

poa_children_families

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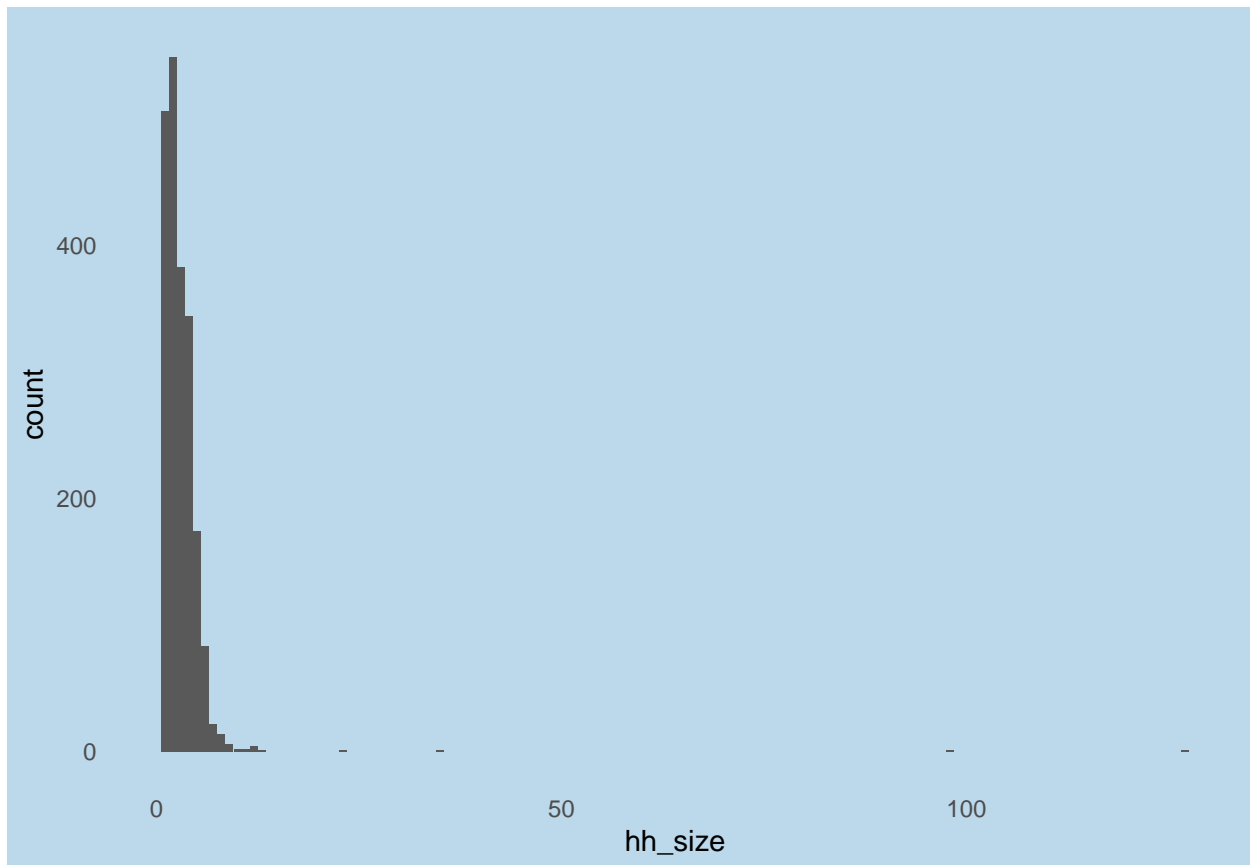
Contents

3.1)People who had difficulties accessing childcare in the past year [21]	3
3.2)People who need childcare, but cannot afford it [30]	6
3.3)People who have had full-time jobs pre-pandemic and currently are more likely to have or have had difficulties finding childcare [14, 29]	13
3.4, 3.11, 3.13, 3.14	16
3.4)People who returned to work in-person are more likely to have difficulties finding childcare . .	16
3.11)Households in Bronx and Queens are more likely to not be able to afford childcare/had difficulty with childcare	16
3.13)Households that had difficulty accessing childcare during the pandemic are more likely to be concerned about their students' academic level	17
3.14)Households that had difficulty accessing childcare during the pandemic are more likely to be concerned about their students' comfort around other students	17
3.5)Single person households with children are more likely to have or have had difficulties accessing childcare [25,21]	20
3.6)Households with children in public schools were more likely to have difficulty accessing childcare in the past year	21
3.7)Households above the median income were more likely to look towards friends/families for childcare needs rather than government resources	22
3.8)Households at or below median income were more likely to rely on the government for childcare	23
3.9)Households that did/did not send their children back to in-person school	24
3.10) Summary of all concerns regarding children attending full-time schools [28]	27
3.12)Households that did not send their children back to school because they are concerned about COVID-19 are more likely to have had at least one person in the household test positive for COVID-19	36

