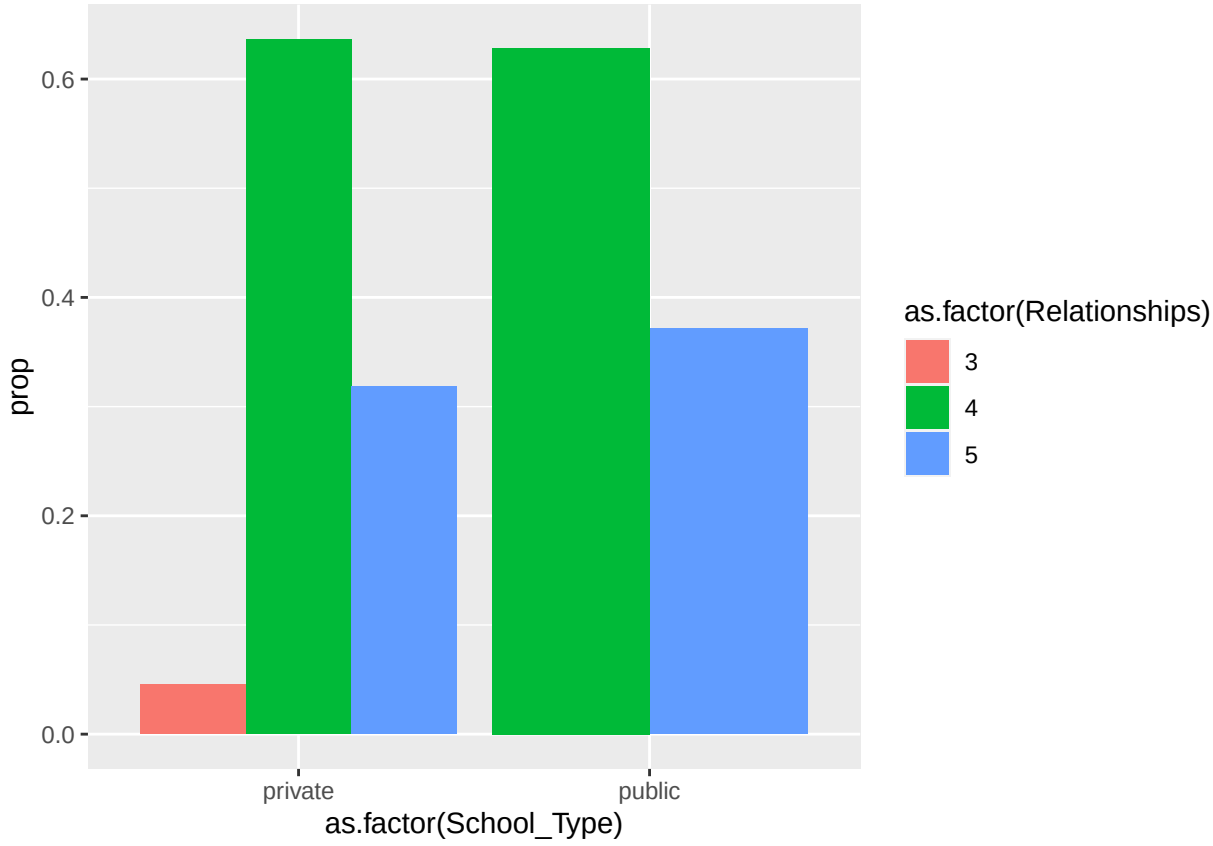
```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  group_by(School_Type, Confidence) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(School_Type), y = `prop`, fill = as.factor(Confidence))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  group_by(School_Type, Habits) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(School_Type), y = `prop`, fill = as.factor(Habits))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  group_by(School_Type, Relationships) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(School_Type), y = `prop`, fill = as.factor(Relationships))) +
  geom_col(position = "dodge")
```



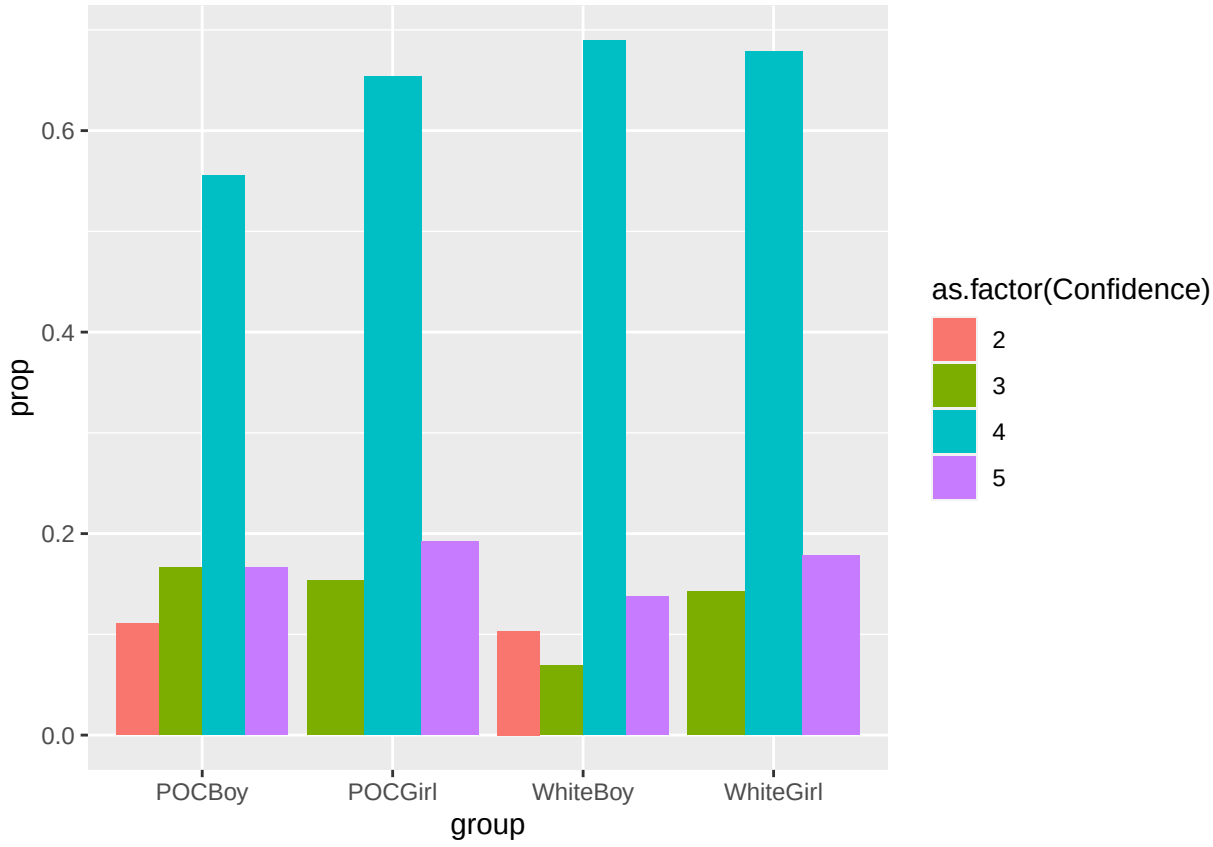

```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  group_by(School_Type) %>%
  summarize(avg_confidence = mean(Confidence), avg_habits = mean(Habits), avg_relationships = mean(Rela
```

```
## # A tibble: 2 x 5
##   School_Type avg_confidence avg_habits avg_relationships count
##   <chr>                <dbl>      <dbl>             <dbl> <int>
## 1 private               3.86       4.05              4.27    66
## 2 public                4.09       3.89              4.37    35
```

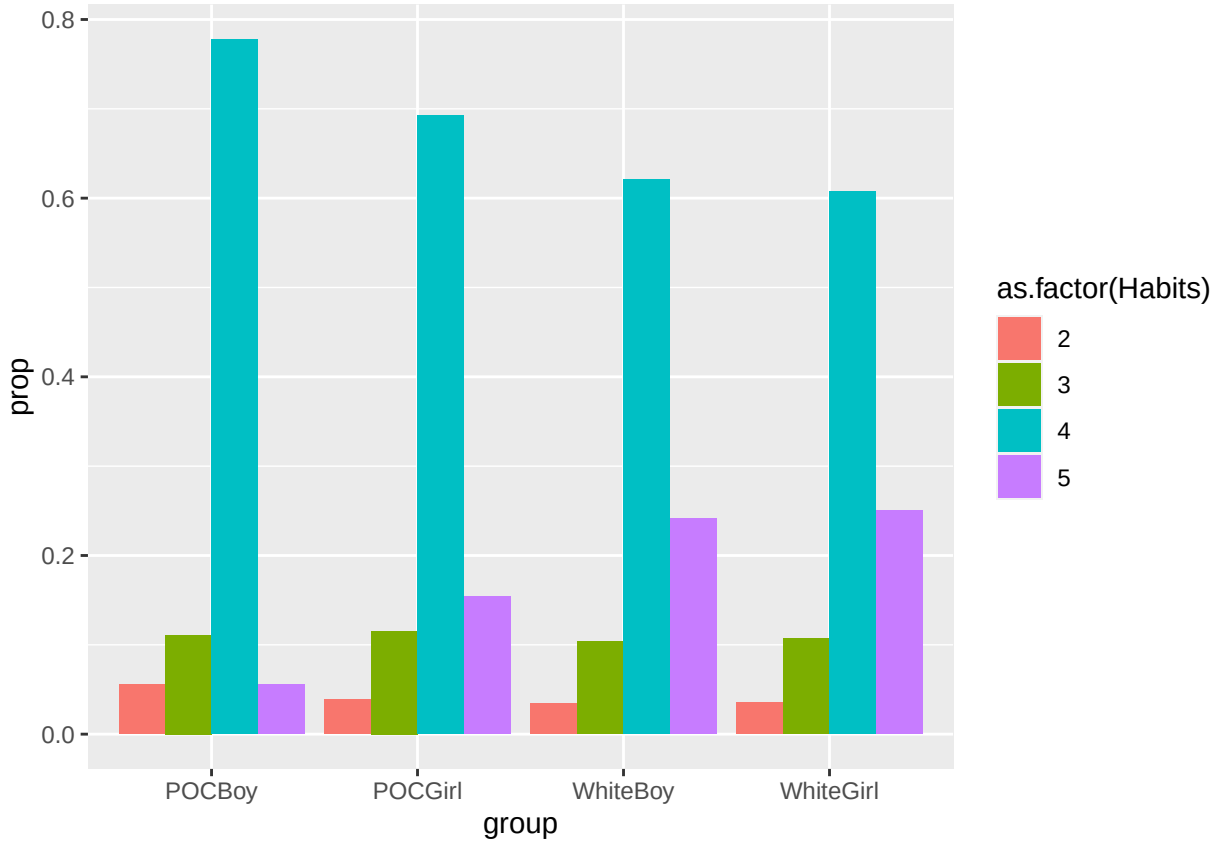
SEL by Race + Gender

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), Gender <= 2) %>%
  group_by(POC, Gender, Confidence) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
```

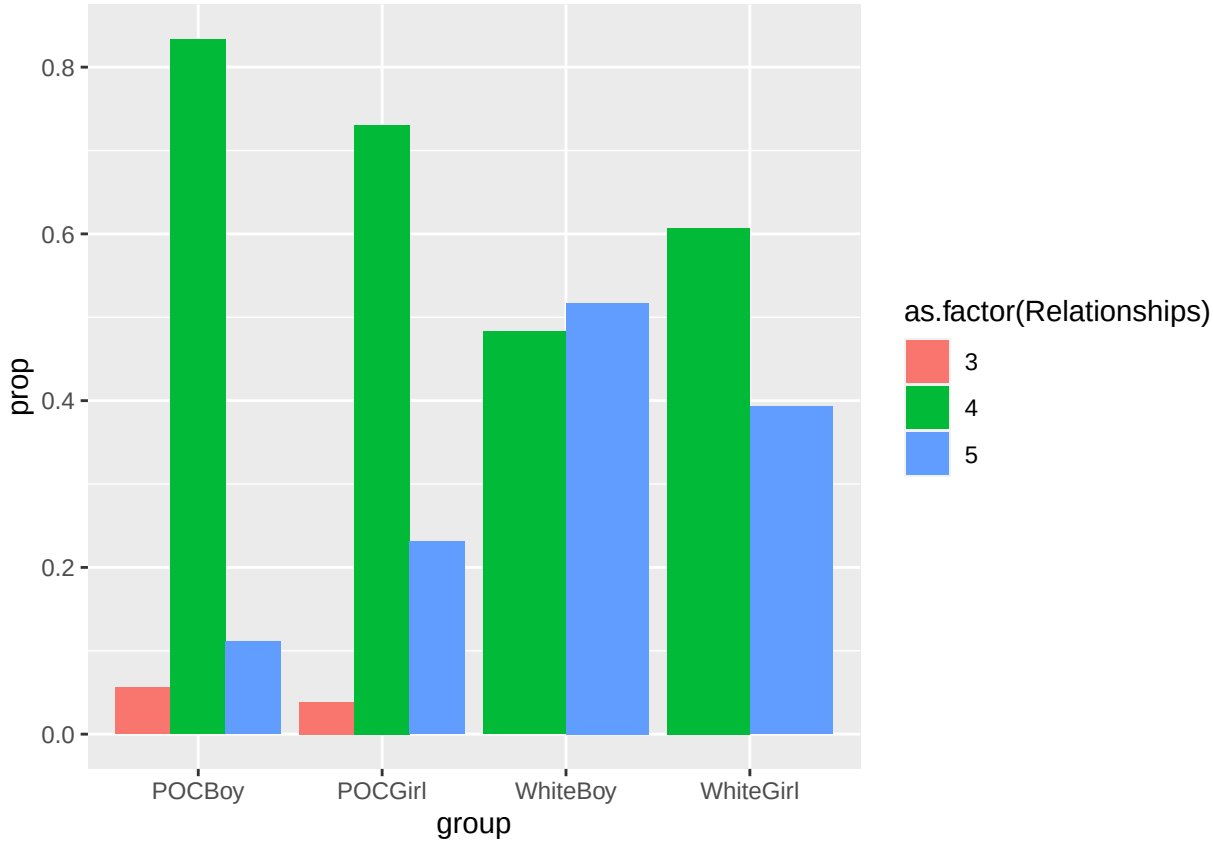
```
    POC == "White" & Gender == 1 ~ "WhiteBoy",
    POC == "White" & Gender == 2 ~ "WhiteGirl",
    POC == "POC" & Gender == 1 ~ "POCBoy",
    POC == "POC" & Gender == 2 ~ "POCGirl"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Confidence))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), Gender <= 2) %>%
  group_by(POC, Gender, Habits) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & Gender == 1 ~ "WhiteBoy",
    POC == "White" & Gender == 2 ~ "WhiteGirl",
    POC == "POC" & Gender == 1 ~ "POCBoy",
    POC == "POC" & Gender == 2 ~ "POCGirl"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Habits))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), Gender <= 2) %>%
  group_by(POC, Gender, Relationships) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & Gender == 1 ~ "WhiteBoy",
    POC == "White" & Gender == 2 ~ "WhiteGirl",
    POC == "POC" & Gender == 1 ~ "POCBoy",
    POC == "POC" & Gender == 2 ~ "POCGirl"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Relationships))) +
  geom_col(position = "dodge")
```



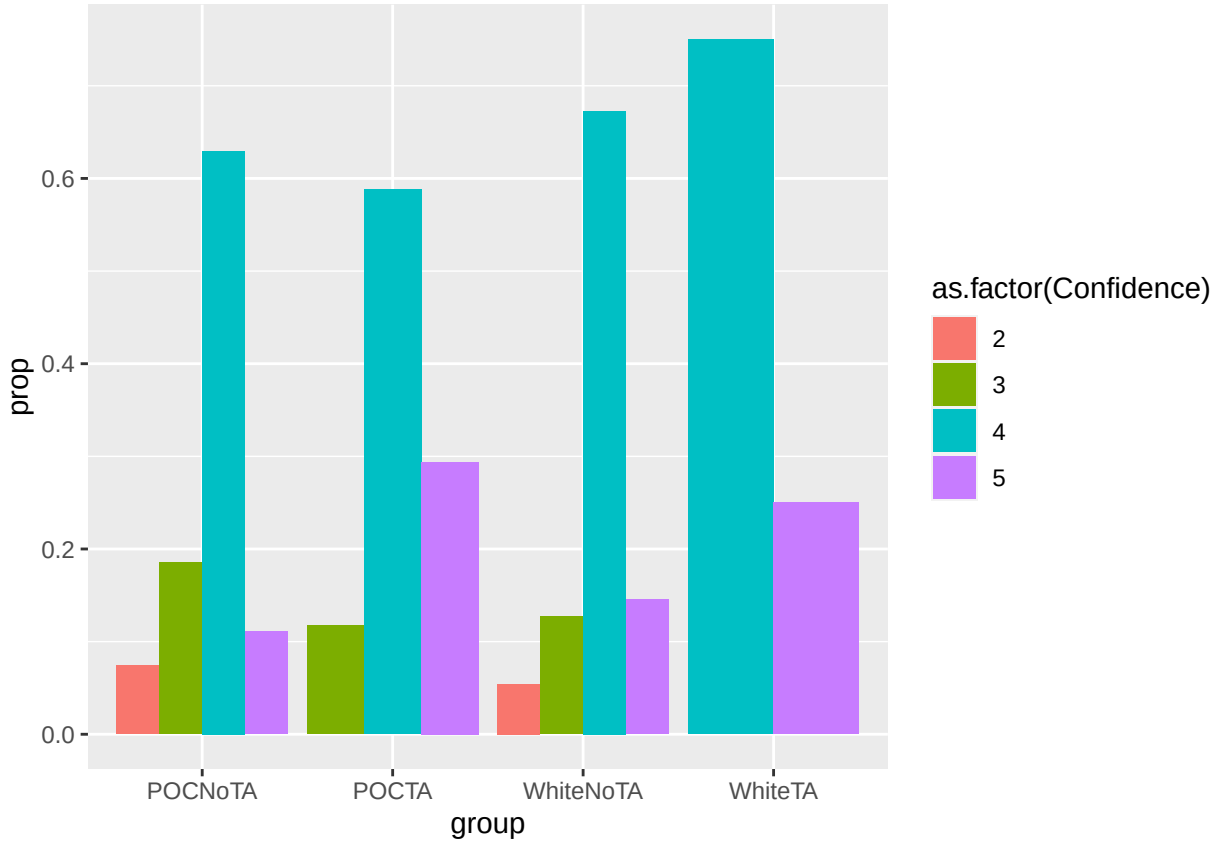

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), Gender <= 2) %>%
  group_by(POC, Gender) %>%
  summarize(avg_confidence = mean(Confidence), avg_habits = mean(Habits), avg_relationships = mean(Rela
```

```
## # A tibble: 4 x 6
## # Groups:   POC [2]
##   POC   Gender avg_confidence avg_habits avg_relationships count
##   <chr>  <dbl>          <dbl>      <dbl>             <dbl> <int>
## 1 POC        1           3.78       3.83              4.06    18
## 2 POC        2           4.04       3.96              4.19    26
## 3 White      1           3.86       4.07              4.52    29
## 4 White      2           4.04       4.07              4.39    28
```

SEL by Race + TA

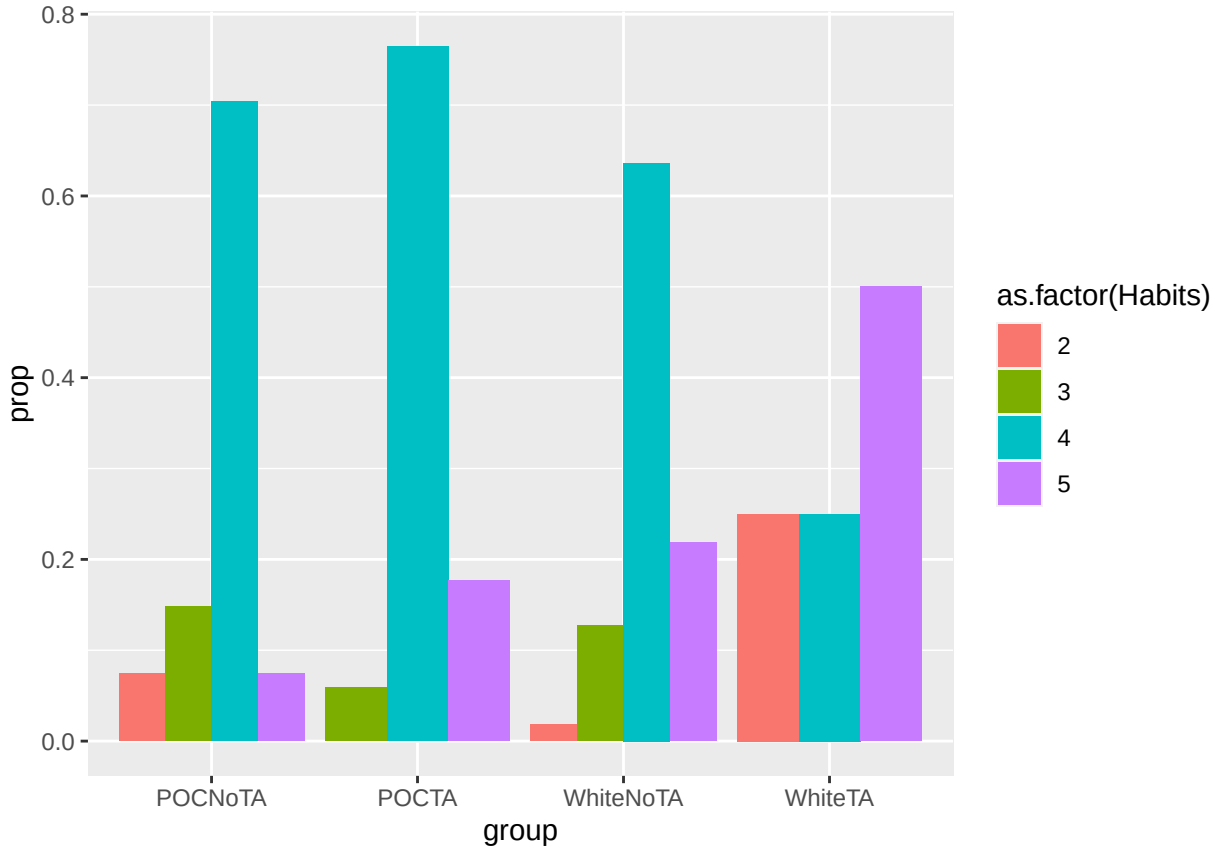
```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
```

```
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(TA)) %>%
  group_by(POC, TA, Confidence) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & TA == 1 ~ "WhiteTA",
    POC == "White" & TA == 2 ~ "WhiteNoTA",
    POC == "POC" & TA == 1 ~ "POCTA",
    POC == "POC" & TA == 2 ~ "POCNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Confidence))) +
  geom_col(position = "dodge")
```

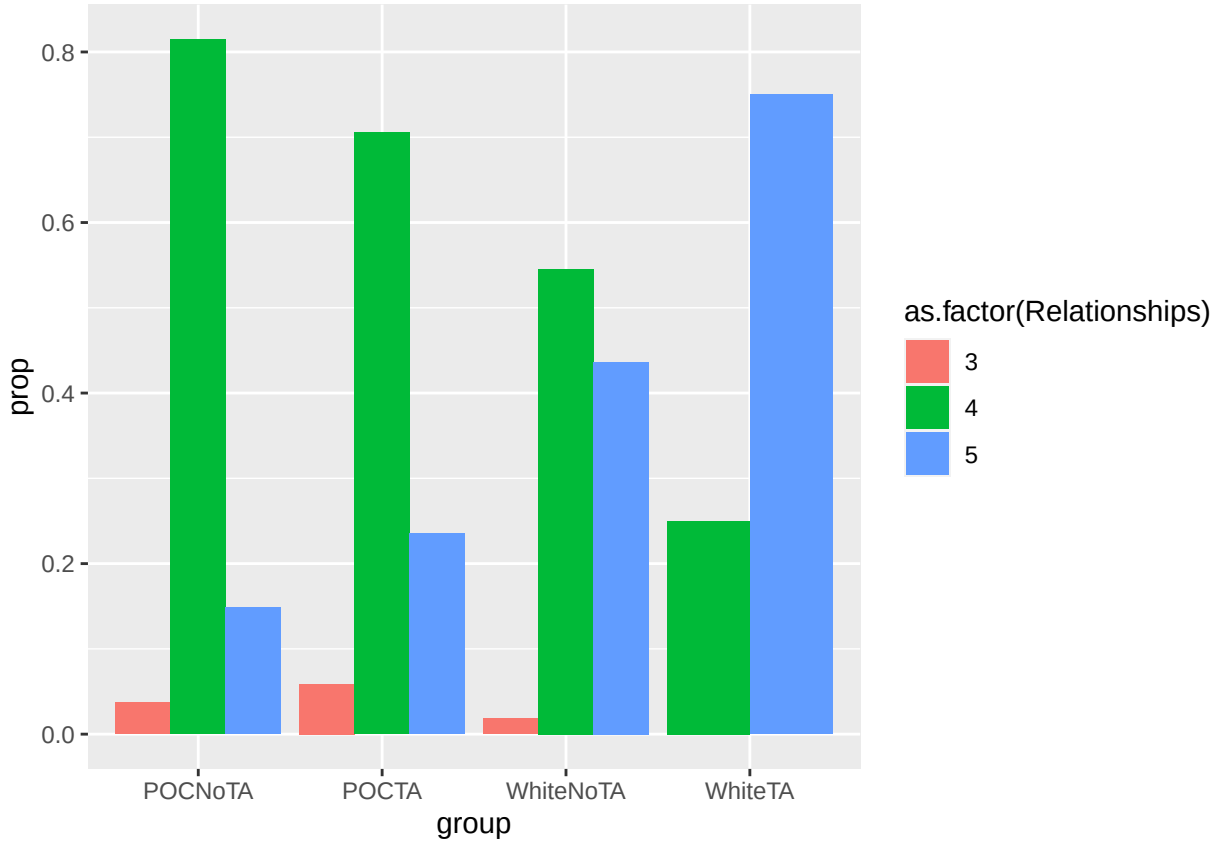



```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(TA)) %>%
  group_by(POC, TA, Habits) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
```

```
    POC == "White" & TA == 1 ~ "WhiteTA",
    POC == "White" & TA == 2 ~ "WhiteNoTA",
    POC == "POC" & TA == 1 ~ "POCTA",
    POC == "POC" & TA == 2 ~ "POCNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Habits))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(TA)) %>%
  group_by(POC, TA, Relationships) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & TA == 1 ~ "WhiteTA",
    POC == "White" & TA == 2 ~ "WhiteNoTA",
    POC == "POC" & TA == 1 ~ "POCTA",
    POC == "POC" & TA == 2 ~ "POCNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Relationships))) +
  geom_col(position = "dodge")
```



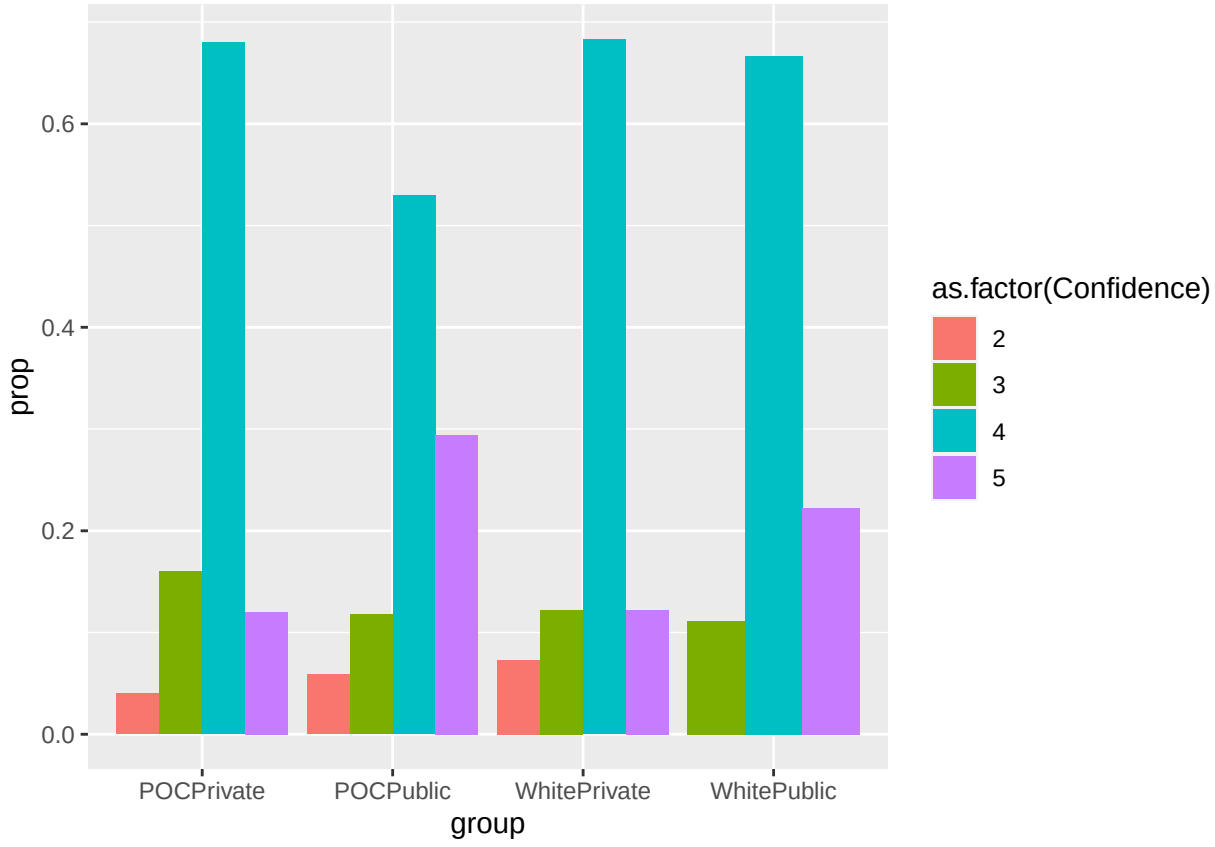

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(TA)) %>%
  group_by(POC, TA) %>%
  summarize(avg_confidence = mean(Confidence), avg_habits = mean(Habits), avg_relationships = mean(Rela
```

```
## # A tibble: 4 x 6
## # Groups:   POC [2]
##   POC      TA avg_confidence avg_habits avg_relationships count
##   <chr> <dbl>          <dbl>      <dbl>              <dbl> <int>
## 1 POC       1           4.18       4.12               4.18    17
## 2 POC       2           3.78       3.78               4.11    27
## 3 White     1           4.25       4                  4.75     4
## 4 White     2           3.91       4.05               4.42    55
```

SEL by Race + School Type

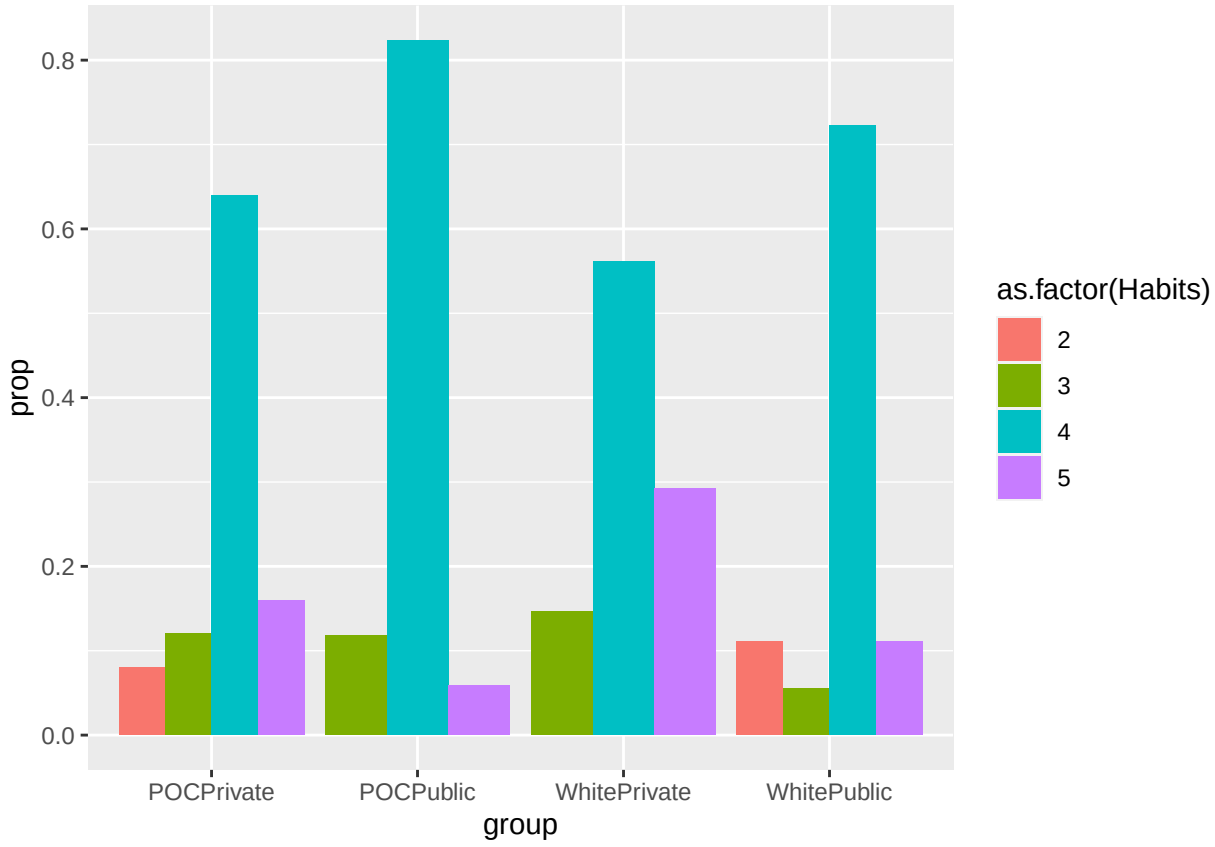
```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
```

```
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(School_Type)) %>%
  group_by(POC, School_Type, Confidence) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & School_Type == "public" ~ "WhitePublic",
    POC == "White" & School_Type == "private" ~ "WhitePrivate",
    POC == "POC" & School_Type == "public" ~ "POCPublic",
    POC == "POC" & School_Type == "private" ~ "POCPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Confidence))) +
  geom_col(position = "dodge")
```

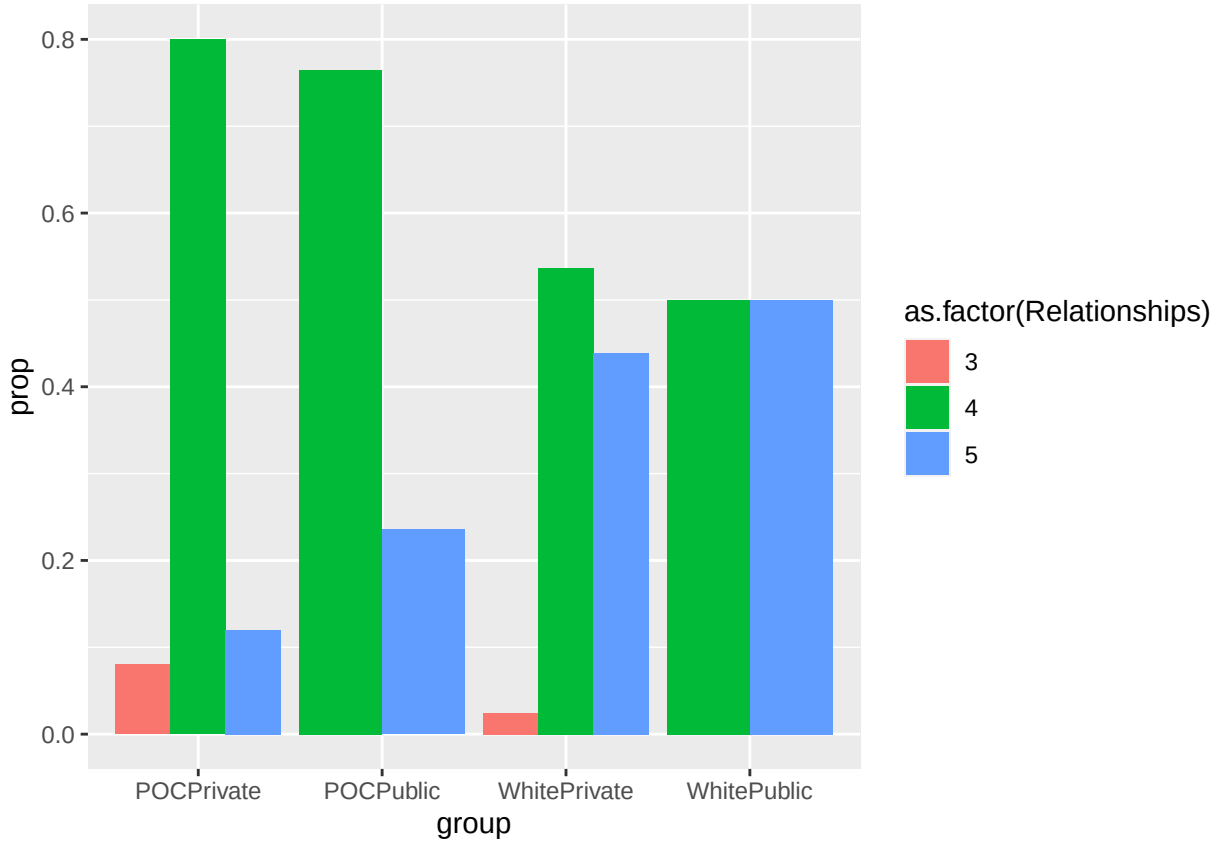



```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(School_Type)) %>%
  group_by(POC, School_Type, Habits) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
```

```
    POC == "White" & School_Type == "public" ~ "WhitePublic",
    POC == "White" & School_Type == "private" ~ "WhitePrivate",
    POC == "POC" & School_Type == "public" ~ "POCPublic",
    POC == "POC" & School_Type == "private" ~ "POCPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Habits))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(School_Type)) %>%
  group_by(POC, School_Type, Relationships) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & School_Type == "public" ~ "WhitePublic",
    POC == "White" & School_Type == "private" ~ "WhitePrivate",
    POC == "POC" & School_Type == "public" ~ "POCPublic",
    POC == "POC" & School_Type == "private" ~ "POCPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Relationships))) +
  geom_col(position = "dodge")
```



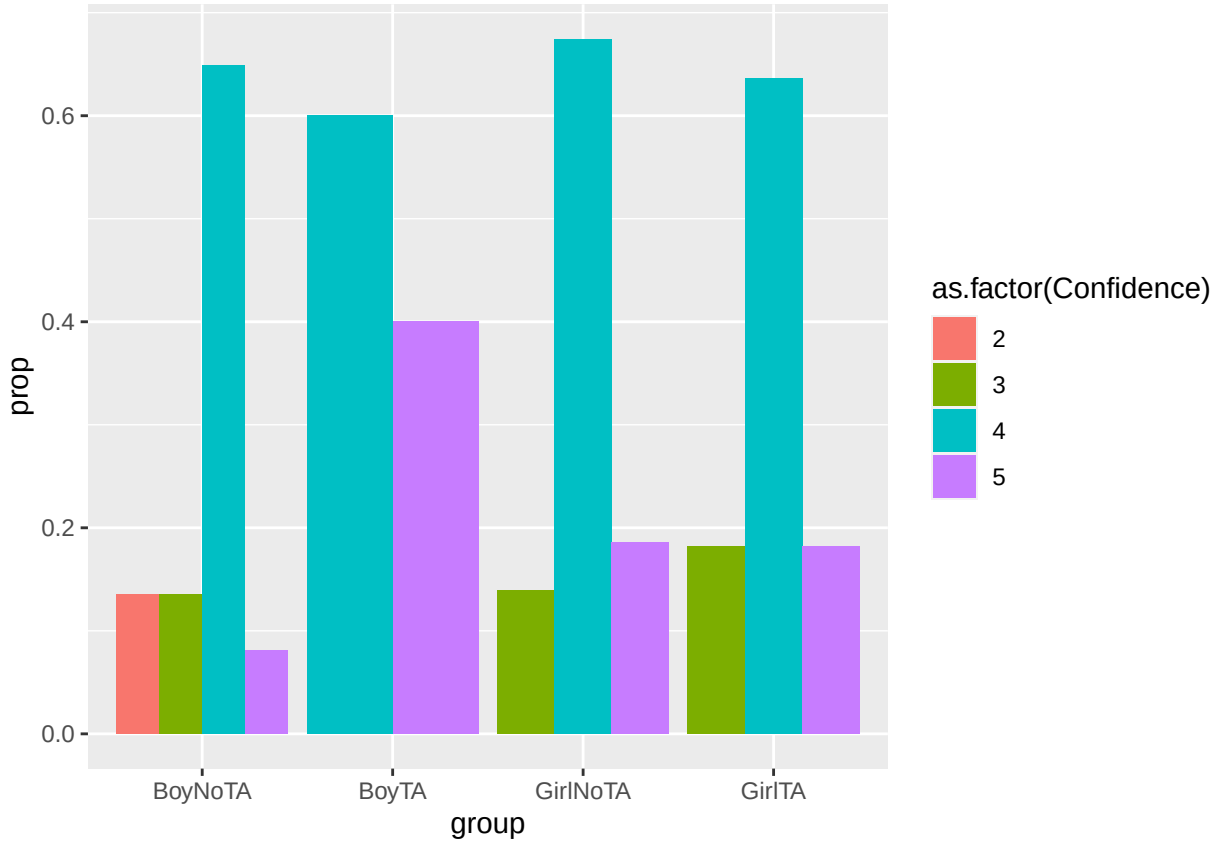

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(School_Type)) %>%
  group_by(POC, School_Type) %>%
  summarize(avg_confidence = mean(Confidence), avg_habits = mean(Habits), avg_relationships = mean(Rela
```

```
## # A tibble: 4 x 6
## # Groups:   POC [2]
##   POC   School_Type avg_confidence avg_habits avg_relationships count
##   <chr> <chr>                <dbl>      <dbl>              <dbl> <int>
## 1 POC   private                3.88       3.88               4.04    25
## 2 POC   public                 4.06       3.94               4.24    17
## 3 White private                3.85       4.15               4.41    41
## 4 White public                 4.11       3.83               4.5     18
```

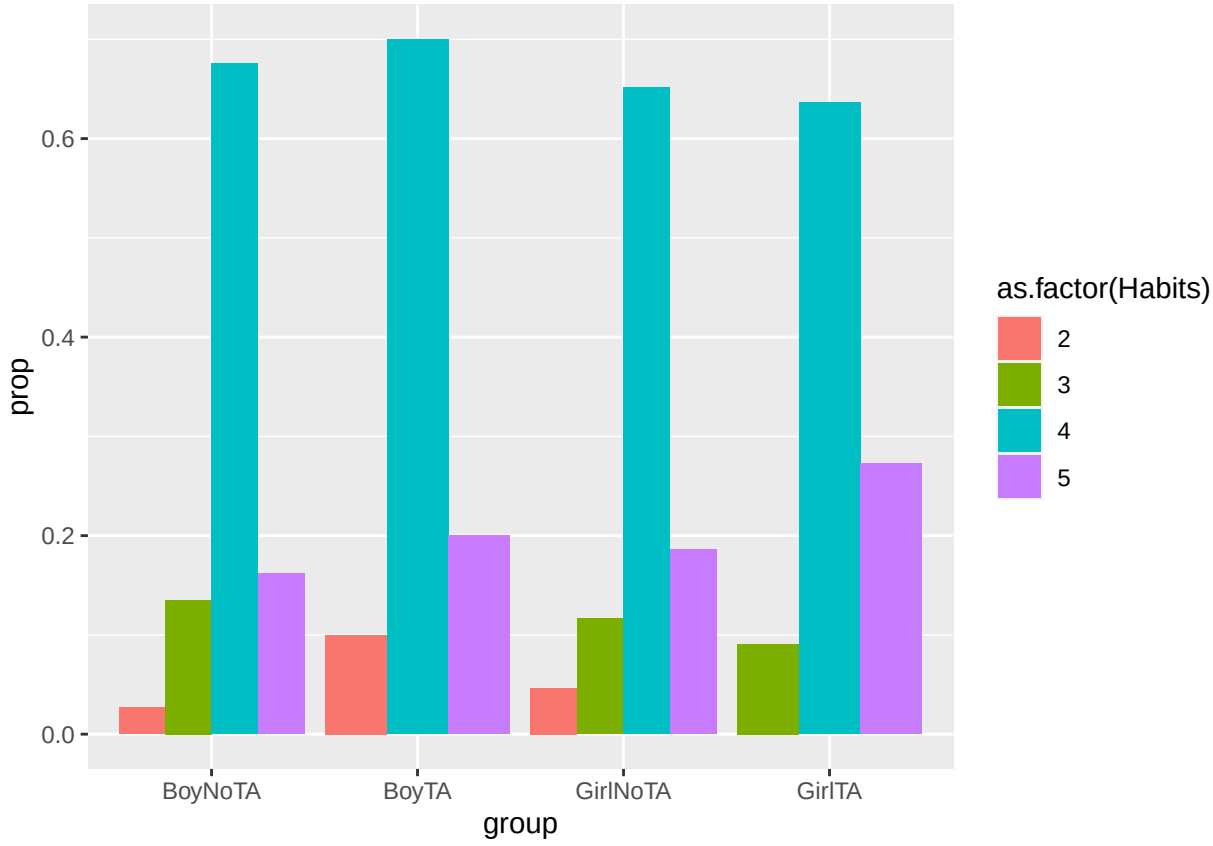
SEL by Gender + TA

```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(TA)) %>%
  group_by(Gender, TA, Confidence) %>%
```

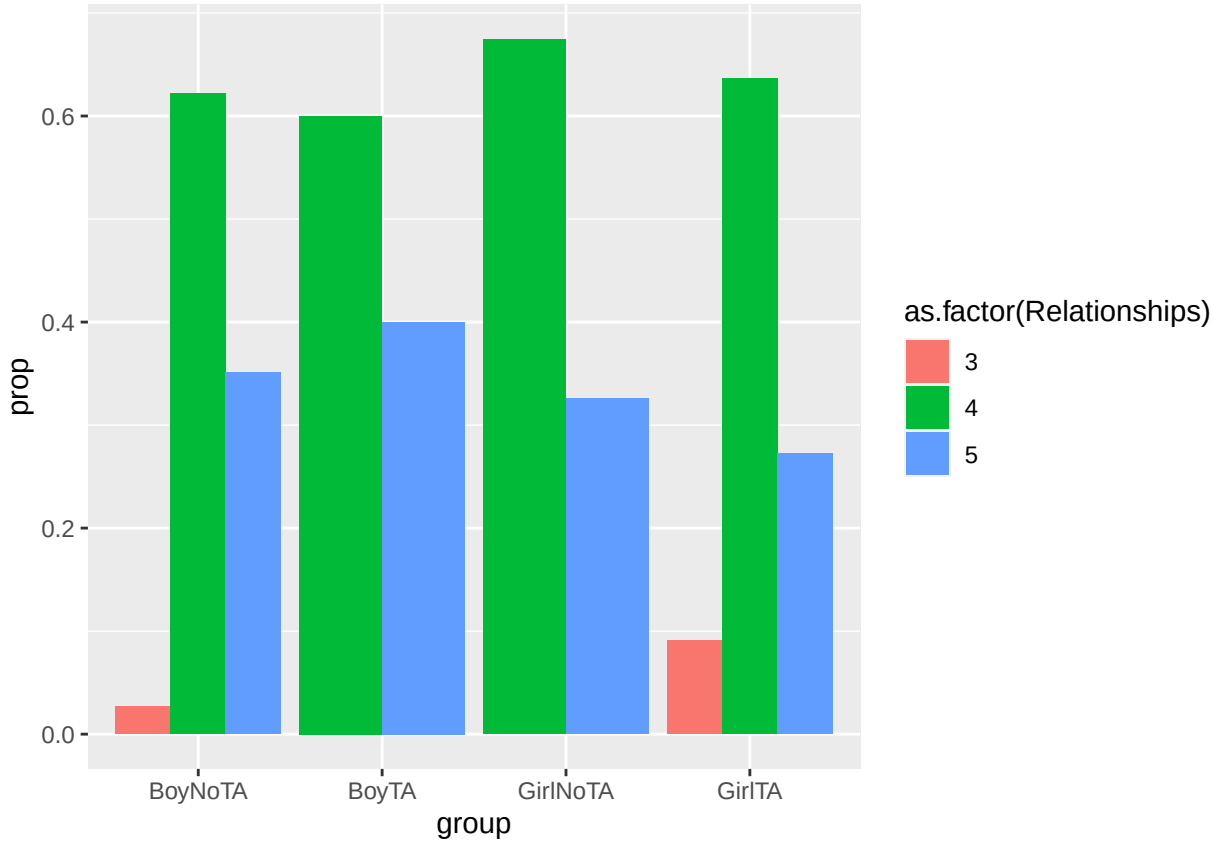
```
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & TA == 1 ~ "BoyTA",
    Gender == 1 & TA == 2 ~ "BoyNoTA",
    Gender == 2 & TA == 1 ~ "GirlTA",
    Gender == 2 & TA == 2 ~ "GirlNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Confidence))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(TA)) %>%
  group_by(Gender, TA, Habits) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & TA == 1 ~ "BoyTA",
    Gender == 1 & TA == 2 ~ "BoyNoTA",
    Gender == 2 & TA == 1 ~ "GirlTA",
    Gender == 2 & TA == 2 ~ "GirlNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Habits))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(TA)) %>%
  group_by(Gender, TA, Relationships) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & TA == 1 ~ "BoyTA",
    Gender == 1 & TA == 2 ~ "BoyNoTA",
    Gender == 2 & TA == 1 ~ "GirlTA",
    Gender == 2 & TA == 2 ~ "GirlNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Relationships))) +
  geom_col(position = "dodge")
```



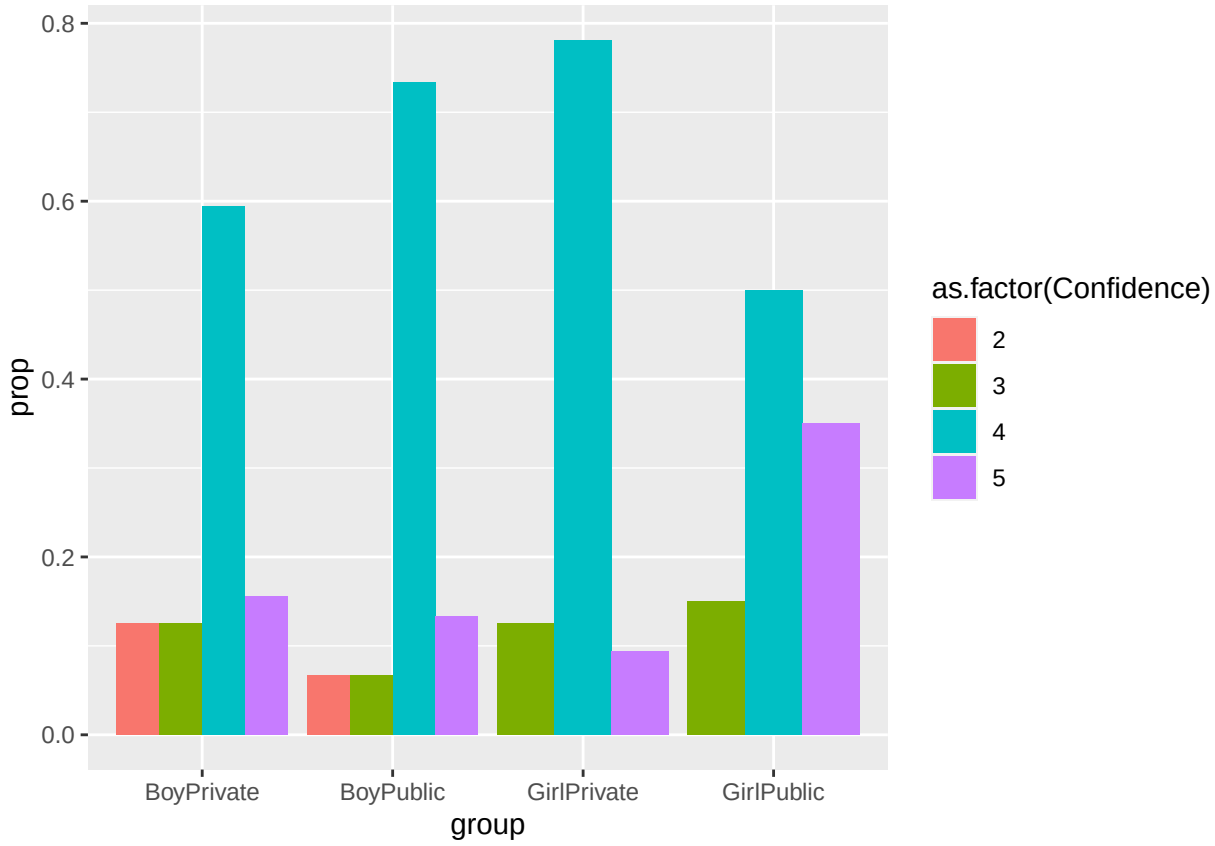

```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(TA)) %>%
  group_by(Gender, TA) %>%
  summarize(avg_confidence = mean(Confidence), avg_habits = mean(Habits), avg_relationships = mean(Rela
```

```
## # A tibble: 4 x 6
## # Groups:   Gender [2]
##   Gender    TA avg_confidence avg_habits avg_relationships count
##    <dbl> <dbl>          <dbl>      <dbl>              <dbl> <int>
## 1      1     1           4.4        4                  4.4     10
## 2      1     2           3.68       3.97               4.32    37
## 3      2     1           4          4.18               4.18    11
## 4      2     2           4.05       3.98               4.33    43
```

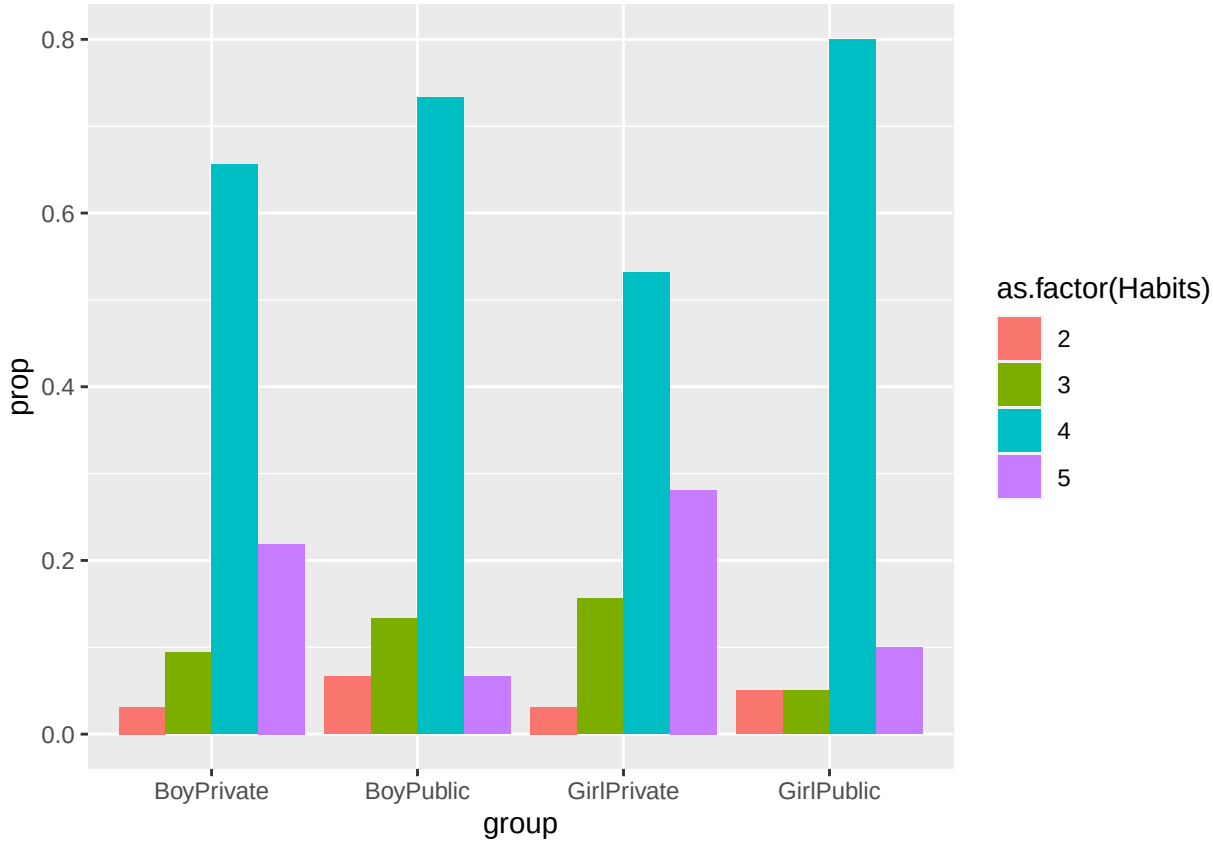
SEL by Gender + School Type

```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(School_Type)) %>%
  group_by(Gender, School_Type, Confidence) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & School_Type == "public" ~ "BoyPublic",
```

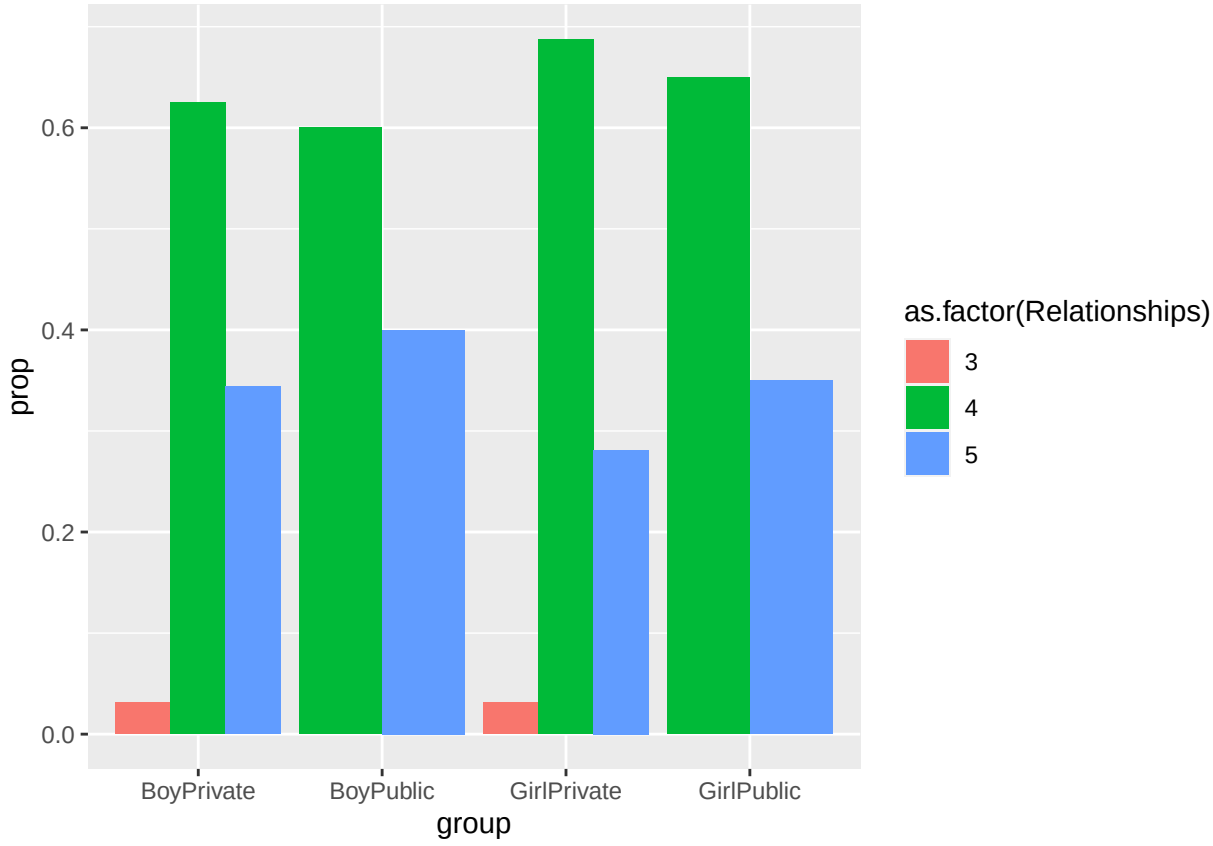
```
    Gender == 1 & School_Type == "private" ~ "BoyPrivate",
    Gender == 2 & School_Type == "public" ~ "GirlPublic",
    Gender == 2 & School_Type == "private" ~ "GirlPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Confidence))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(School_Type)) %>%
  group_by(Gender, School_Type, Habits) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & School_Type == "public" ~ "BoyPublic",
    Gender == 1 & School_Type == "private" ~ "BoyPrivate",
    Gender == 2 & School_Type == "public" ~ "GirlPublic",
    Gender == 2 & School_Type == "private" ~ "GirlPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Habits))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(School_Type)) %>%
  group_by(Gender, School_Type, Relationships) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & School_Type == "public" ~ "BoyPublic",
    Gender == 1 & School_Type == "private" ~ "BoyPrivate",
    Gender == 2 & School_Type == "public" ~ "GirlPublic",
    Gender == 2 & School_Type == "private" ~ "GirlPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Relationships))) +
  geom_col(position = "dodge")
```



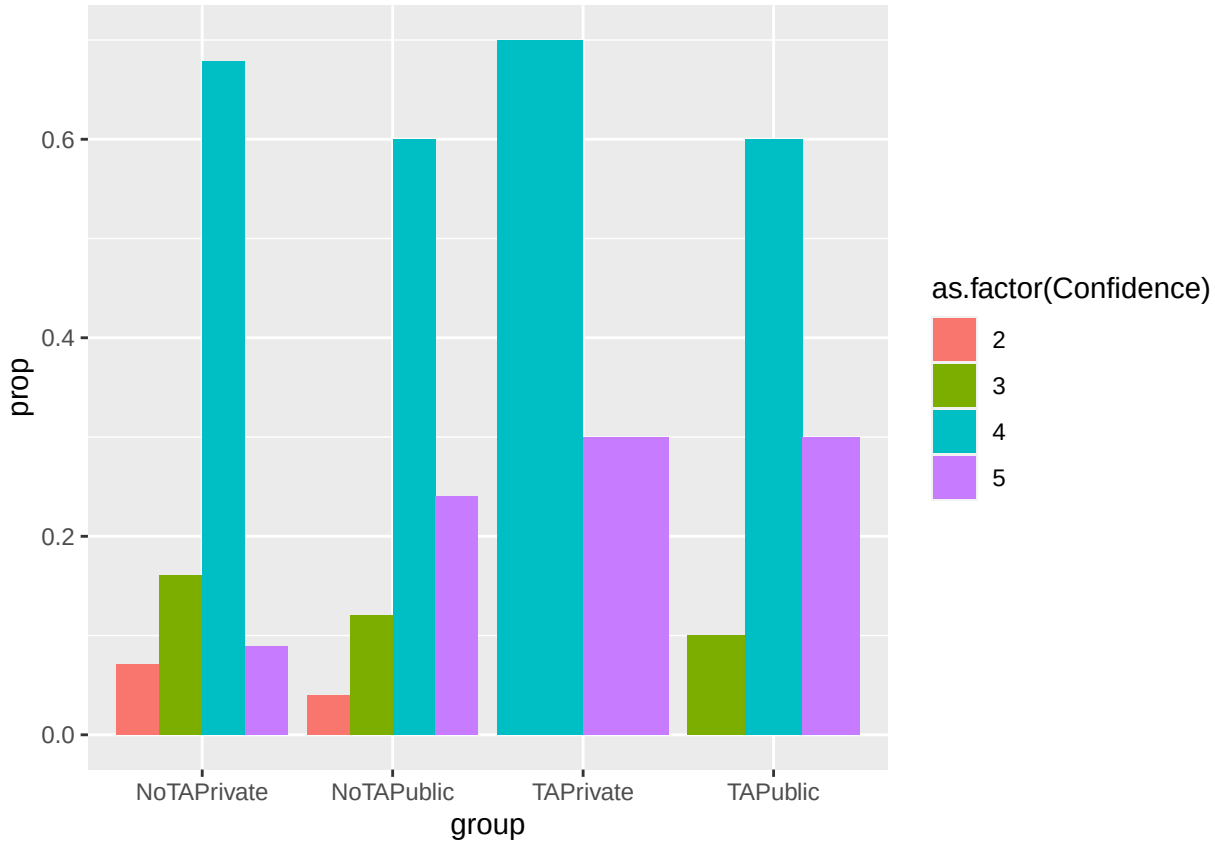

```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(School_Type)) %>%
  group_by(Gender, School_Type) %>%
  summarize(avg_confidence = mean(Confidence), avg_habits = mean(Habits), avg_relationships = mean(Rela
```

```
## # A tibble: 4 x 6
## # Groups:   Gender [2]
##   Gender School_Type avg_confidence avg_habits avg_relationships count
##    <dbl> <chr>                <dbl>      <dbl>             <dbl> <int>
## 1      1 private               3.78       4.06              4.31    32
## 2      1 public                3.93       3.8               4.4     15
## 3      2 private               3.97       4.06              4.25    32
## 4      2 public                4.2        3.95              4.35    20
```

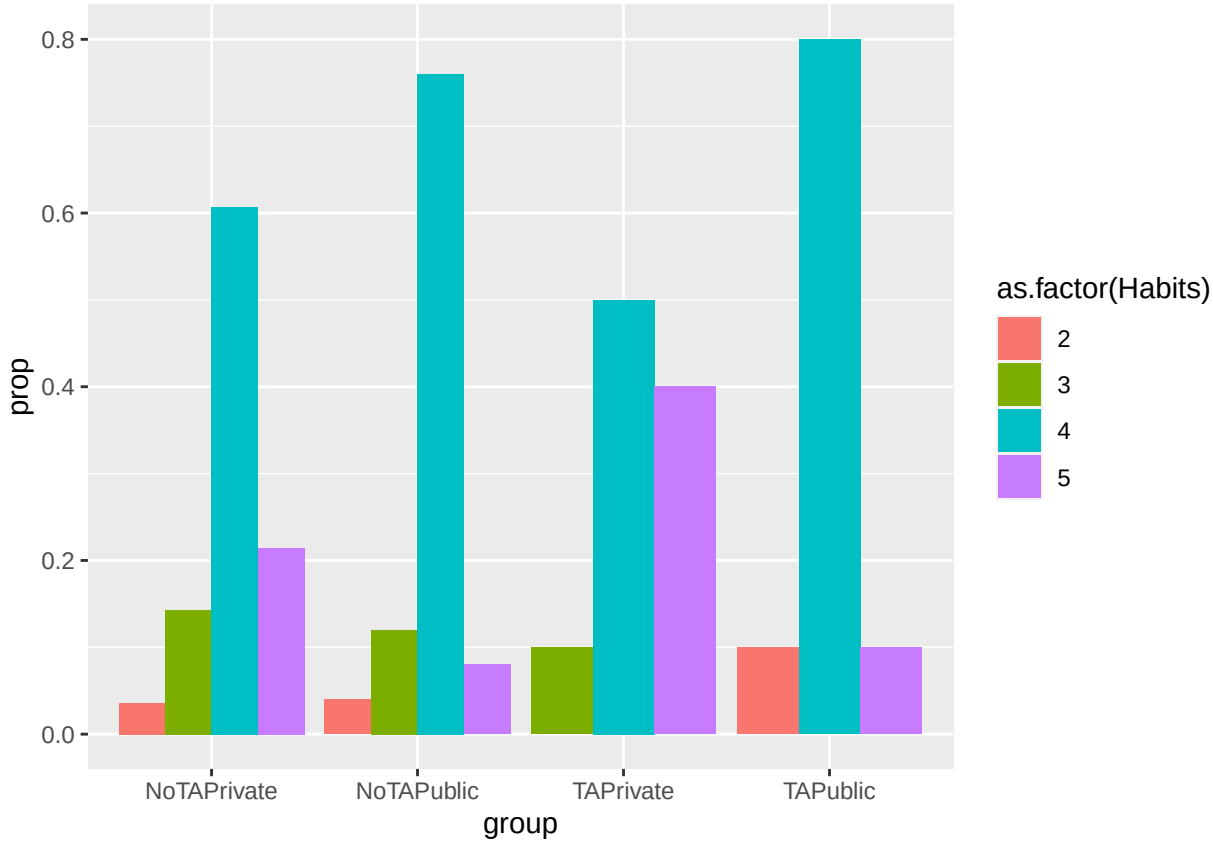
SEL by TA + School Type

```
g9gf_2024 %>%
  filter(!is.na(TA), !is.na(School_Type)) %>%
  group_by(TA, School_Type, Confidence) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    TA == 1 & School_Type == "public" ~ "TAPublic",
```

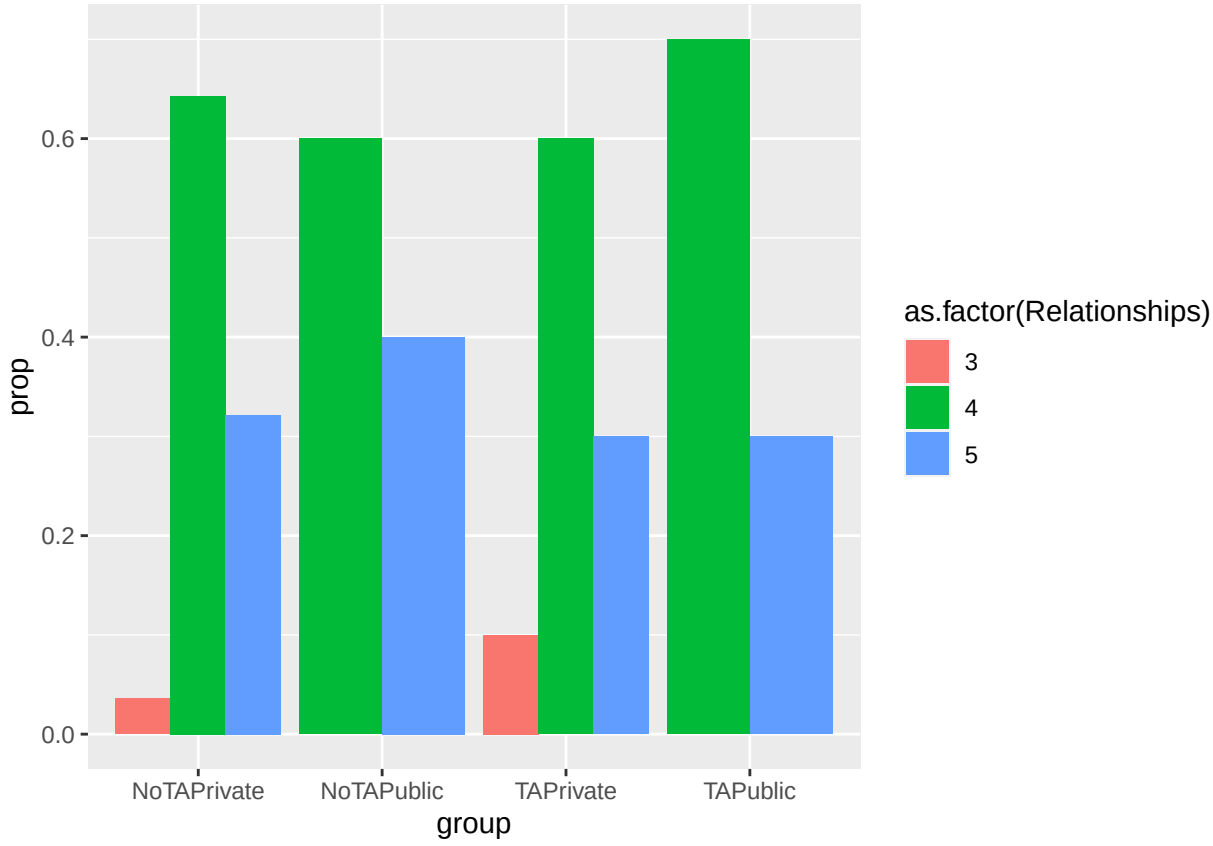
```
    TA == 2 & School_Type == "public" ~ "NoTAPublic",
    TA == 1 & School_Type == "private" ~ "TAPrivate",
    TA == 2 & School_Type == "private" ~ "NoTAPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Confidence))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(TA), !is.na(School_Type)) %>%
  group_by(TA, School_Type, Habits) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    TA == 1 & School_Type == "public" ~ "TAPublic",
    TA == 2 & School_Type == "public" ~ "NoTAPublic",
    TA == 1 & School_Type == "private" ~ "TAPrivate",
    TA == 2 & School_Type == "private" ~ "NoTAPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Habits))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(TA), !is.na(School_Type)) %>%
  group_by(TA, School_Type, Relationships) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    TA == 1 & School_Type == "public" ~ "TAPublic",
    TA == 2 & School_Type == "public" ~ "NoTAPublic",
    TA == 1 & School_Type == "private" ~ "TAPrivate",
    TA == 2 & School_Type == "private" ~ "NoTAPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Relationships))) +
  geom_col(position = "dodge")
```



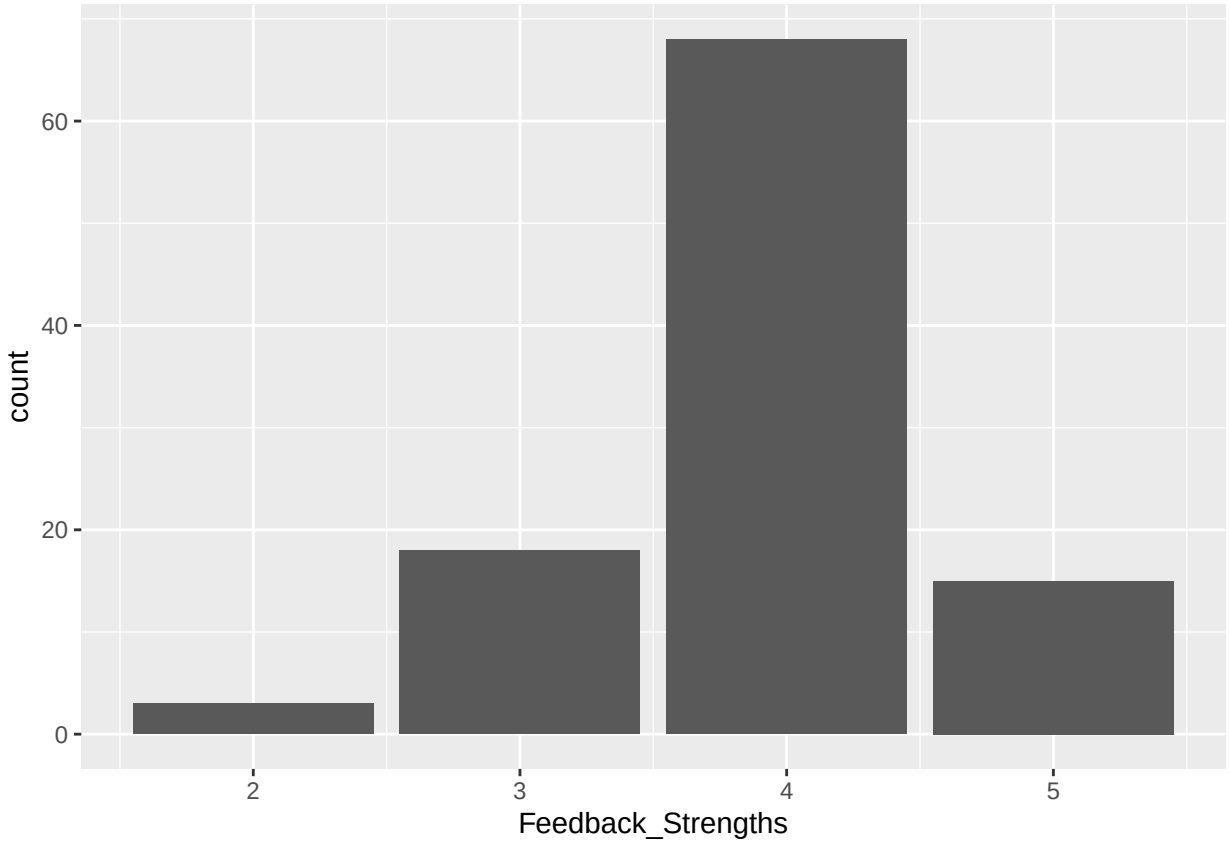

```
g9gf_2024 %>%
  filter(!is.na(TA), !is.na(School_Type)) %>%
  group_by(TA, School_Type) %>%
  summarize(avg_confidence = mean(Confidence), avg_habits = mean(Habits), avg_relationships = mean(Rela
```

```
## # A tibble: 4 x 6
## # Groups:   TA [2]
##      TA School_Type avg_confidence avg_habits avg_relationships count
##   <dbl> <chr>                <dbl>      <dbl>             <dbl> <int>
## 1     1 private               4.3        4.3               4.2     10
## 2     1 public                4.2        3.9               4.3     10
## 3     2 private               3.79       4                 4.29    56
## 4     2 public                4.04       3.88              4.4     25
```

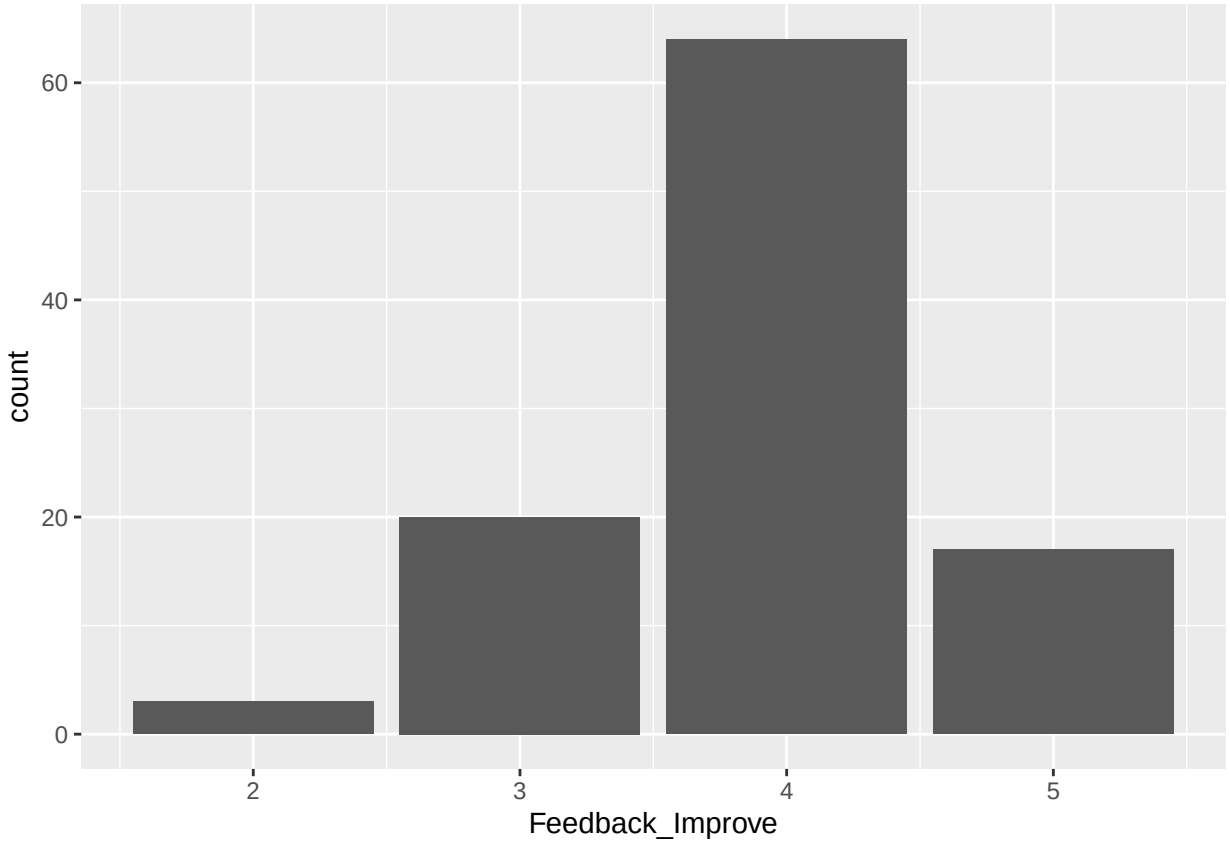
Feedback

Feedback Overall

```
g9gf_2024 %>%
  ggplot(aes(x=`Feedback_Strengths`)) +
  geom_bar()
```

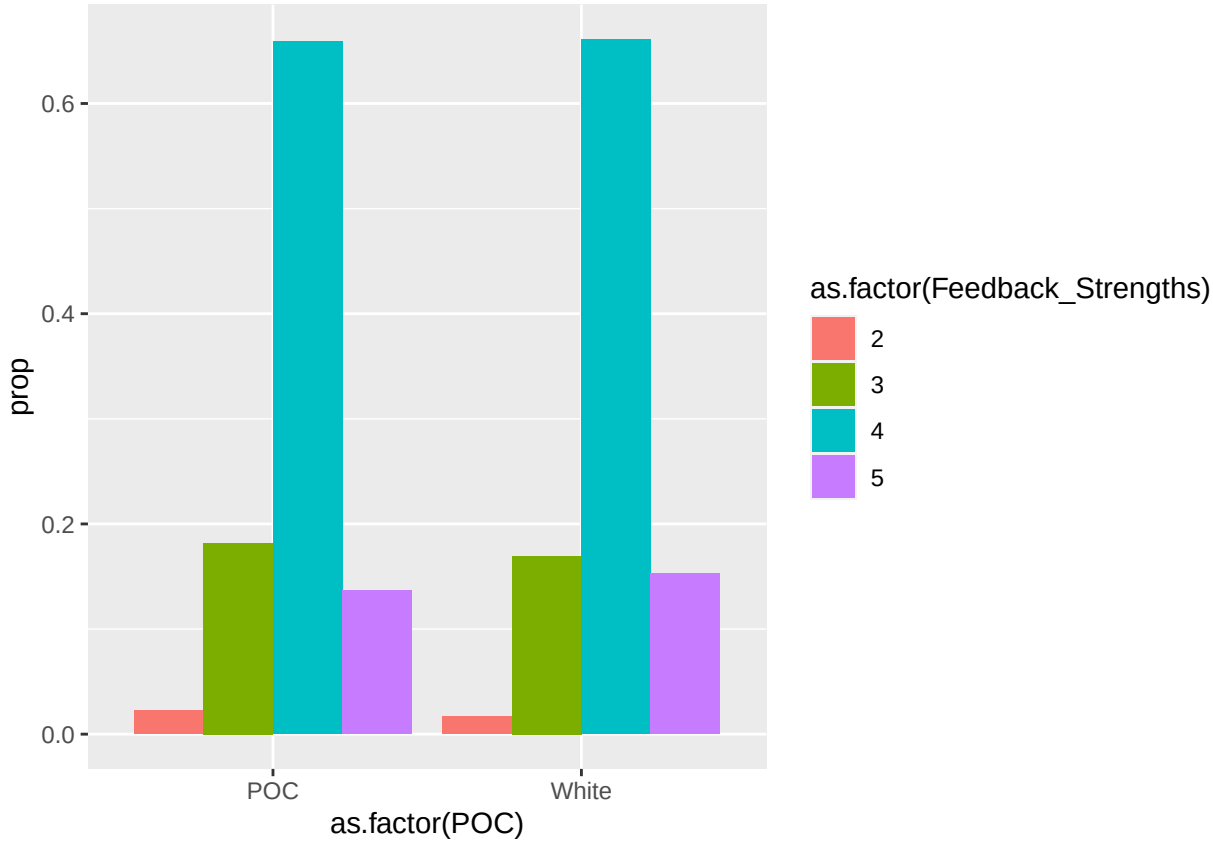



```
g9gf_2024 %>%
  ggplot(aes(x=`Feedback_Improve`)) +
  geom_bar()
```

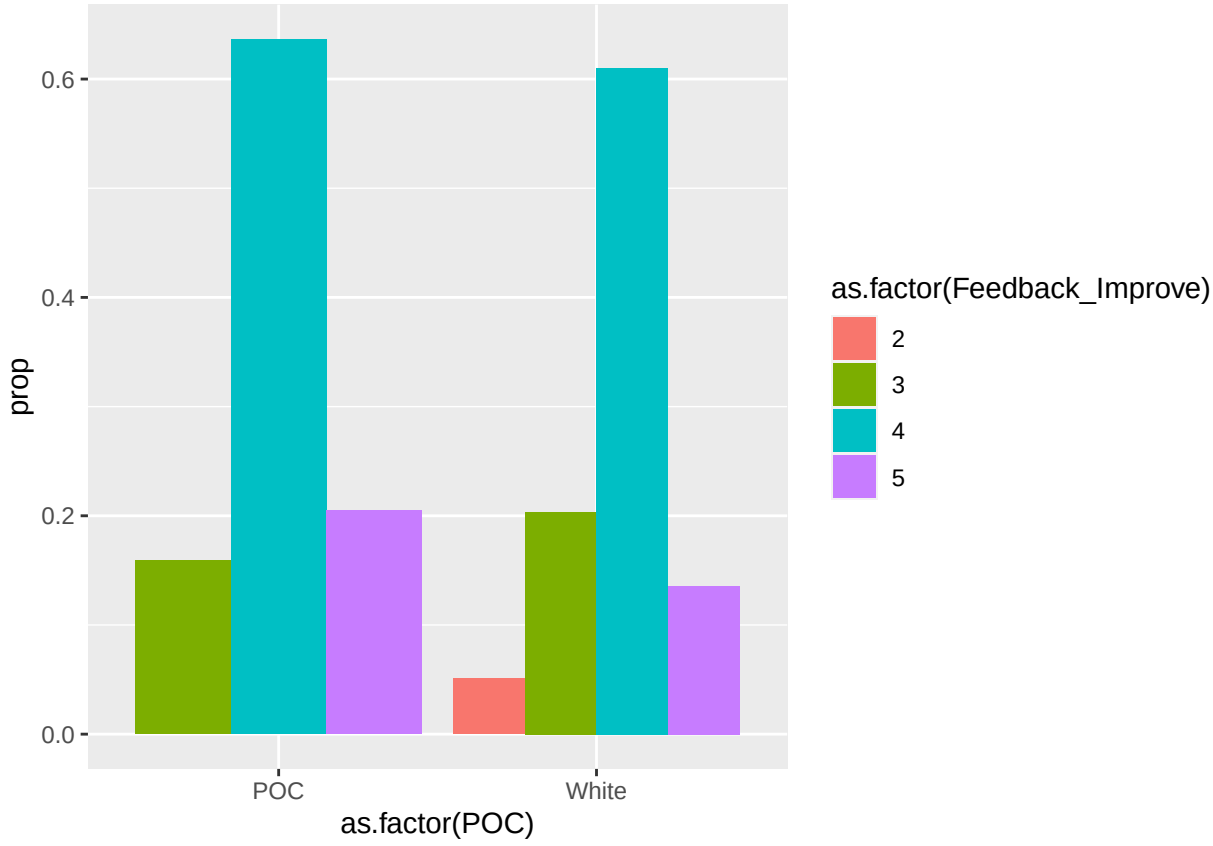


Feedback by Race

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  group_by(POC, Feedback_Strengths) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(POC), y = `prop`, fill = as.factor(Feedback_Strengths))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  group_by(POC, Feedback_Improve) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(POC), y = `prop`, fill = as.factor(Feedback_Improve))) +
  geom_col(position = "dodge")
```

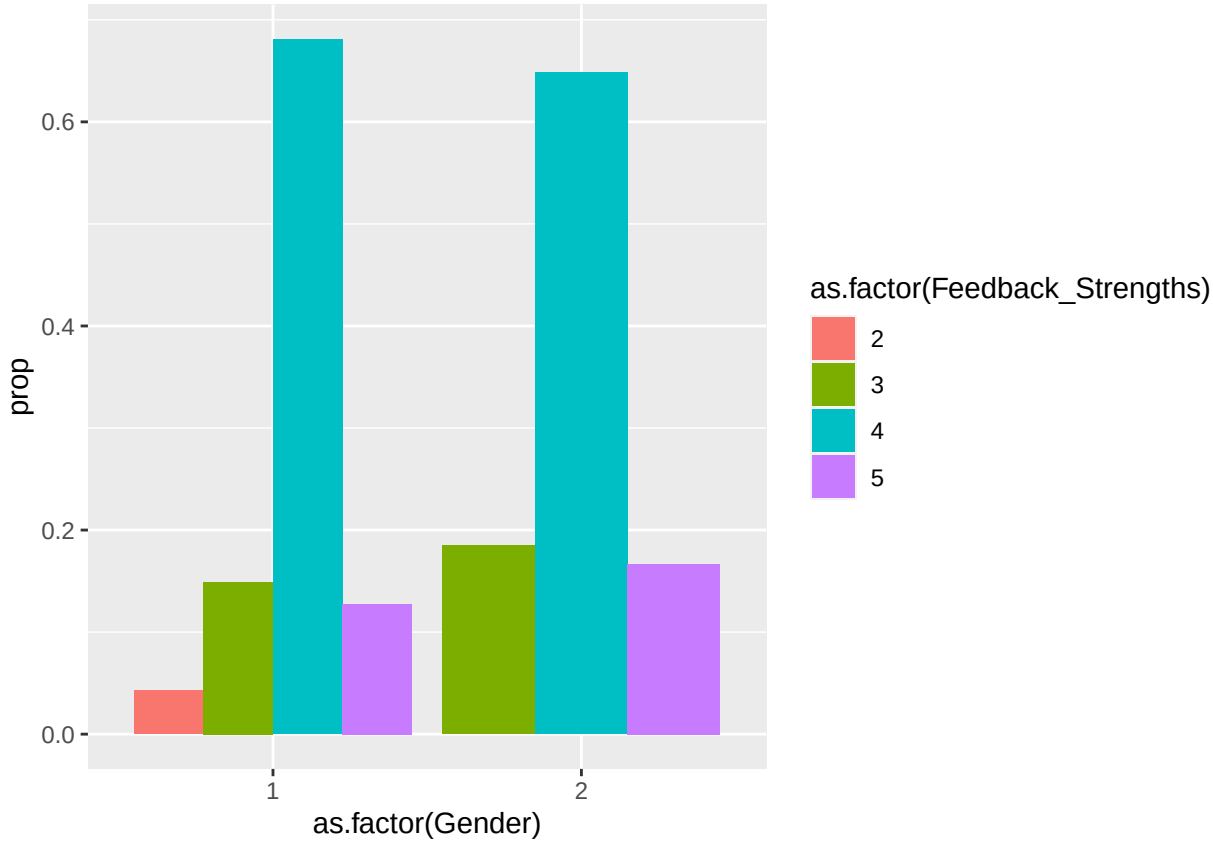



```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  group_by(POC) %>%
  summarize(avg_strengths = mean(Feedback_Strengths), avg_improve = mean(Feedback_Improve), count = n()
```

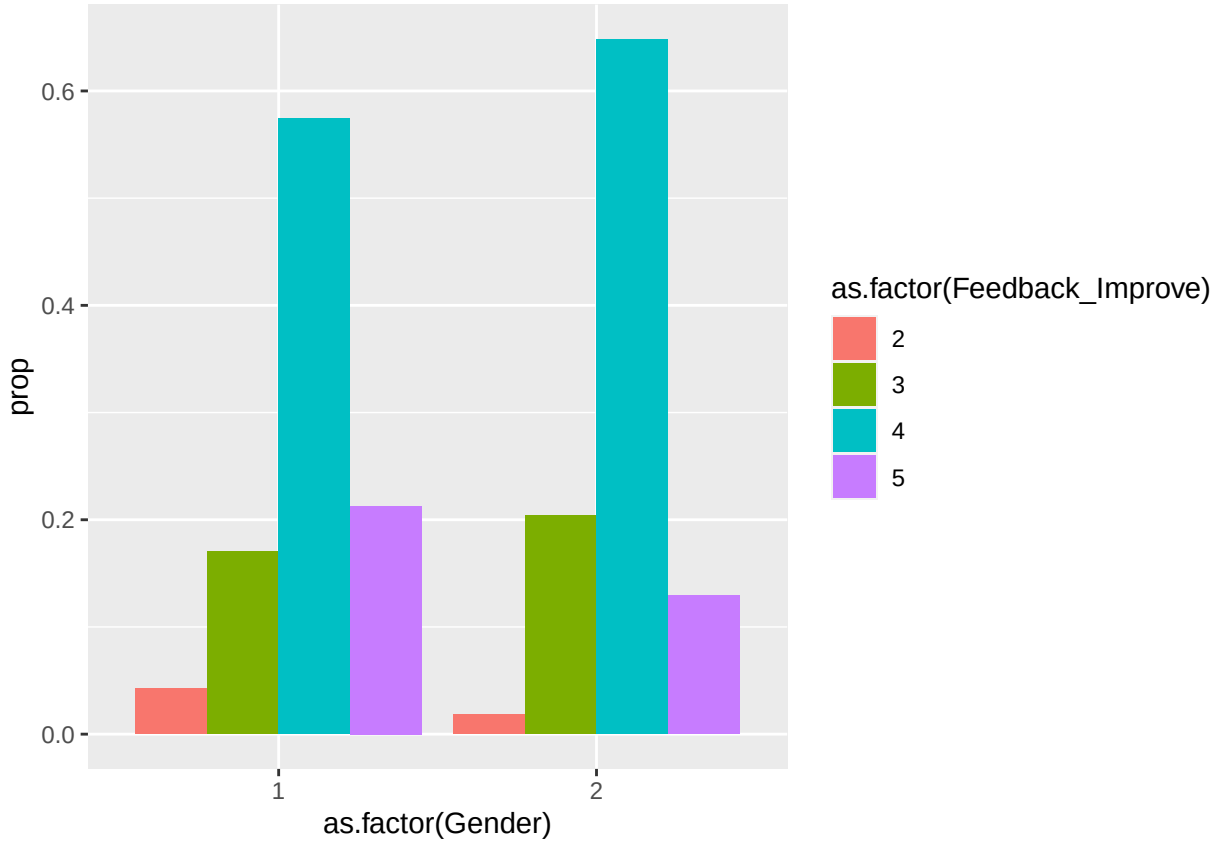
```
## # A tibble: 2 x 4
##   POC   avg_strengths avg_improve count
##   <chr>         <dbl>       <dbl> <int>
## 1 POC            3.91        4.05    44
## 2 White          3.95        3.83    59
```

Feedback by Gender

```
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  group_by(Gender, Feedback_Strengths) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(Gender), y = `prop`, fill = as.factor(Feedback_Strengths))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  group_by(Gender, Feedback_Improve) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(Gender), y = `prop`, fill = as.factor(Feedback_Improve))) +
  geom_col(position = "dodge")
```

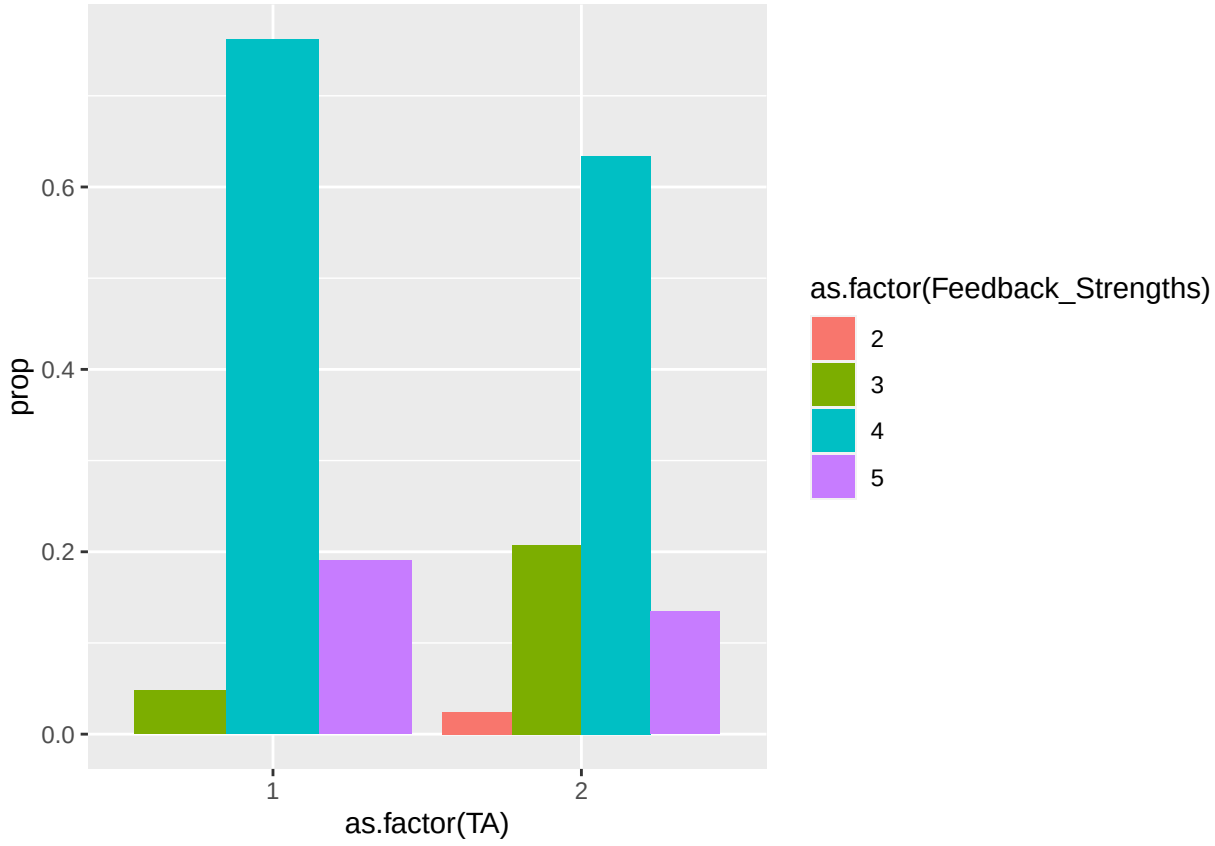



```
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  group_by(Gender) %>%
  summarize(avg_strengths = mean(Feedback_Strengths), avg_improve = mean(Feedback_Improve), count = n()
```

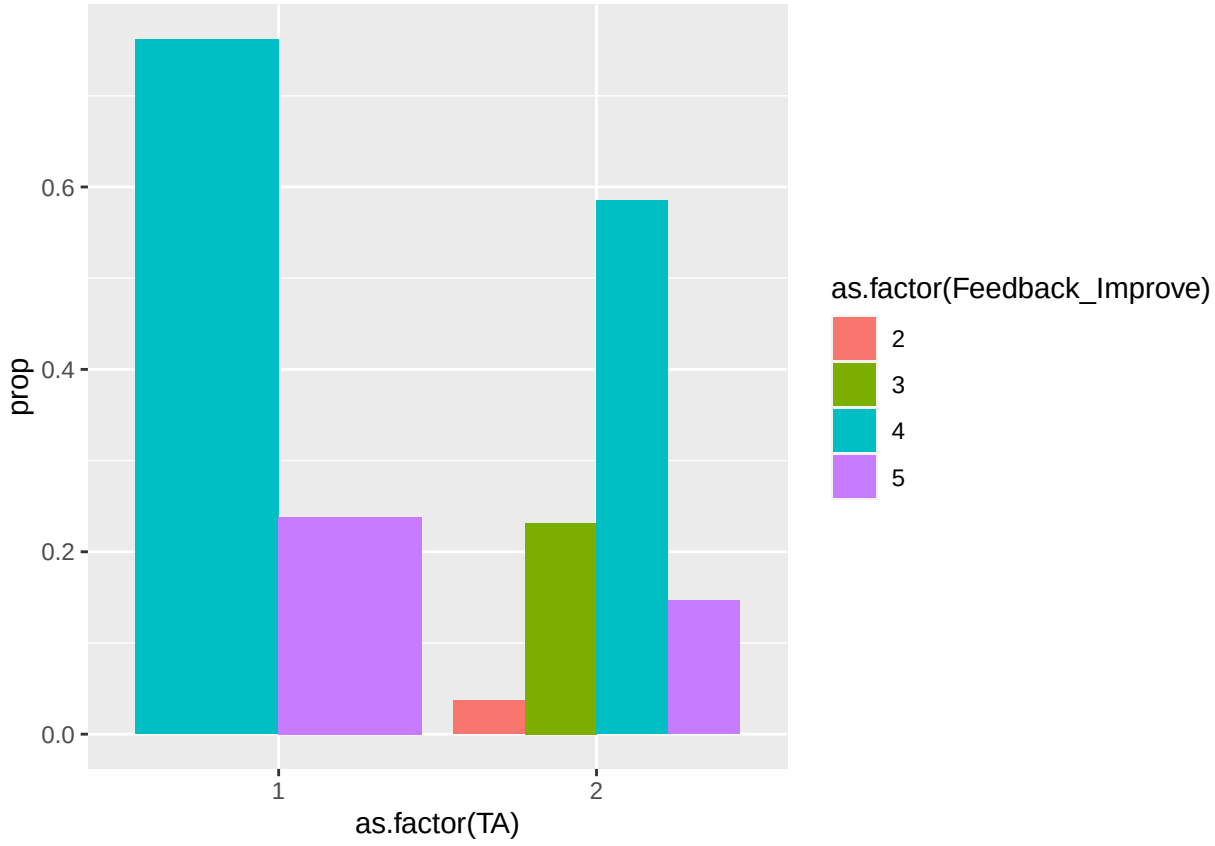
```
## # A tibble: 2 x 4
##   Gender avg_strengths avg_improve count
##    <dbl>         <dbl>       <dbl> <int>
## 1      1          3.89        3.96    47
## 2      2          3.98        3.89    54
```

Feedback by TA