3.15) Respondents who have a low income (below median income) are more likely to be worried about transport while their child attends in-person school

37

```
wrangled %>%
  ggplot(aes(x = hh_size, group = hh_ch_0_17_bi)) + geom_bar()
```



```
range(wrangled$hh_size, na.rm = TRUE)
```

```
## [1] 1 127
```

```
wrangled %>% select(hh_size, hh_sn_65, hh_ad_18_64, hh_ch_4_17, hh_ch_0_4) %>% filter(hh_size > 20)
```

```
## # A tibble: 4 x 5
##   hh_size hh_sn_65 hh_ad_18_64 hh_ch_4_17 hh_ch_0_4
##   <dbl>   <dbl>   <dbl>   <int>   <int>
## 1    127     2      18     43     64
## 2     23     0      23     0      0
## 3     98    46      38    11      3
## 4     35     1      34     0      0
```

```
df_ch <- wrangled %>% filter(hh_ch_0_17_bi == 1)
```

3.1) People who had difficulties accessing childcare in the past year [21]

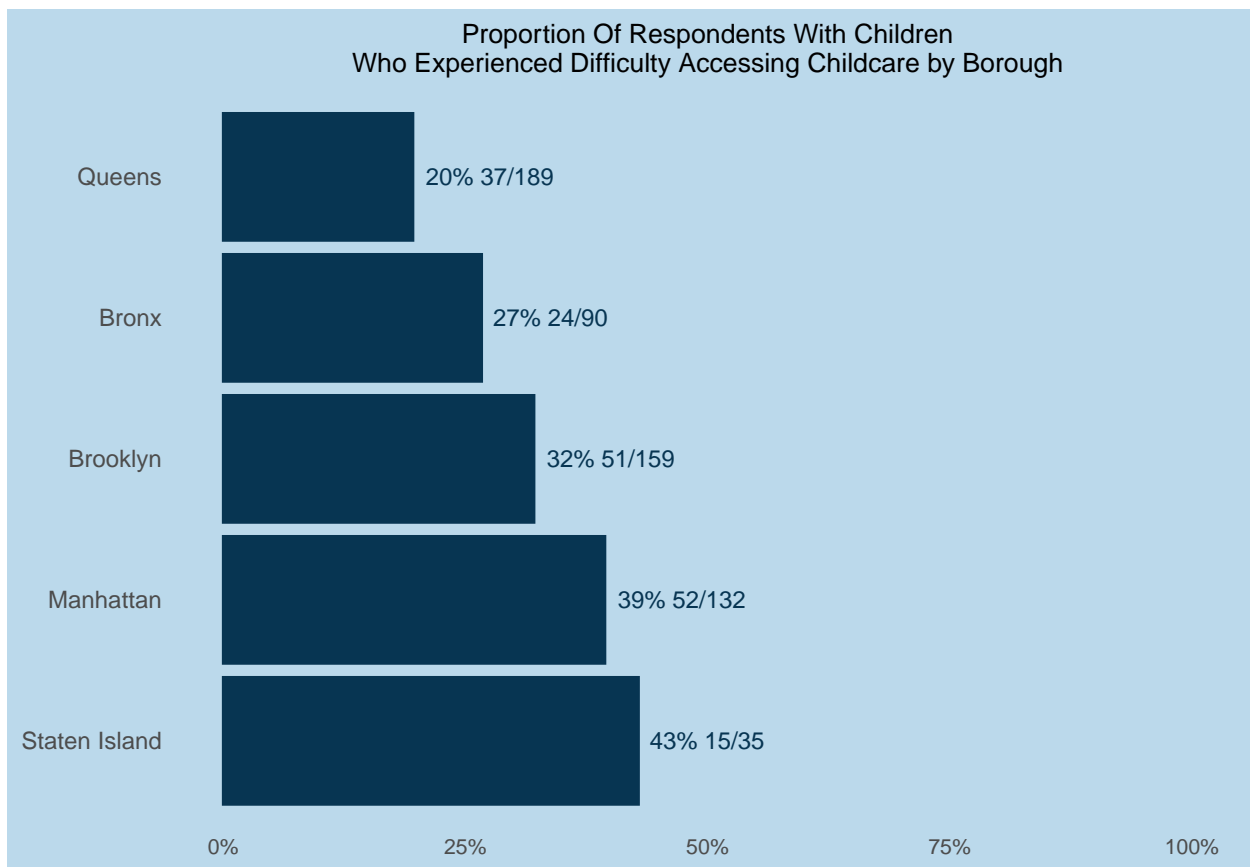
1. Run distribution over population
2. Run distribution by sub-demographics (a-n)
 - a. Compare and find gaps (test unequal proportions)

```
mean(wrangled$diff_cc, na.rm = TRUE)
```

```
## [1] 0.1394865
```