```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  group_by(TA, Feedback_Strengths) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(TA), y = `prop`, fill = as.factor(Feedback_Strengths))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  group_by(TA, Feedback_Improve) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(TA), y = `prop`, fill = as.factor(Feedback_Improve))) +
  geom_col(position = "dodge")
```

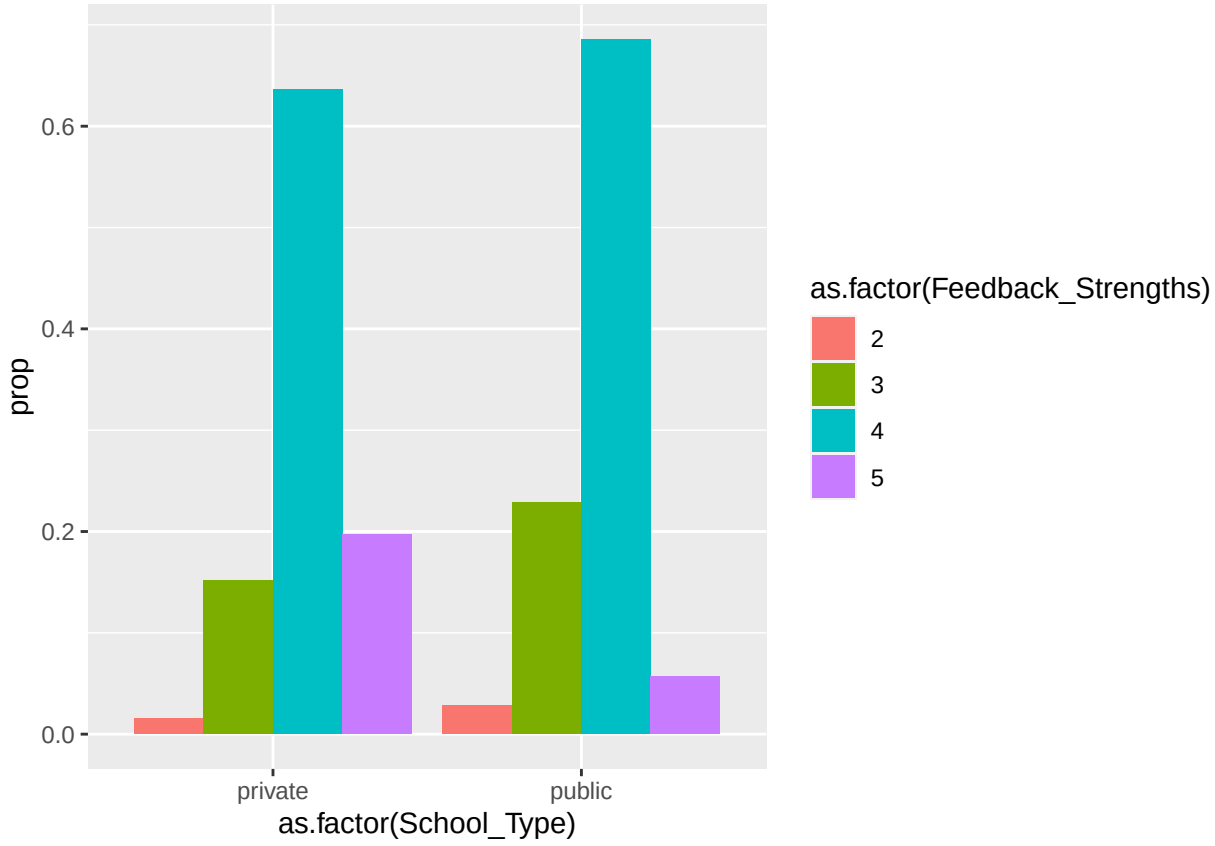



```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  group_by(TA) %>%
  summarize(avg_strengths = mean(Feedback_Strengths), avg_improve = mean(Feedback_Improve), count = n()
```

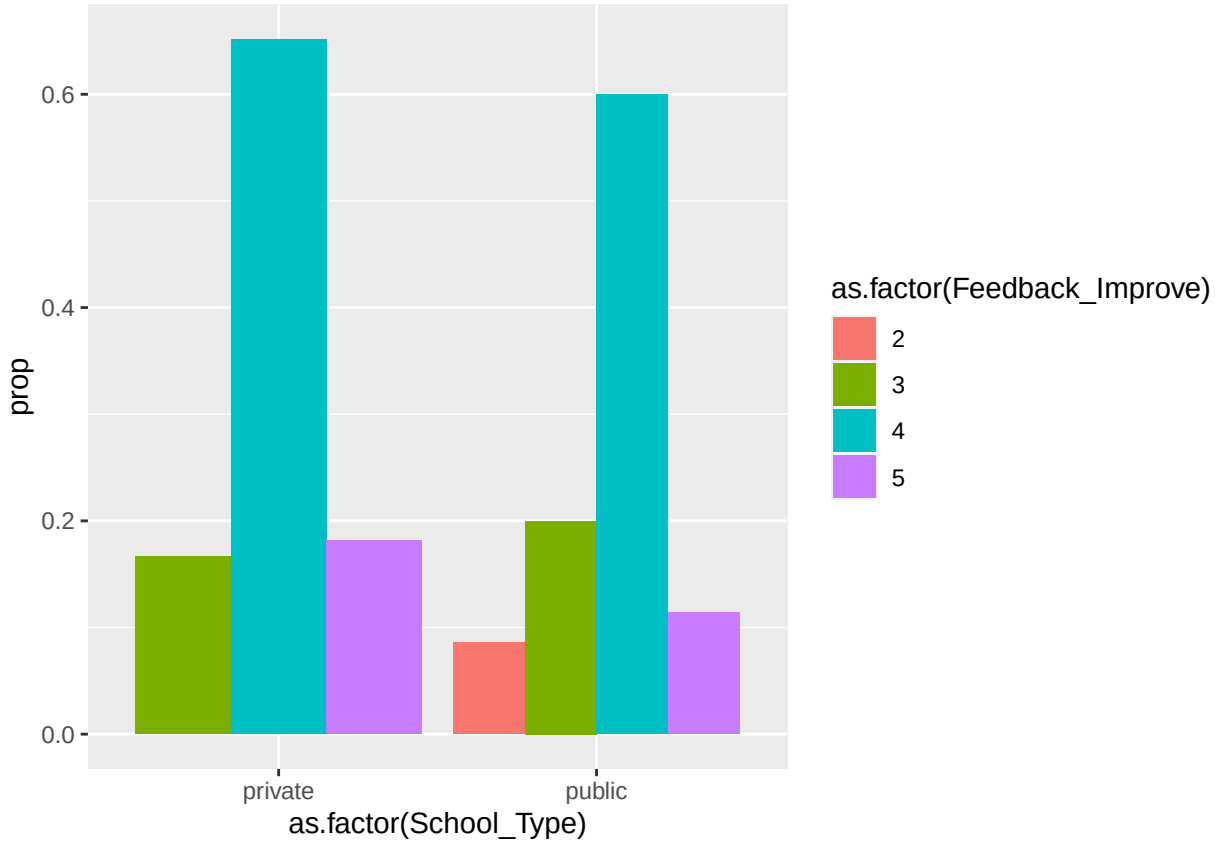
```
## # A tibble: 2 x 4
##      TA avg_strengths avg_improve count
##   <dbl>         <dbl>       <dbl> <int>
## 1     1          4.14        4.24    21
## 2     2          3.88        3.84    82
```

Feedback by School Type

```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  group_by(School_Type, Feedback_Strengths) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(School_Type), y = `prop`, fill = as.factor(Feedback_Strengths))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  group_by(School_Type, Feedback_Improve) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(School_Type), y = `prop`, fill = as.factor(Feedback_Improve))) +
  geom_col(position = "dodge")
```



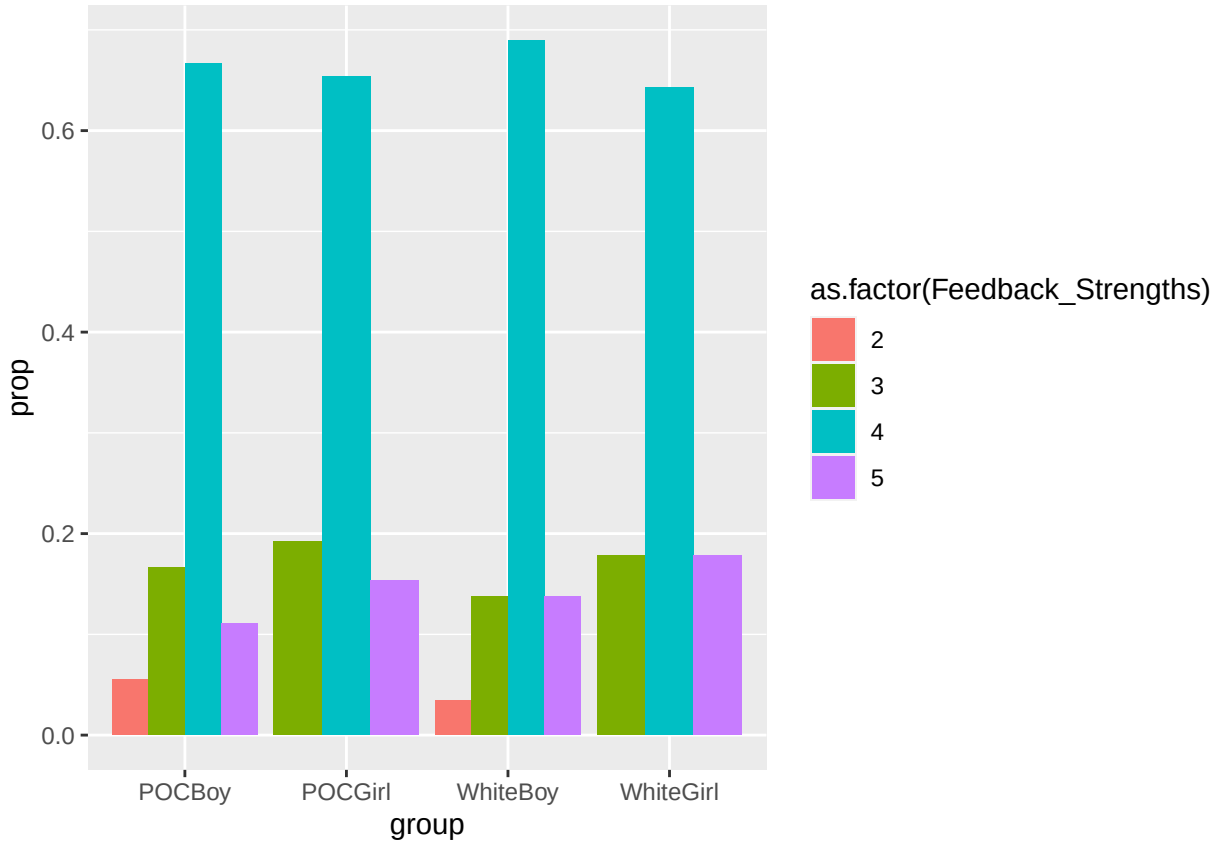

```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  group_by(School_Type) %>%
  summarize(avg_strengths = mean(Feedback_Strengths), avg_improve = mean(Feedback_Improve), count = n()
```

```
## # A tibble: 2 x 4
##   School_Type avg_strengths avg_improve count
##   <chr>               <dbl>       <dbl> <int>
## 1 private              4.02        4.02    66
## 2 public               3.77        3.74    35
```

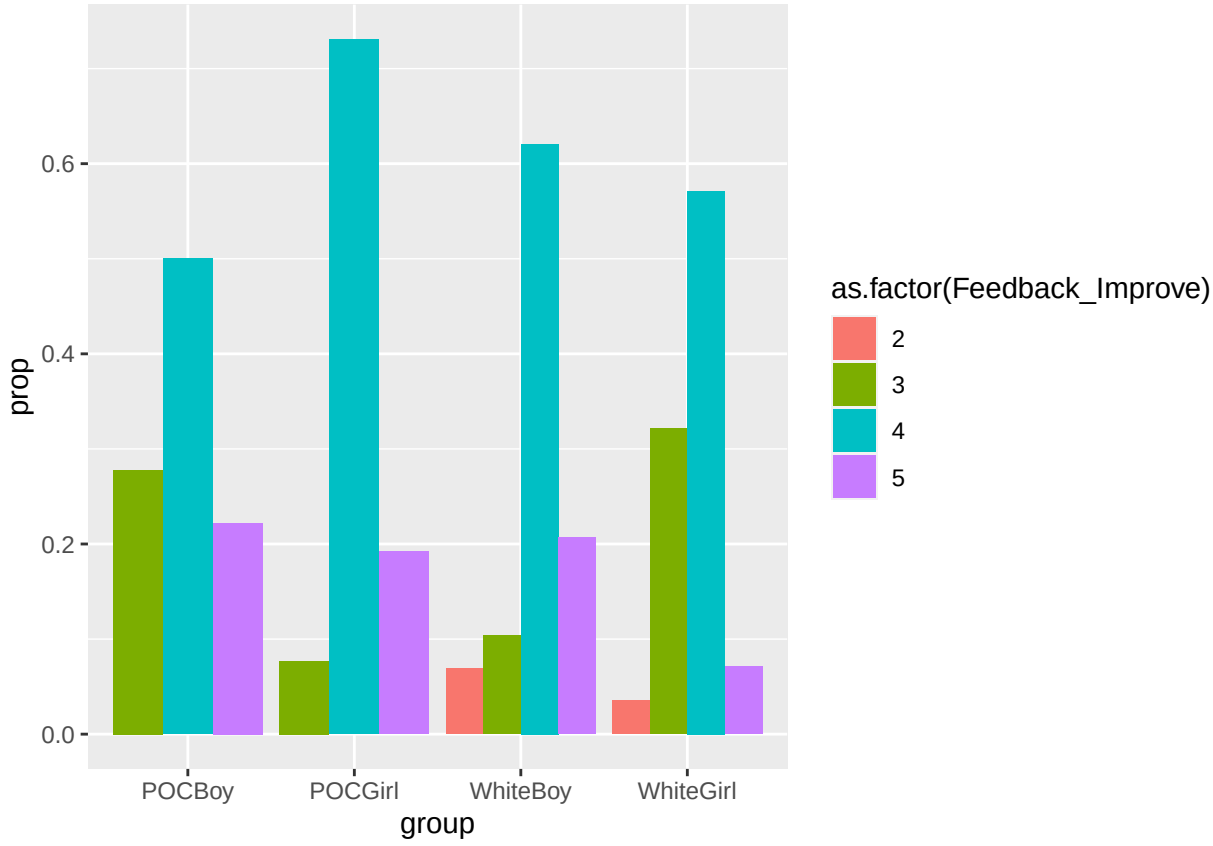
Feedback by Race + Gender

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), Gender <= 2) %>%
  group_by(POC, Gender, Feedback_Strengths) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
```

```
    POC == "White" & Gender == 1 ~ "WhiteBoy",
    POC == "White" & Gender == 2 ~ "WhiteGirl",
    POC == "POC" & Gender == 1 ~ "POCBoy",
    POC == "POC" & Gender == 2 ~ "POCGirl"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Feedback_Strengths))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), Gender <= 2) %>%
  group_by(POC, Gender, Feedback_Improve) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & Gender == 1 ~ "WhiteBoy",
    POC == "White" & Gender == 2 ~ "WhiteGirl",
    POC == "POC" & Gender == 1 ~ "POCBoy",
    POC == "POC" & Gender == 2 ~ "POCGirl"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Feedback_Improve))) +
  geom_col(position = "dodge")
```



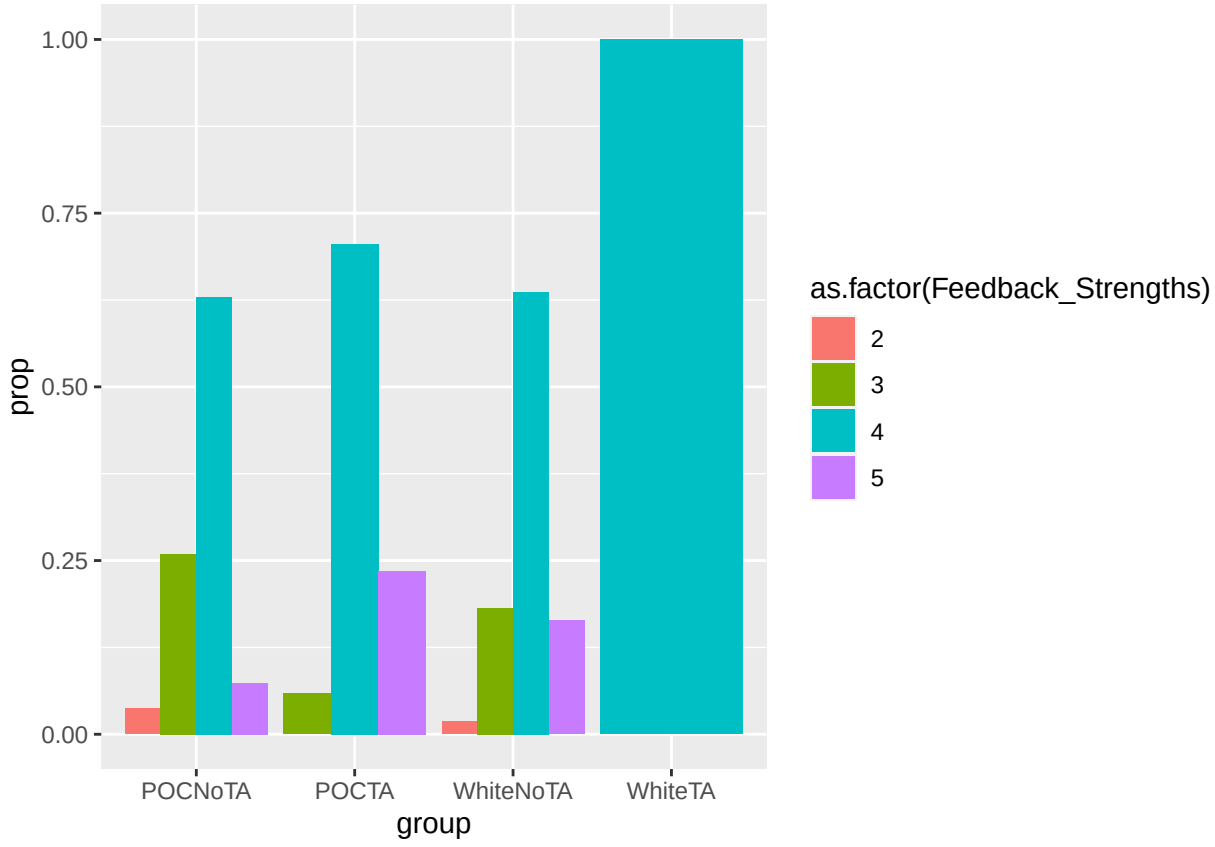

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), Gender <= 2) %>%
  group_by(POC, Gender) %>%
  summarize(avg_strengths = mean(Feedback_Strengths), avg_improve = mean(Feedback_Improve), count = n()
```

```
## # A tibble: 4 x 5
## # Groups:   POC [2]
##   POC   Gender avg_strengths avg_improve count
##   <chr>  <dbl>         <dbl>       <dbl> <int>
## 1 POC        1          3.83        3.94    18
## 2 POC        2          3.96        4.12    26
## 3 White      1          3.93        3.97    29
## 4 White      2          4           3.68    28
```

Feedback by Race + TA

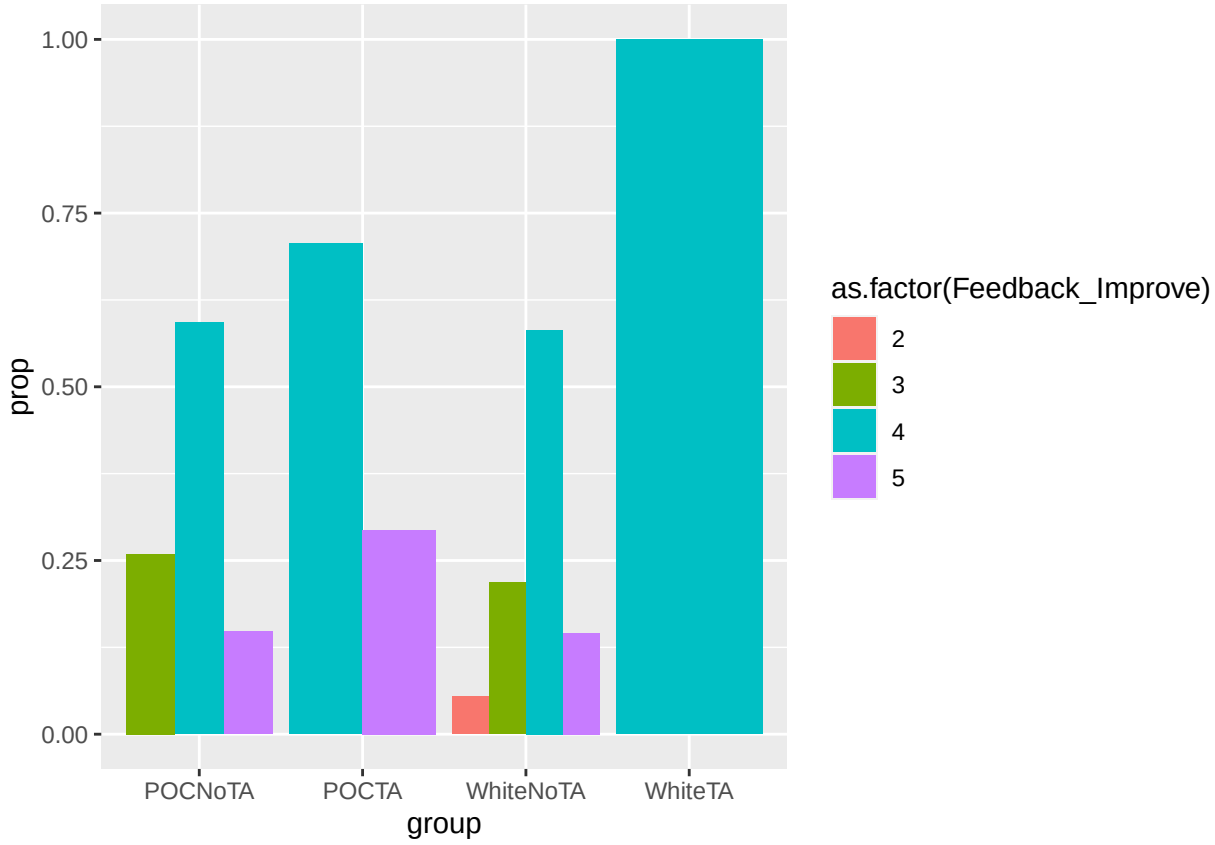
```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
```

```
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(TA)) %>%
  group_by(POC, TA, Feedback_Strengths) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & TA == 1 ~ "WhiteTA",
    POC == "White" & TA == 2 ~ "WhiteNoTA",
    POC == "POC" & TA == 1 ~ "POCTA",
    POC == "POC" & TA == 2 ~ "POCNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Feedback_Strengths))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(TA)) %>%
  group_by(POC, TA, Feedback_Improve) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
```

```
    POC == "White" & TA == 1 ~ "WhiteTA",
    POC == "White" & TA == 2 ~ "WhiteNoTA",
    POC == "POC" & TA == 1 ~ "POCTA",
    POC == "POC" & TA == 2 ~ "POCNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Feedback_Improve))) +
  geom_col(position = "dodge")
```

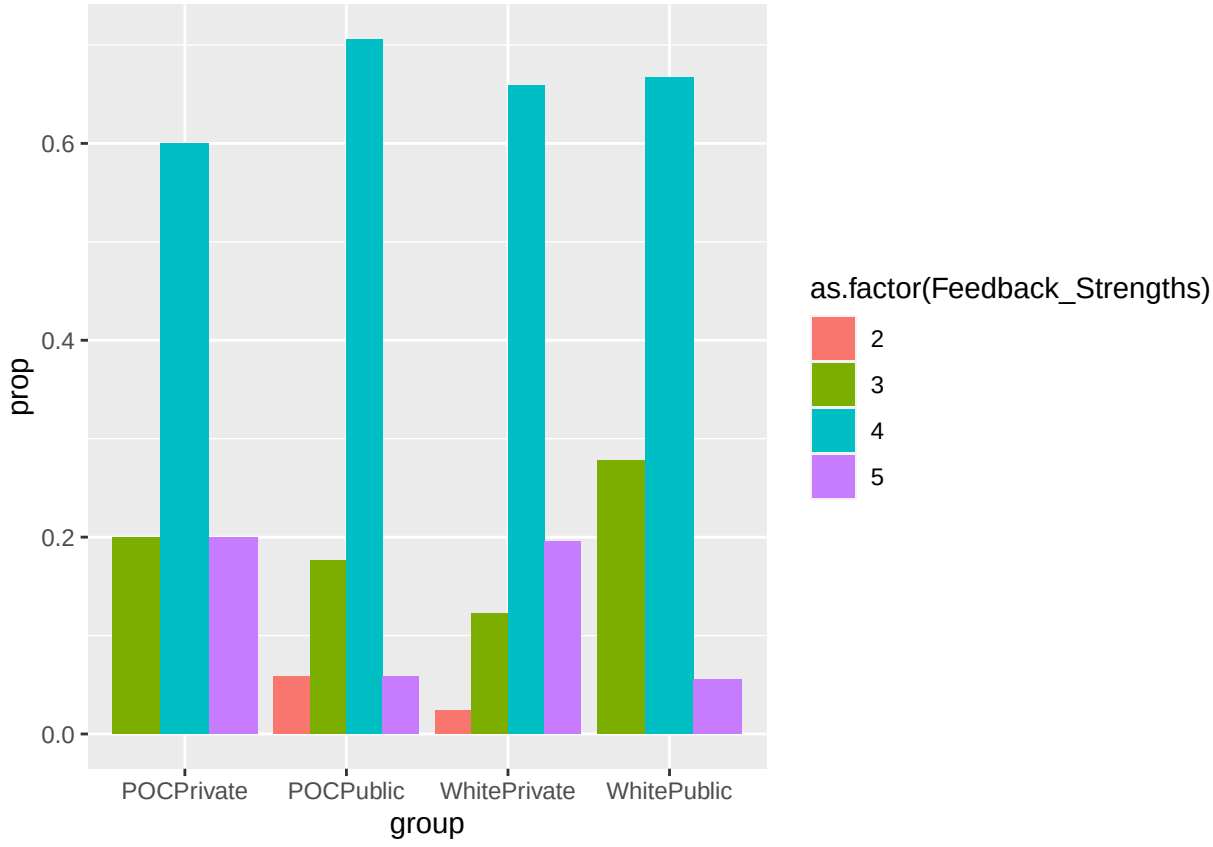



```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(TA)) %>%
  group_by(POC, TA) %>%
  summarize(avg_strengths = mean(Feedback_Strengths), avg_improve = mean(Feedback_Improve), count = n()
```

```
## # A tibble: 4 x 5
## # Groups:   POC [2]
##   POC      TA avg_strengths avg_improve count
##   <chr> <dbl>         <dbl>       <dbl> <int>
## 1 POC       1          4.18        4.29    17
## 2 POC       2          3.74        3.89    27
## 3 White     1          4           4        4
## 4 White     2          3.95        3.82    55
```

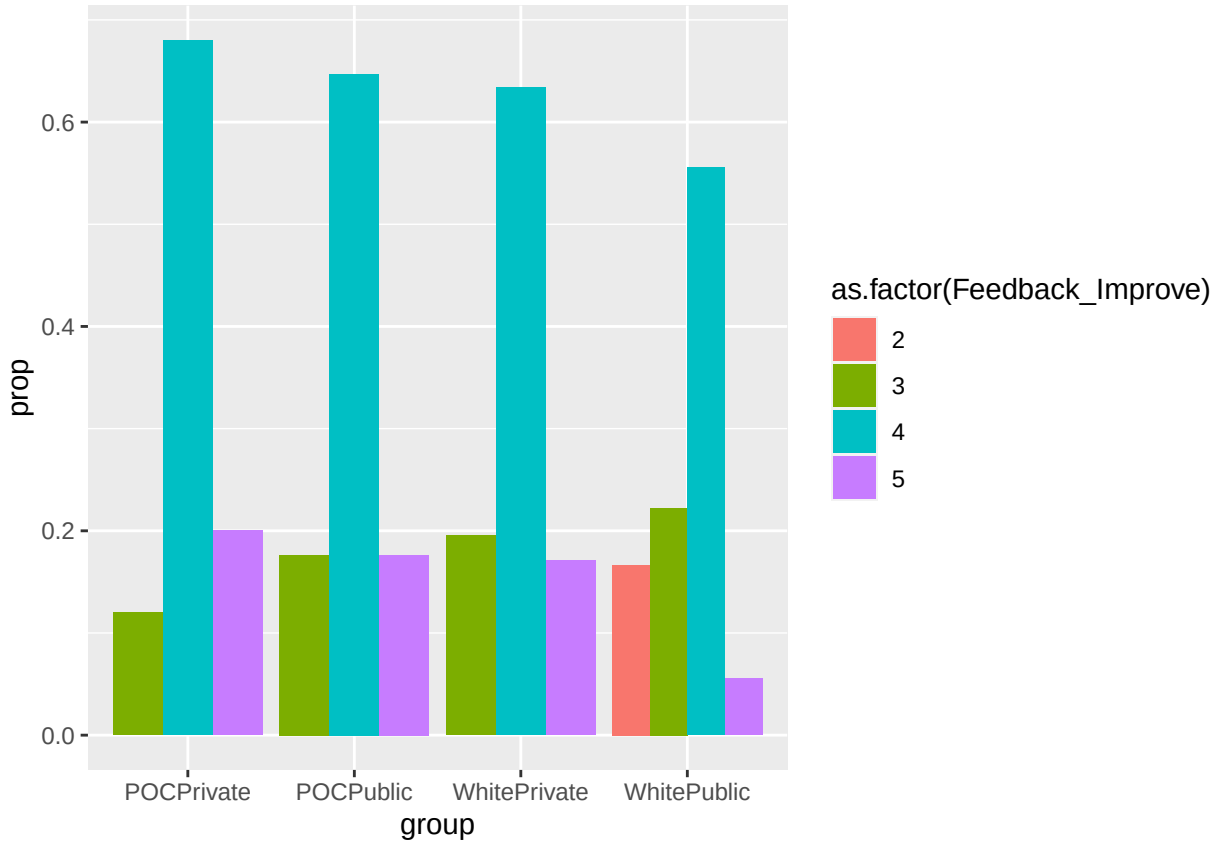
Feedback by Race + School Type

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(School_Type)) %>%
  group_by(POC, School_Type, Feedback_Strengths) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & School_Type == "public" ~ "WhitePublic",
    POC == "White" & School_Type == "private" ~ "WhitePrivate",
    POC == "POC" & School_Type == "public" ~ "POCPublic",
    POC == "POC" & School_Type == "private" ~ "POCPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Feedback_Strengths))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
```

```
  )) %>%
  filter(!is.na(POC), !is.na(School_Type)) %>%
  group_by(POC, School_Type, Feedback_Improve) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & School_Type == "public" ~ "WhitePublic",
    POC == "White" & School_Type == "private" ~ "WhitePrivate",
    POC == "POC" & School_Type == "public" ~ "POCPublic",
    POC == "POC" & School_Type == "private" ~ "POCPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Feedback_Improve))) +
  geom_col(position = "dodge")
```



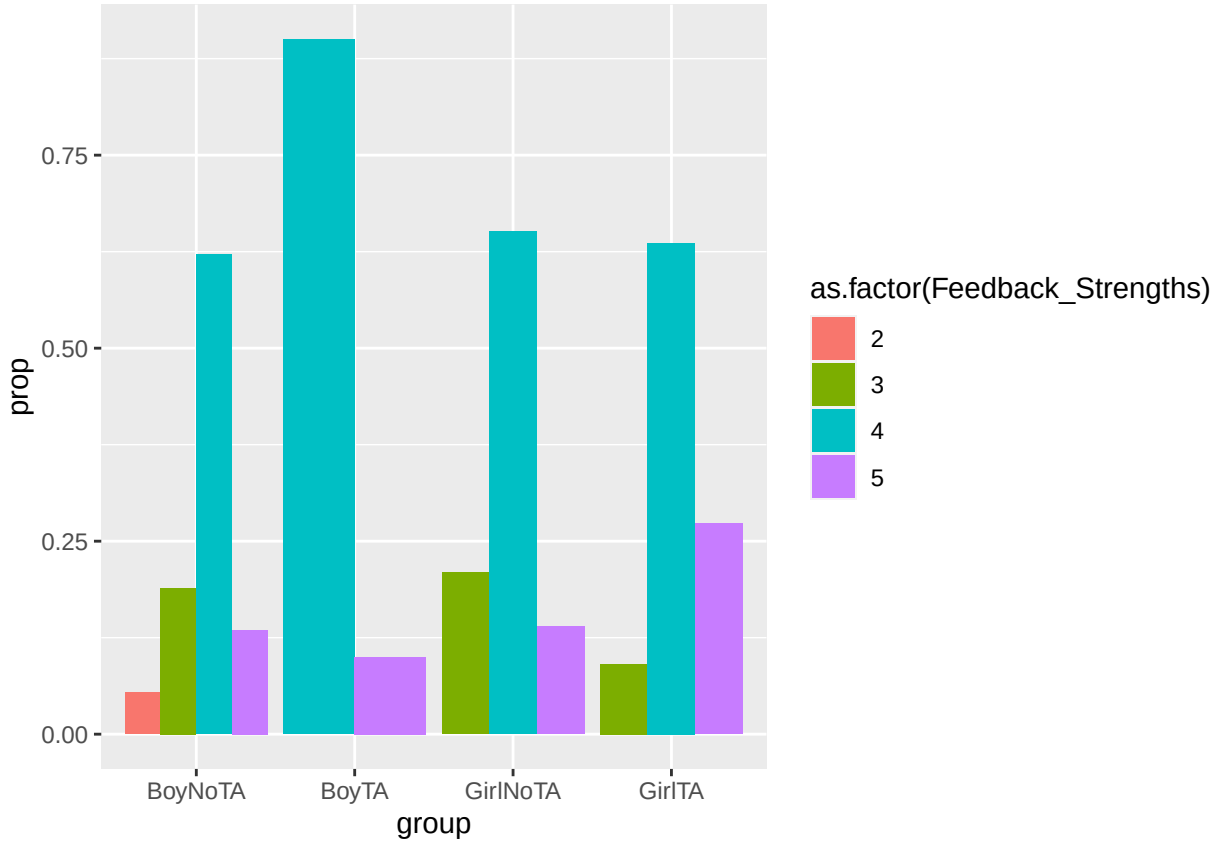

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(School_Type)) %>%
  group_by(POC, School_Type) %>%
  summarize(avg_strengths = mean(Feedback_Strengths), avg_improve = mean(Feedback_Improve), count = n()
```

```
## # A tibble: 4 x 5
## # Groups:   POC [2]
```

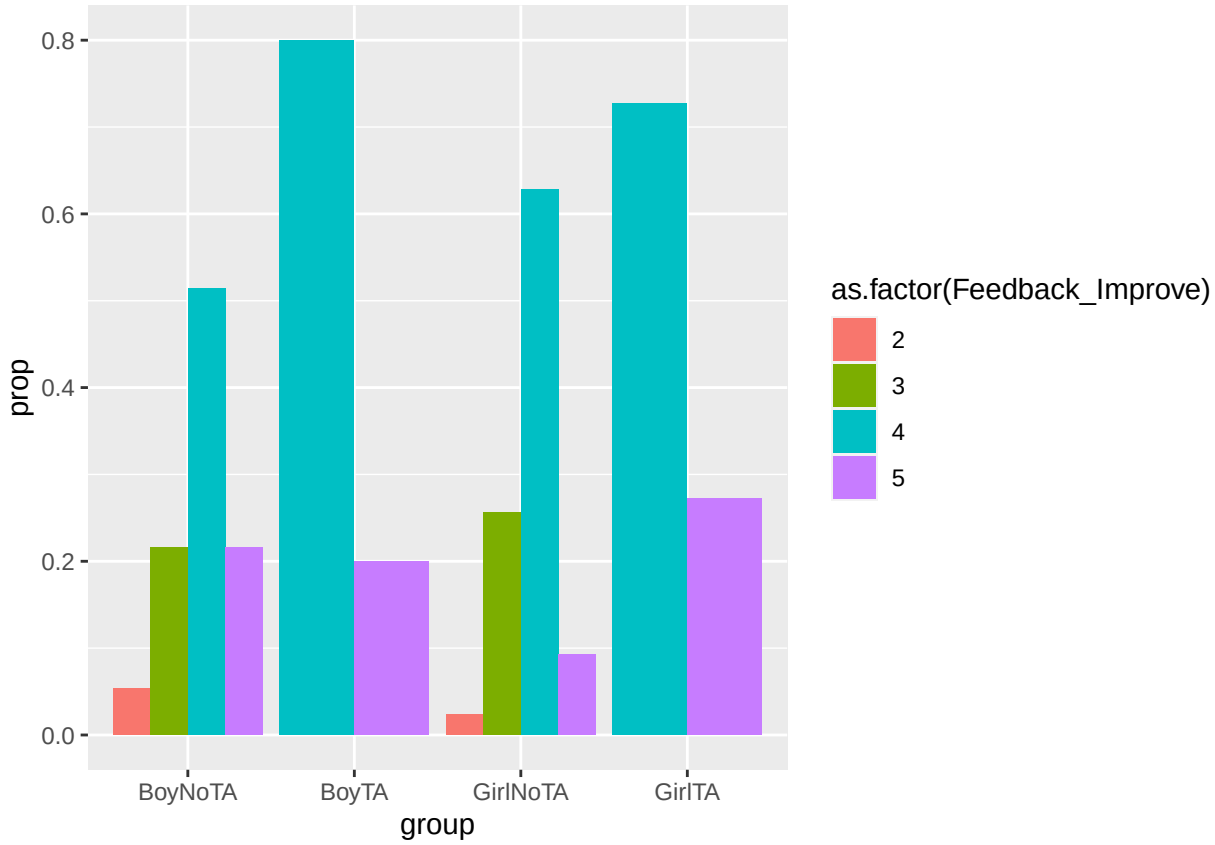
```
##   POC   School_Type avg_strengths avg_improve count
##   <chr> <chr>               <dbl>       <dbl> <int>
## 1 POC   private              4           4.08    25
## 2 POC   public               3.76        4       17
## 3 White private              4.02        3.98    41
## 4 White public               3.78        3.5     18
```

Feedback by Gender + TA

```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(TA)) %>%
  group_by(Gender, TA, Feedback_Strengths) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & TA == 1 ~ "BoyTA",
    Gender == 1 & TA == 2 ~ "BoyNoTA",
    Gender == 2 & TA == 1 ~ "GirlTA",
    Gender == 2 & TA == 2 ~ "GirlNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Feedback_Strengths))) +
  geom_col(position = "dodge")
```



```r
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(TA)) %>%
  group_by(Gender, TA, Feedback_Improve) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & TA == 1 ~ "BoyTA",
    Gender == 1 & TA == 2 ~ "BoyNoTA",
    Gender == 2 & TA == 1 ~ "GirlTA",
    Gender == 2 & TA == 2 ~ "GirlNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Feedback_Improve))) +
  geom_col(position = "dodge")
```



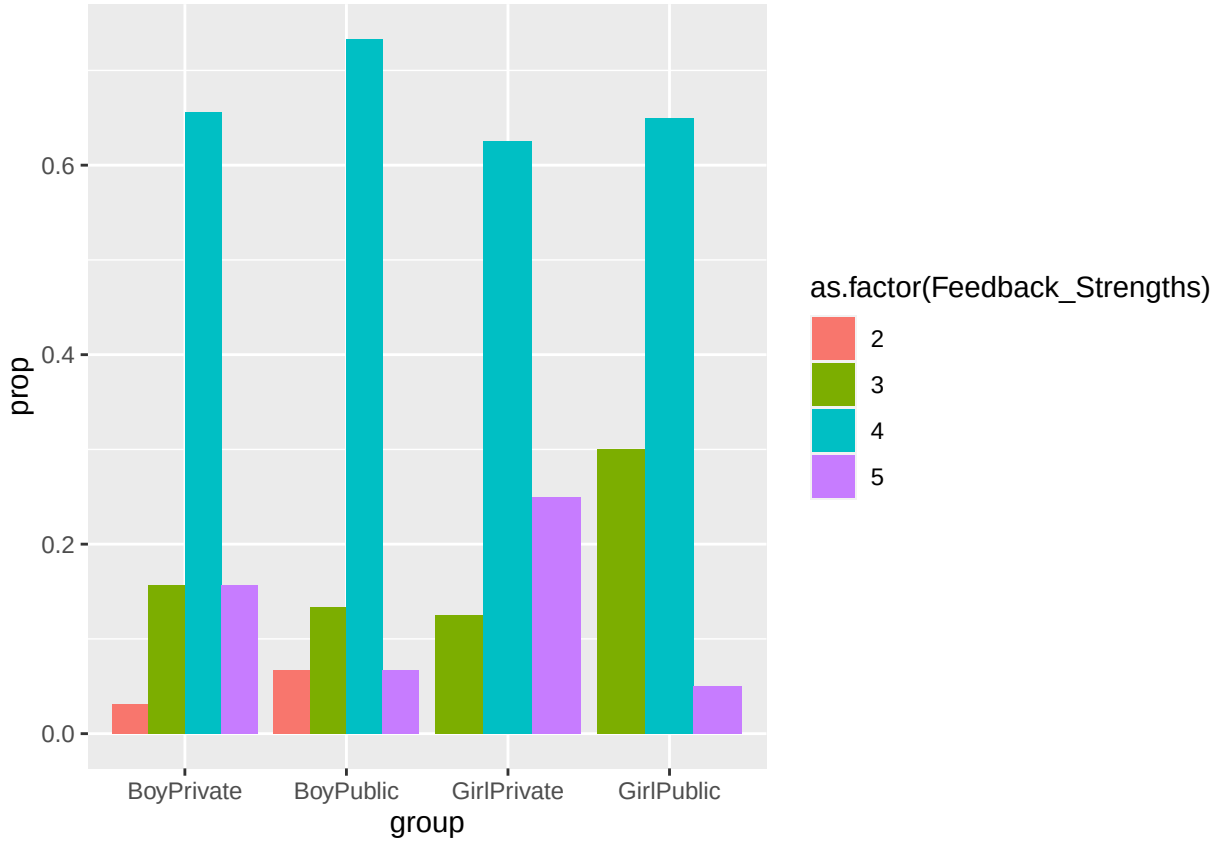

```r
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(TA)) %>%
  group_by(Gender, TA) %>%
  summarize(avg_strengths = mean(Feedback_Strengths), avg_improve = mean(Feedback_Improve), count = n())
```

```
## # A tibble: 4 x 5
## # Groups:   Gender [2]
##   Gender    TA avg_strengths avg_improve count
##    <dbl> <dbl>          <dbl>       <dbl> <int>
## 1      1     1           4.1         4.2     10
## 2      1     2           3.84        3.89    37
```

```
## 3      2     1          4.18        4.27    11
## 4      2     2          3.93        3.79    43
```

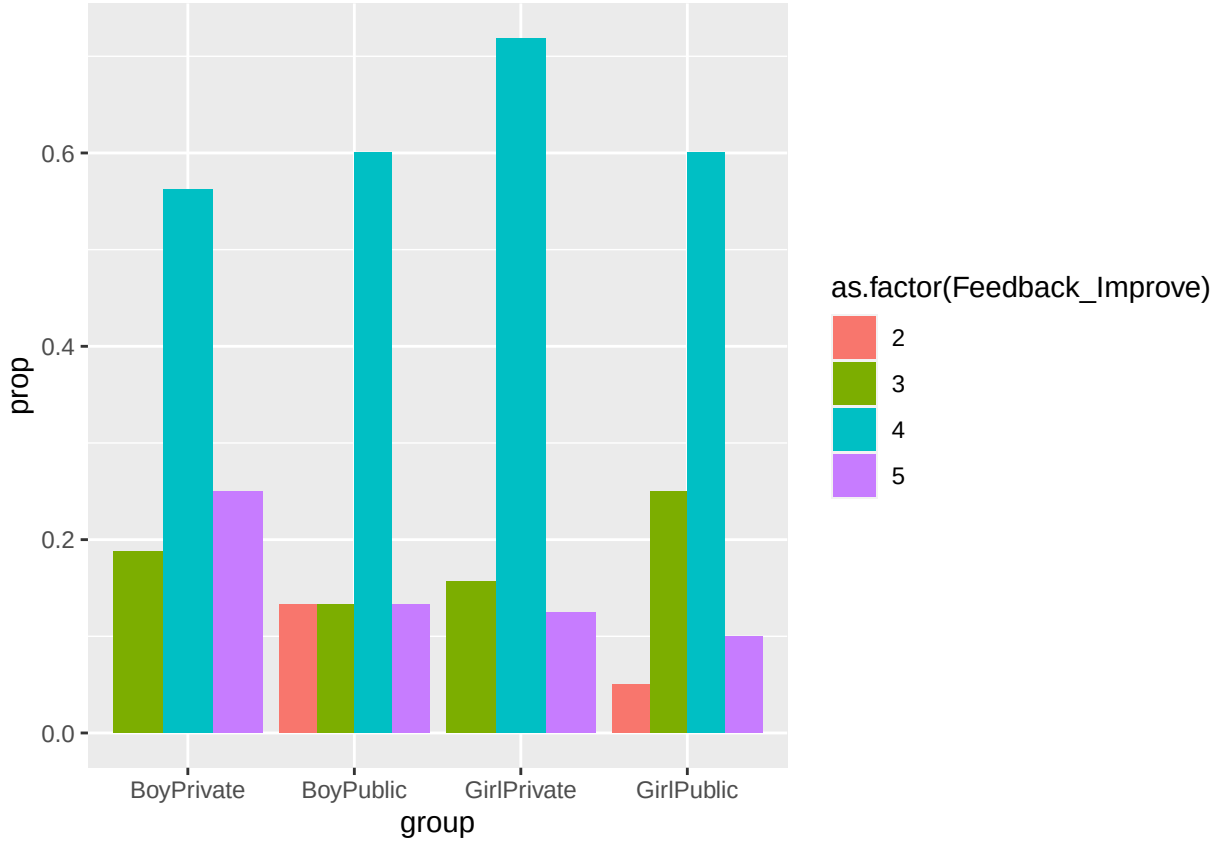
Feedback by Gender + School Type

```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(School_Type)) %>%
  group_by(Gender, School_Type, Feedback_Strengths) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & School_Type == "public" ~ "BoyPublic",
    Gender == 1 & School_Type == "private" ~ "BoyPrivate",
    Gender == 2 & School_Type == "public" ~ "GirlPublic",
    Gender == 2 & School_Type == "private" ~ "GirlPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Feedback_Strengths))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(School_Type)) %>%
  group_by(Gender, School_Type, Feedback_Improve) %>%
  summarize(count = n()) %>%
```

```
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & School_Type == "public" ~ "BoyPublic",
    Gender == 1 & School_Type == "private" ~ "BoyPrivate",
    Gender == 2 & School_Type == "public" ~ "GirlPublic",
    Gender == 2 & School_Type == "private" ~ "GirlPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Feedback_Improve))) +
  geom_col(position = "dodge")
```

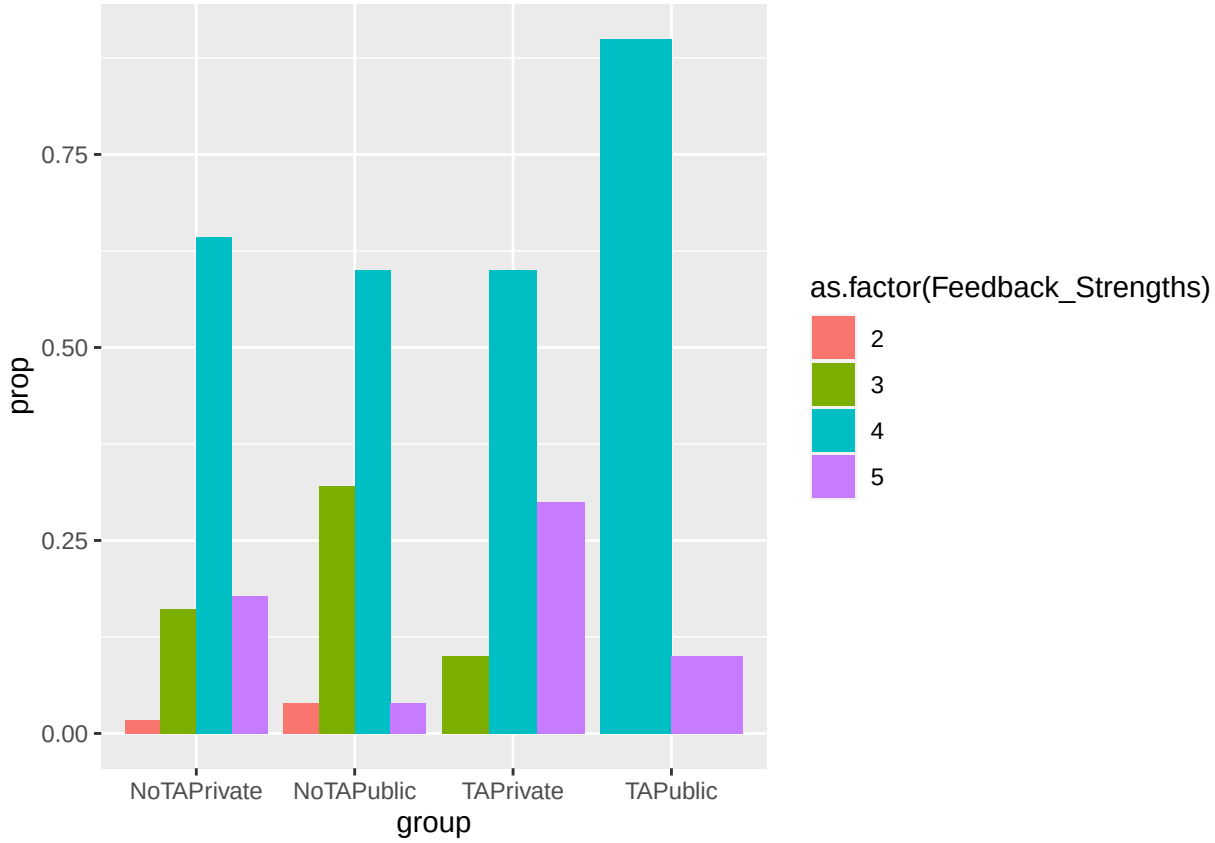



```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(School_Type)) %>%
  group_by(Gender, School_Type) %>%
  summarize(avg_strengths = mean(Feedback_Strengths), avg_improve = mean(Feedback_Improve), count = n())
```

```
## # A tibble: 4 x 5
## # Groups:   Gender [2]
##   Gender School_Type avg_strengths avg_improve count
##    <dbl> <chr>               <dbl>       <dbl> <int>
## 1      1 private              3.94        4.06    32
## 2      1 public               3.8         3.73    15
## 3      2 private              4.12        3.97    32
## 4      2 public               3.75        3.75    20
```

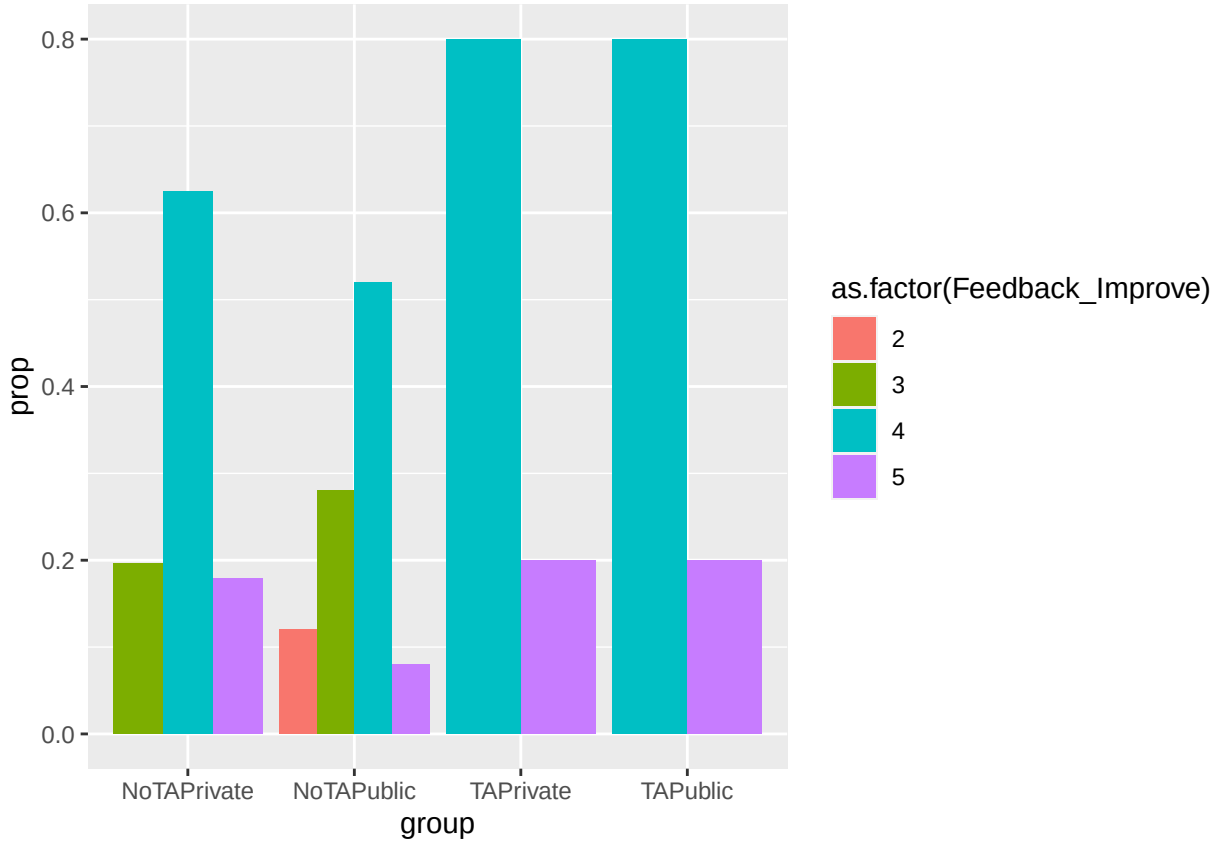
Feedback by TA + School Type