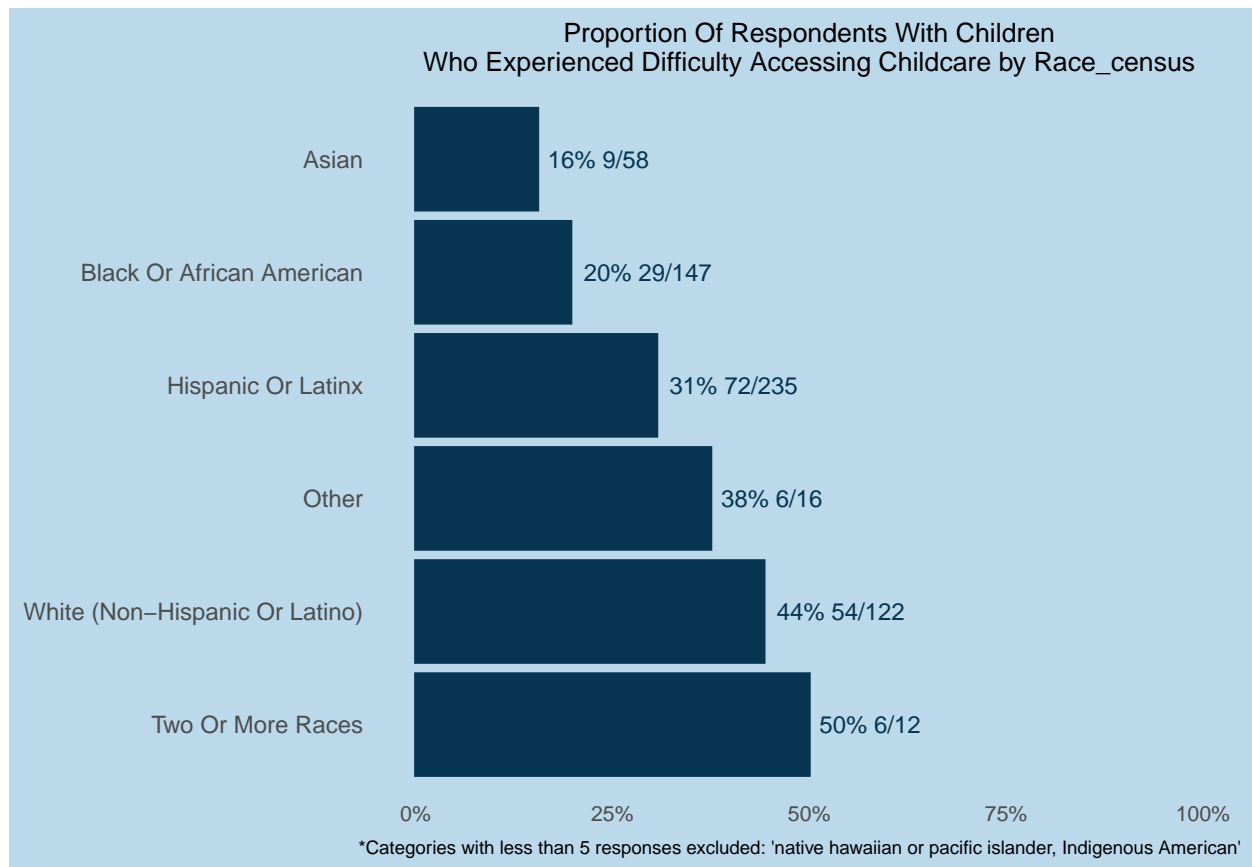
```
make_plots(df_ch, demographics, "diff_cc", title = "Proportion of Respondents With Children\nwho experi
```

```
## $borough  
## $borough$plot
```



```
##  
## $borough$p.values  
## $borough$p.values$diff_cc  
##           queens bronx brooklyn manhattan staten island  
## queens           NA      NA           NA    0.00016      0.0055
```

```
## bronx          NA    NA    NA    NA    NA
## brooklyn       NA    NA    NA    NA    NA
## manhattan      0.00016 NA    NA    NA    NA
## staten island  0.00550 NA    NA    NA    NA
##
##
##
## $gen
## NULL
##
## $race_census
## $race_census$plot
```