```
g9gf_2024 %>%
  filter(!is.na(TA), !is.na(School_Type)) %>%
  group_by(TA, School_Type, Feedback_Strengths) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    TA == 1 & School_Type == "public" ~ "TAPublic",
    TA == 2 & School_Type == "public" ~ "NoTAPublic",
    TA == 1 & School_Type == "private" ~ "TAPrivate",
    TA == 2 & School_Type == "private" ~ "NoTAPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Feedback_Strengths))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(TA), !is.na(School_Type)) %>%
  group_by(TA, School_Type, Feedback_Improve) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    TA == 1 & School_Type == "public" ~ "TAPublic",
    TA == 2 & School_Type == "public" ~ "NoTAPublic",
```

```
    TA == 1 & School_Type == "private" ~ "TAPrivate",
    TA == 2 & School_Type == "private" ~ "NoTAPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Feedback_Improve))) +
  geom_col(position = "dodge")
```



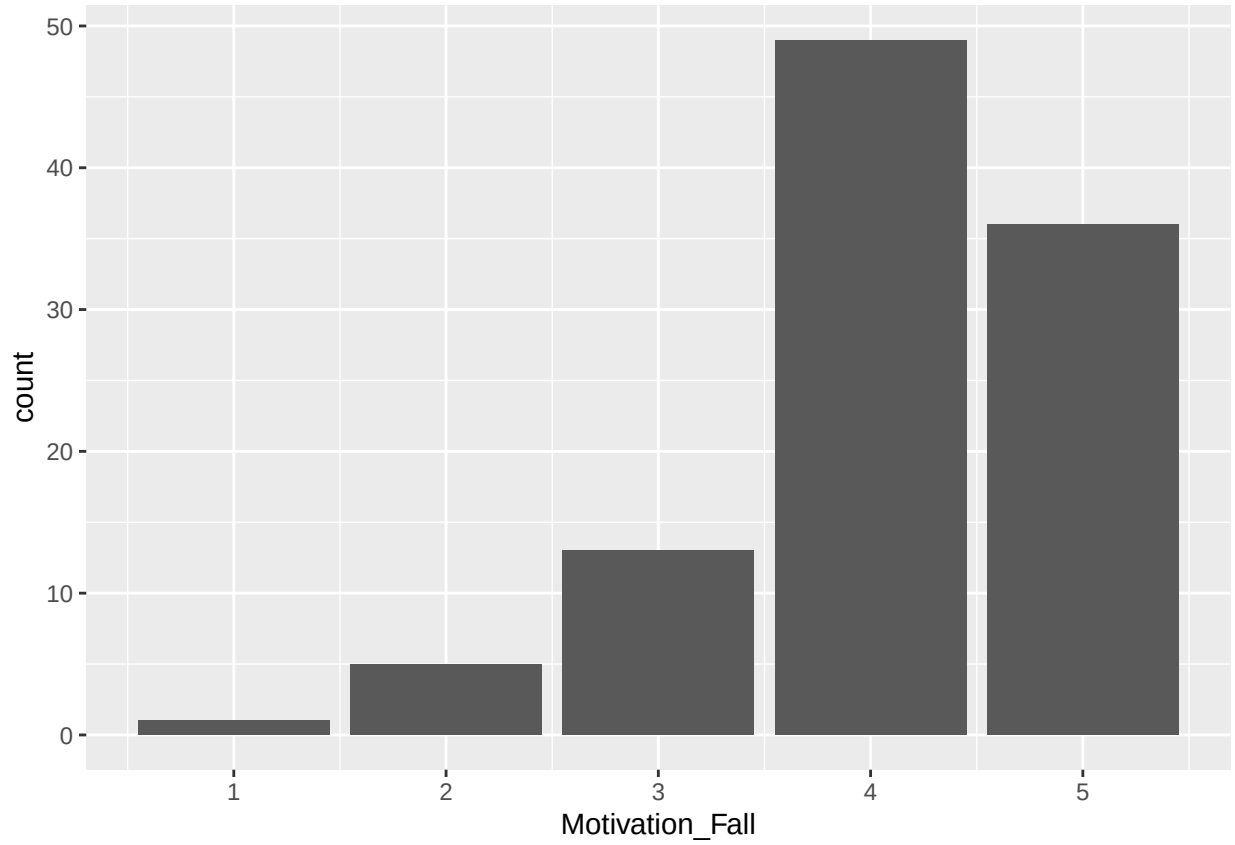

```
g9gf_2024 %>%
  filter(!is.na(TA), !is.na(School_Type)) %>%
  group_by(TA, School_Type) %>%
  summarize(avg_strengths = mean(Feedback_Strengths), avg_improve = mean(Feedback_Improve), count = n()
```

```
## # A tibble: 4 x 5
## # Groups:   TA [2]
##      TA School_Type avg_strengths avg_improve count
##   <dbl> <chr>                <dbl>       <dbl> <int>
## 1     1 private               4.2         4.2     10
## 2     1 public                4.1         4.2     10
## 3     2 private               3.98        3.98    56
## 4     2 public                3.64        3.56    25
```

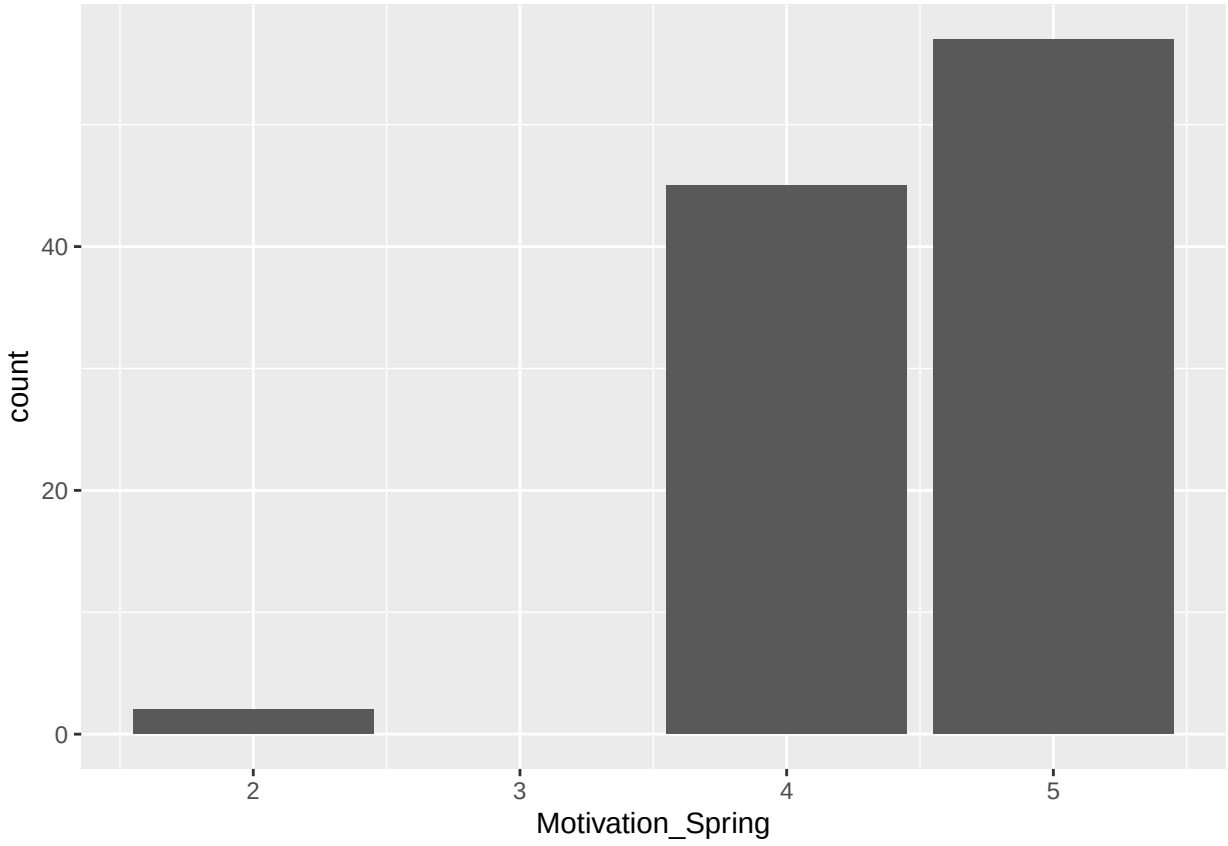
Motivation

Motivation Overall

```
g9gf_2024 %>%
  ggplot(aes(x=`Motivation_Fall`)) +
  geom_bar()
```




```
g9gf_2024 %>%
  ggplot(aes(x=`Motivation_Spring`)) +
  geom_bar()
```




```
wilcox.test(g9gf_2024$`Motivation_Spring`, g9gf_2024$`Motivation_Fall`, paired = TRUE, alternative = "g
```

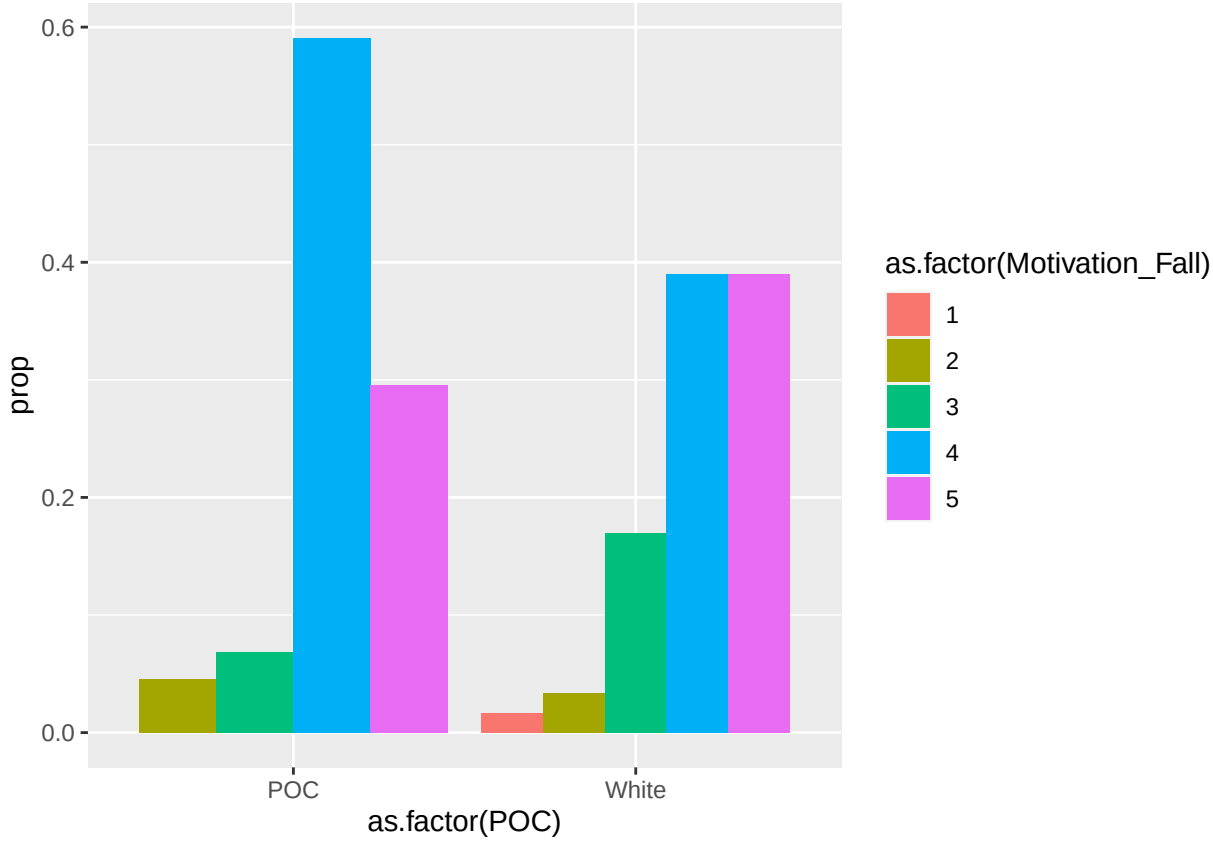
```
##
##  Wilcoxon signed rank test with continuity correction
##
## data:  g9gf_2024$Motivation_Spring and g9gf_2024$Motivation_Fall
## V = 1255, p-value = 8.353e-06
## alternative hypothesis: true location shift is greater than 0
```

```
t.test(g9gf_2024$`Motivation_Spring`, g9gf_2024$`Motivation_Fall`, paired = TRUE, alternative = "greate
```

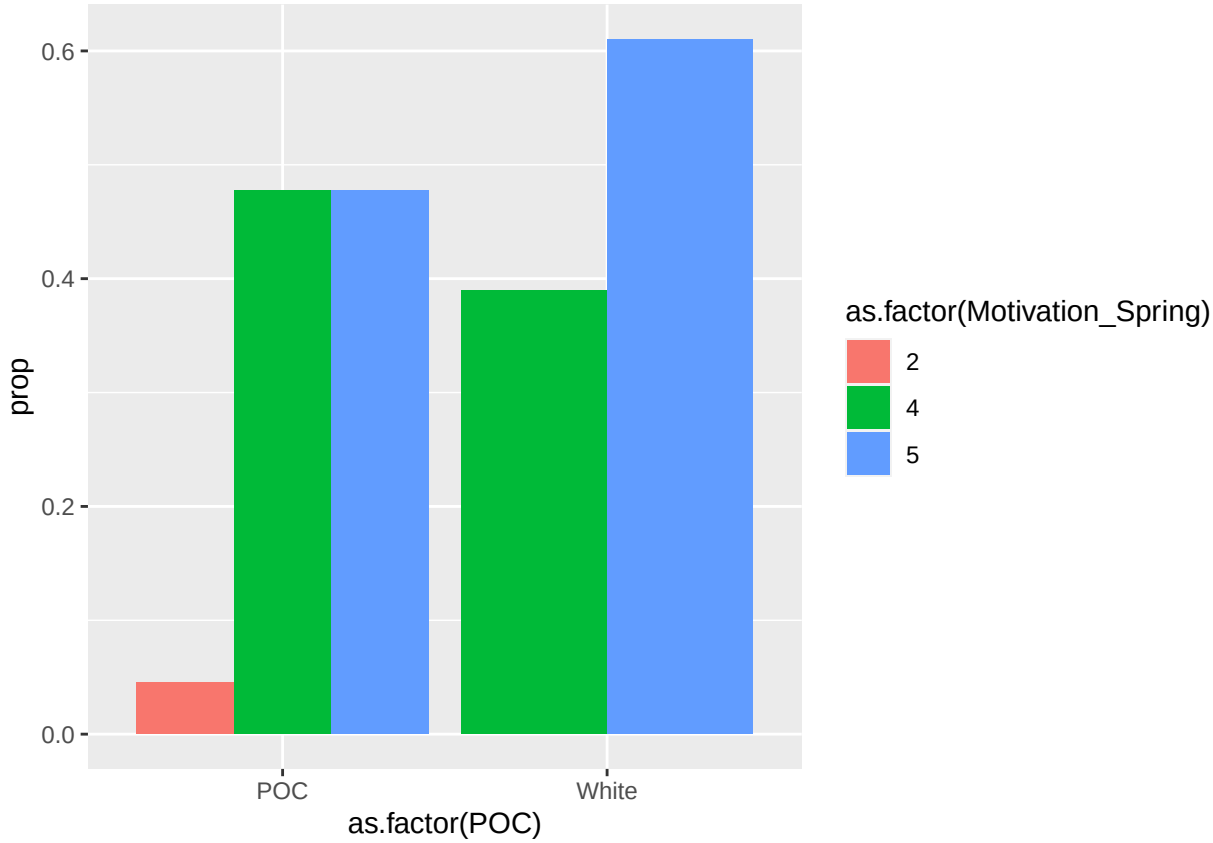
```
##
##  Paired t-test
##
## data:  g9gf_2024$Motivation_Spring and g9gf_2024$Motivation_Fall
## t = 4.7483, df = 103, p-value = 3.325e-06
## alternative hypothesis: true mean difference is greater than 0
## 95 percent confidence interval:
##  0.2689341       Inf
## sample estimates:
## mean difference
##       0.4134615
```

Motivation by Race

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  group_by(POC, Motivation_Fall) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(POC), y = `prop`, fill = as.factor(Motivation_Fall))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  group_by(POC, Motivation_Spring) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(POC), y = `prop`, fill = as.factor(Motivation_Spring))) +
  geom_col(position = "dodge")
```

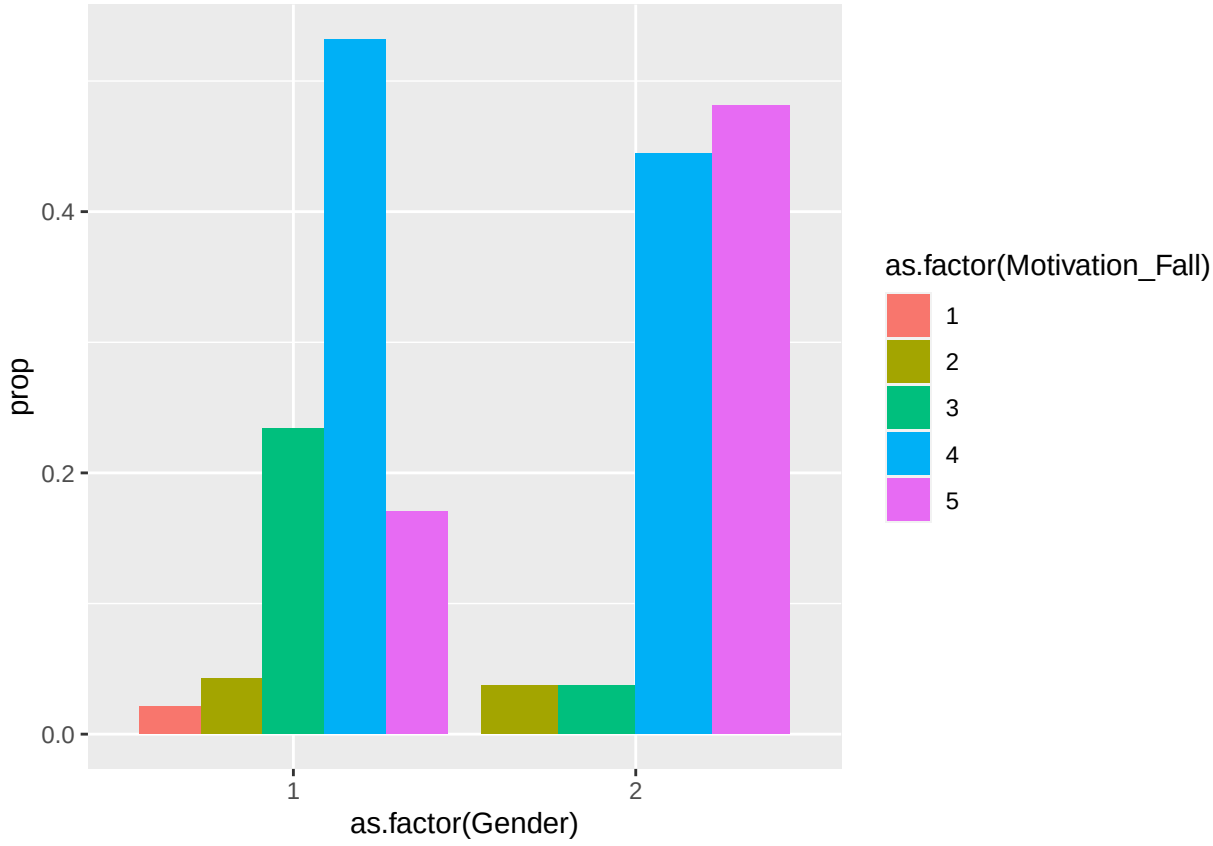



```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  group_by(POC) %>%
  summarize(avg_fall = mean(Motivation_Fall), avg_spring = mean(Motivation_Spring), count = n())
```

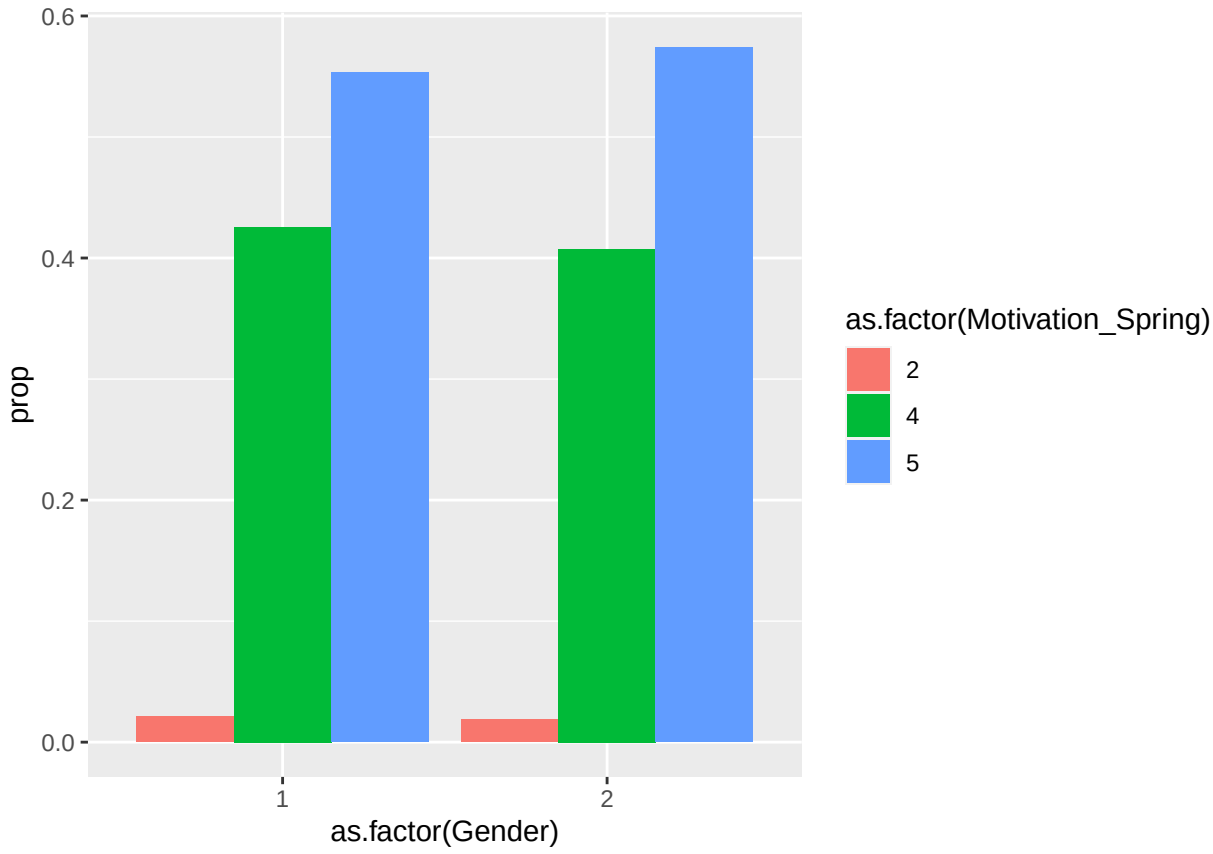
```
## # A tibble: 2 x 4
##   POC   avg_fall avg_spring count
##   <chr>    <dbl>      <dbl> <int>
## 1 POC       4.14       4.39    44
## 2 White     4.10       4.61    59
```

Motivation by Gender

```
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  group_by(Gender, Motivation_Fall) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(Gender), y = `prop`, fill = as.factor(Motivation_Fall))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  group_by(Gender, Motivation_Spring) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(Gender), y = `prop`, fill = as.factor(Motivation_Spring))) +
  geom_col(position = "dodge")
```

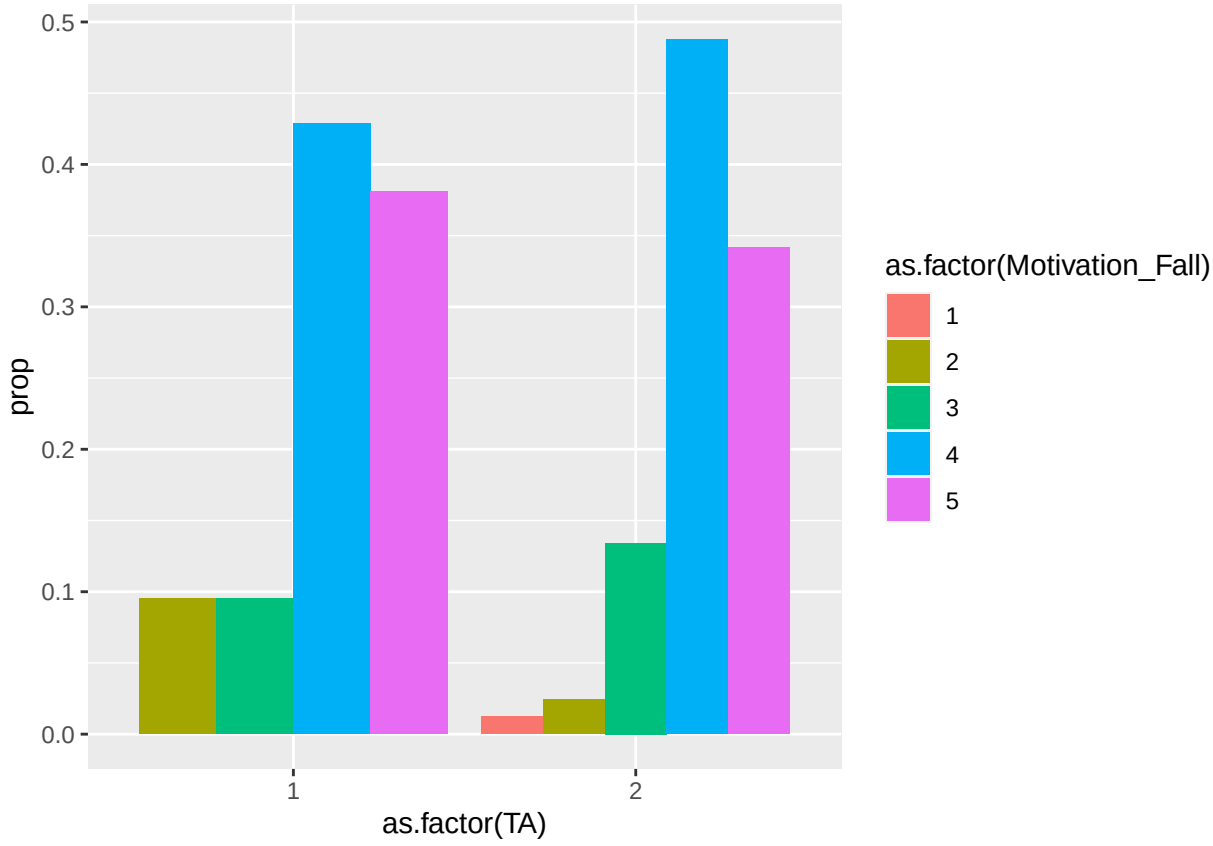



```
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  group_by(Gender) %>%
  summarize(avg_fall = mean(Motivation_Fall), avg_spring = mean(Motivation_Spring), count = n())
```

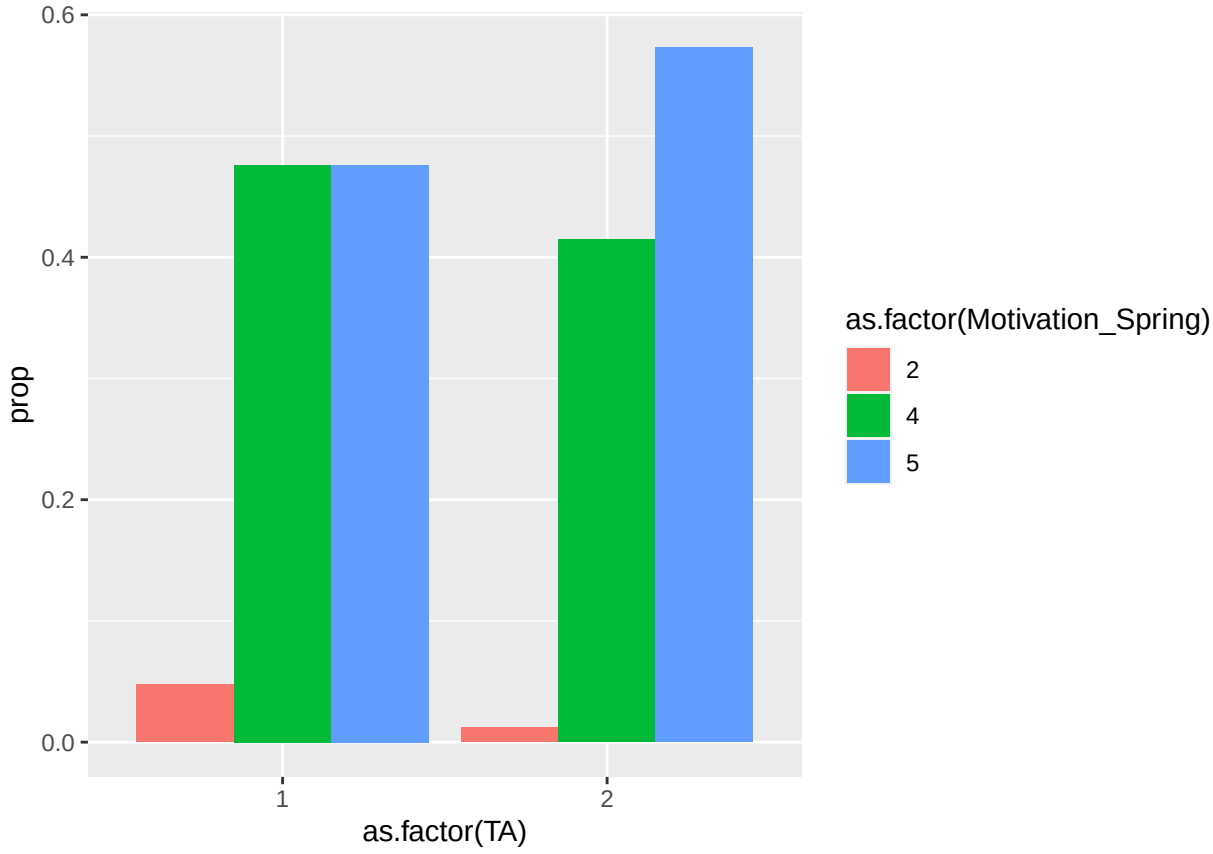
```
## # A tibble: 2 x 4
##   Gender avg_fall avg_spring count
##    <dbl>    <dbl>      <dbl> <int>
## 1      1     3.79       4.51    47
## 2      2     4.37       4.54    54
```

Motivation by TA

```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  group_by(TA, Motivation_Fall) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(TA), y = `prop`, fill = as.factor(Motivation_Fall))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  group_by(TA, Motivation_Spring) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(TA), y = `prop`, fill = as.factor(Motivation_Spring))) +
  geom_col(position = "dodge")
```

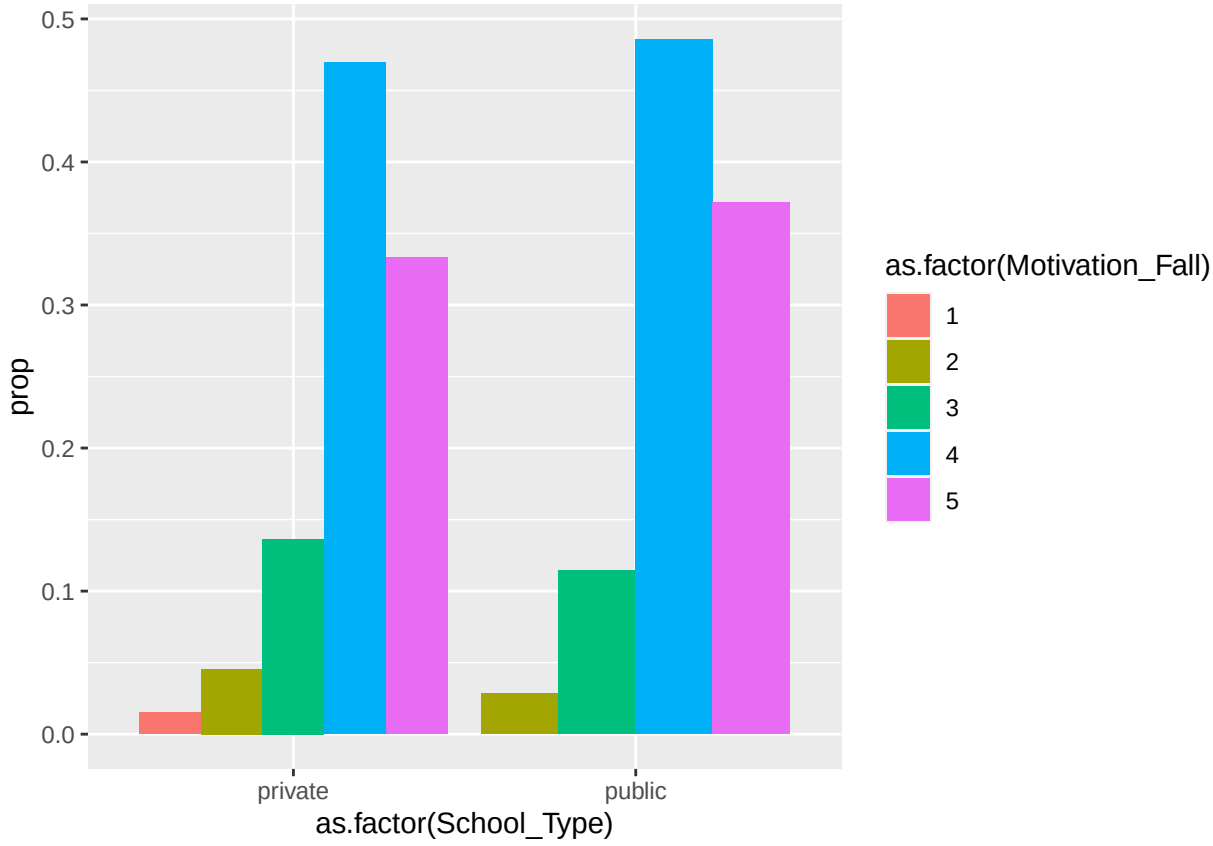



```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  group_by(TA) %>%
  summarize(avg_fall = mean(Motivation_Fall), avg_spring = mean(Motivation_Spring), count = n())
```

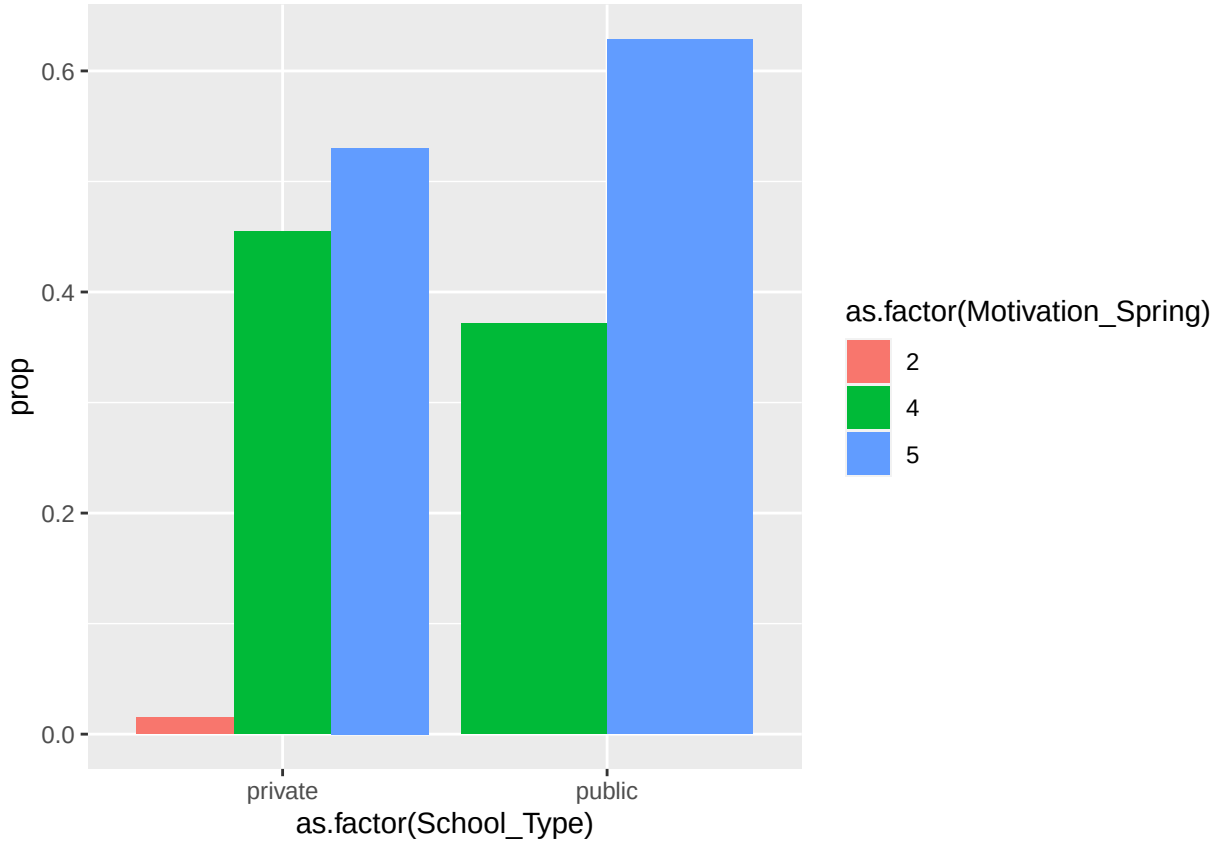
```
## # A tibble: 2 x 4
##      TA avg_fall avg_spring count
##   <dbl>    <dbl>      <dbl> <int>
## 1     1     4.10       4.38    21
## 2     2     4.12       4.55    82
```

Motivation by School Type

```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  group_by(School_Type, Motivation_Fall) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(School_Type), y = `prop`, fill = as.factor(Motivation_Fall))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  group_by(School_Type, Motivation_Spring) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(School_Type), y = `prop`, fill = as.factor(Motivation_Spring))) +
  geom_col(position = "dodge")
```



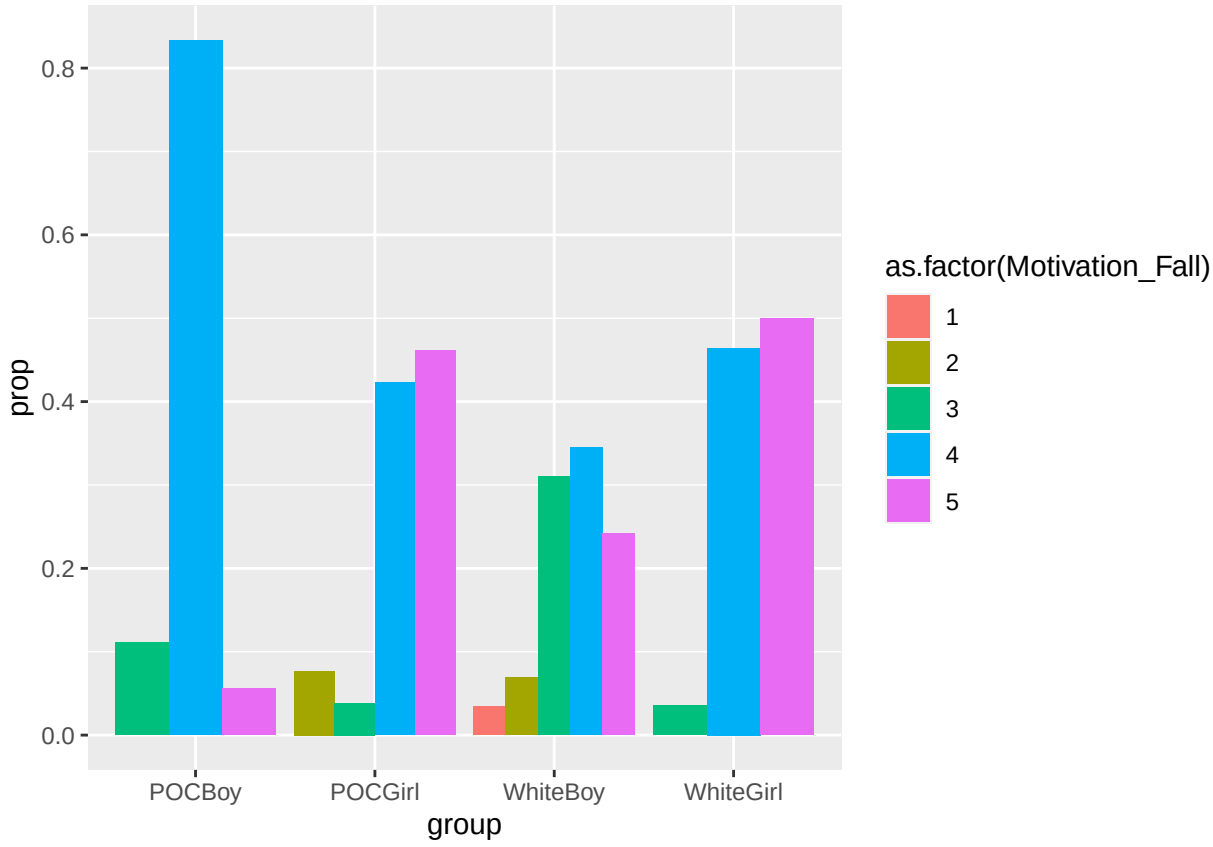

```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  group_by(School_Type) %>%
  summarize(avg_fall = mean(Motivation_Fall), avg_spring = mean(Motivation_Spring), count = n())
```

```
## # A tibble: 2 x 4
##   School_Type avg_fall avg_spring count
##   <chr>          <dbl>      <dbl> <int>
## 1 private         4.06       4.5     66
## 2 public          4.2        4.63    35
```

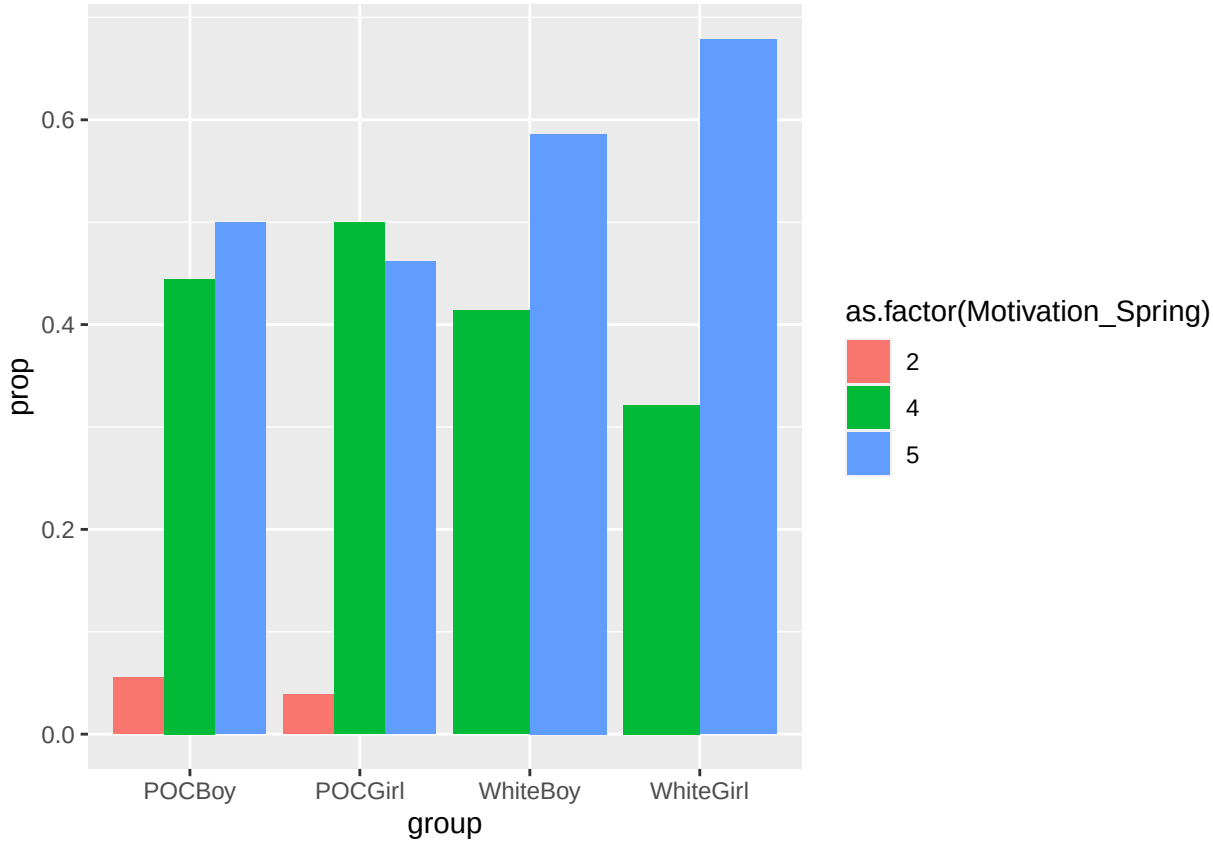
Motivation by Race + Gender

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), Gender <= 2) %>%
  group_by(POC, Gender, Motivation_Fall) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
```

```
    POC == "White" & Gender == 1 ~ "WhiteBoy",
    POC == "White" & Gender == 2 ~ "WhiteGirl",
    POC == "POC" & Gender == 1 ~ "POCBoy",
    POC == "POC" & Gender == 2 ~ "POCGirl"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Motivation_Fall))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), Gender <= 2) %>%
  group_by(POC, Gender, Motivation_Spring) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & Gender == 1 ~ "WhiteBoy",
    POC == "White" & Gender == 2 ~ "WhiteGirl",
    POC == "POC" & Gender == 1 ~ "POCBoy",
    POC == "POC" & Gender == 2 ~ "POCGirl"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Motivation_Spring))) +
  geom_col(position = "dodge")
```



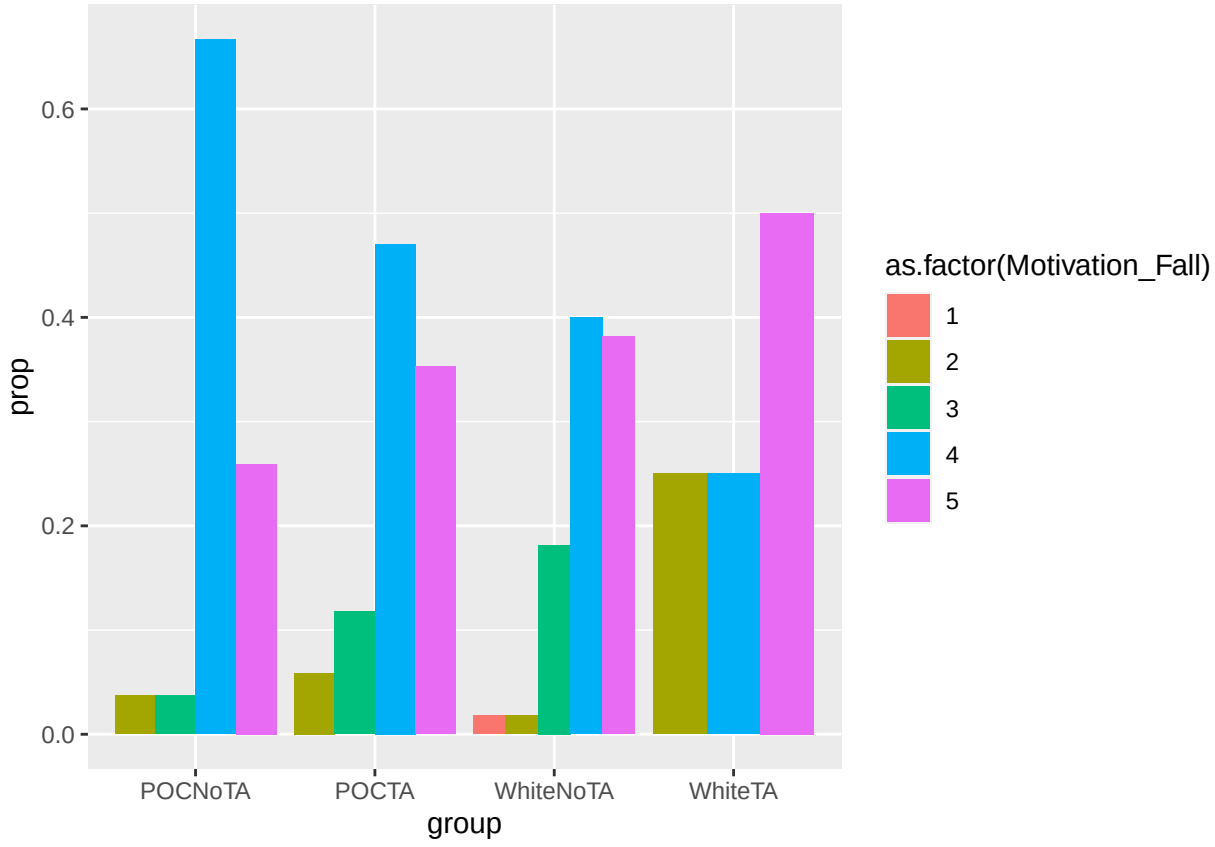

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), Gender <= 2) %>%
  group_by(POC, Gender) %>%
  summarize(avg_fall = mean(Motivation_Fall), avg_spring = mean(Motivation_Spring), count = n())
```

```
## # A tibble: 4 x 5
## # Groups:   POC [2]
##   POC   Gender avg_fall avg_spring count
##   <chr>  <dbl>    <dbl>      <dbl> <int>
## 1 POC        1     3.94       4.39    18
## 2 POC        2     4.27       4.38    26
## 3 White      1     3.69       4.59    29
## 4 White      2     4.46       4.68    28
```