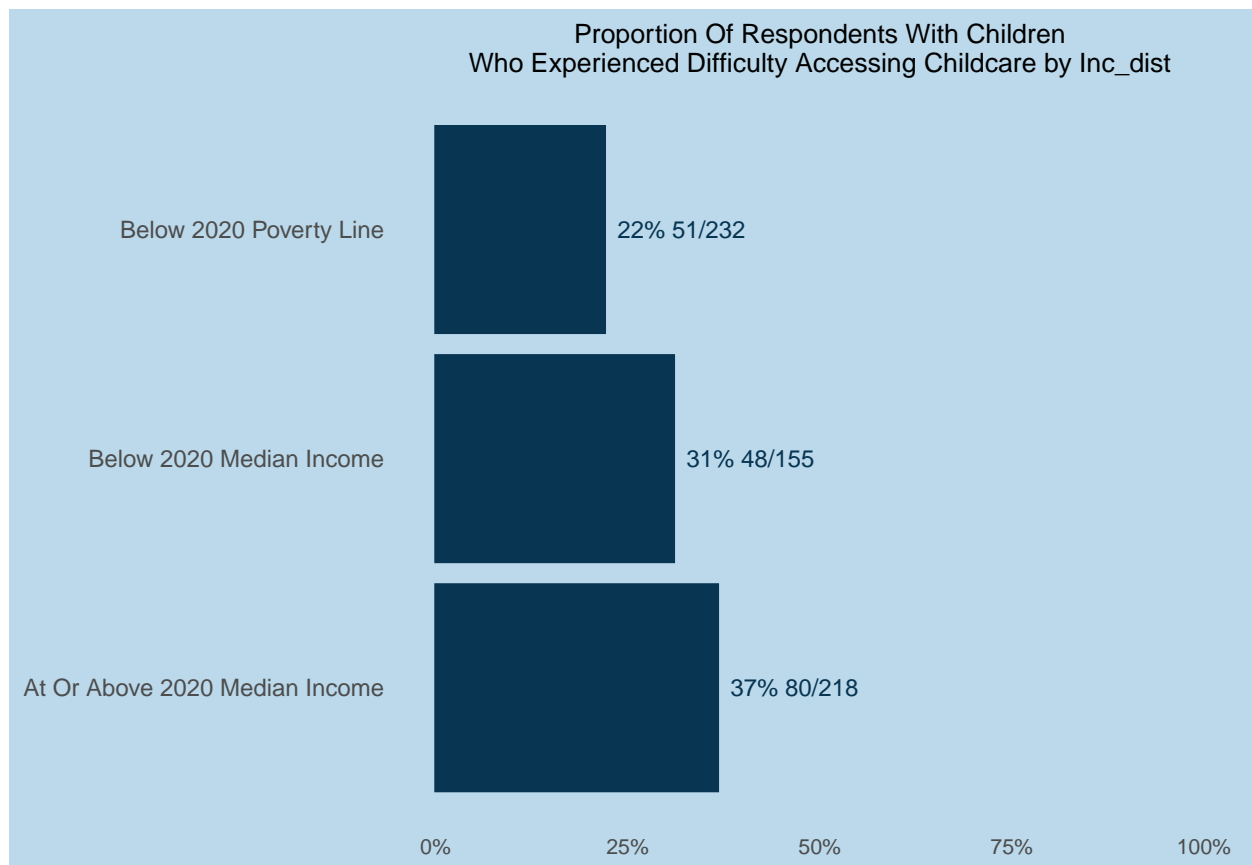


```
##
## $race_census$p.values
## $race_census$p.values$diff_cc
##
##          asian black or african american
## asian          NA                      NA
## black or african american          NA
## hispanic or latinx          NA
## other          NA                      NA
## white (non-hispanic or latino) 3e-04    2.6e-05
## two or more races          NA                      NA
##
##          hispanic or latinx other
## asian                      NA    NA
```

```

## black or african american      NA      NA
## hispanic or latinx             NA      NA
## other                          NA      NA
## white (non-hispanic or latino) NA      NA
## two or more races              NA      NA
##                                white (non-hispanic or latino) two or more races
## asian                          3.0e-04      NA
## black or african american      2.6e-05      NA
## hispanic or latinx             NA      NA
## other                          NA      NA
## white (non-hispanic or latino) NA      NA
## two or more races              NA      NA
##
##
##
## $hh_ch_0_17_bi
## NULL
##
## $hh_sn_65_bi
## NULL
##
## $inc_dist
## $inc_dist$plot

```



```
##
```

```
## $inc_dist$p.values
## $inc_dist$p.values$diff_cc
##
## below 2020 poverty line below 2020 median income
## below 2020 poverty line NA NA
## below 2020 median income NA NA
## at or above 2020 median income 0.00087 NA
##
## at or above 2020 median income
## below 2020 poverty line 0.00087
## below 2020 median income NA
## at or above 2020 median income NA
```

3.2) People who need childcare, but cannot afford it [30]

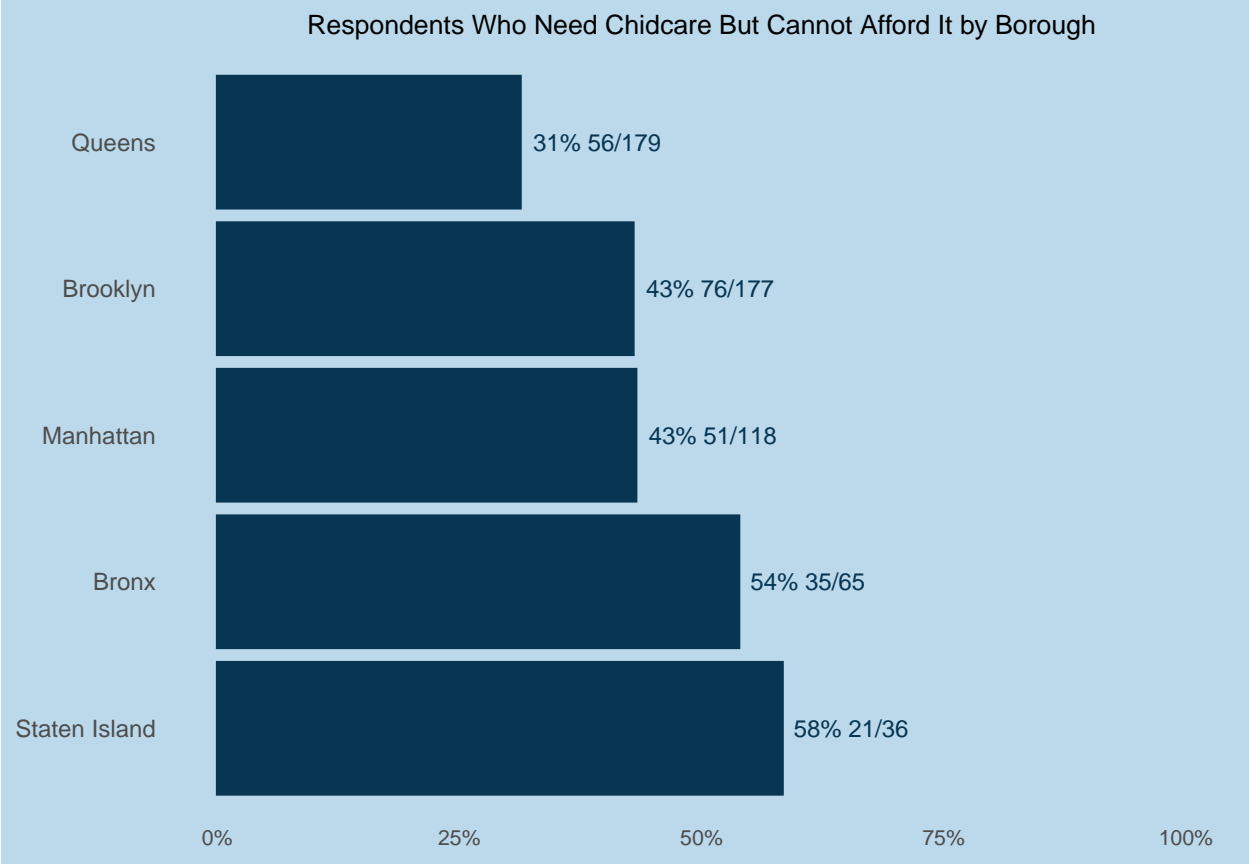
1. Run distribution over population
2. Run distribution over sub-demographics, specifically race, location/borough, and income
3. Run distribution over size of household [30]

```
mean(df_ch$need_cc_bi, na.rm = TRUE)
```