Motivation by Race + TA

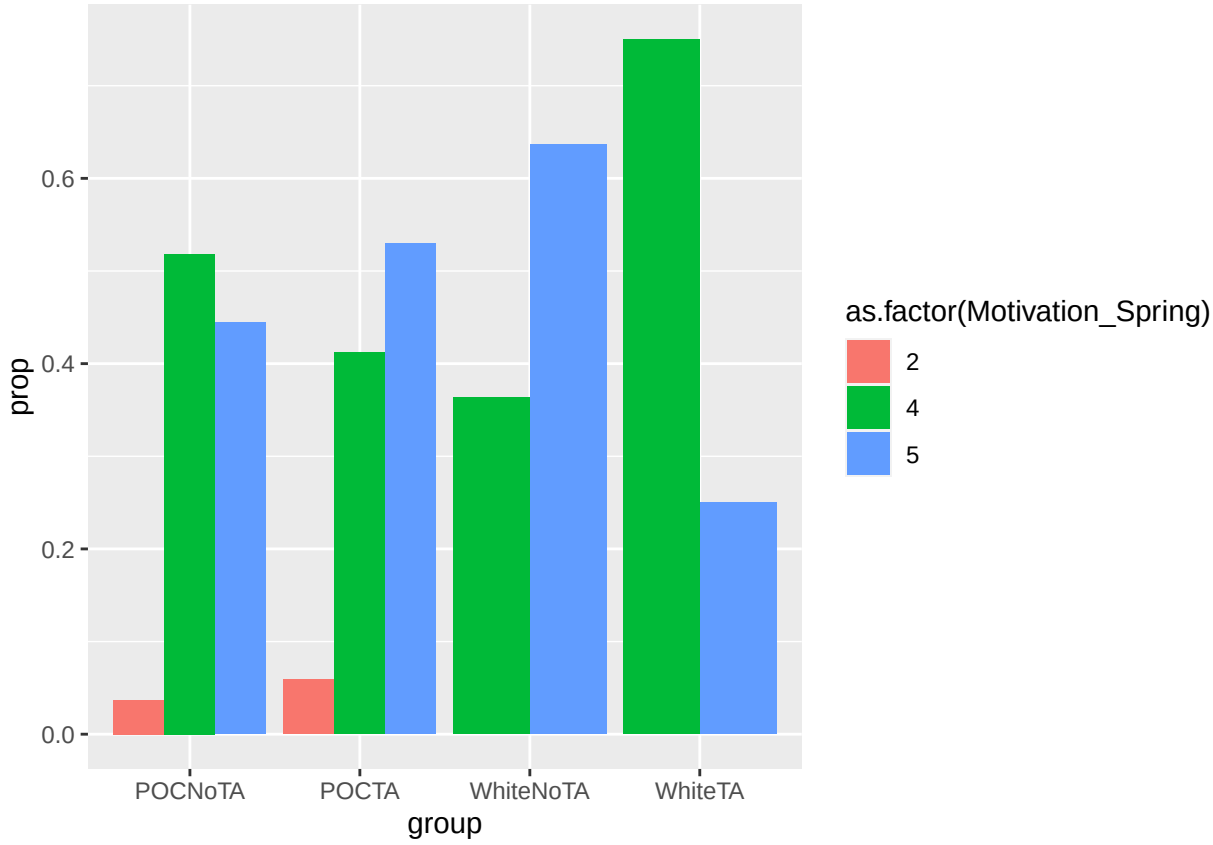
```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
```

```
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(TA)) %>%
  group_by(POC, TA, Motivation_Fall) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & TA == 1 ~ "WhiteTA",
    POC == "White" & TA == 2 ~ "WhiteNoTA",
    POC == "POC" & TA == 1 ~ "POCTA",
    POC == "POC" & TA == 2 ~ "POCNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Motivation_Fall))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(TA)) %>%
  group_by(POC, TA, Motivation_Spring) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
```

```
    POC == "White" & TA == 1 ~ "WhiteTA",
    POC == "White" & TA == 2 ~ "WhiteNoTA",
    POC == "POC" & TA == 1 ~ "POCTA",
    POC == "POC" & TA == 2 ~ "POCNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Motivation_Spring))) +
  geom_col(position = "dodge")
```

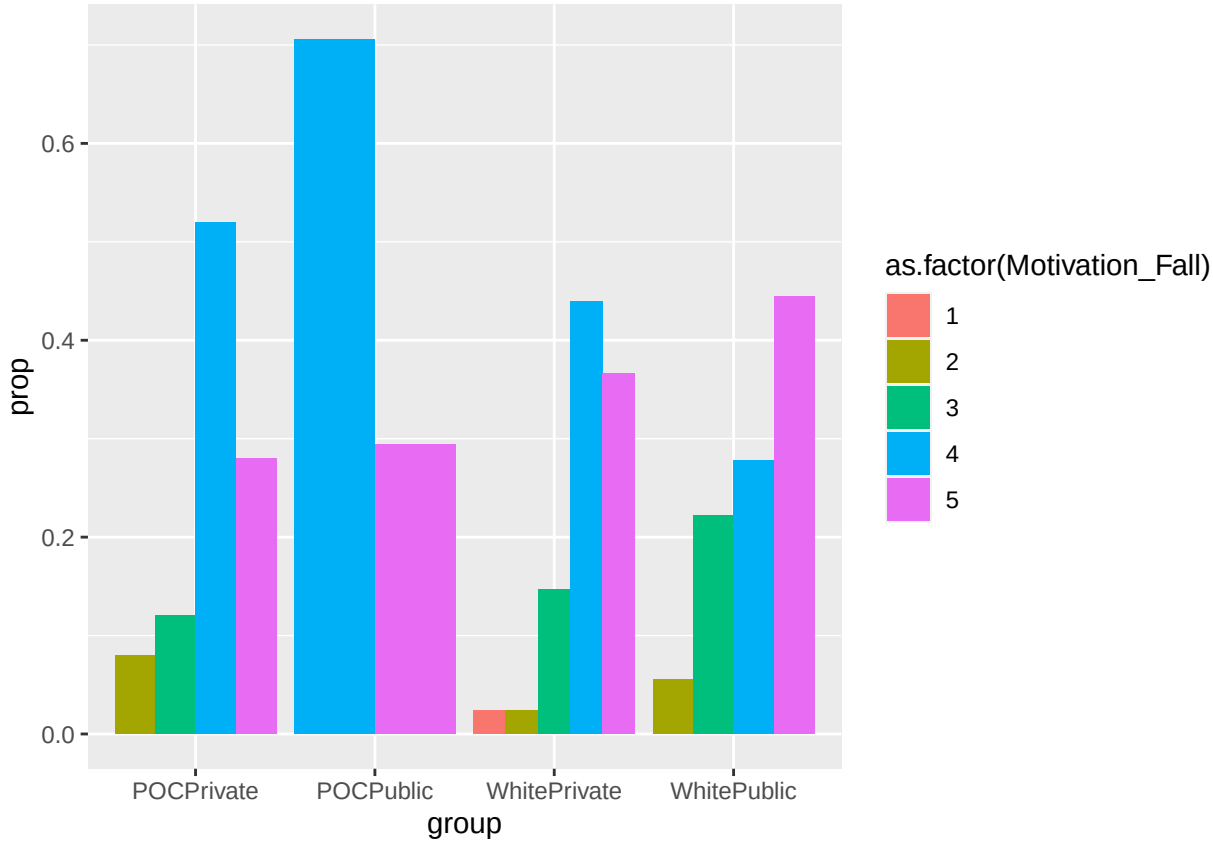



```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(TA)) %>%
  group_by(POC, TA) %>%
  summarize(avg_fall = mean(Motivation_Fall), avg_spring = mean(Motivation_Spring), count = n())
```

```
## # A tibble: 4 x 5
## # Groups:   POC [2]
##   POC      TA avg_fall avg_spring count
##   <chr> <dbl>    <dbl>      <dbl> <int>
## 1 POC       1     4.12       4.41    17
## 2 POC       2     4.15       4.37    27
## 3 White     1     4          4.25     4
## 4 White     2     4.11       4.64    55
```

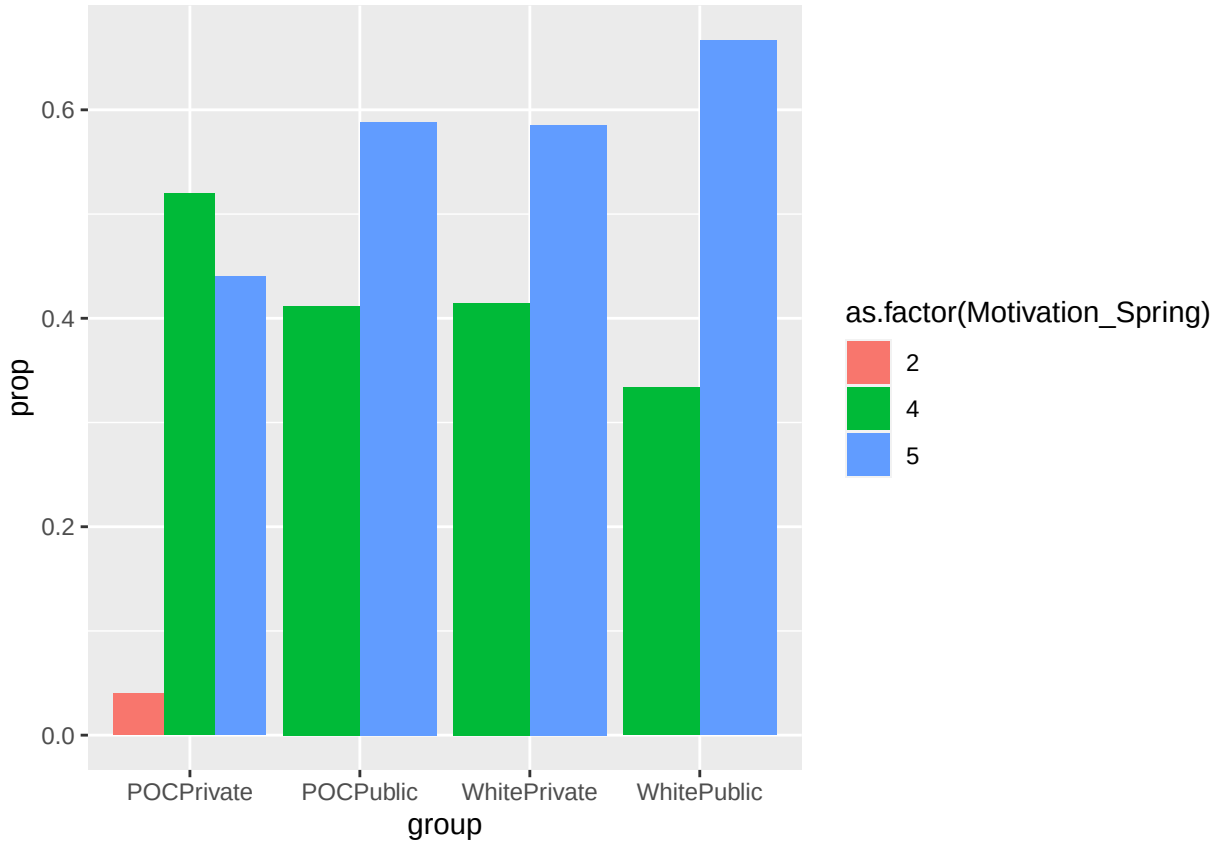
Motivation by Race + School Type

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(School_Type)) %>%
  group_by(POC, School_Type, Motivation_Fall) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & School_Type == "public" ~ "WhitePublic",
    POC == "White" & School_Type == "private" ~ "WhitePrivate",
    POC == "POC" & School_Type == "public" ~ "POCPublic",
    POC == "POC" & School_Type == "private" ~ "POCPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Motivation_Fall))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
```

```
  )) %>%
  filter(!is.na(POC), !is.na(School_Type)) %>%
  group_by(POC, School_Type, Motivation_Spring) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & School_Type == "public" ~ "WhitePublic",
    POC == "White" & School_Type == "private" ~ "WhitePrivate",
    POC == "POC" & School_Type == "public" ~ "POCPublic",
    POC == "POC" & School_Type == "private" ~ "POCPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Motivation_Spring))) +
  geom_col(position = "dodge")
```



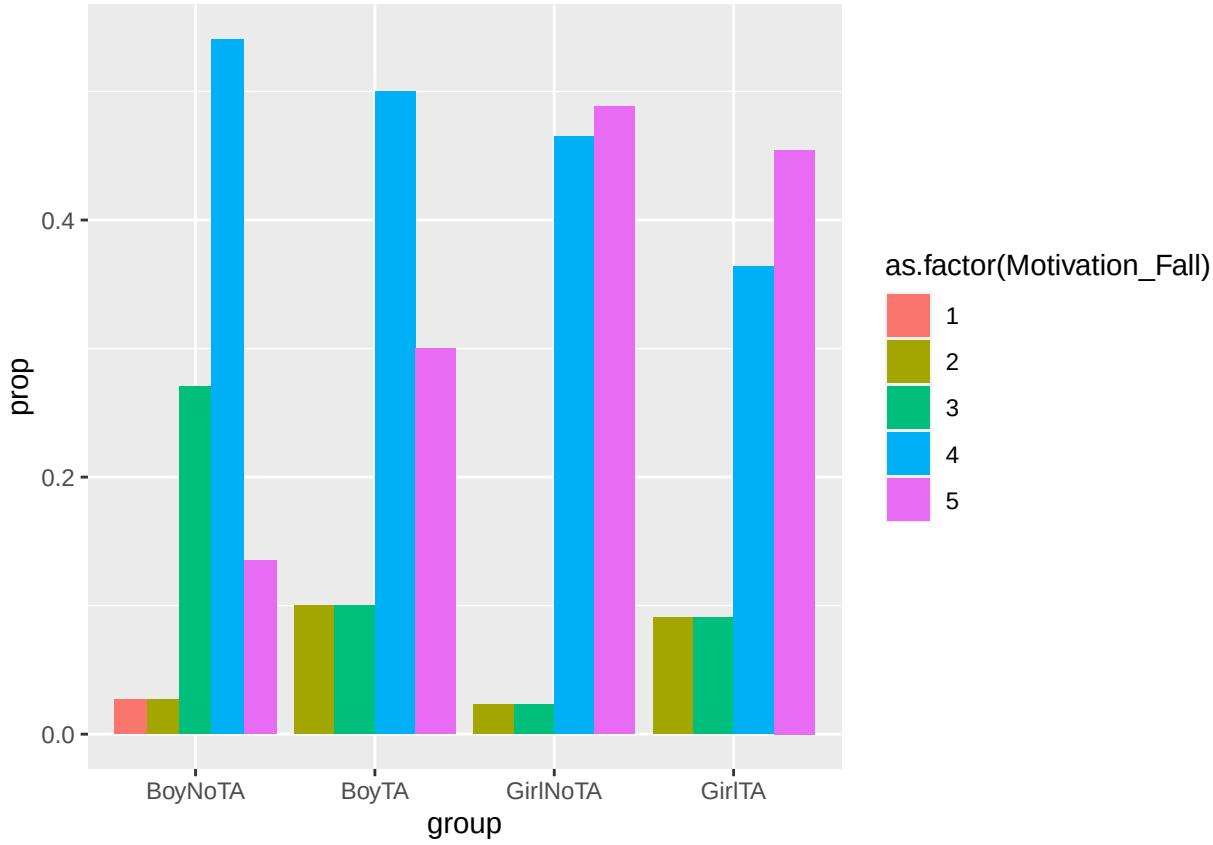

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(School_Type)) %>%
  group_by(POC, School_Type) %>%
  summarize(avg_fall = mean(Motivation_Fall), avg_spring = mean(Motivation_Spring), count = n())
```

```
## # A tibble: 4 x 5
## # Groups:   POC [2]
```

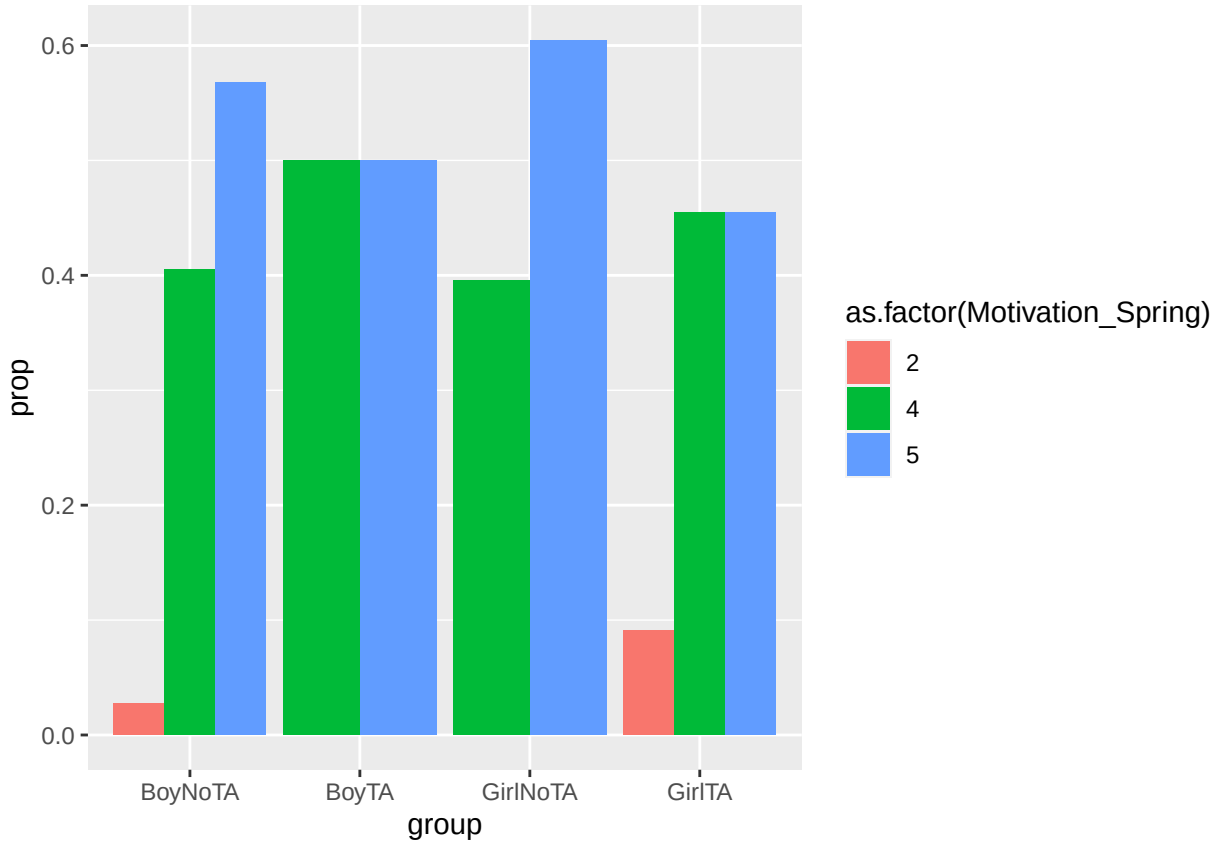
```
##   POC   School_Type avg_fall avg_spring count
##   <chr> <chr>          <dbl>      <dbl> <int>
## 1 POC   private          4          4.36    25
## 2 POC   public           4.29       4.59    17
## 3 White private          4.10       4.59    41
## 4 White public           4.11       4.67    18
```

Motivation by Gender + TA

```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(TA)) %>%
  group_by(Gender, TA, Motivation_Fall) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & TA == 1 ~ "BoyTA",
    Gender == 1 & TA == 2 ~ "BoyNoTA",
    Gender == 2 & TA == 1 ~ "GirlTA",
    Gender == 2 & TA == 2 ~ "GirlNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Motivation_Fall))) +
  geom_col(position = "dodge")
```



```r
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(TA)) %>%
  group_by(Gender, TA, Motivation_Spring) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & TA == 1 ~ "BoyTA",
    Gender == 1 & TA == 2 ~ "BoyNoTA",
    Gender == 2 & TA == 1 ~ "GirlTA",
    Gender == 2 & TA == 2 ~ "GirlNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Motivation_Spring))) +
  geom_col(position = "dodge")
```



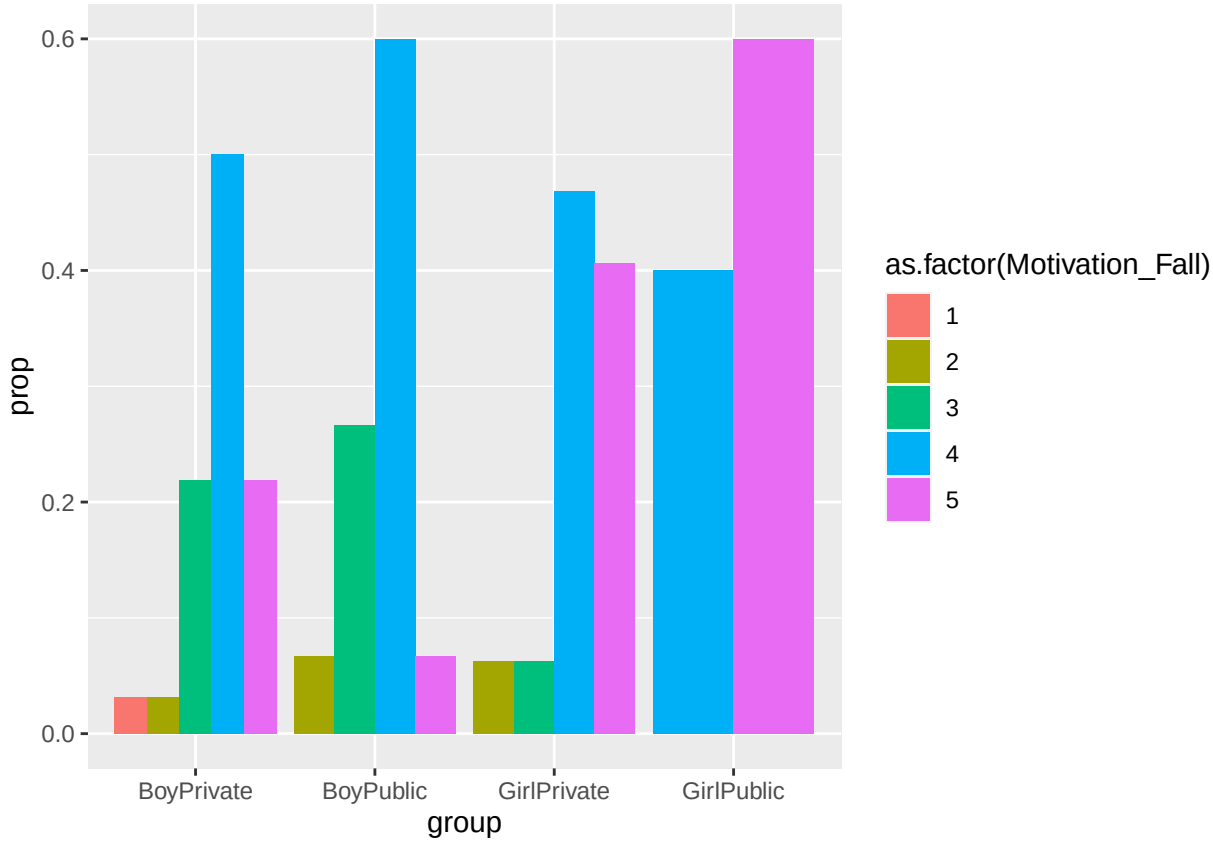

```r
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(TA)) %>%
  group_by(Gender, TA) %>%
  summarize(avg_fall = mean(Motivation_Fall), avg_spring = mean(Motivation_Spring), count = n())
```

```
## # A tibble: 4 x 5
## # Groups:   Gender [2]
##   Gender    TA avg_fall avg_spring count
##    <dbl> <dbl>    <dbl>      <dbl> <int>
## 1      1     1     4          4.5     10
## 2      1     2     3.73       4.51    37
```

```
## 3      2     1     4.18       4.27    11
## 4      2     2     4.42       4.60    43
```

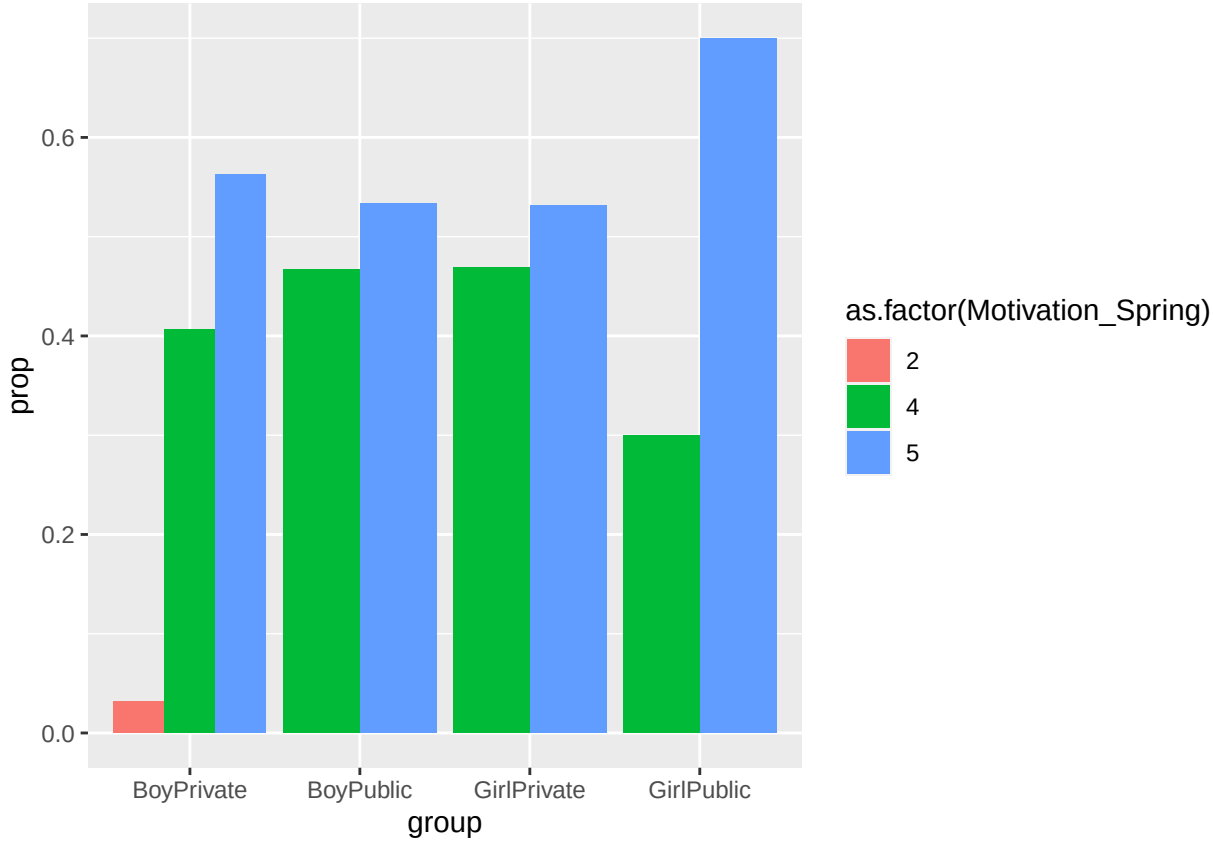
Motivation by Gender + School Type

```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(School_Type)) %>%
  group_by(Gender, School_Type, Motivation_Fall) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & School_Type == "public" ~ "BoyPublic",
    Gender == 1 & School_Type == "private" ~ "BoyPrivate",
    Gender == 2 & School_Type == "public" ~ "GirlPublic",
    Gender == 2 & School_Type == "private" ~ "GirlPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Motivation_Fall))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(School_Type)) %>%
  group_by(Gender, School_Type, Motivation_Spring) %>%
  summarize(count = n()) %>%
```

```
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & School_Type == "public" ~ "BoyPublic",
    Gender == 1 & School_Type == "private" ~ "BoyPrivate",
    Gender == 2 & School_Type == "public" ~ "GirlPublic",
    Gender == 2 & School_Type == "private" ~ "GirlPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Motivation_Spring))) +
  geom_col(position = "dodge")
```

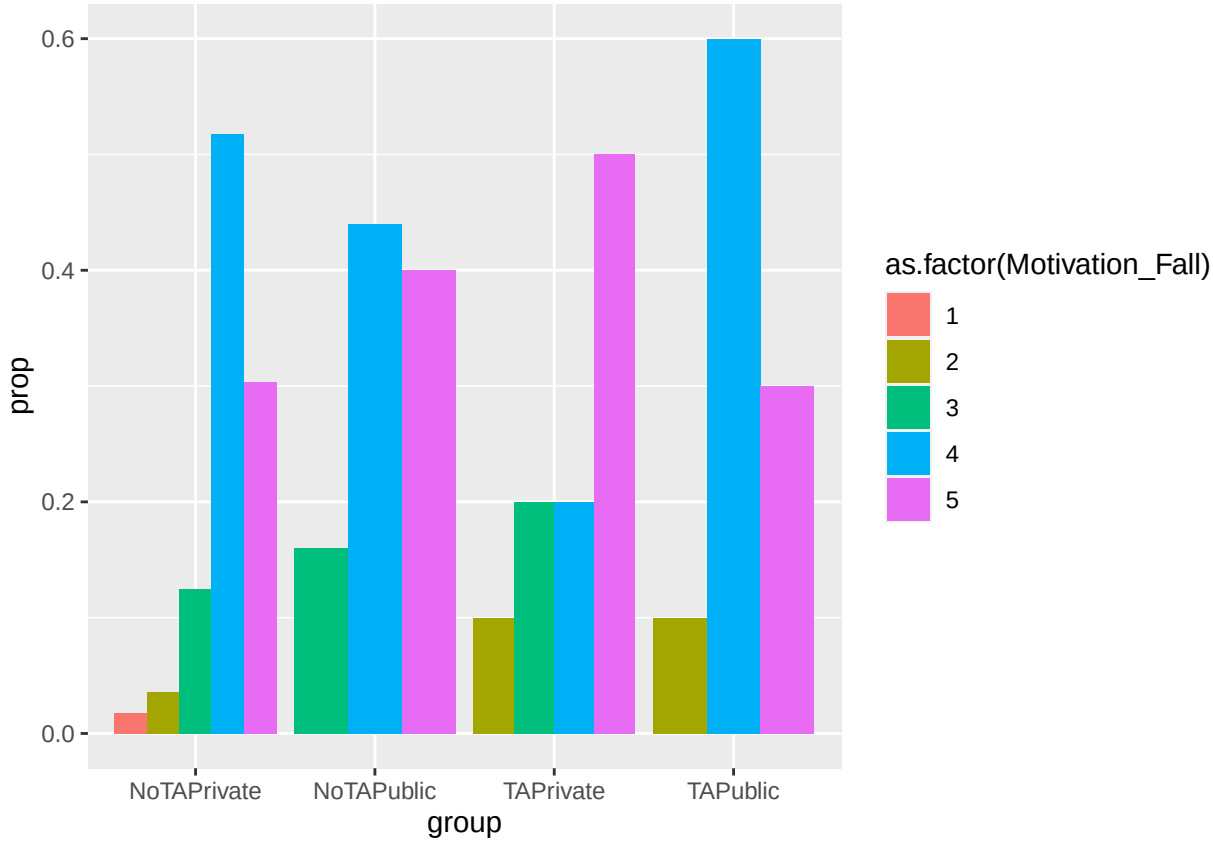



```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(School_Type)) %>%
  group_by(Gender, School_Type) %>%
  summarize(avg_fall = mean(Motivation_Fall), avg_spring = mean(Motivation_Spring), count = n())
```

```
## # A tibble: 4 x 5
## # Groups:   Gender [2]
##   Gender School_Type avg_fall avg_spring count
##    <dbl> <chr>          <dbl>      <dbl> <int>
## 1      1 private         3.84       4.5     32
## 2      1 public          3.67       4.53    15
## 3      2 private         4.22       4.53    32
## 4      2 public          4.6        4.7     20
```

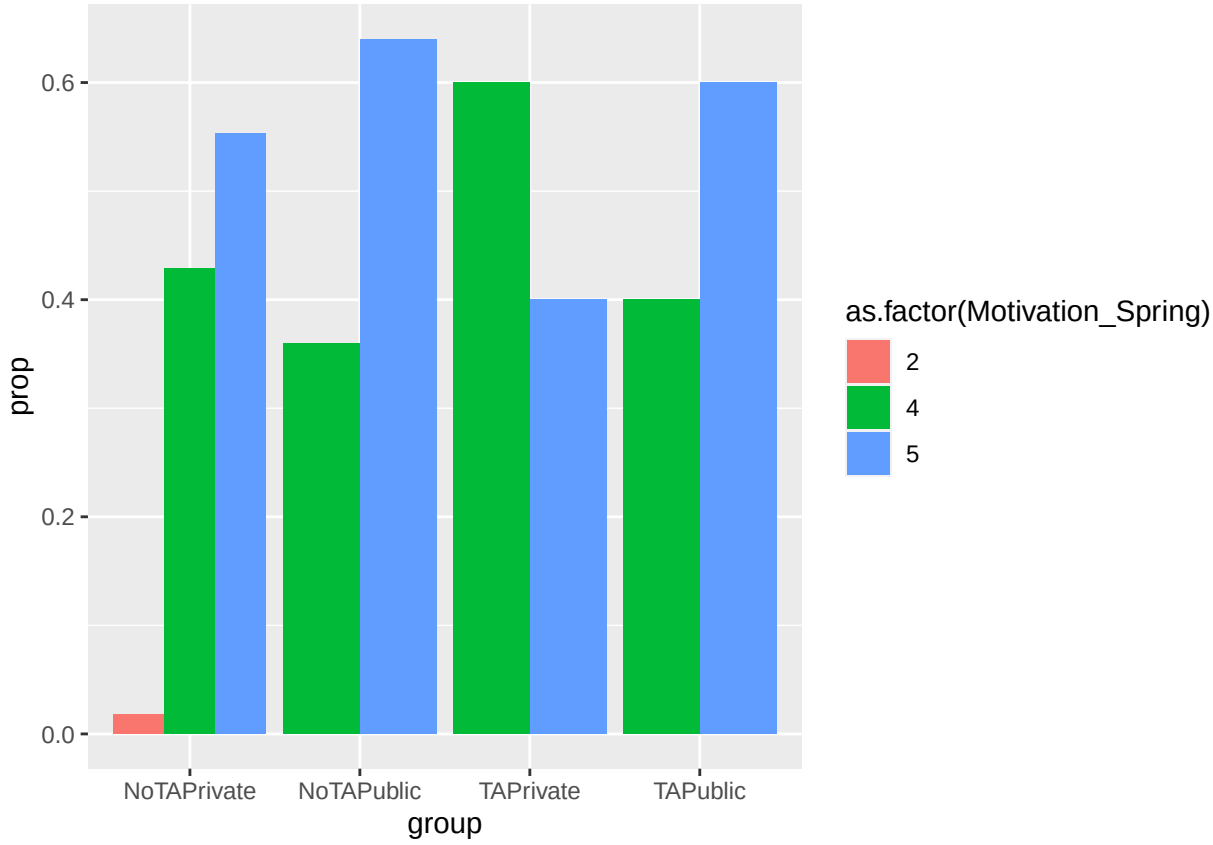
Motivation by TA + School Type

```
g9gf_2024 %>%
  filter(!is.na(TA), !is.na(School_Type)) %>%
  group_by(TA, School_Type, Motivation_Fall) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    TA == 1 & School_Type == "public" ~ "TAPublic",
    TA == 2 & School_Type == "public" ~ "NoTAPublic",
    TA == 1 & School_Type == "private" ~ "TAPrivate",
    TA == 2 & School_Type == "private" ~ "NoTAPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Motivation_Fall))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(TA), !is.na(School_Type)) %>%
  group_by(TA, School_Type, Motivation_Spring) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    TA == 1 & School_Type == "public" ~ "TAPublic",
    TA == 2 & School_Type == "public" ~ "NoTAPublic",
```

```
    TA == 1 & School_Type == "private" ~ "TAPrivate",
    TA == 2 & School_Type == "private" ~ "NoTAPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Motivation_Spring))) +
  geom_col(position = "dodge")
```



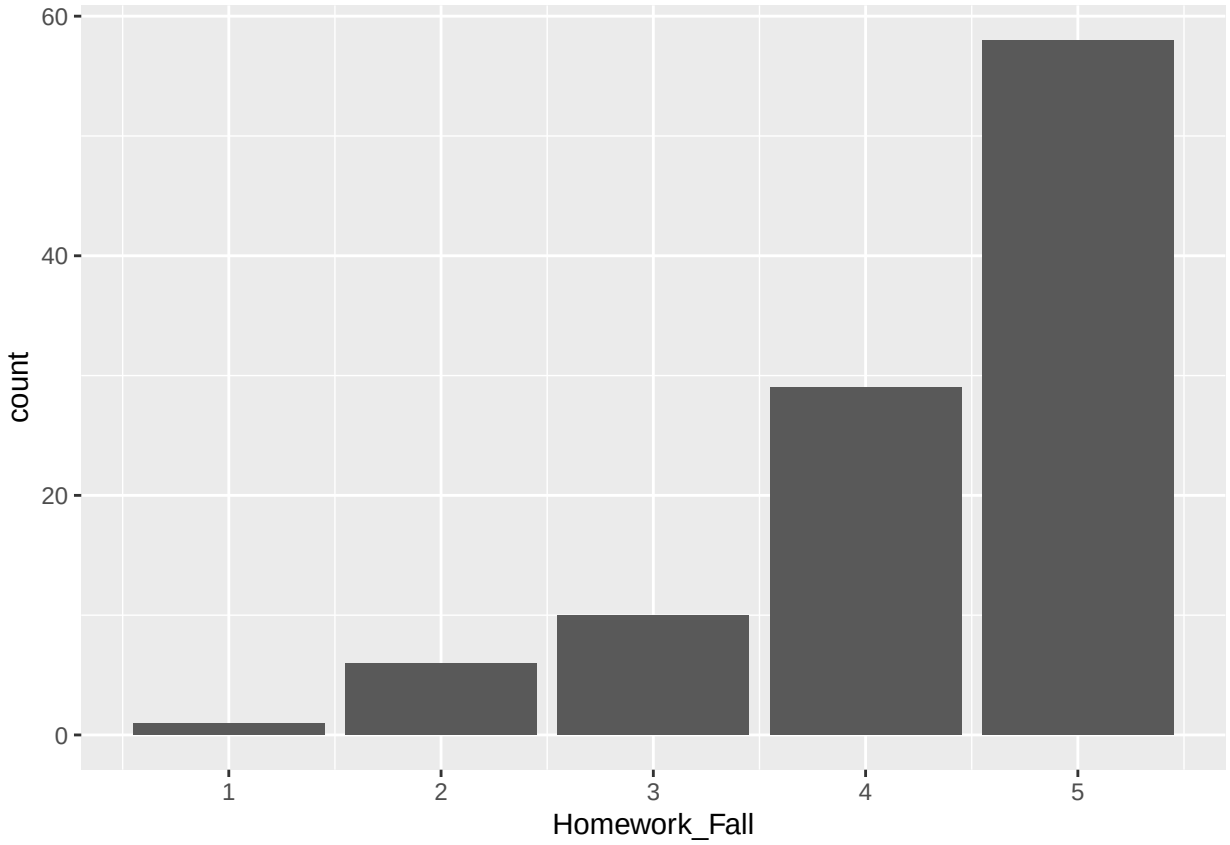

```
g9gf_2024 %>%
  filter(!is.na(TA), !is.na(School_Type)) %>%
  group_by(TA, School_Type) %>%
  summarize(avg_fall = mean(Motivation_Fall), avg_spring = mean(Motivation_Spring), count = n())
```

```
## # A tibble: 4 x 5
## # Groups:   TA [2]
##      TA School_Type avg_fall avg_spring count
##   <dbl> <chr>          <dbl>      <dbl> <int>
## 1     1 private         4.1        4.4     10
## 2     1 public          4.1        4.6     10
## 3     2 private         4.05       4.52    56
## 4     2 public          4.24       4.64    25
```

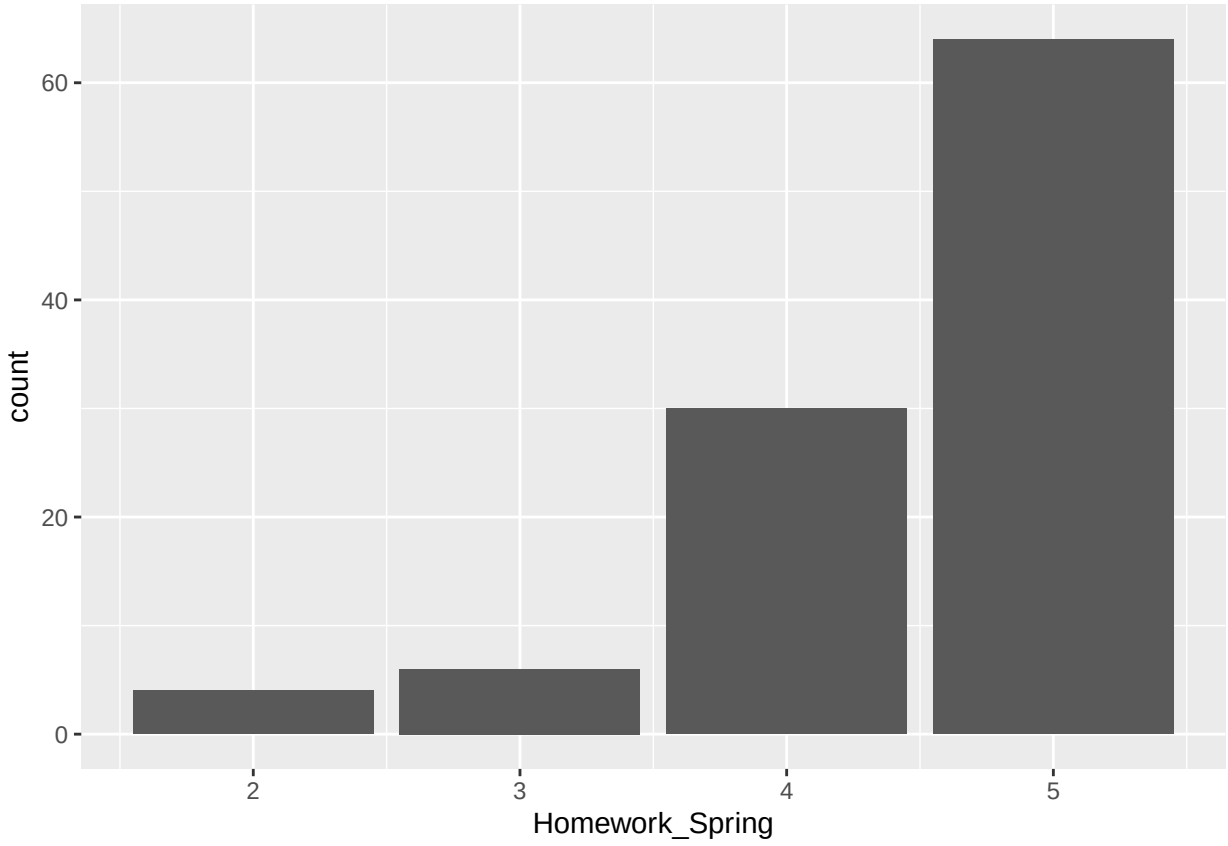
Homework

Homework Overall

```
g9gf_2024 %>%
  ggplot(aes(x=`Homework_Fall`)) +
  geom_bar()
```




```
g9gf_2024 %>%
  ggplot(aes(x=`Homework_Spring`)) +
  geom_bar()
```




```
wilcox.test(g9gf_2024$`Homework_Spring`, g9gf_2024$`Homework_Fall`, paired = TRUE, alternative = "greate
```

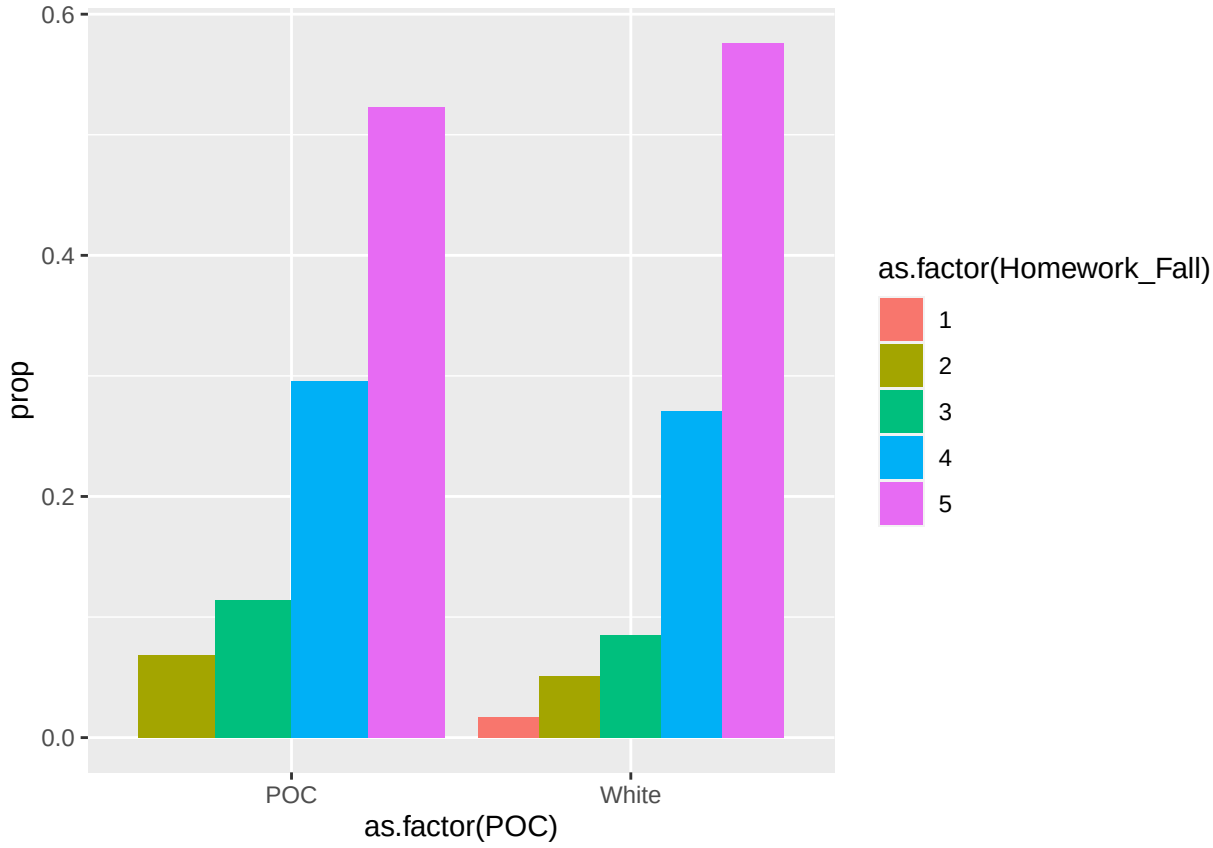
```
##
##  Wilcoxon signed rank test with continuity correction
##
## data:  g9gf_2024$Homework_Spring and g9gf_2024$Homework_Fall
## V = 488.5, p-value = 0.01469
## alternative hypothesis: true location shift is greater than 0
```

```
t.test(g9gf_2024$`Homework_Spring`, g9gf_2024$`Homework_Fall`, paired = TRUE, alternative = "greater")
```

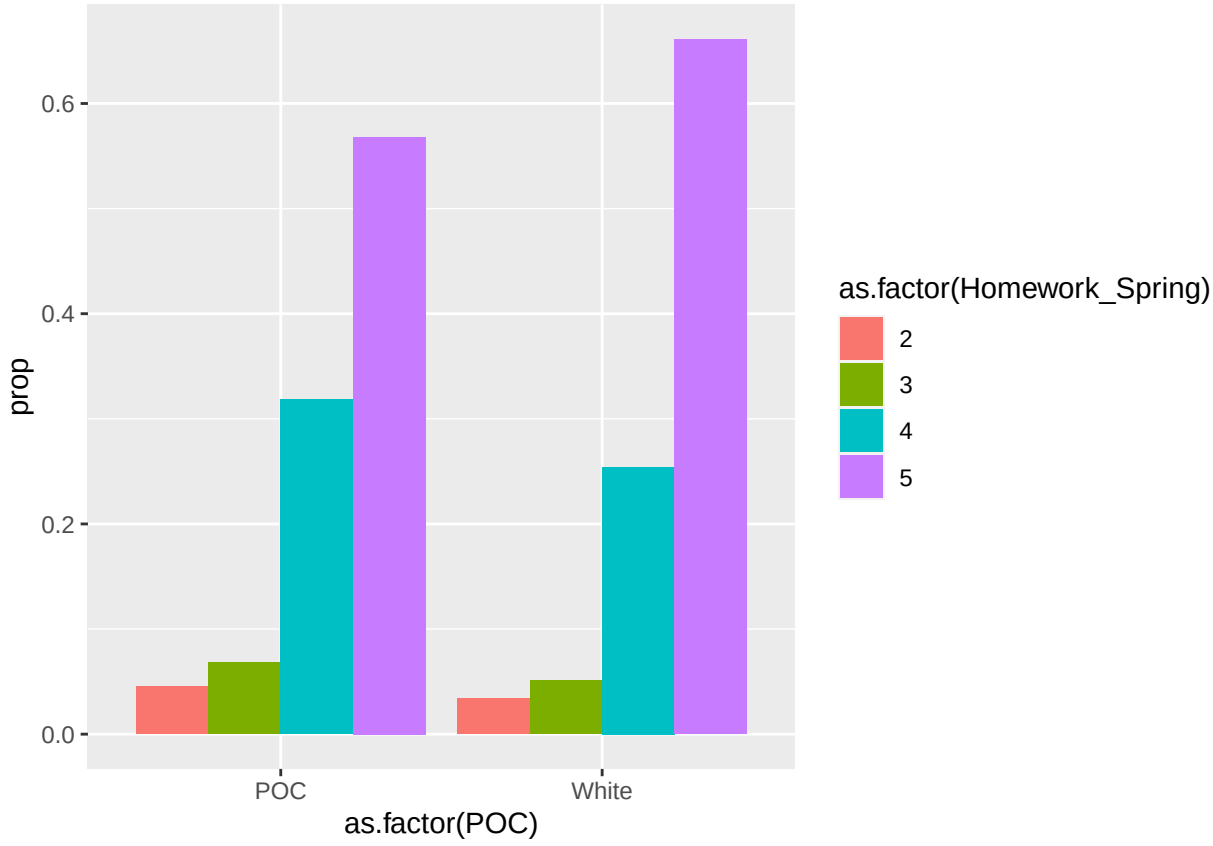
```
##
##  Paired t-test
##
## data:  g9gf_2024$Homework_Spring and g9gf_2024$Homework_Fall
## t = 2.079, df = 103, p-value = 0.02005
## alternative hypothesis: true mean difference is greater than 0
## 95 percent confidence interval:
##  0.03296043        Inf
## sample estimates:
## mean difference
##       0.1634615
```

Homework by Race

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  group_by(POC, Homework_Fall) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(POC), y = `prop`, fill = as.factor(Homework_Fall))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  group_by(POC, Homework_Spring) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(POC), y = `prop`, fill = as.factor(Homework_Spring))) +
  geom_col(position = "dodge")
```

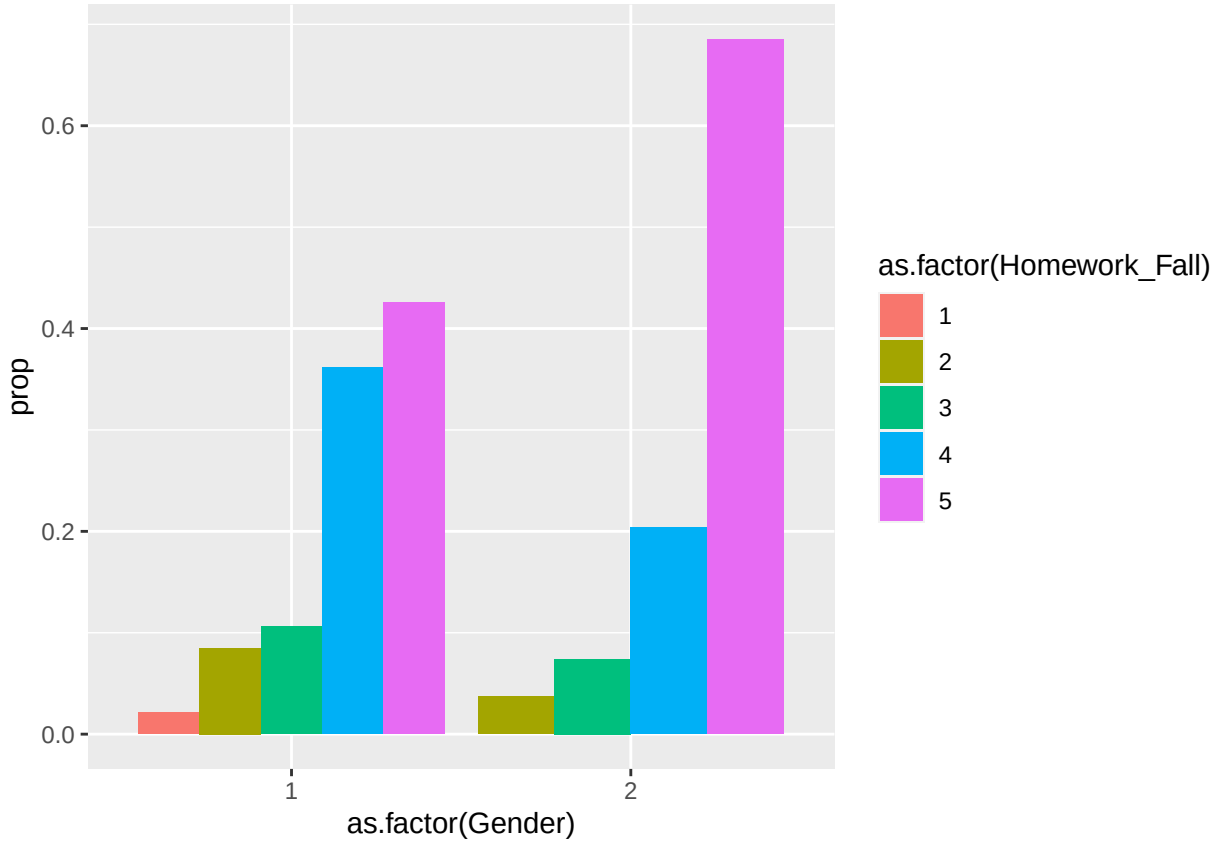



```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  group_by(POC) %>%
  summarize(avg_fall = mean(Homework_Fall), avg_spring = mean(Homework_Spring), count = n())
```

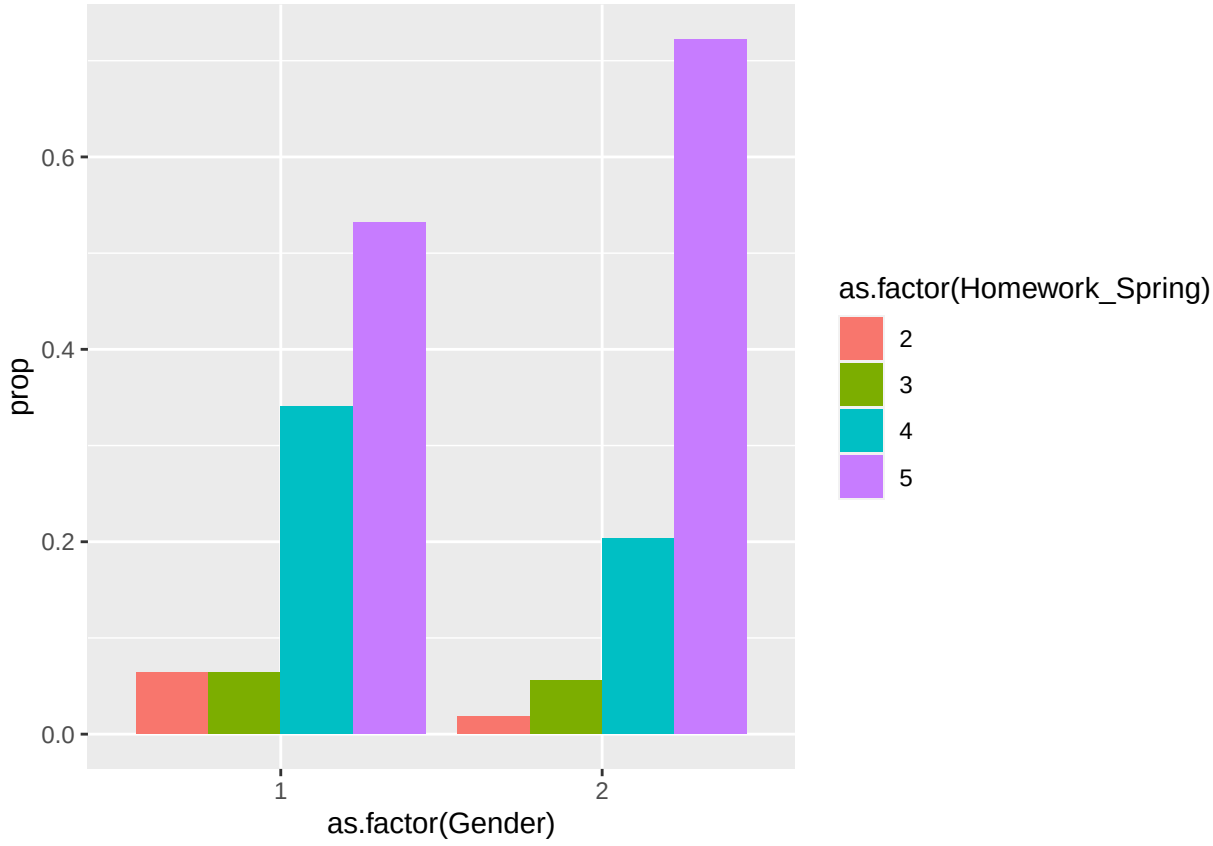
```
## # A tibble: 2 x 4
##   POC   avg_fall avg_spring count
##   <chr>    <dbl>      <dbl> <int>
## 1 POC       4.27       4.41    44
## 2 White     4.34       4.54    59
```

Homework by Gender

```
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  group_by(Gender, Homework_Fall) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(Gender), y = `prop`, fill = as.factor(Homework_Fall))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  group_by(Gender, Homework_Spring) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(Gender), y = `prop`, fill = as.factor(Homework_Spring))) +
  geom_col(position = "dodge")
```

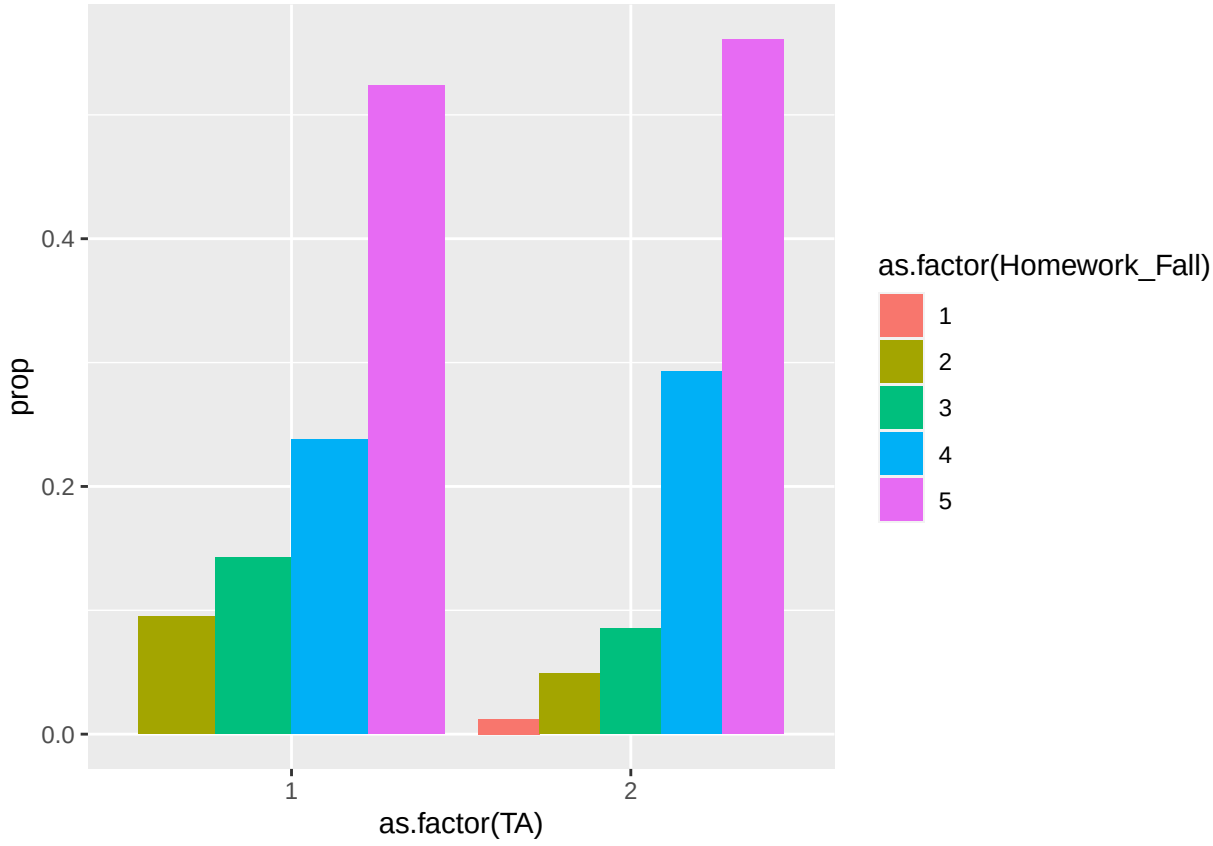



```
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  group_by(Gender) %>%
  summarize(avg_fall = mean(Homework_Fall), avg_spring = mean(Homework_Spring), count = n())
```

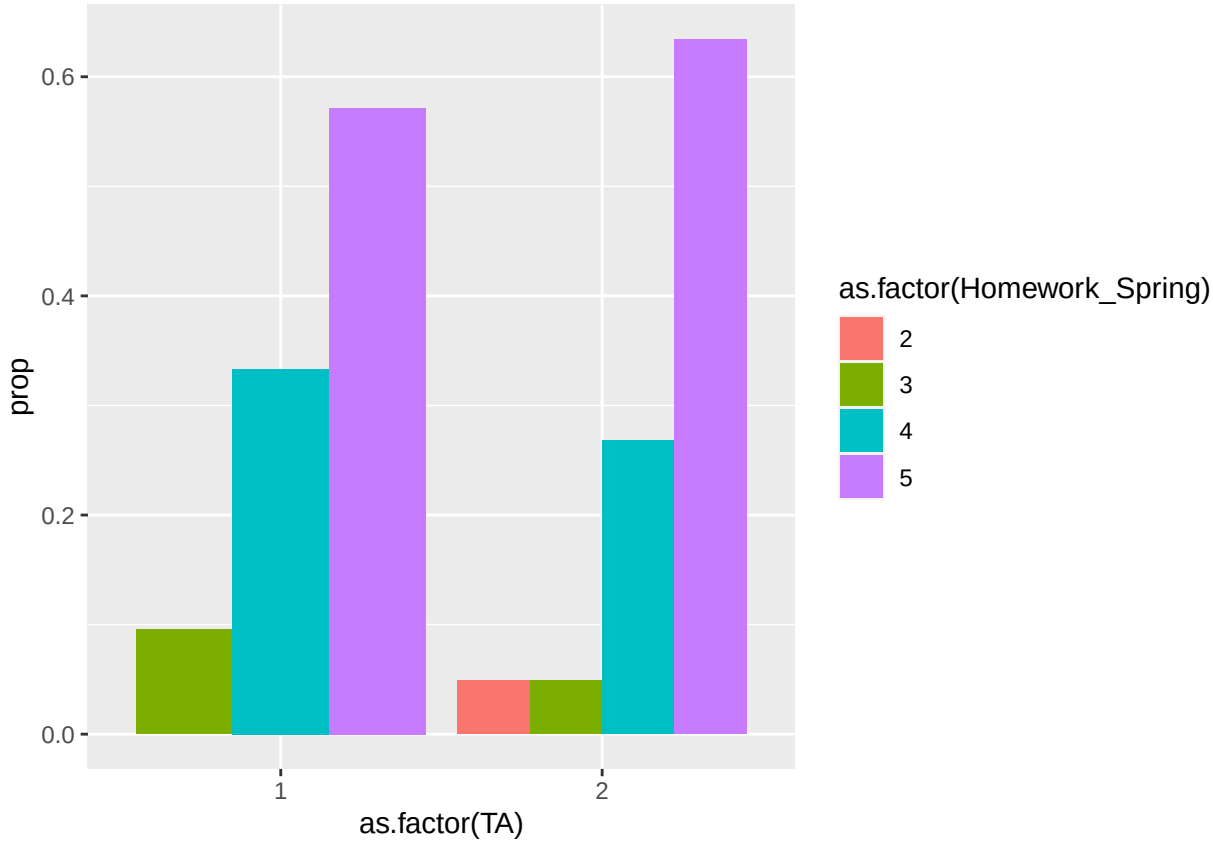
```
## # A tibble: 2 x 4
##   Gender avg_fall avg_spring count
##    <dbl>    <dbl>      <dbl> <int>
## 1      1     4.09       4.34    47
## 2      2     4.54       4.63    54
```

Homework by TA

```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  group_by(TA, Homework_Fall) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(TA), y = `prop`, fill = as.factor(Homework_Fall))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  group_by(TA, Homework_Spring) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(TA), y = `prop`, fill = as.factor(Homework_Spring))) +
  geom_col(position = "dodge")
```

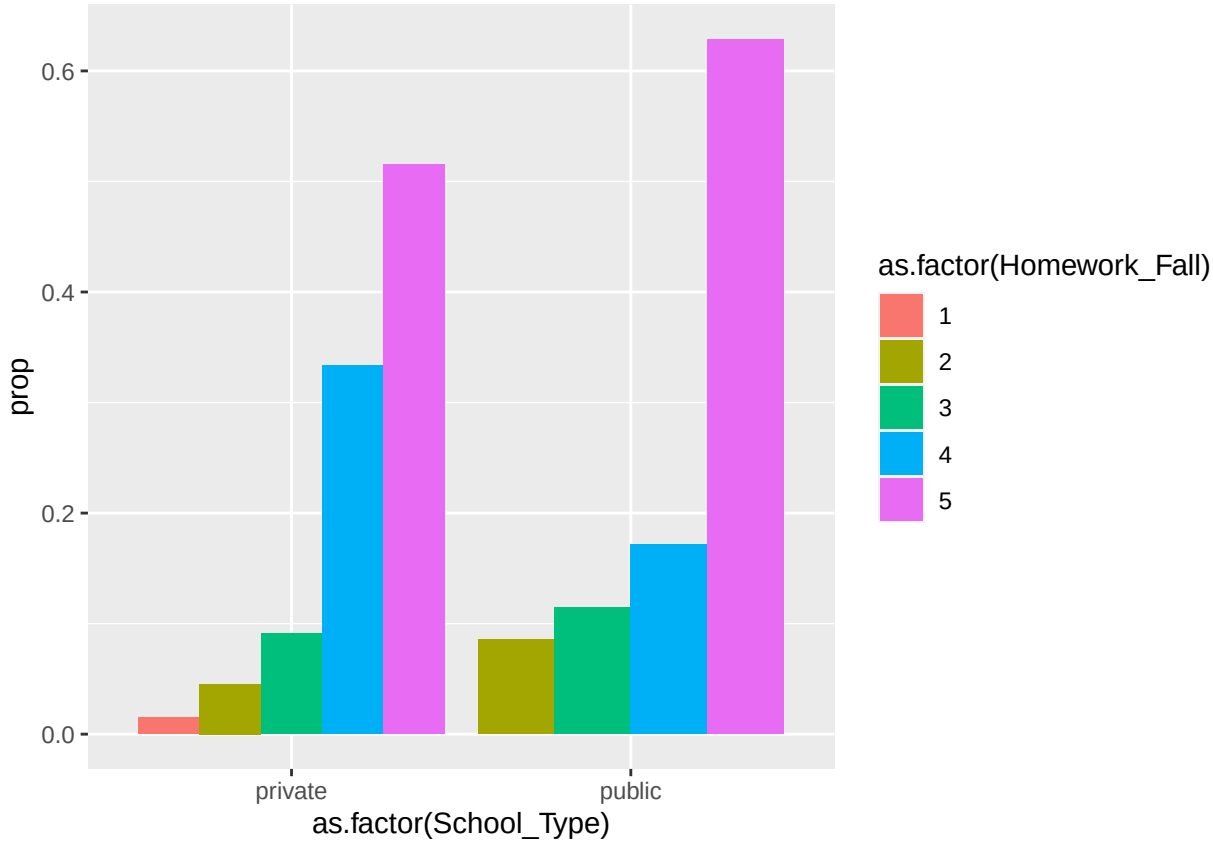



```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  group_by(TA) %>%
  summarize(avg_fall = mean(Homework_Fall), avg_spring = mean(Homework_Spring), count = n())
```

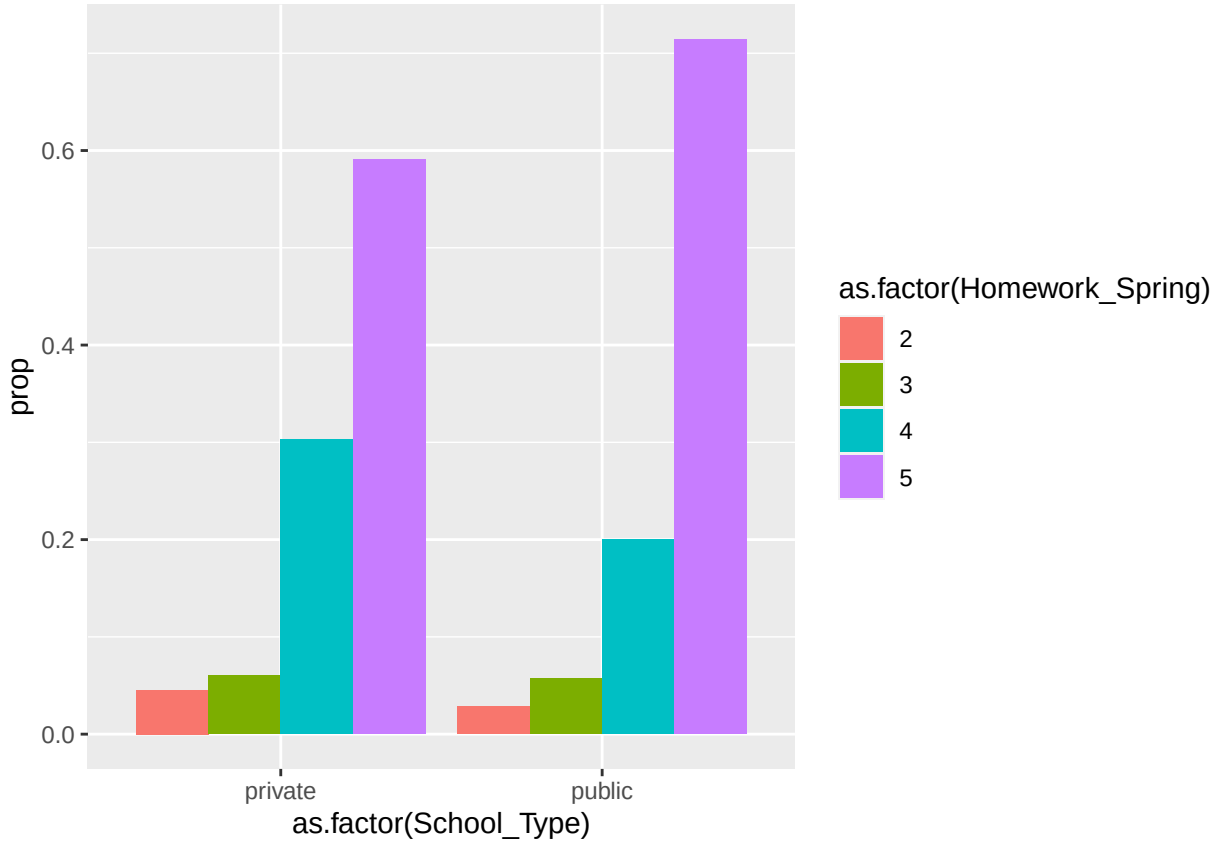
```
## # A tibble: 2 x 4
##      TA avg_fall avg_spring count
##   <dbl>    <dbl>      <dbl> <int>
## 1     1     4.19       4.48    21
## 2     2     4.34       4.49    82
```

Homework by School Type

```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  group_by(School_Type, Homework_Fall) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(School_Type), y = `prop`, fill = as.factor(Homework_Fall))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  group_by(School_Type, Homework_Spring) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(School_Type), y = `prop`, fill = as.factor(Homework_Spring))) +
  geom_col(position = "dodge")
```



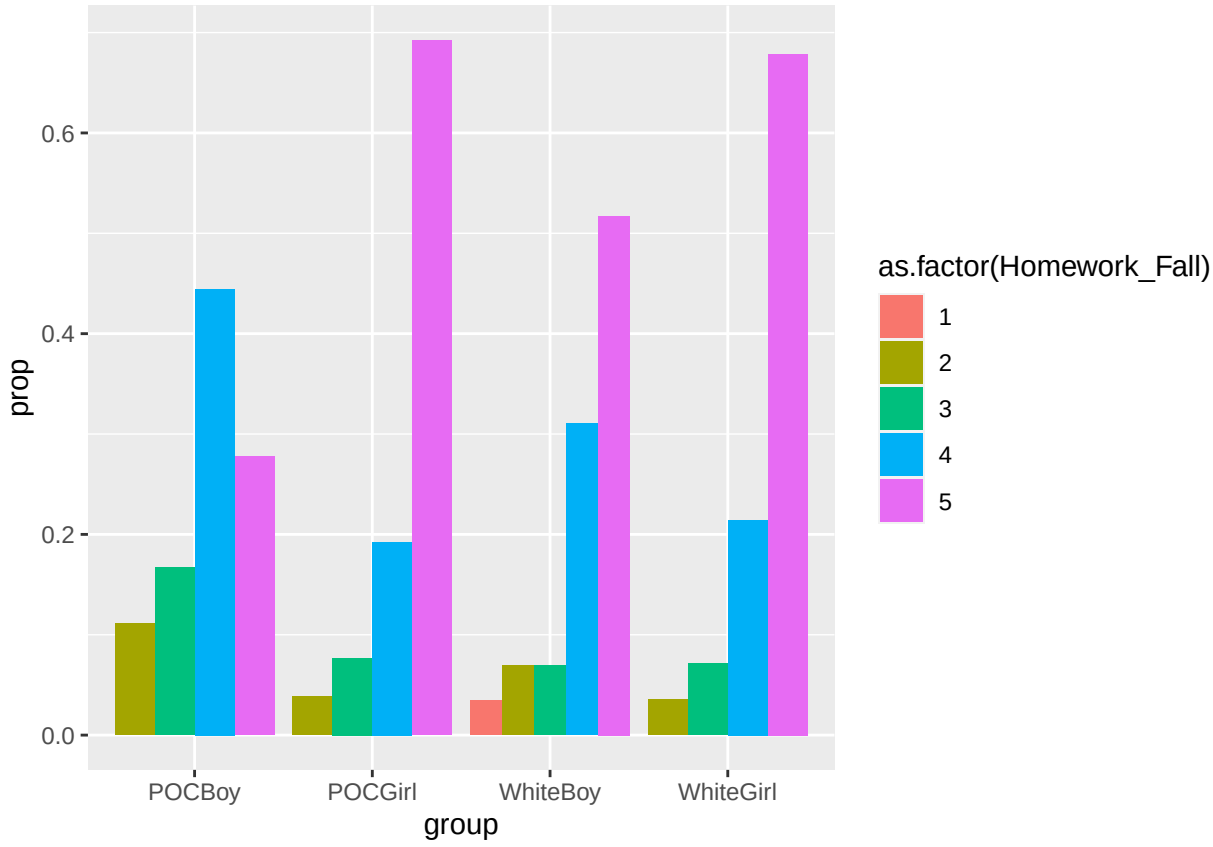

```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  group_by(School_Type) %>%
  summarize(avg_fall = mean(Homework_Fall), avg_spring = mean(Homework_Spring), count = n())
```

```
## # A tibble: 2 x 4
##   School_Type avg_fall avg_spring count
##   <chr>          <dbl>      <dbl> <int>
## 1 private         4.29       4.44    66
## 2 public          4.34       4.6     35
```

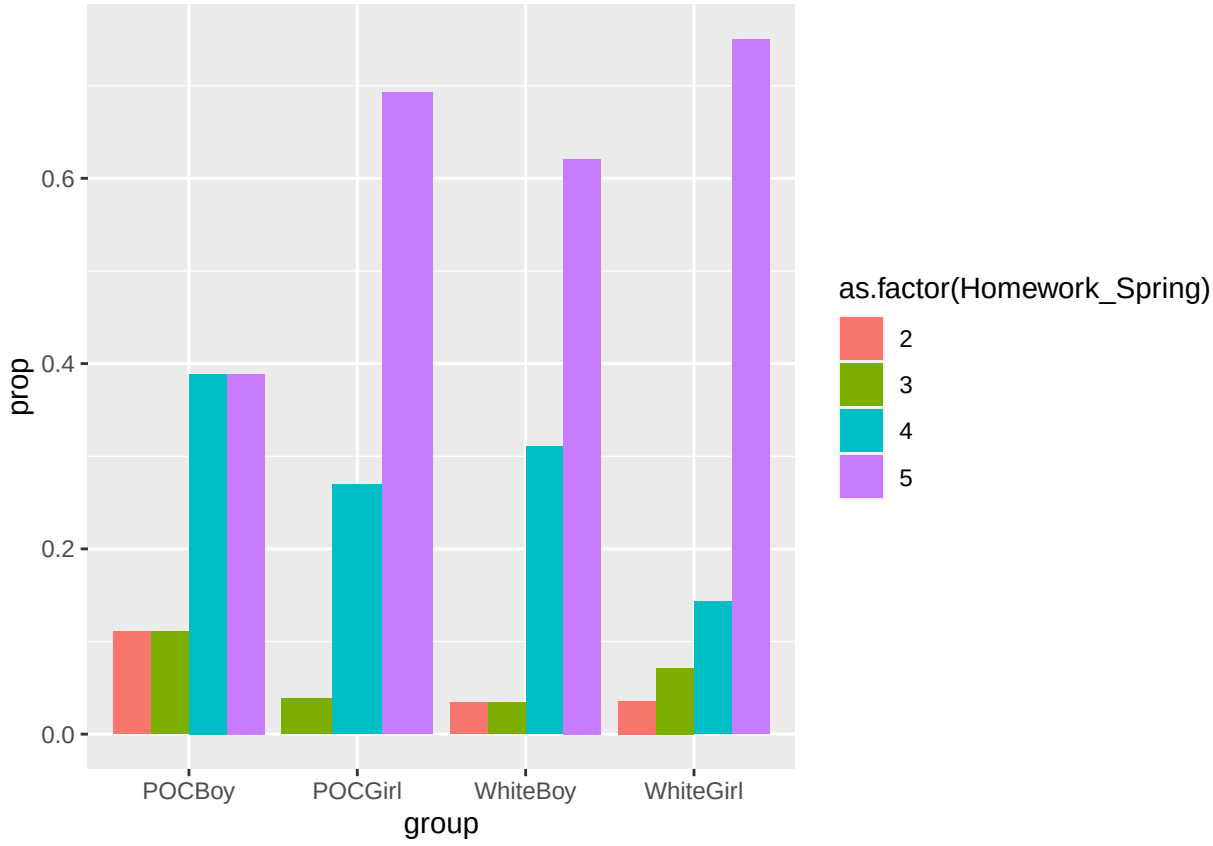
Homework by Race + Gender

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), Gender <= 2) %>%
  group_by(POC, Gender, Homework_Fall) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
```

```
    POC == "White" & Gender == 1 ~ "WhiteBoy",
    POC == "White" & Gender == 2 ~ "WhiteGirl",
    POC == "POC" & Gender == 1 ~ "POCBoy",
    POC == "POC" & Gender == 2 ~ "POCGirl"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Homework_Fall))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), Gender <= 2) %>%
  group_by(POC, Gender, Homework_Spring) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & Gender == 1 ~ "WhiteBoy",
    POC == "White" & Gender == 2 ~ "WhiteGirl",
    POC == "POC" & Gender == 1 ~ "POCBoy",
    POC == "POC" & Gender == 2 ~ "POCGirl"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Homework_Spring))) +
  geom_col(position = "dodge")
```



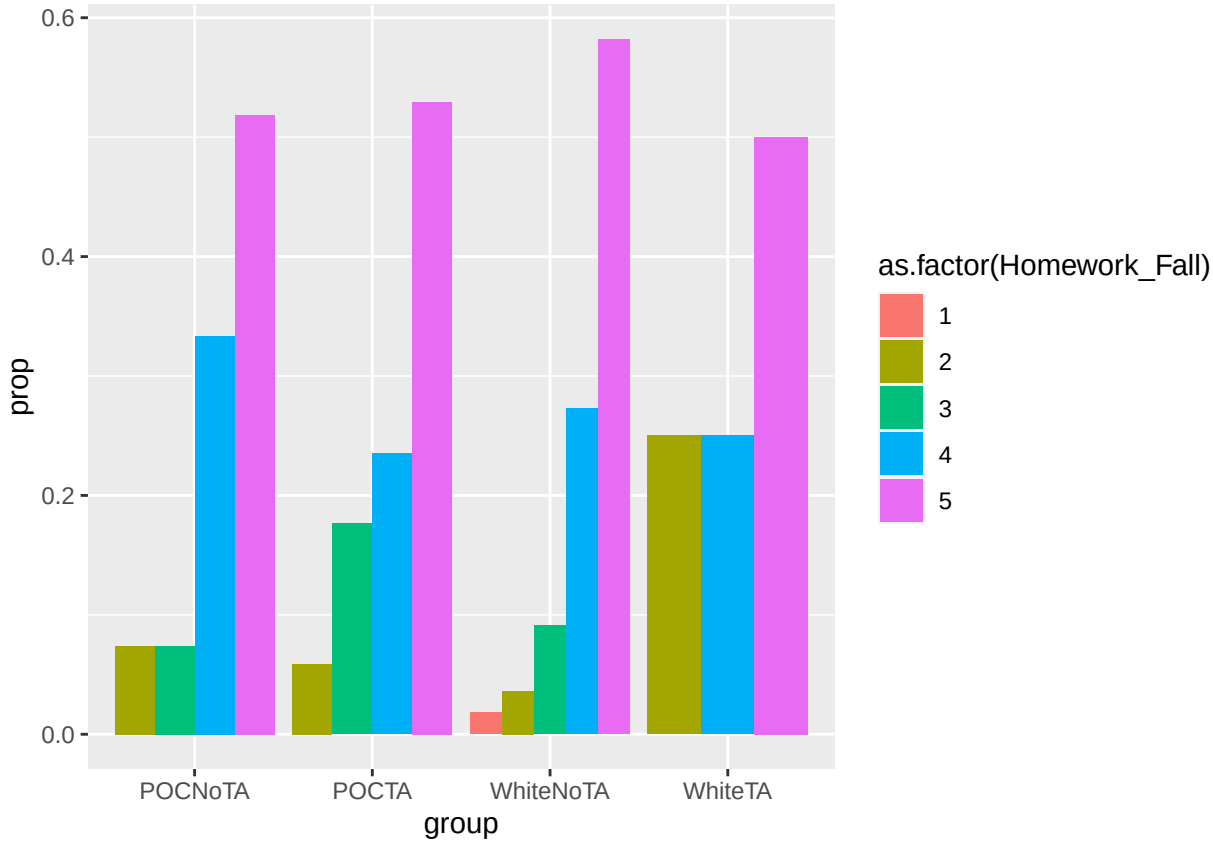

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), Gender <= 2) %>%
  group_by(POC, Gender) %>%
  summarize(avg_fall = mean(Homework_Fall), avg_spring = mean(Homework_Spring), count = n())
```

```
## # A tibble: 4 x 5
## # Groups:   POC [2]
##   POC   Gender avg_fall avg_spring count
##   <chr>  <dbl>    <dbl>      <dbl> <int>
## 1 POC        1     3.89       4.06    18
## 2 POC        2     4.54       4.65    26
## 3 White      1     4.21       4.52    29
## 4 White      2     4.54       4.61    28
```

Homework by Race + TA

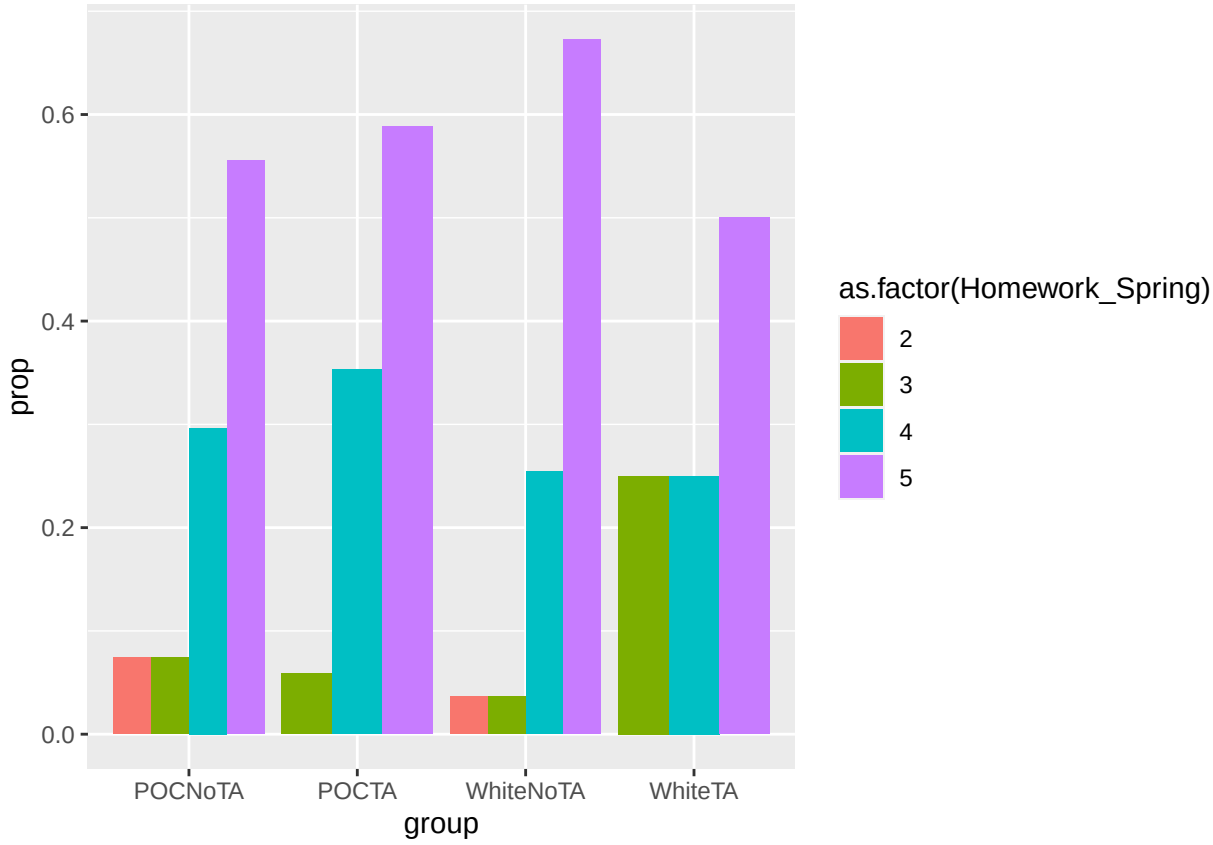
```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
```

```
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(TA)) %>%
  group_by(POC, TA, Homework_Fall) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & TA == 1 ~ "WhiteTA",
    POC == "White" & TA == 2 ~ "WhiteNoTA",
    POC == "POC" & TA == 1 ~ "POCTA",
    POC == "POC" & TA == 2 ~ "POCNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Homework_Fall))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(TA)) %>%
  group_by(POC, TA, Homework_Spring) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
```

```
    POC == "White" & TA == 1 ~ "WhiteTA",
    POC == "White" & TA == 2 ~ "WhiteNoTA",
    POC == "POC" & TA == 1 ~ "POCTA",
    POC == "POC" & TA == 2 ~ "POCNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Homework_Spring))) +
  geom_col(position = "dodge")
```

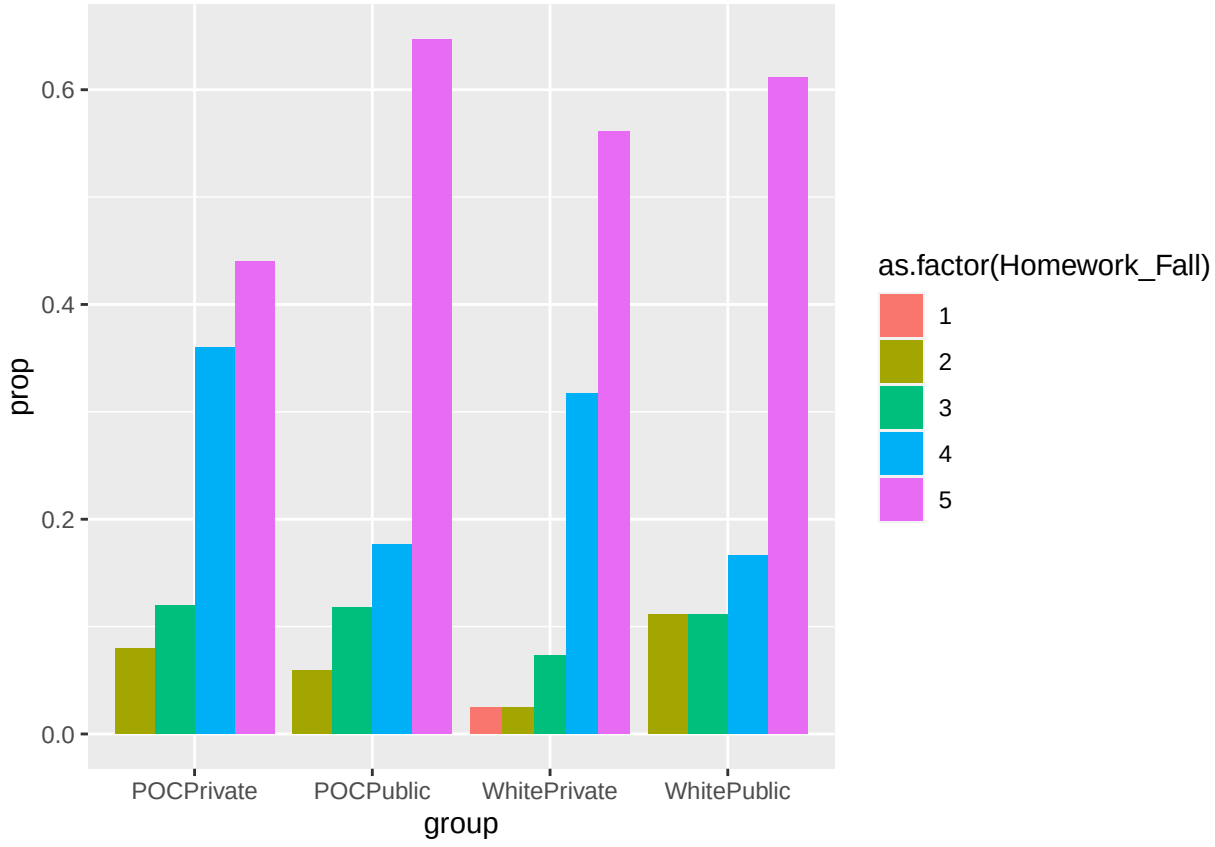



```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(TA)) %>%
  group_by(POC, TA) %>%
  summarize(avg_fall = mean(Homework_Fall), avg_spring = mean(Homework_Spring), count = n())
```

```
## # A tibble: 4 x 5
## # Groups:   POC [2]
##   POC      TA avg_fall avg_spring count
##   <chr> <dbl>    <dbl>      <dbl> <int>
## 1 POC       1     4.24       4.53    17
## 2 POC       2     4.30       4.33    27
## 3 White     1     4          4.25     4
## 4 White     2     4.36       4.56    55
```

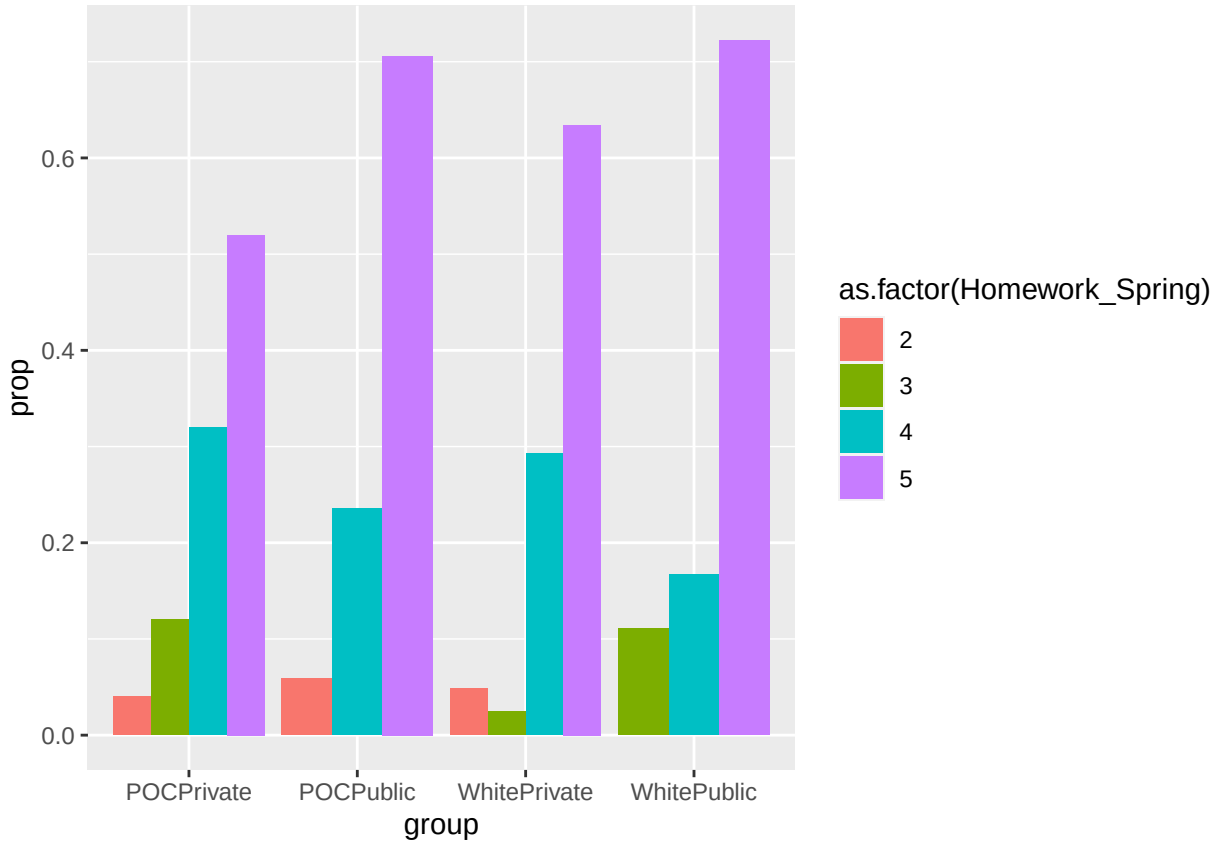
Homework by Race + School Type

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(School_Type)) %>%
  group_by(POC, School_Type, Homework_Fall) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & School_Type == "public" ~ "WhitePublic",
    POC == "White" & School_Type == "private" ~ "WhitePrivate",
    POC == "POC" & School_Type == "public" ~ "POCPublic",
    POC == "POC" & School_Type == "private" ~ "POCPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Homework_Fall))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
```

```
  )) %>%
  filter(!is.na(POC), !is.na(School_Type)) %>%
  group_by(POC, School_Type, Homework_Spring) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & School_Type == "public" ~ "WhitePublic",
    POC == "White" & School_Type == "private" ~ "WhitePrivate",
    POC == "POC" & School_Type == "public" ~ "POCPublic",
    POC == "POC" & School_Type == "private" ~ "POCPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Homework_Spring))) +
  geom_col(position = "dodge")
```



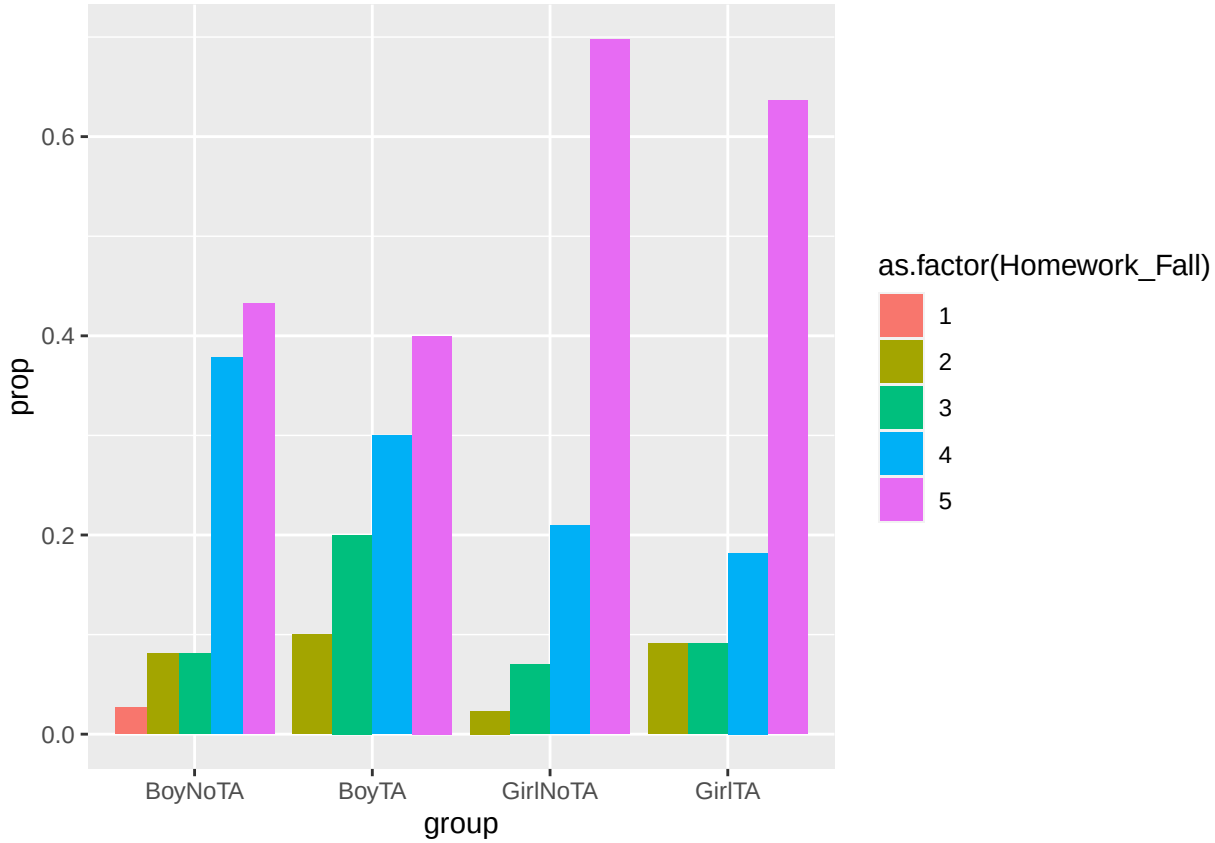

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(School_Type)) %>%
  group_by(POC, School_Type) %>%
  summarize(avg_fall = mean(Homework_Fall), avg_spring = mean(Homework_Spring), count = n())
```

```
## # A tibble: 4 x 5
## # Groups:   POC [2]
```

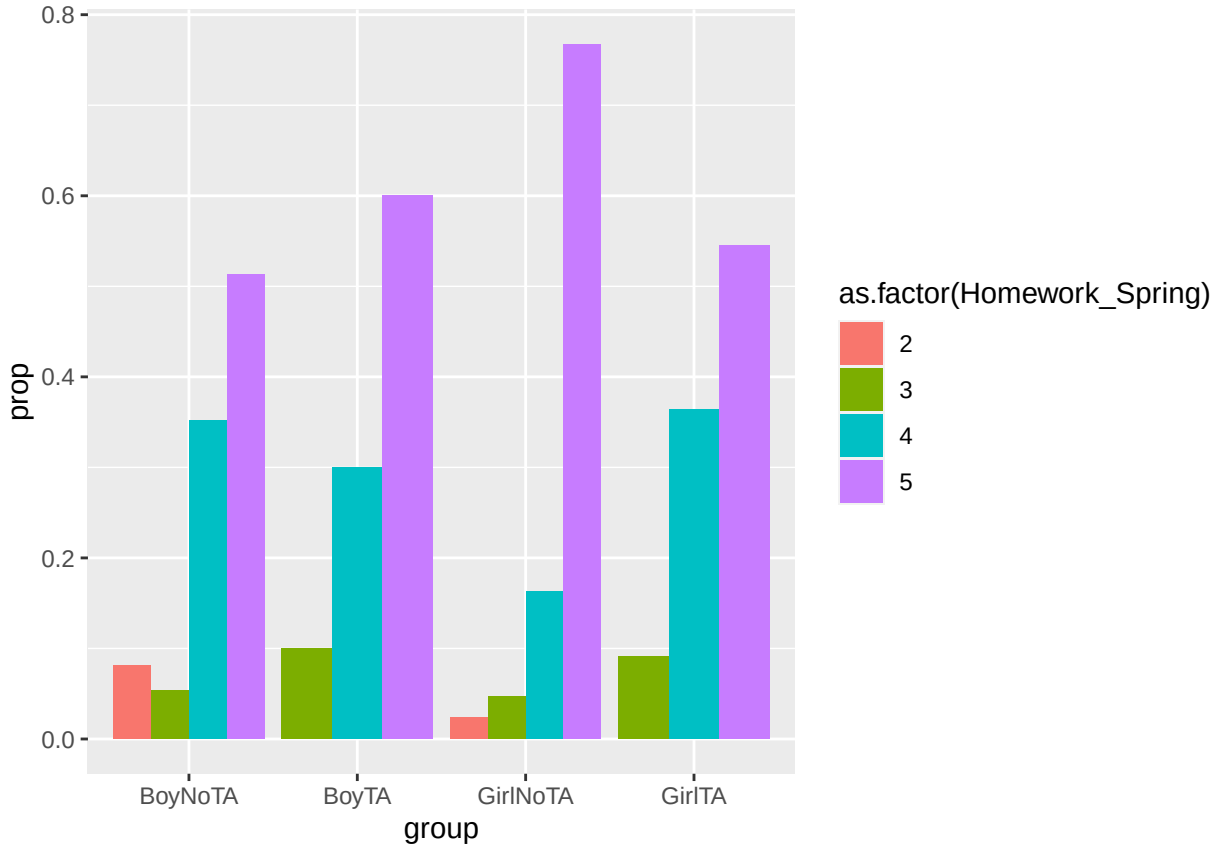
```
##   POC   School_Type avg_fall avg_spring count
##   <chr> <chr>          <dbl>      <dbl> <int>
## 1 POC   private         4.16       4.32    25
## 2 POC   public          4.41       4.59    17
## 3 White private         4.37       4.51    41
## 4 White public          4.28       4.61    18
```

Homework by Gender + TA

```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(TA)) %>%
  group_by(Gender, TA, Homework_Fall) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & TA == 1 ~ "BoyTA",
    Gender == 1 & TA == 2 ~ "BoyNoTA",
    Gender == 2 & TA == 1 ~ "GirlTA",
    Gender == 2 & TA == 2 ~ "GirlNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Homework_Fall))) +
  geom_col(position = "dodge")
```



```r
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(TA)) %>%
  group_by(Gender, TA, Homework_Spring) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & TA == 1 ~ "BoyTA",
    Gender == 1 & TA == 2 ~ "BoyNoTA",
    Gender == 2 & TA == 1 ~ "GirlTA",
    Gender == 2 & TA == 2 ~ "GirlNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Homework_Spring))) +
  geom_col(position = "dodge")
```



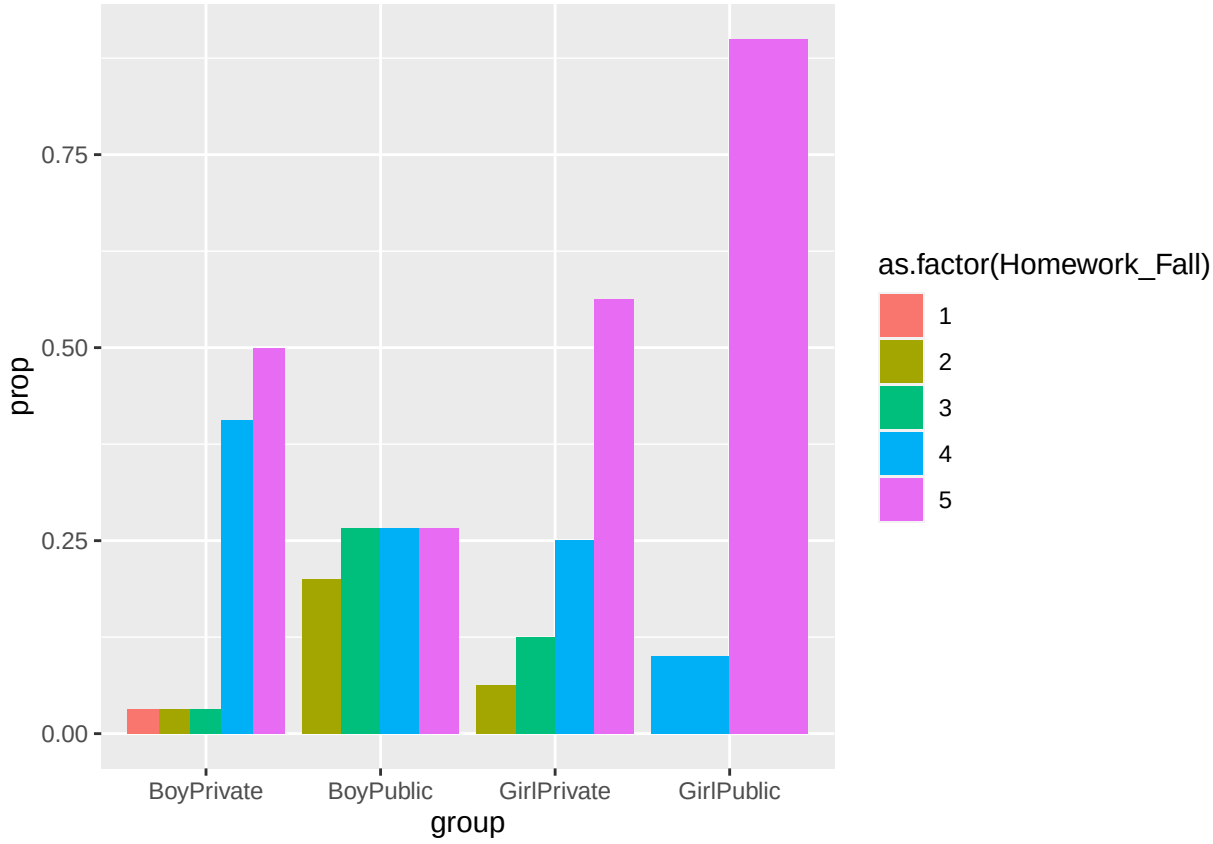

```r
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(TA)) %>%
  group_by(Gender, TA) %>%
  summarize(avg_fall = mean(Homework_Fall), avg_spring = mean(Homework_Spring), count = n())
```

```
## # A tibble: 4 x 5
## # Groups:   Gender [2]
##   Gender    TA avg_fall avg_spring count
##    <dbl> <dbl>    <dbl>      <dbl> <int>
## 1      1     1     4          4.5     10
## 2      1     2     4.11       4.30    37
```

```
## 3      2     1     4.36       4.45    11
## 4      2     2     4.58       4.67    43
```

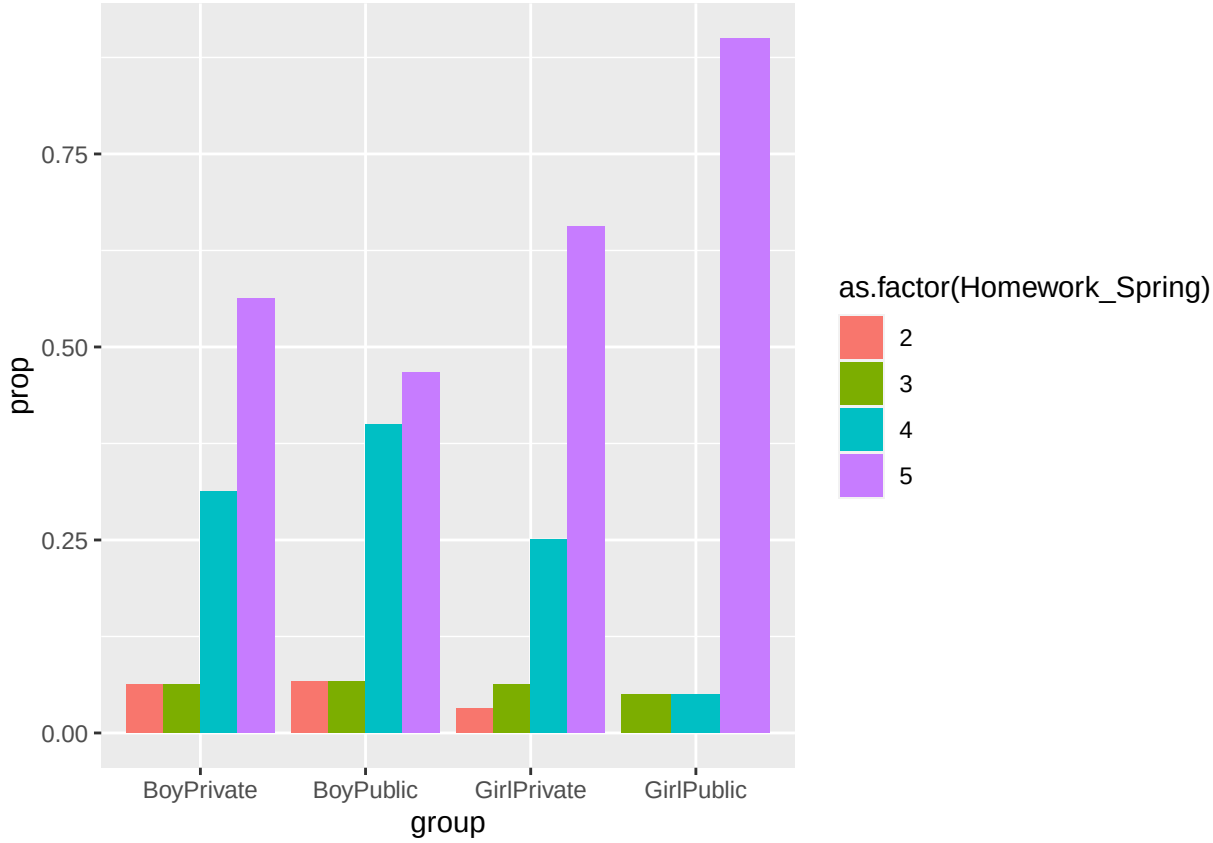
Homework by Gender + School Type

```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(School_Type)) %>%
  group_by(Gender, School_Type, Homework_Fall) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & School_Type == "public" ~ "BoyPublic",
    Gender == 1 & School_Type == "private" ~ "BoyPrivate",
    Gender == 2 & School_Type == "public" ~ "GirlPublic",
    Gender == 2 & School_Type == "private" ~ "GirlPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Homework_Fall))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(School_Type)) %>%
  group_by(Gender, School_Type, Homework_Spring) %>%
  summarize(count = n()) %>%
```

```
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & School_Type == "public" ~ "BoyPublic",
    Gender == 1 & School_Type == "private" ~ "BoyPrivate",
    Gender == 2 & School_Type == "public" ~ "GirlPublic",
    Gender == 2 & School_Type == "private" ~ "GirlPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Homework_Spring))) +
  geom_col(position = "dodge")
```

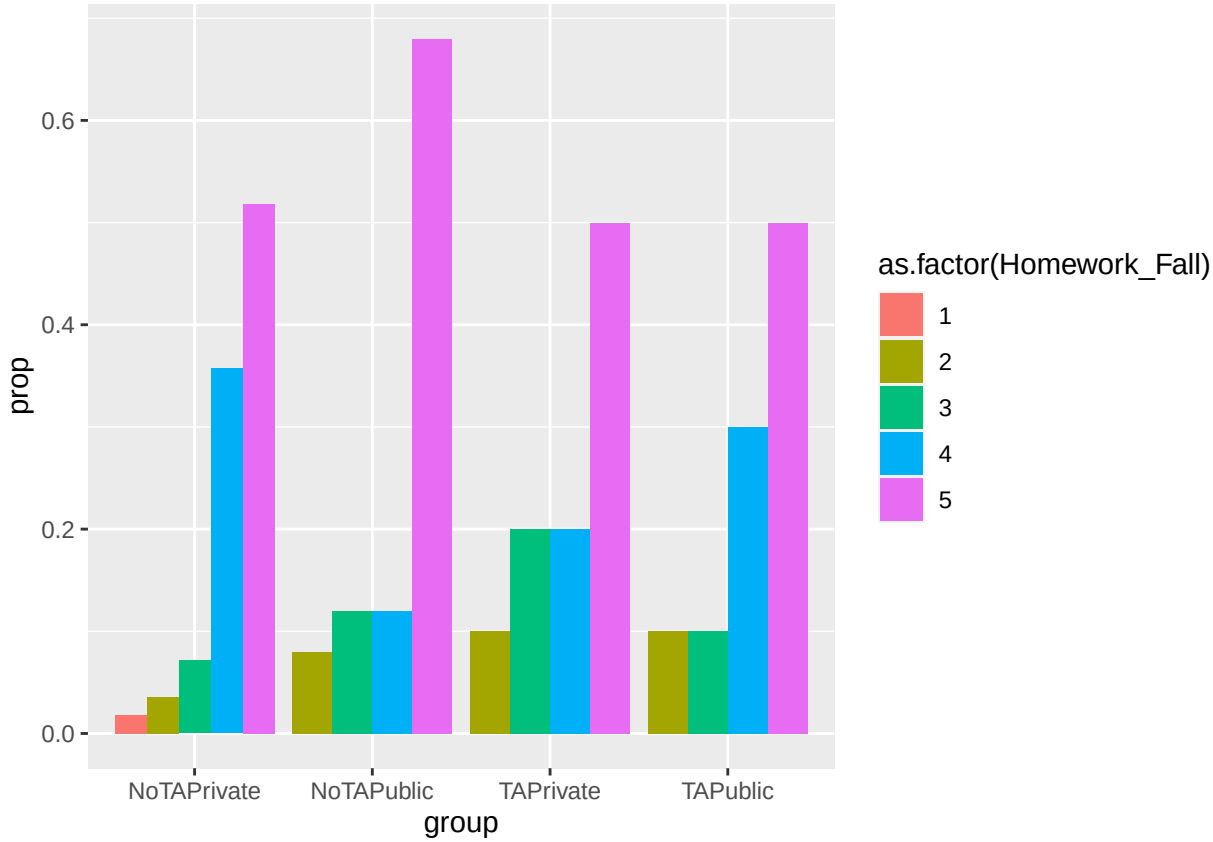



```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(School_Type)) %>%
  group_by(Gender, School_Type) %>%
  summarize(avg_fall = mean(Homework_Fall), avg_spring = mean(Homework_Spring), count = n())
```

```
## # A tibble: 4 x 5
## # Groups:   Gender [2]
##   Gender School_Type avg_fall avg_spring count
##    <dbl> <chr>          <dbl>      <dbl> <int>
## 1      1 private         4.31       4.38    32
## 2      1 public          3.6        4.27    15
## 3      2 private         4.31       4.53    32
## 4      2 public          4.9        4.85    20
```

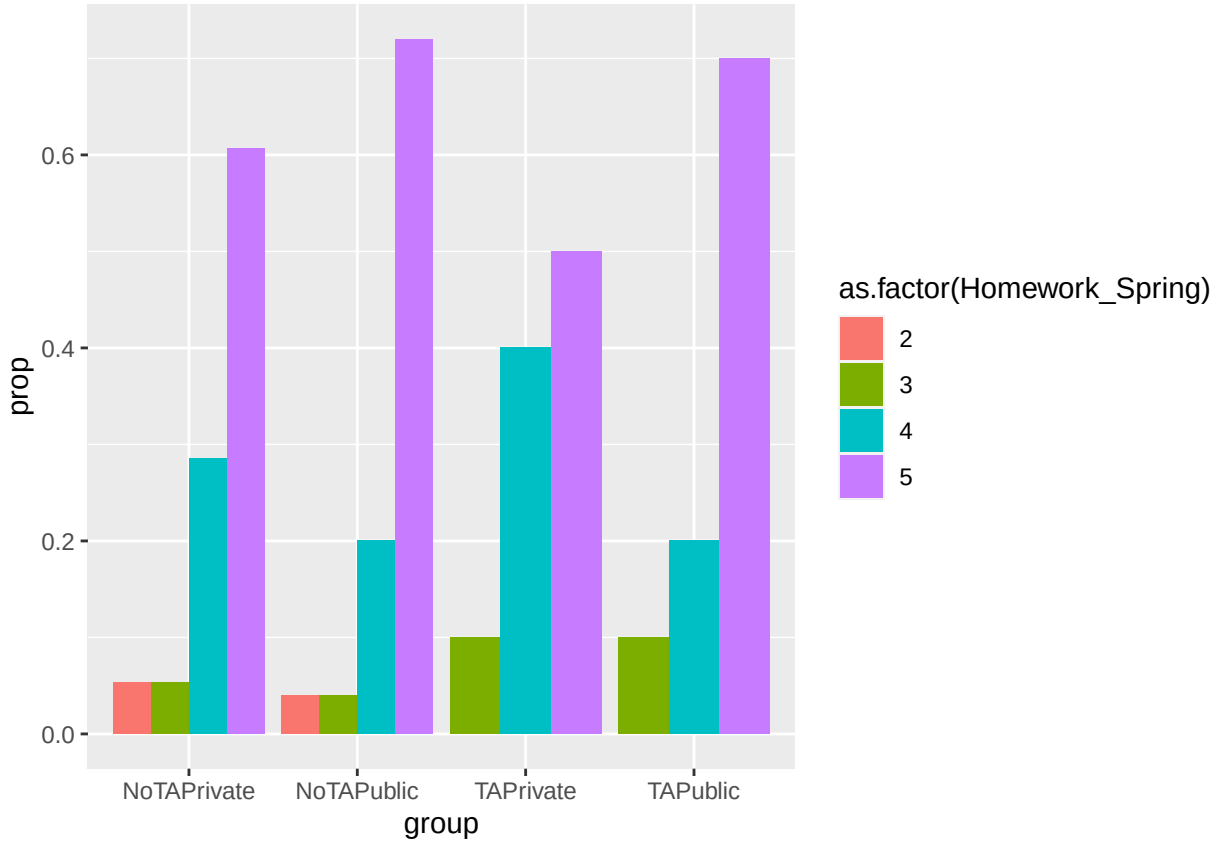
Homework by TA + School Type

```
g9gf_2024 %>%
  filter(!is.na(TA), !is.na(School_Type)) %>%
  group_by(TA, School_Type, Homework_Fall) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    TA == 1 & School_Type == "public" ~ "TAPublic",
    TA == 2 & School_Type == "public" ~ "NoTAPublic",
    TA == 1 & School_Type == "private" ~ "TAPrivate",
    TA == 2 & School_Type == "private" ~ "NoTAPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Homework_Fall))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(TA), !is.na(School_Type)) %>%
  group_by(TA, School_Type, Homework_Spring) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    TA == 1 & School_Type == "public" ~ "TAPublic",
    TA == 2 & School_Type == "public" ~ "NoTAPublic",
```

```
    TA == 1 & School_Type == "private" ~ "TAPrivate",
    TA == 2 & School_Type == "private" ~ "NoTAPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Homework_Spring))) +
  geom_col(position = "dodge")
```



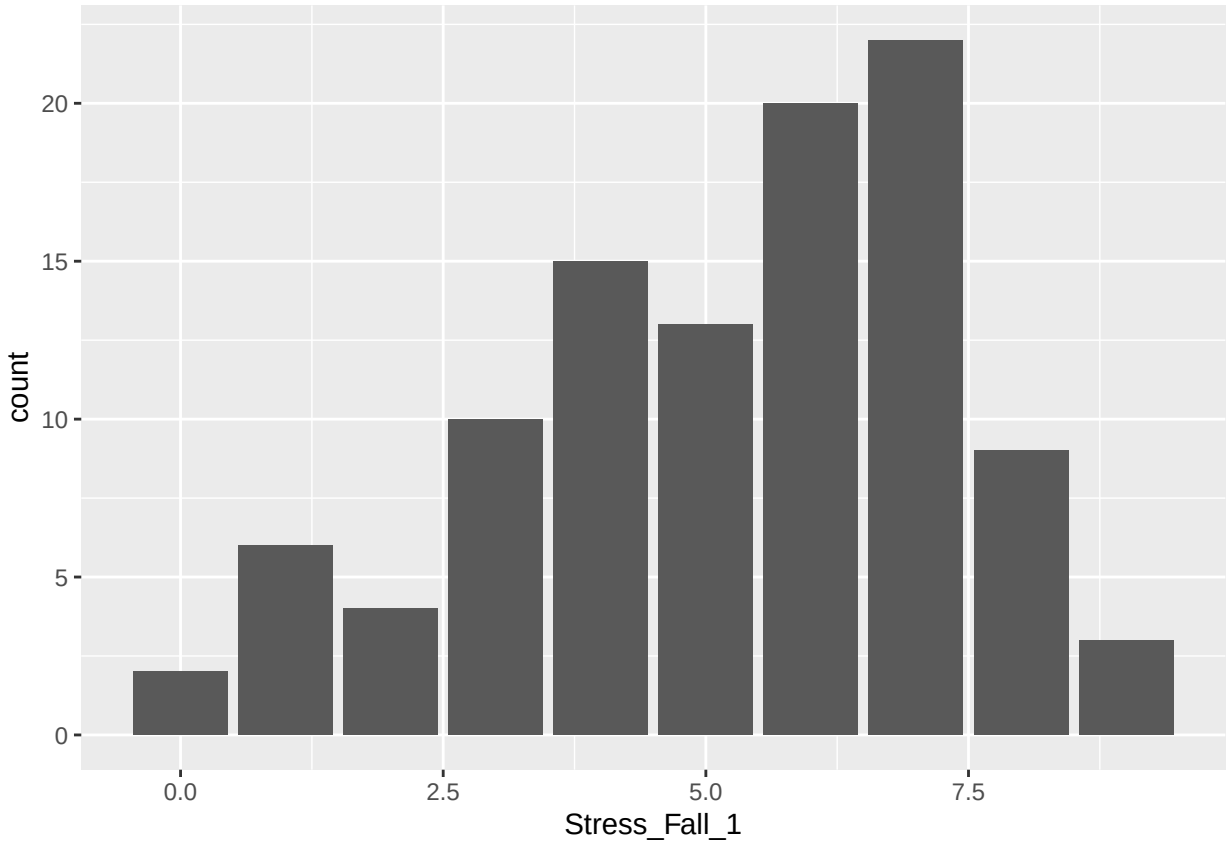

```
g9gf_2024 %>%
  filter(!is.na(TA), !is.na(School_Type)) %>%
  group_by(TA, School_Type) %>%
  summarize(avg_fall = mean(Homework_Fall), avg_spring = mean(Homework_Spring), count = n())
```

```
## # A tibble: 4 x 5
## # Groups:   TA [2]
##      TA School_Type avg_fall avg_spring count
##   <dbl> <chr>          <dbl>      <dbl> <int>
## 1     1 private         4.1        4.4     10
## 2     1 public          4.2        4.6     10
## 3     2 private         4.32       4.45    56
## 4     2 public          4.4        4.6     25
```

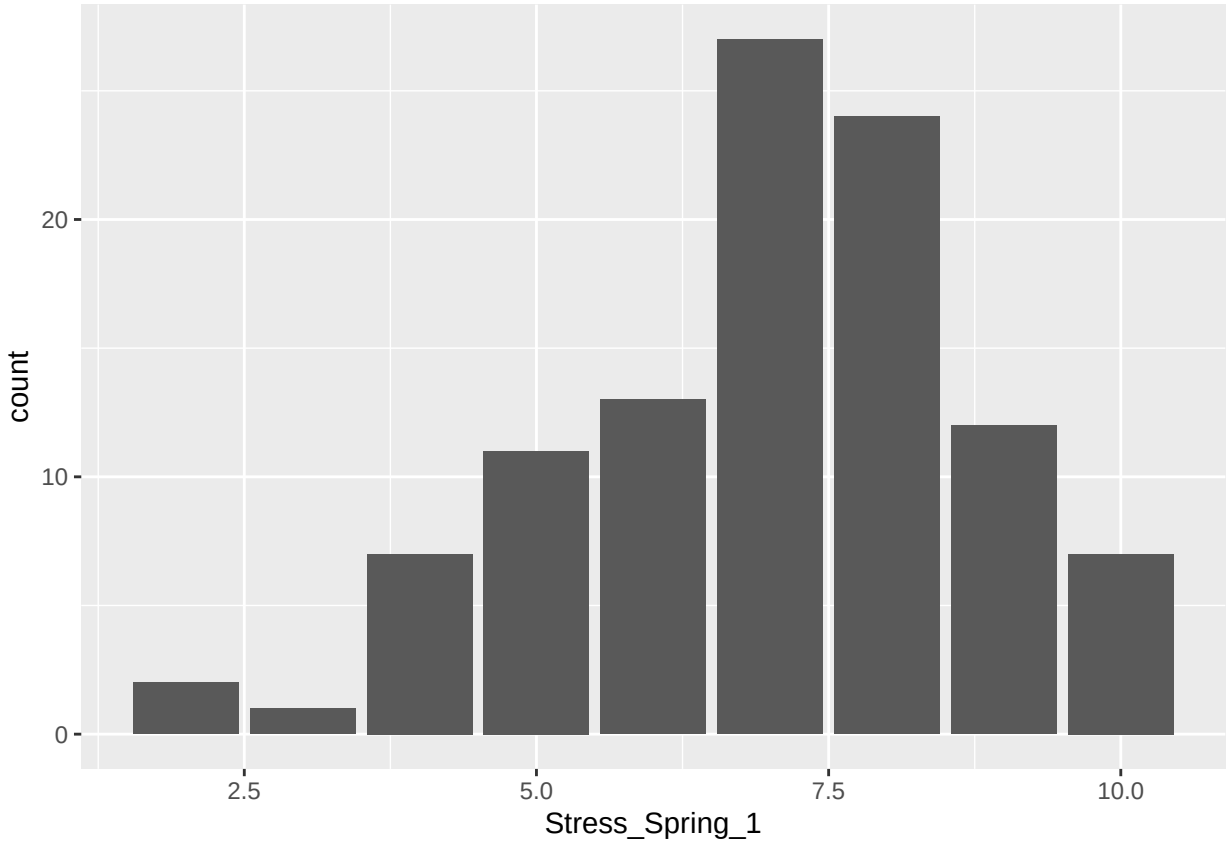
Stress

Stress Overall

```
g9gf_2024 %>%
  ggplot(aes(x=`Stress_Fall_1`)) +
  geom_bar()
```




```
g9gf_2024 %>%
  ggplot(aes(x=`Stress_Spring_1`)) +
  geom_bar()
```




```
wilcox.test(g9gf_2024$`Stress_Spring_1`, g9gf_2024$`Stress_Fall_1`, paired = TRUE, alternative = "greate
```

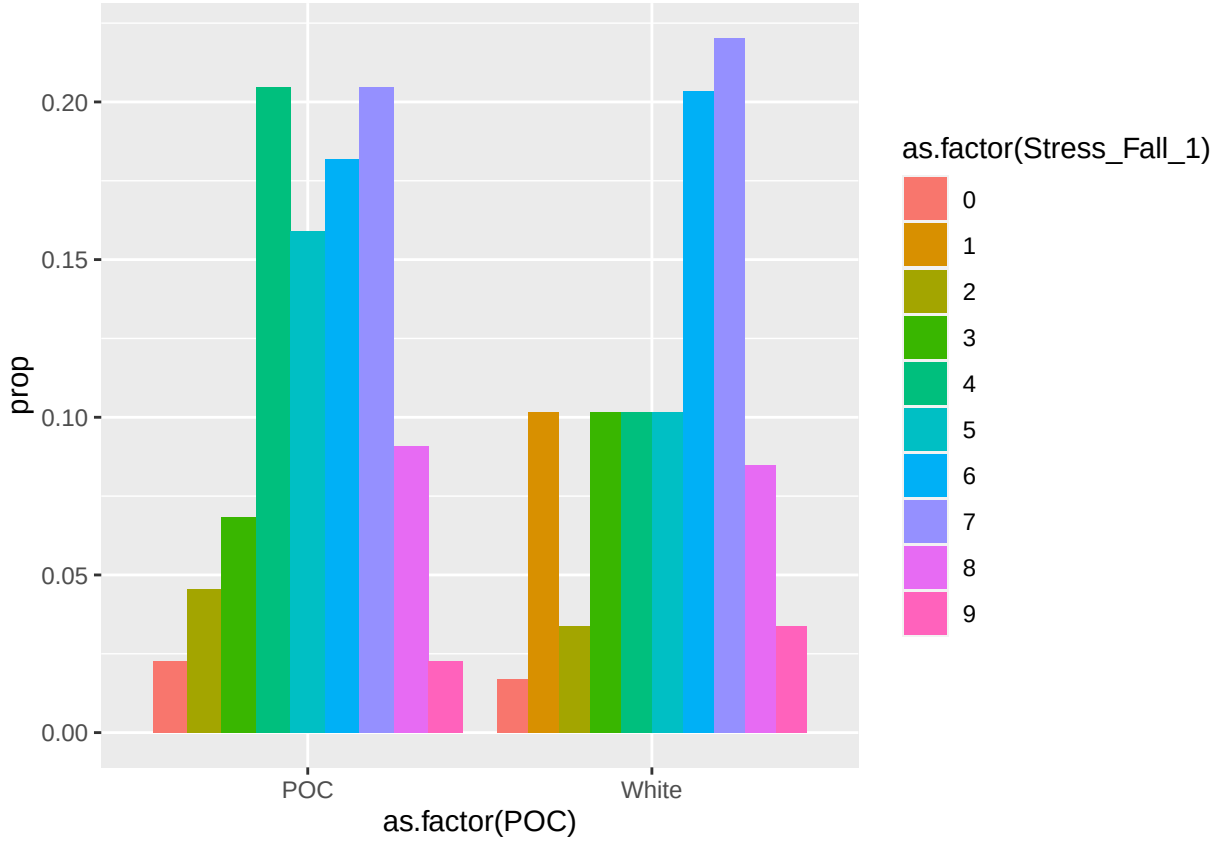
```
##
##  Wilcoxon signed rank test with continuity correction
##
## data:  g9gf_2024$Stress_Spring_1 and g9gf_2024$Stress_Fall_1
## V = 3735, p-value = 1.936e-10
## alternative hypothesis: true location shift is greater than 0
```

```
t.test(g9gf_2024$`Stress_Spring_1`, g9gf_2024$`Stress_Fall_1`, paired = TRUE, alternative = "greater")
```

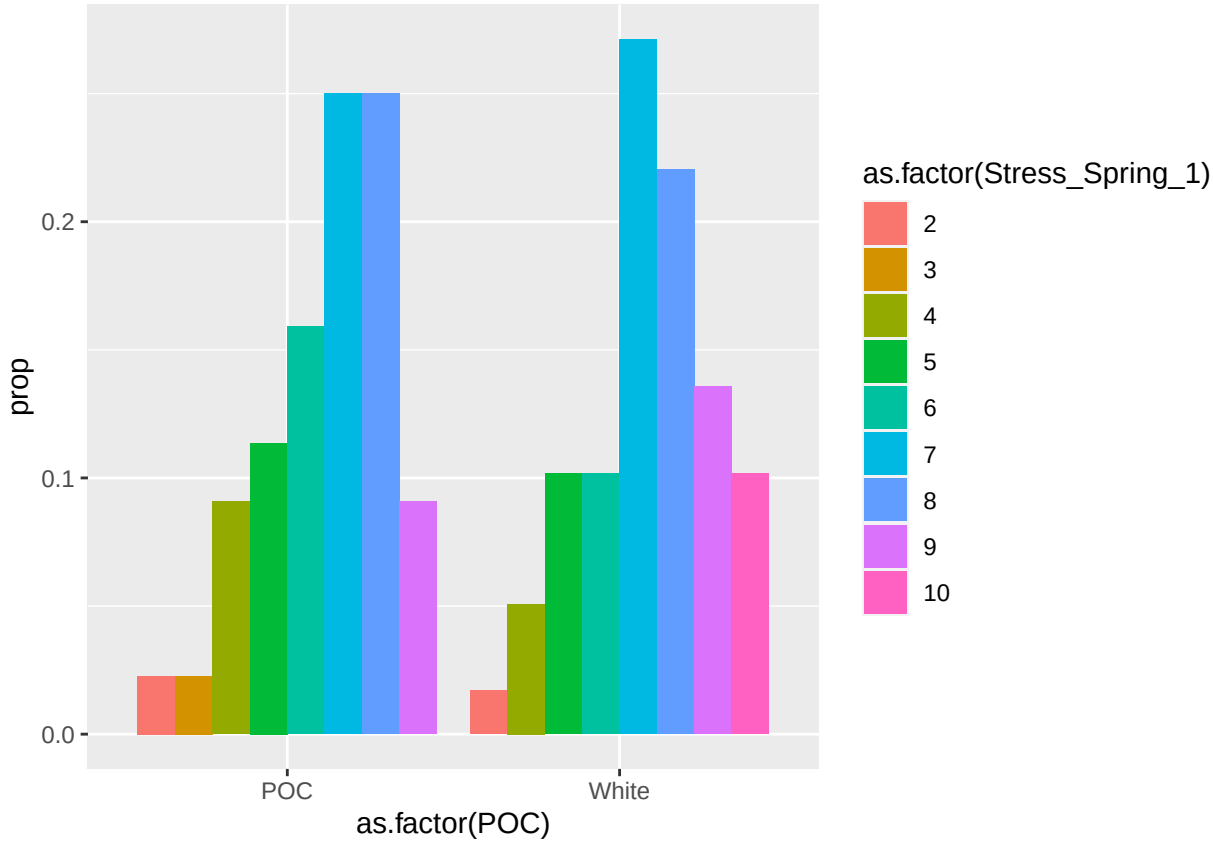
```
##
##  Paired t-test
##
## data:  g9gf_2024$Stress_Spring_1 and g9gf_2024$Stress_Fall_1
## t = 7.6321, df = 103, p-value = 6.061e-12
## alternative hypothesis: true mean difference is greater than 0
## 95 percent confidence interval:
##  1.391994      Inf
## sample estimates:
## mean difference
##        1.778846
```

Stress by Race

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  group_by(POC, Stress_Fall_1) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(POC), y = `prop`, fill = as.factor(Stress_Fall_1))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  group_by(POC, Stress_Spring_1) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(POC), y = `prop`, fill = as.factor(Stress_Spring_1))) +
  geom_col(position = "dodge")
```

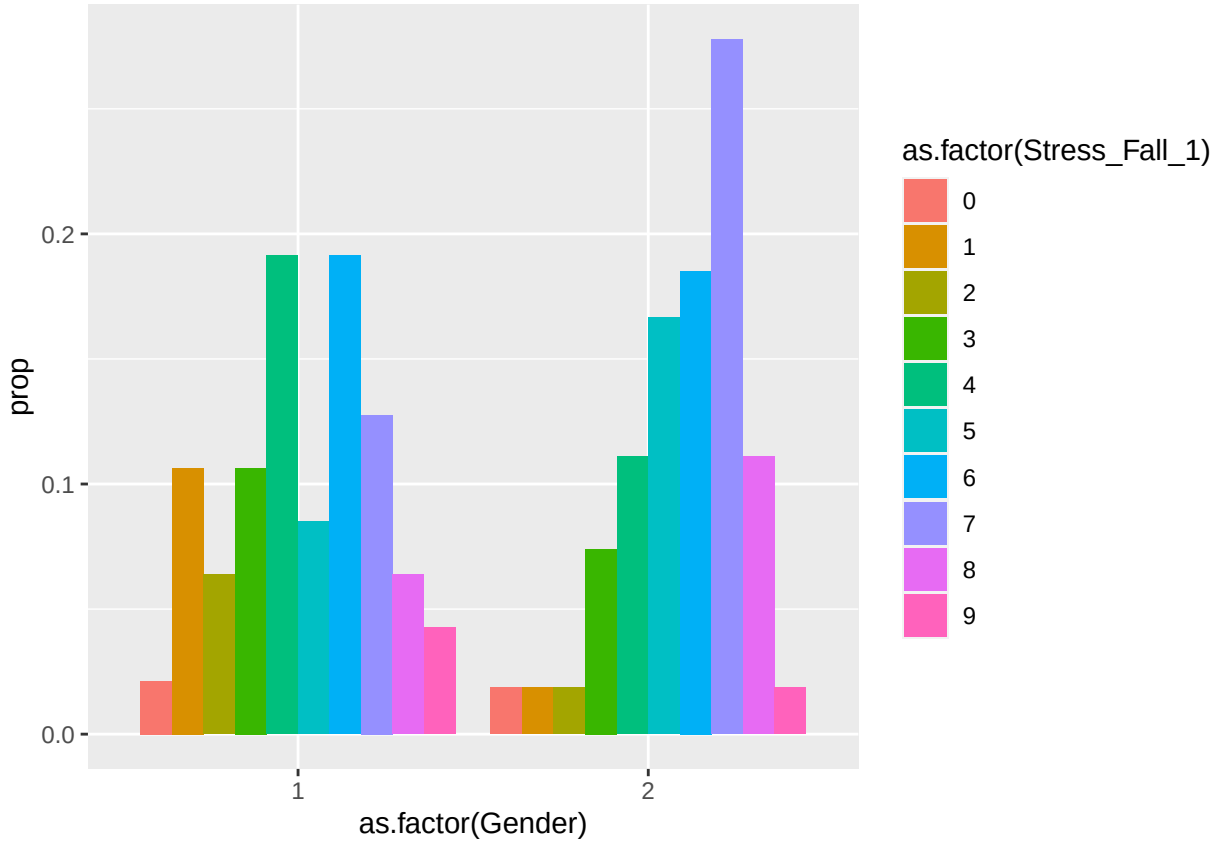



```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC)) %>%
  group_by(POC) %>%
  summarize(avg_fall = mean(Stress_Fall_1), avg_spring = mean(Stress_Spring_1), count = n())
```

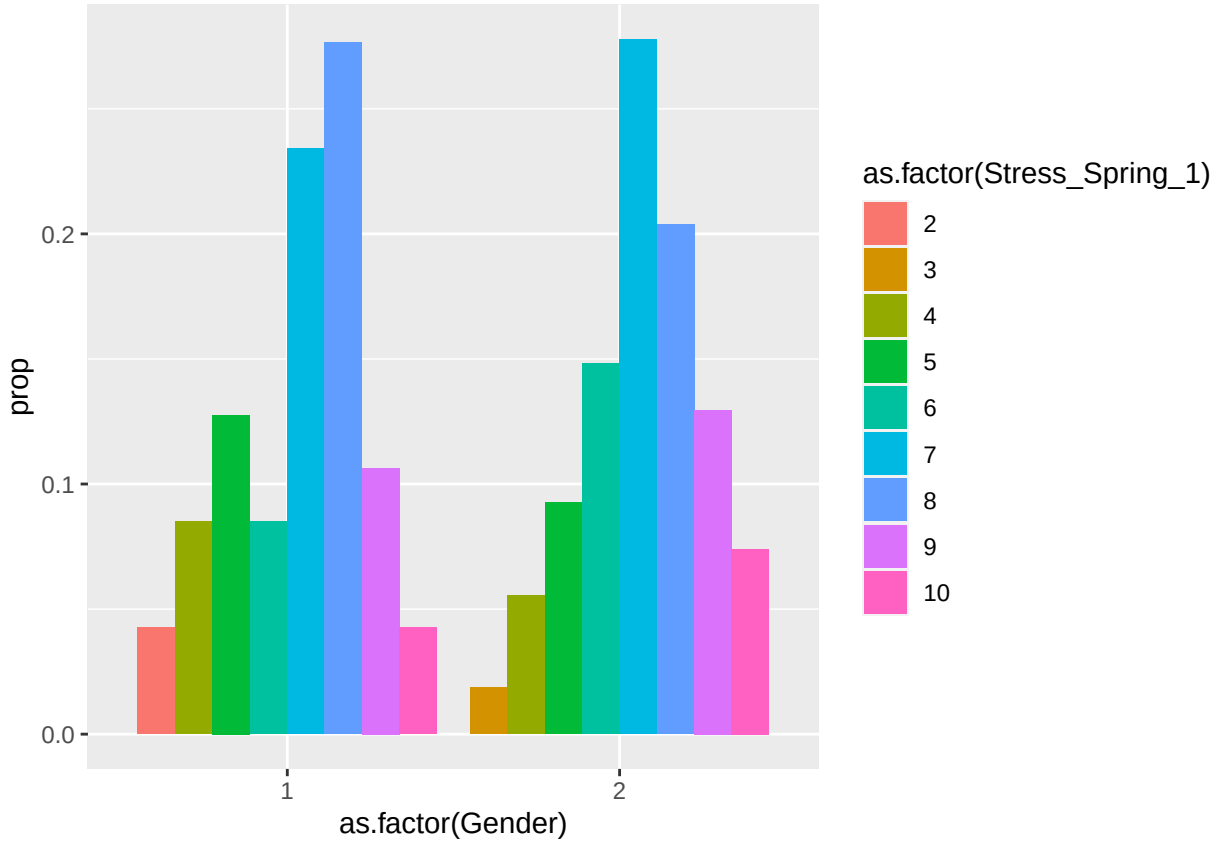
```
## # A tibble: 2 x 4
##   POC   avg_fall avg_spring count
##   <chr>    <dbl>      <dbl> <int>
## 1 POC       5.36       6.57    44
## 2 White     5.14       7.25    59
```

Stress by Gender

```
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  group_by(Gender, Stress_Fall_1) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(Gender), y = `prop`, fill = as.factor(Stress_Fall_1))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  group_by(Gender, Stress_Spring_1) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(Gender), y = `prop`, fill = as.factor(Stress_Spring_1))) +
  geom_col(position = "dodge")
```

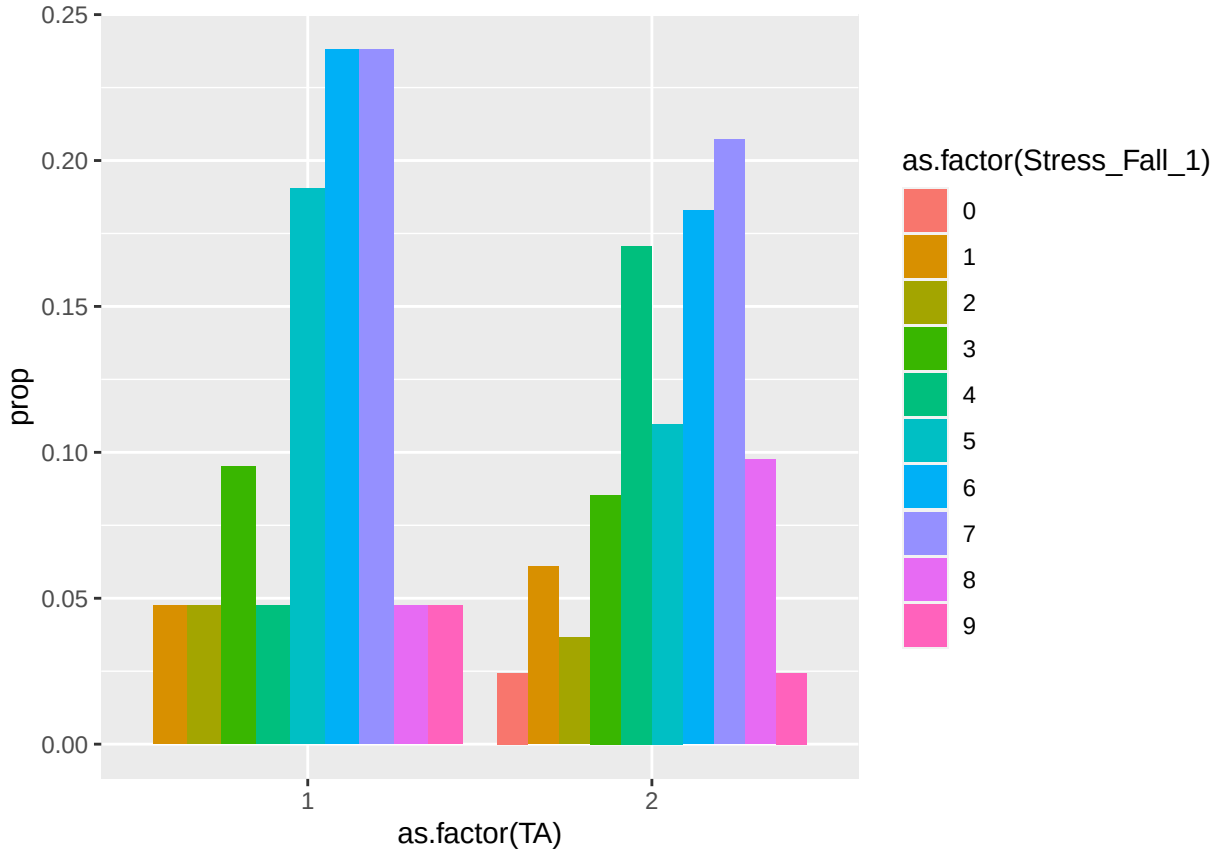



```
g9gf_2024 %>%
  filter(Gender <= 2) %>%
  group_by(Gender) %>%
  summarize(avg_fall = mean(Stress_Fall_1), avg_spring = mean(Stress_Spring_1), count = n())
```

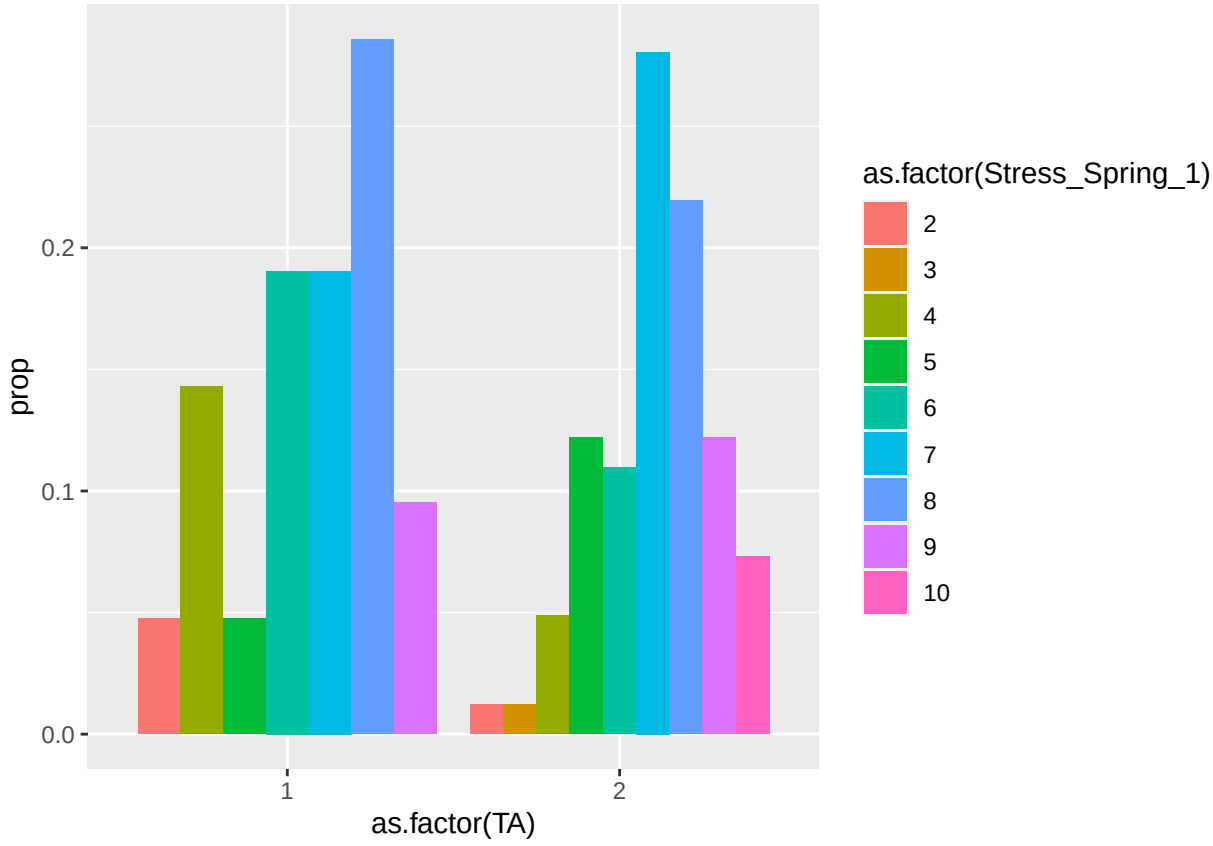
```
## # A tibble: 2 x 4
##   Gender avg_fall avg_spring count
##    <dbl>    <dbl>      <dbl> <int>
## 1      1     4.68       6.81    47
## 2      2     5.67       7.11    54
```

Stress by TA

```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  group_by(TA, Stress_Fall_1) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(TA), y = `prop`, fill = as.factor(Stress_Fall_1))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  group_by(TA, Stress_Spring_1) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(TA), y = `prop`, fill = as.factor(Stress_Spring_1))) +
  geom_col(position = "dodge")
```

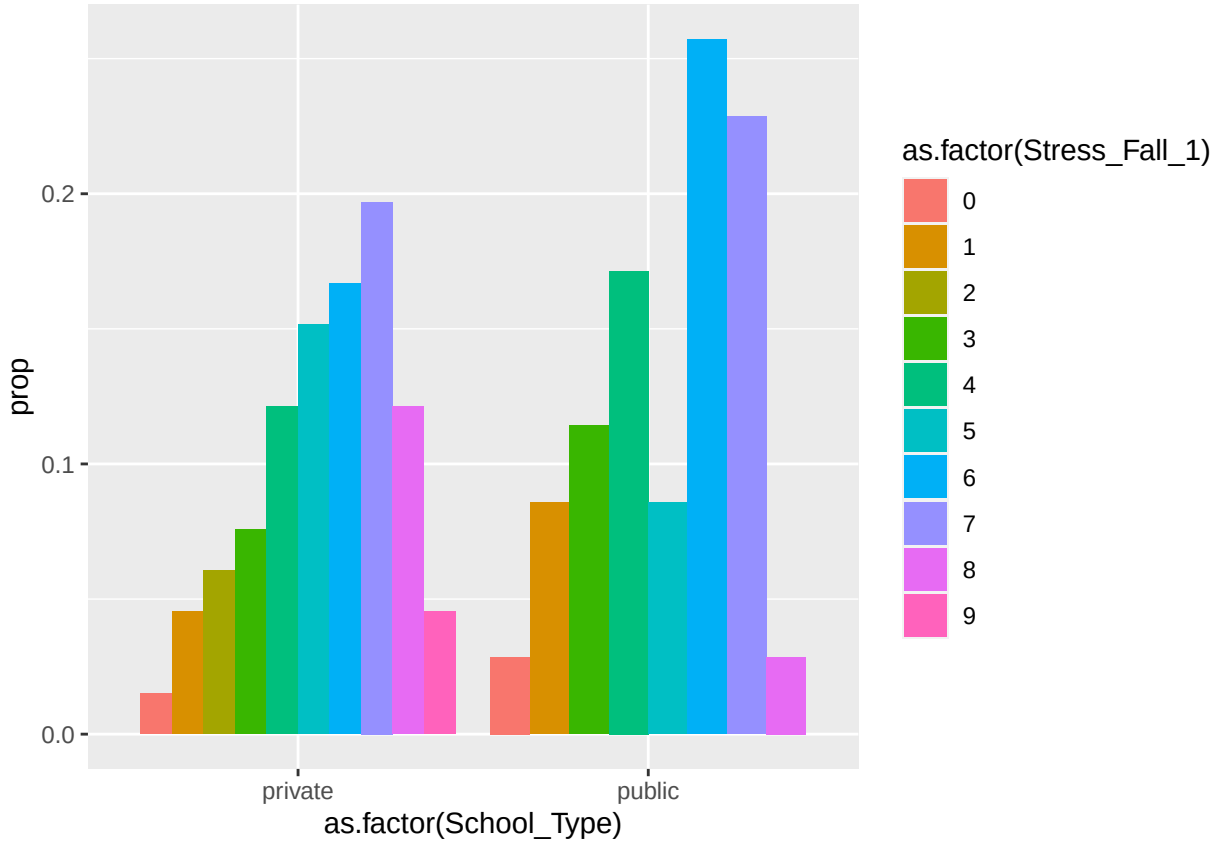



```
g9gf_2024 %>%
  filter(!is.na(TA)) %>%
  group_by(TA) %>%
  summarize(avg_fall = mean(Stress_Fall_1), avg_spring = mean(Stress_Spring_1), count = n())
```

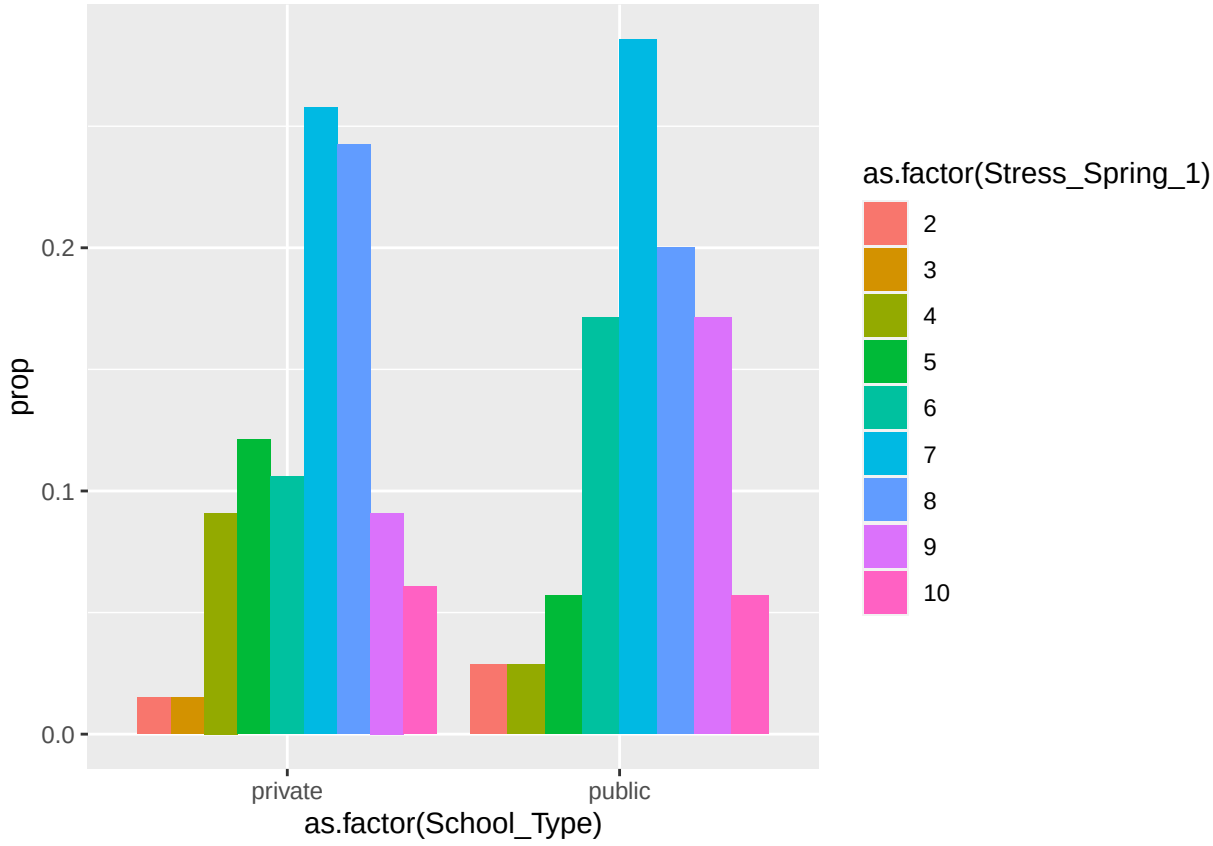
```
## # A tibble: 2 x 4
##      TA avg_fall avg_spring count
##   <dbl>    <dbl>      <dbl> <int>
## 1     1     5.48       6.52    21
## 2     2     5.17       7.07    82
```

Stress by School Type

```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  group_by(School_Type, Stress_Fall_1) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(School_Type), y = `prop`, fill = as.factor(Stress_Fall_1))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  group_by(School_Type, Stress_Spring_1) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  ggplot(aes(x = as.factor(School_Type), y = `prop`, fill = as.factor(Stress_Spring_1))) +
  geom_col(position = "dodge")
```



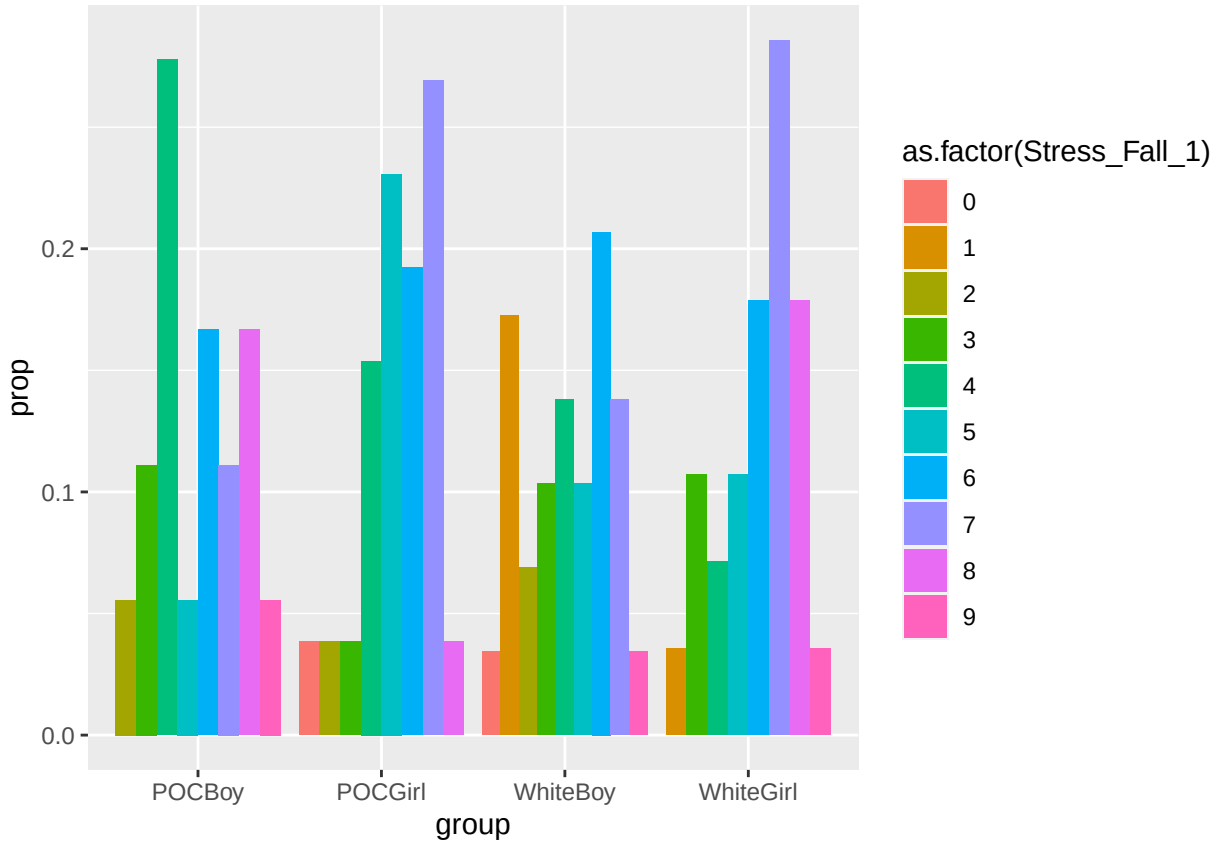

```
g9gf_2024 %>%
  filter(!is.na(School_Type)) %>%
  group_by(School_Type) %>%
  summarize(avg_fall = mean(Stress_Fall_1), avg_spring = mean(Stress_Spring_1), count = n())
```

```
## # A tibble: 2 x 4
##   School_Type avg_fall avg_spring count
##   <chr>          <dbl>      <dbl> <int>
## 1 private         5.39       6.85    66
## 2 public          4.91       7.2     35
```

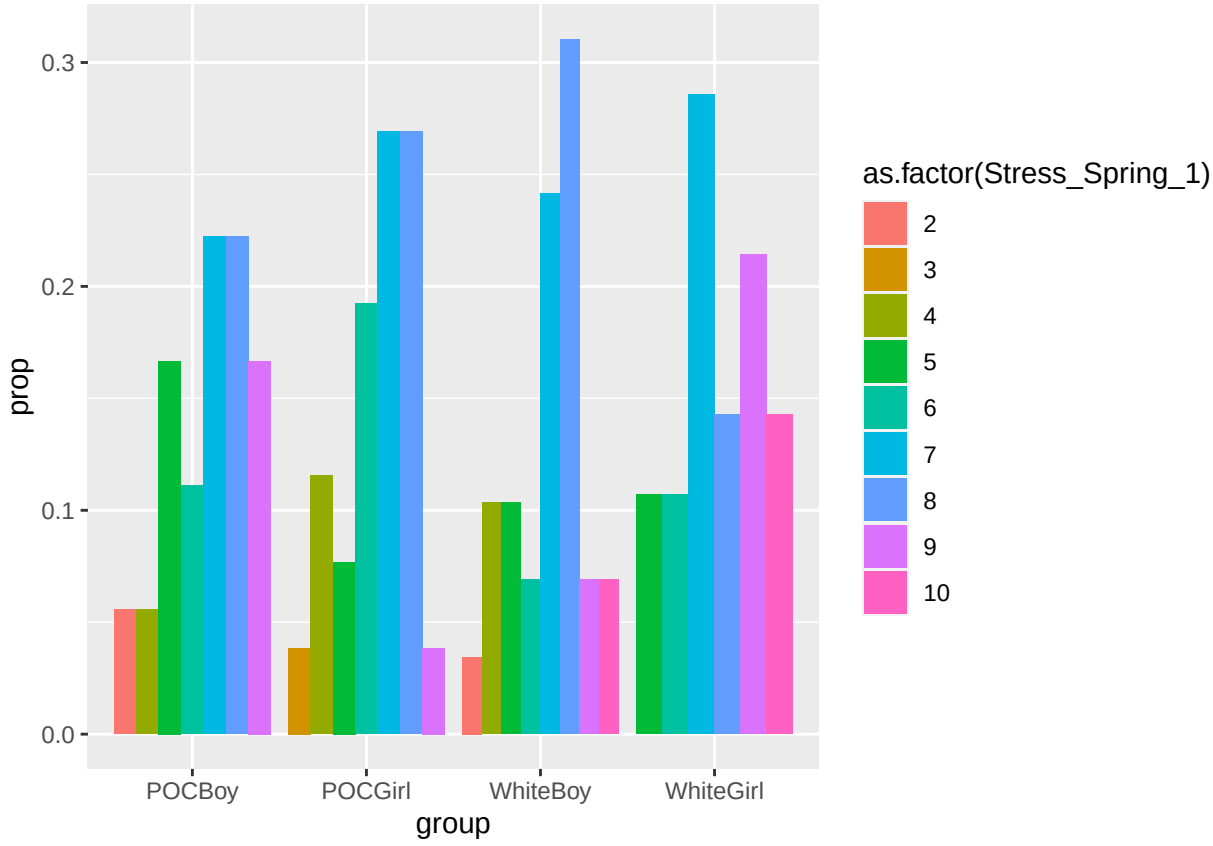
Stress by Race + Gender

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), Gender <= 2) %>%
  group_by(POC, Gender, Stress_Fall_1) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
```

```
    POC == "White" & Gender == 1 ~ "WhiteBoy",
    POC == "White" & Gender == 2 ~ "WhiteGirl",
    POC == "POC" & Gender == 1 ~ "POCBoy",
    POC == "POC" & Gender == 2 ~ "POCGirl"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Stress_Fall_1))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), Gender <= 2) %>%
  group_by(POC, Gender, Stress_Spring_1) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & Gender == 1 ~ "WhiteBoy",
    POC == "White" & Gender == 2 ~ "WhiteGirl",
    POC == "POC" & Gender == 1 ~ "POCBoy",
    POC == "POC" & Gender == 2 ~ "POCGirl"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Stress_Spring_1))) +
  geom_col(position = "dodge")
```



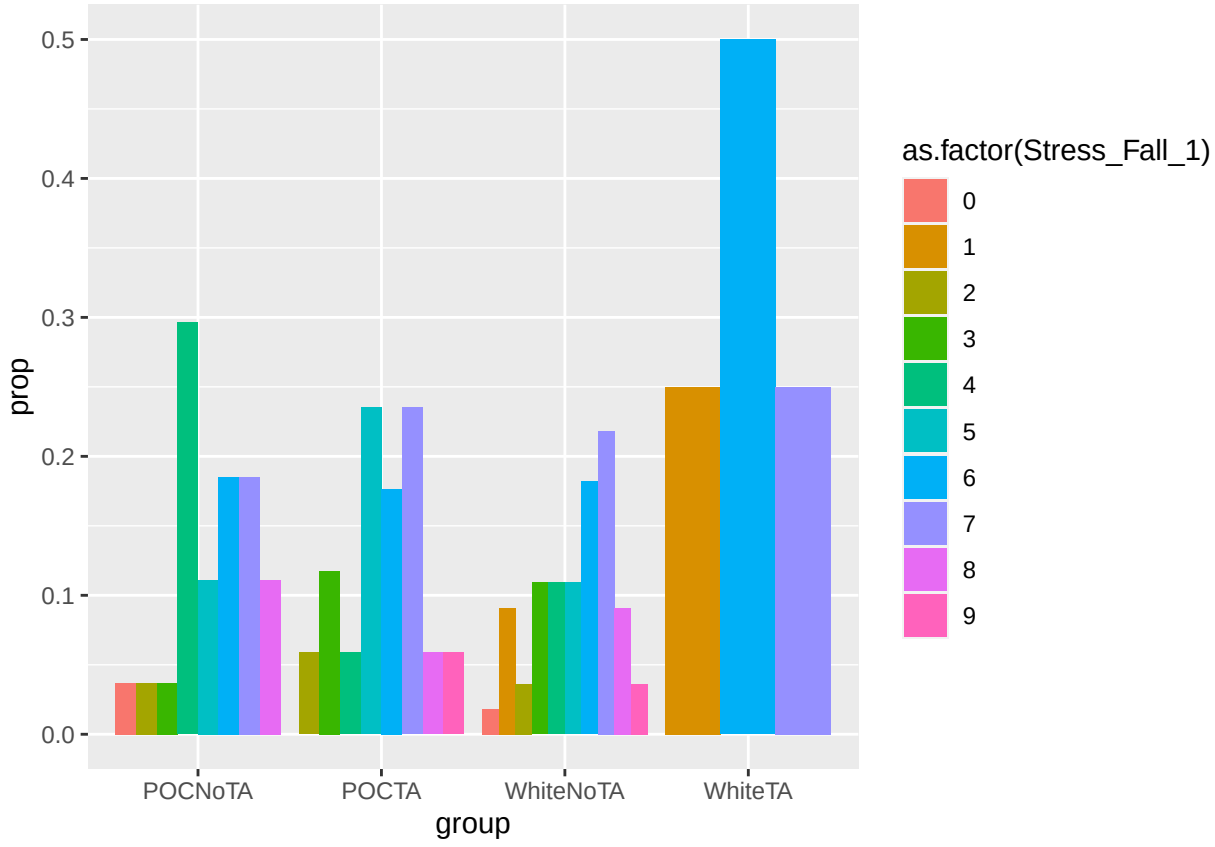

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), Gender <= 2) %>%
  group_by(POC, Gender) %>%
  summarize(avg_fall = mean(Stress_Fall_1), avg_spring = mean(Stress_Spring_1), count = n())
```

```
## # A tibble: 4 x 5
## # Groups:   POC [2]
##   POC   Gender avg_fall avg_spring count
##   <chr>  <dbl>    <dbl>      <dbl> <int>
## 1 POC        1     5.44       6.67    18
## 2 POC        2     5.31       6.5     26
## 3 White      1     4.21       6.90    29
## 4 White      2     6          7.68    28
```

Stress by Race + TA

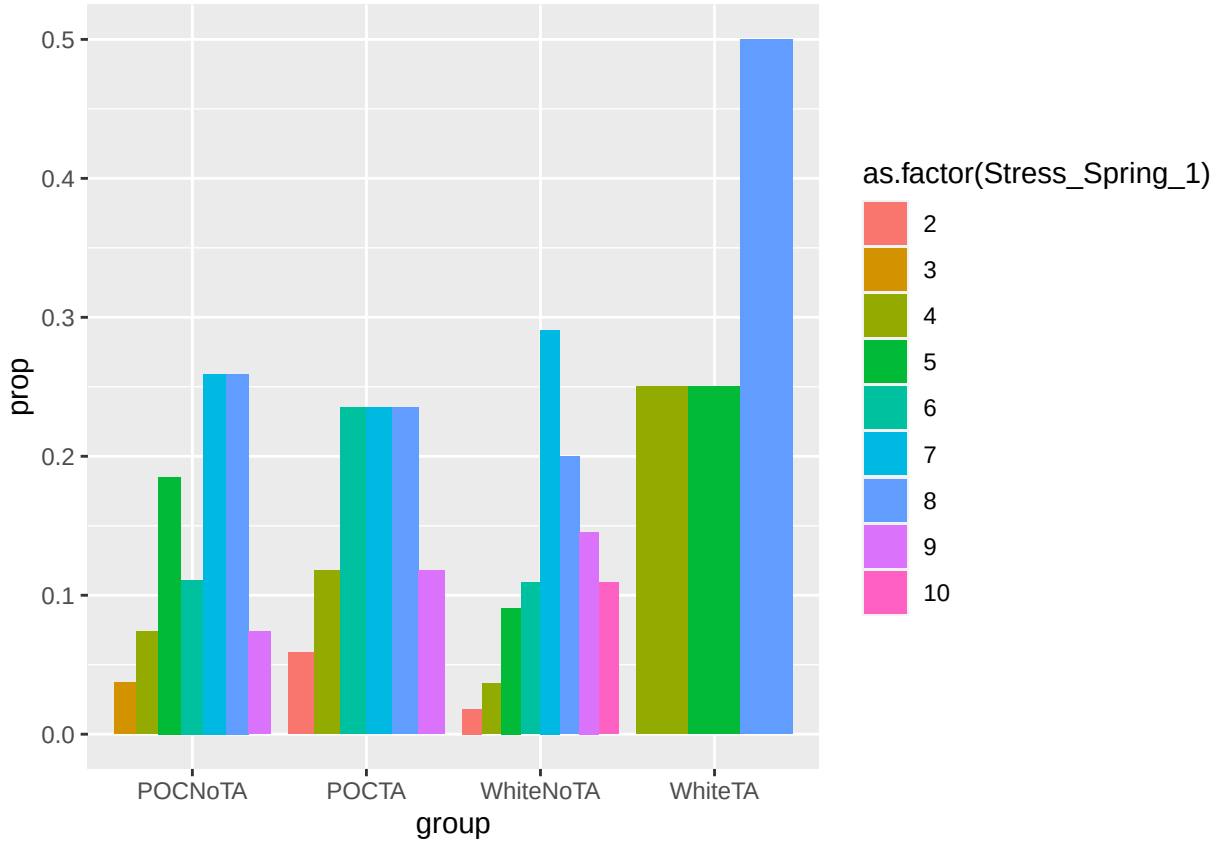
```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
```

```
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(TA)) %>%
  group_by(POC, TA, Stress_Fall_1) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & TA == 1 ~ "WhiteTA",
    POC == "White" & TA == 2 ~ "WhiteNoTA",
    POC == "POC" & TA == 1 ~ "POCTA",
    POC == "POC" & TA == 2 ~ "POCNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Stress_Fall_1))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(TA)) %>%
  group_by(POC, TA, Stress_Spring_1) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
```

```
    POC == "White" & TA == 1 ~ "WhiteTA",
    POC == "White" & TA == 2 ~ "WhiteNoTA",
    POC == "POC" & TA == 1 ~ "POCTA",
    POC == "POC" & TA == 2 ~ "POCNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Stress_Spring_1))) +
  geom_col(position = "dodge")
```

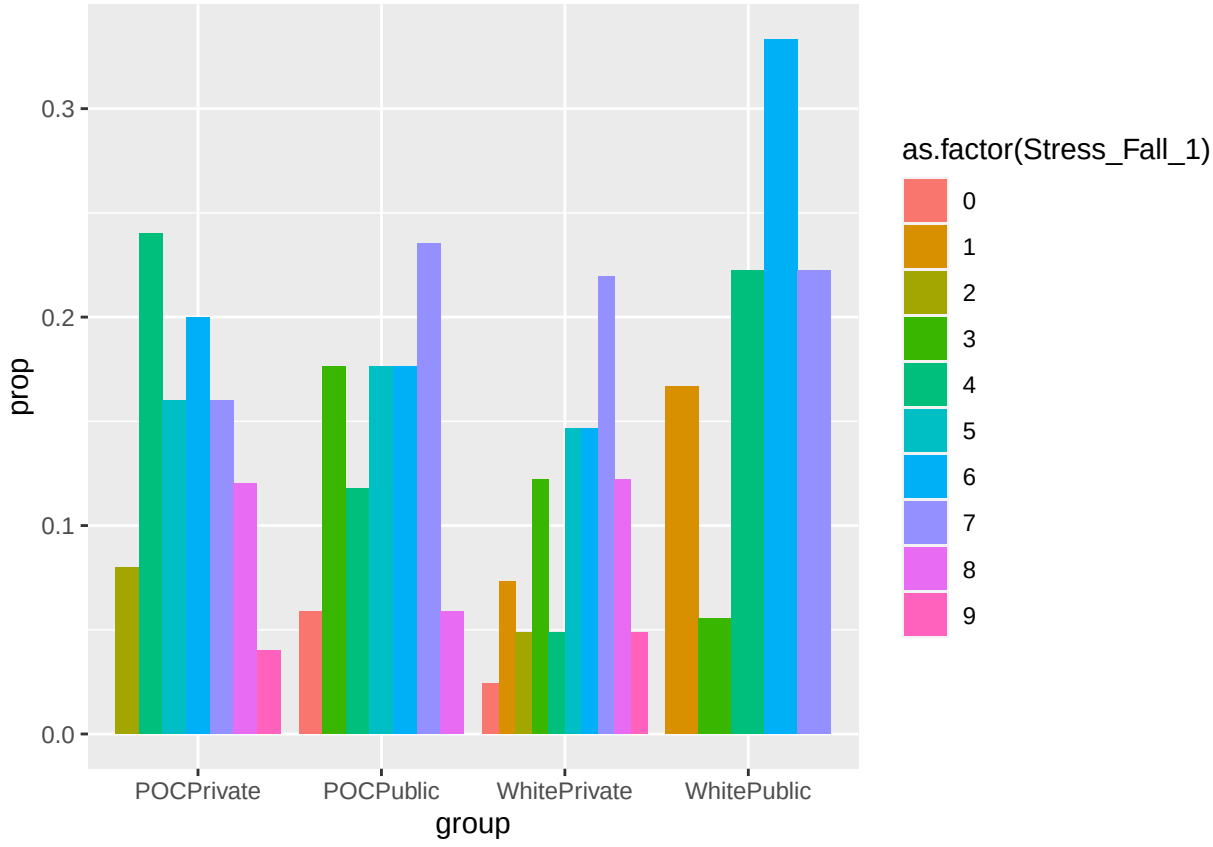



```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(TA)) %>%
  group_by(POC, TA) %>%
  summarize(avg_fall = mean(Stress_Fall_1), avg_spring = mean(Stress_Spring_1), count = n())
```

```
## # A tibble: 4 x 5
## # Groups:   POC [2]
##   POC      TA avg_fall avg_spring count
##   <chr> <dbl>    <dbl>      <dbl> <int>
## 1 POC       1     5.59       6.59    17
## 2 POC       2     5.22       6.56    27
## 3 White     1     5          6.25     4
## 4 White     2     5.15       7.33    55
```

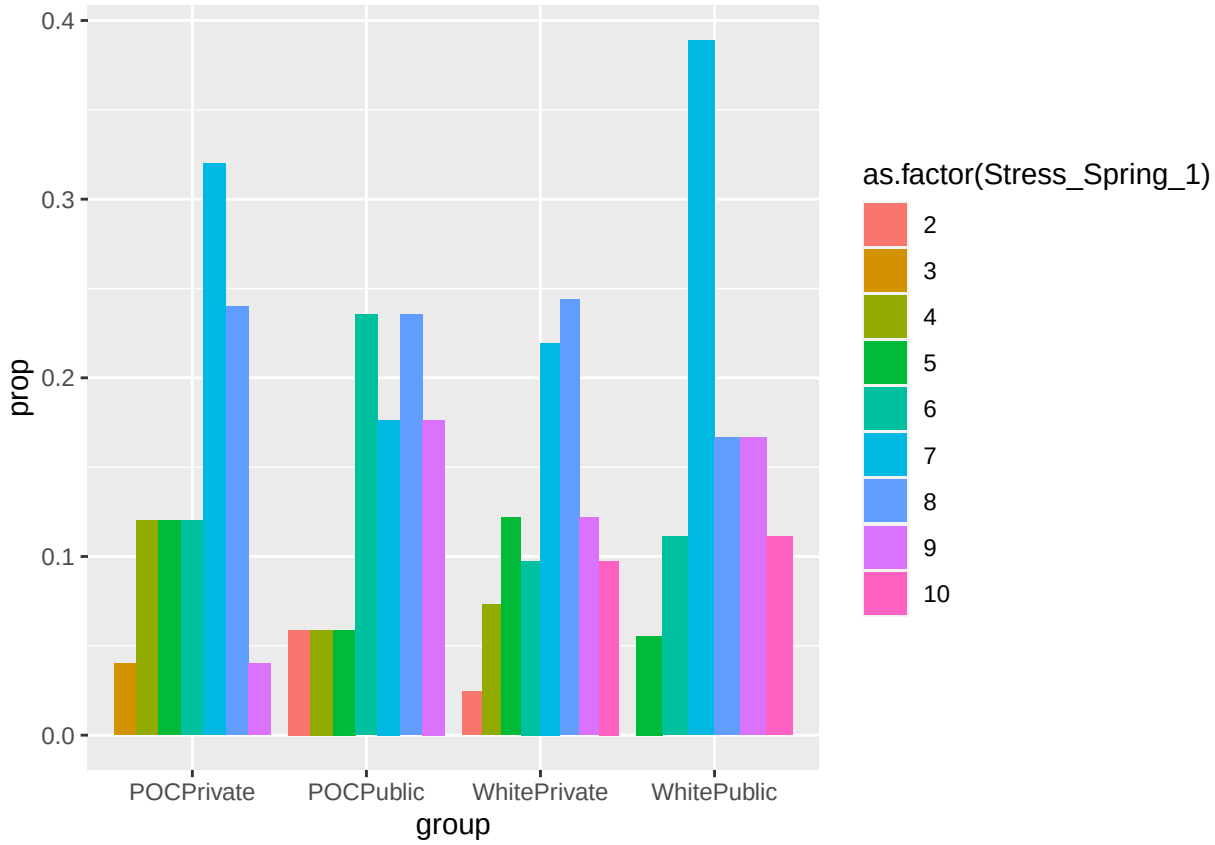
Stress by Race + School Type

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(School_Type)) %>%
  group_by(POC, School_Type, Stress_Fall_1) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & School_Type == "public" ~ "WhitePublic",
    POC == "White" & School_Type == "private" ~ "WhitePrivate",
    POC == "POC" & School_Type == "public" ~ "POCPublic",
    POC == "POC" & School_Type == "private" ~ "POCPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Stress_Fall_1))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
```

```
  )) %>%
  filter(!is.na(POC), !is.na(School_Type)) %>%
  group_by(POC, School_Type, Stress_Spring_1) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    POC == "White" & School_Type == "public" ~ "WhitePublic",
    POC == "White" & School_Type == "private" ~ "WhitePrivate",
    POC == "POC" & School_Type == "public" ~ "POCPublic",
    POC == "POC" & School_Type == "private" ~ "POCPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Stress_Spring_1))) +
  geom_col(position = "dodge")
```



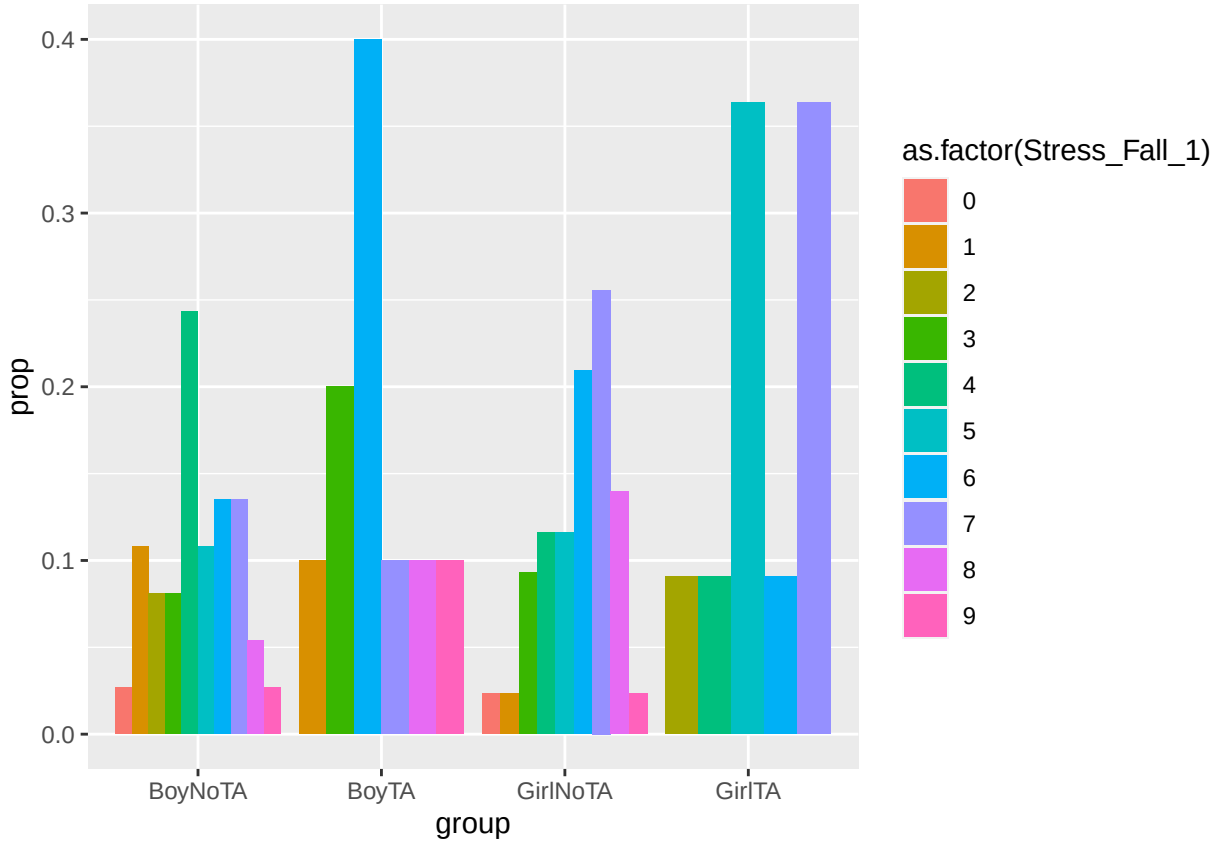

```
g9gf_2024 %>%
  mutate(POC = case_when(
    Race == 1 ~ "White",
    Race > 1 ~ "POC"
  )) %>%
  filter(!is.na(POC), !is.na(School_Type)) %>%
  group_by(POC, School_Type) %>%
  summarize(avg_fall = mean(Stress_Fall_1), avg_spring = mean(Stress_Spring_1), count = n())
```

```
## # A tibble: 4 x 5
## # Groups:   POC [2]
```

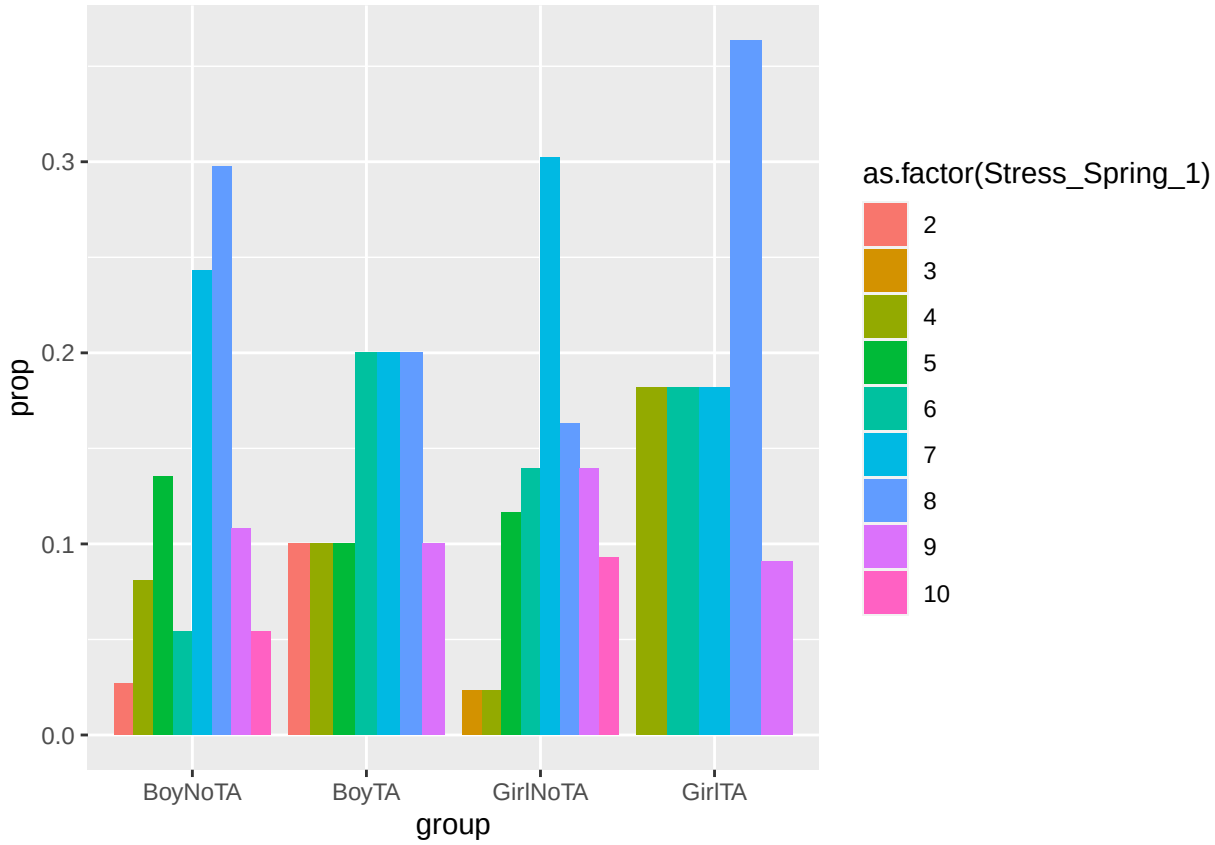
```
##   POC   School_Type avg_fall avg_spring count
##   <chr> <chr>          <dbl>      <dbl> <int>
## 1 POC   private         5.56       6.44    25
## 2 POC   public          5.06       6.76    17
## 3 White private         5.29       7.10    41
## 4 White public          4.78       7.61    18
```

Stress by Gender + TA

```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(TA)) %>%
  group_by(Gender, TA, Stress_Fall_1) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & TA == 1 ~ "BoyTA",
    Gender == 1 & TA == 2 ~ "BoyNoTA",
    Gender == 2 & TA == 1 ~ "GirlTA",
    Gender == 2 & TA == 2 ~ "GirlNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Stress_Fall_1))) +
  geom_col(position = "dodge")
```



```r
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(TA)) %>%
  group_by(Gender, TA, Stress_Spring_1) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & TA == 1 ~ "BoyTA",
    Gender == 1 & TA == 2 ~ "BoyNoTA",
    Gender == 2 & TA == 1 ~ "GirlTA",
    Gender == 2 & TA == 2 ~ "GirlNoTA"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Stress_Spring_1))) +
  geom_col(position = "dodge")
```



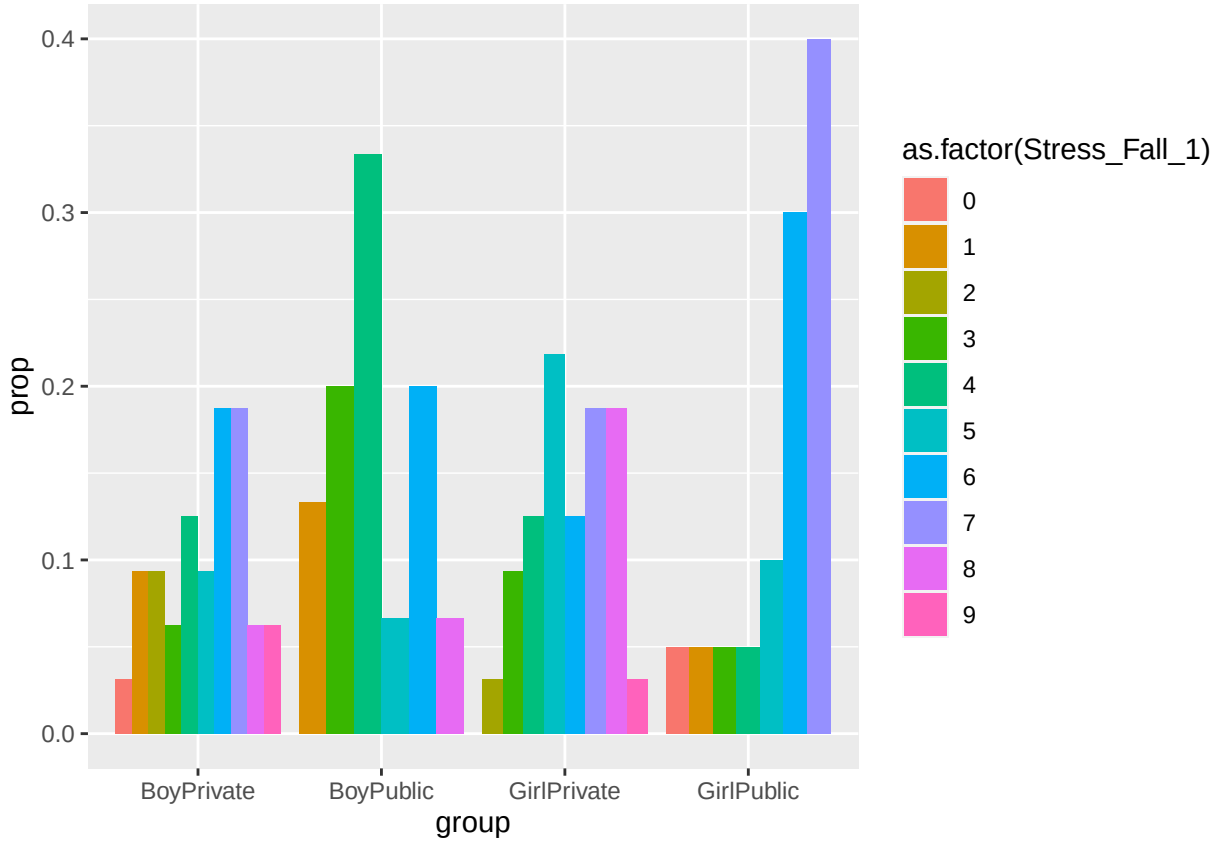

```r
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(TA)) %>%
  group_by(Gender, TA) %>%
  summarize(avg_fall = mean(Stress_Fall_1), avg_spring = mean(Stress_Spring_1), count = n())
```

```
## # A tibble: 4 x 5
## # Groups:   Gender [2]
##   Gender    TA avg_fall avg_spring count
##    <dbl> <dbl>    <dbl>      <dbl> <int>
## 1      1     1     5.5        6.2     10
## 2      1     2     4.46       6.97    37
```

```
## 3      2     1     5.45       6.82    11
## 4      2     2     5.72       7.19    43
```

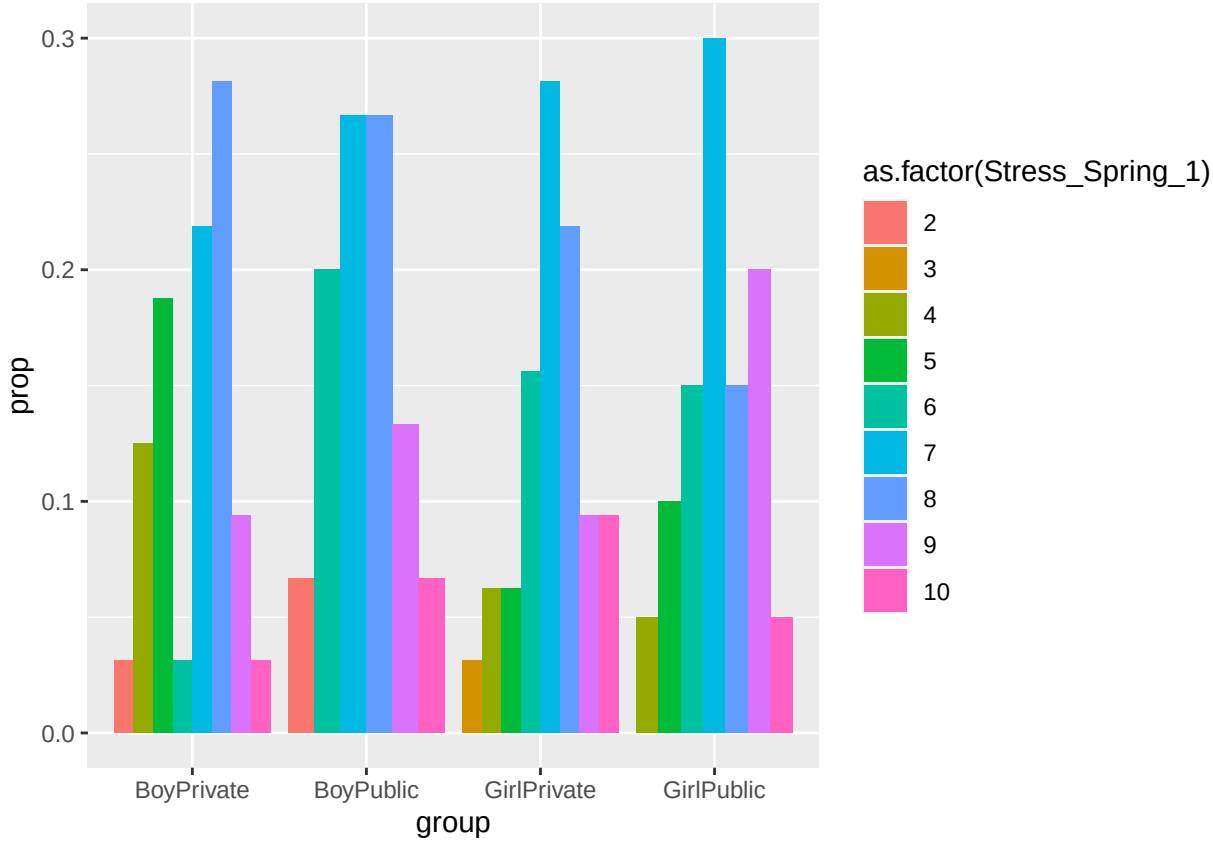
Stress by Gender + School Type

```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(School_Type)) %>%
  group_by(Gender, School_Type, Stress_Fall_1) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & School_Type == "public" ~ "BoyPublic",
    Gender == 1 & School_Type == "private" ~ "BoyPrivate",
    Gender == 2 & School_Type == "public" ~ "GirlPublic",
    Gender == 2 & School_Type == "private" ~ "GirlPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Stress_Fall_1))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(School_Type)) %>%
  group_by(Gender, School_Type, Stress_Spring_1) %>%
  summarize(count = n()) %>%
```

```
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    Gender == 1 & School_Type == "public" ~ "BoyPublic",
    Gender == 1 & School_Type == "private" ~ "BoyPrivate",
    Gender == 2 & School_Type == "public" ~ "GirlPublic",
    Gender == 2 & School_Type == "private" ~ "GirlPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Stress_Spring_1))) +
  geom_col(position = "dodge")
```

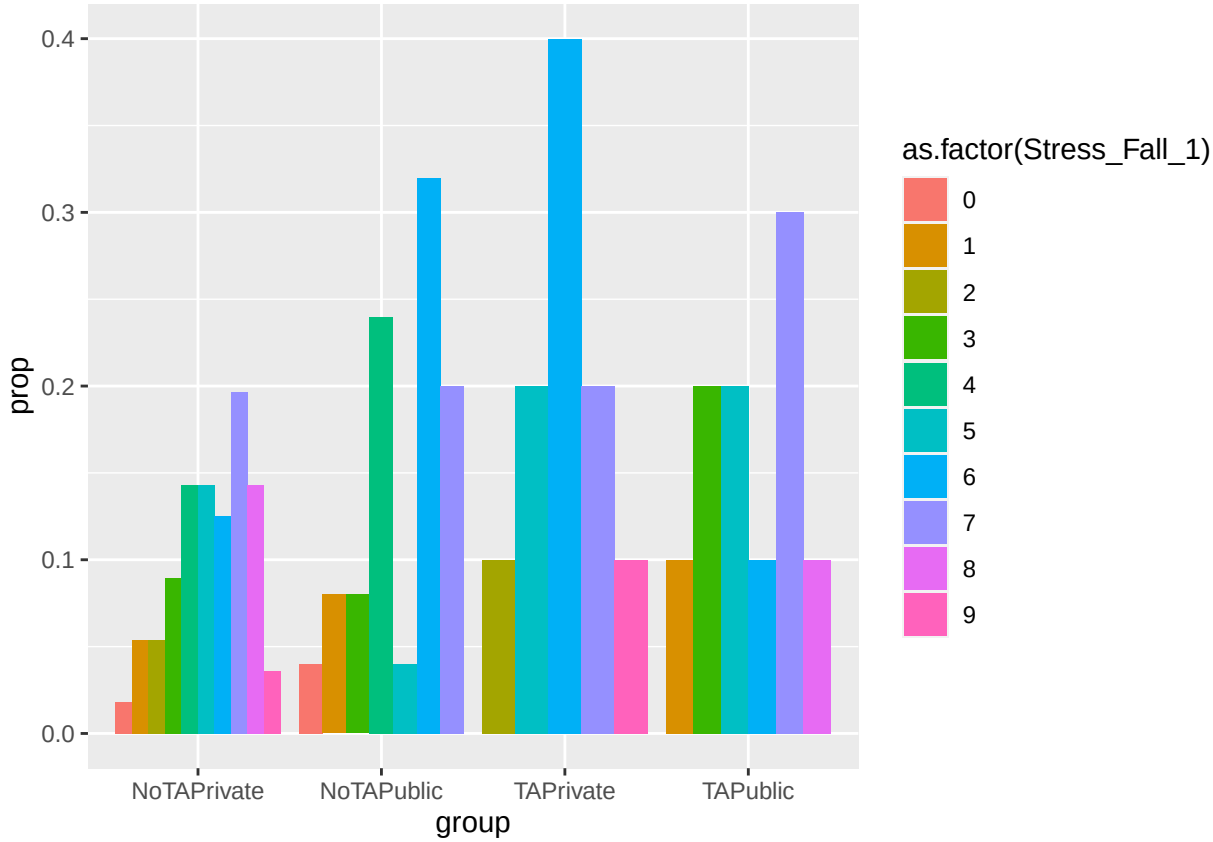



```
g9gf_2024 %>%
  filter(Gender <= 2, !is.na(School_Type)) %>%
  group_by(Gender, School_Type) %>%
  summarize(avg_fall = mean(Stress_Fall_1), avg_spring = mean(Stress_Spring_1), count = n())
```

```
## # A tibble: 4 x 5
## # Groups:   Gender [2]
##   Gender School_Type avg_fall avg_spring count
##    <dbl> <chr>          <dbl>      <dbl> <int>
## 1      1 private         4.94       6.62    32
## 2      1 public          4.13       7.2     15
## 3      2 private         5.78       7.09    32
## 4      2 public          5.5        7.2     20
```

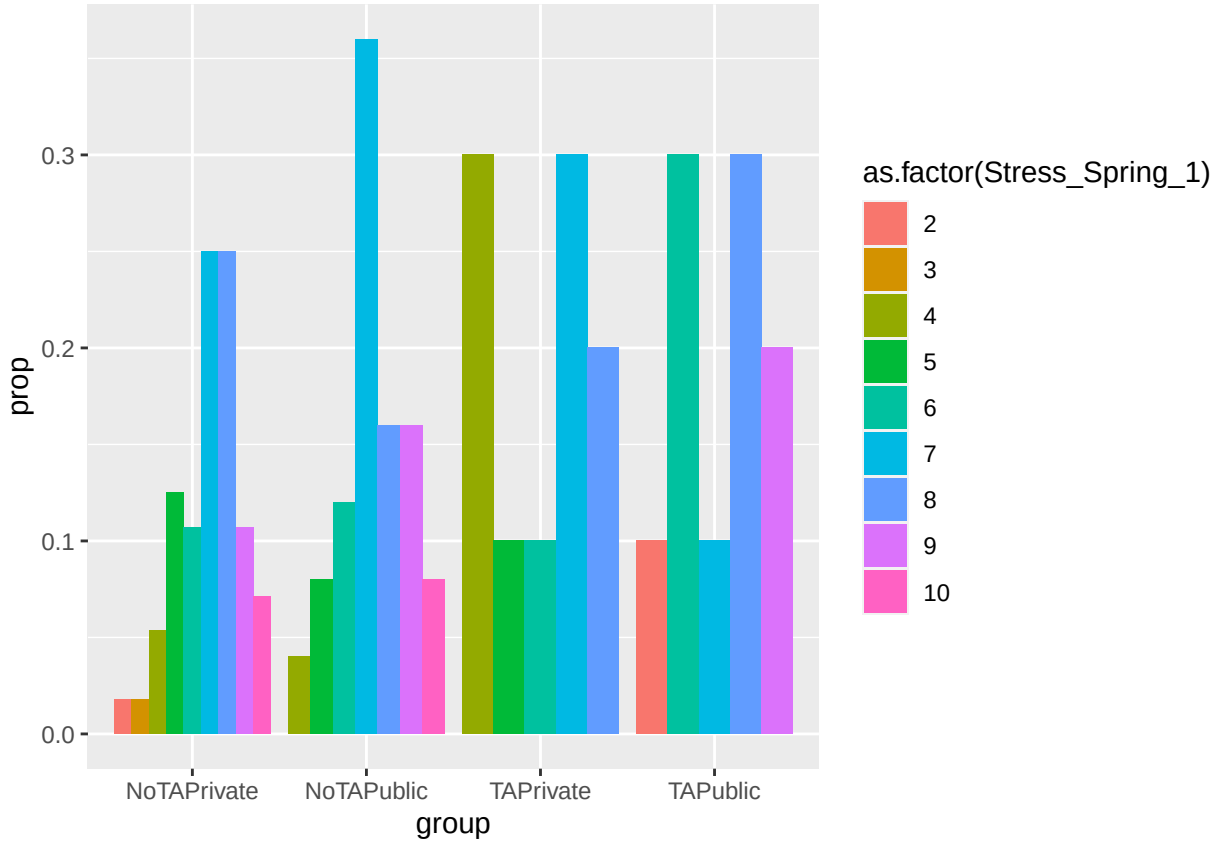
Stress by TA + School Type

```
g9gf_2024 %>%
  filter(!is.na(TA), !is.na(School_Type)) %>%
  group_by(TA, School_Type, Stress_Fall_1) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    TA == 1 & School_Type == "public" ~ "TAPublic",
    TA == 2 & School_Type == "public" ~ "NoTAPublic",
    TA == 1 & School_Type == "private" ~ "TAPrivate",
    TA == 2 & School_Type == "private" ~ "NoTAPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Stress_Fall_1))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(TA), !is.na(School_Type)) %>%
  group_by(TA, School_Type, Stress_Spring_1) %>%
  summarize(count = n()) %>%
  mutate(prop = count/sum(count)) %>%
  mutate(group = case_when(
    TA == 1 & School_Type == "public" ~ "TAPublic",
    TA == 2 & School_Type == "public" ~ "NoTAPublic",
```

```
    TA == 1 & School_Type == "private" ~ "TAPrivate",
    TA == 2 & School_Type == "private" ~ "NoTAPrivate"
  )) %>%
  ggplot(aes(x = group, y = `prop`, fill = as.factor(Stress_Spring_1))) +
  geom_col(position = "dodge")
```




```
g9gf_2024 %>%
  filter(!is.na(TA), !is.na(School_Type)) %>%
  group_by(TA, School_Type) %>%
  summarize(avg_fall = mean(Stress_Fall_1), avg_spring = mean(Stress_Spring_1), count = n())
```

```
## # A tibble: 4 x 5
## # Groups:   TA [2]
##      TA School_Type avg_fall avg_spring count
##   <dbl> <chr>          <dbl>      <dbl> <int>
## 1     1 private         5.9        6       10
## 2     1 public          5.2        6.9     10
## 3     2 private         5.30       7       56
## 4     2 public          4.8        7.32    25
```