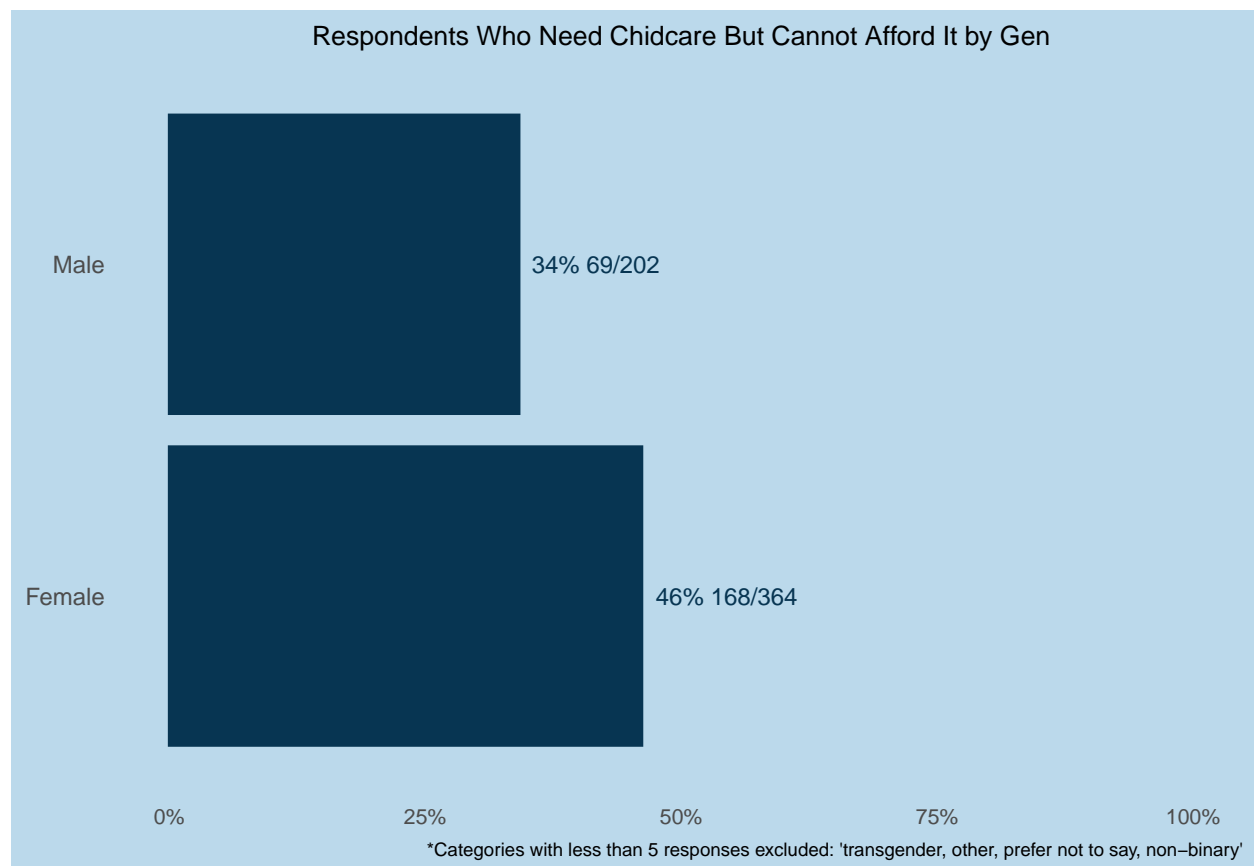
```
## [1] 0.4156522
```

```
make_plots(df_ch,
            c(demographics, "hh_size"), "need_cc_bi",
            title = "Respondents who Need Chidcare but cannot afford it", show = TRUE)
```

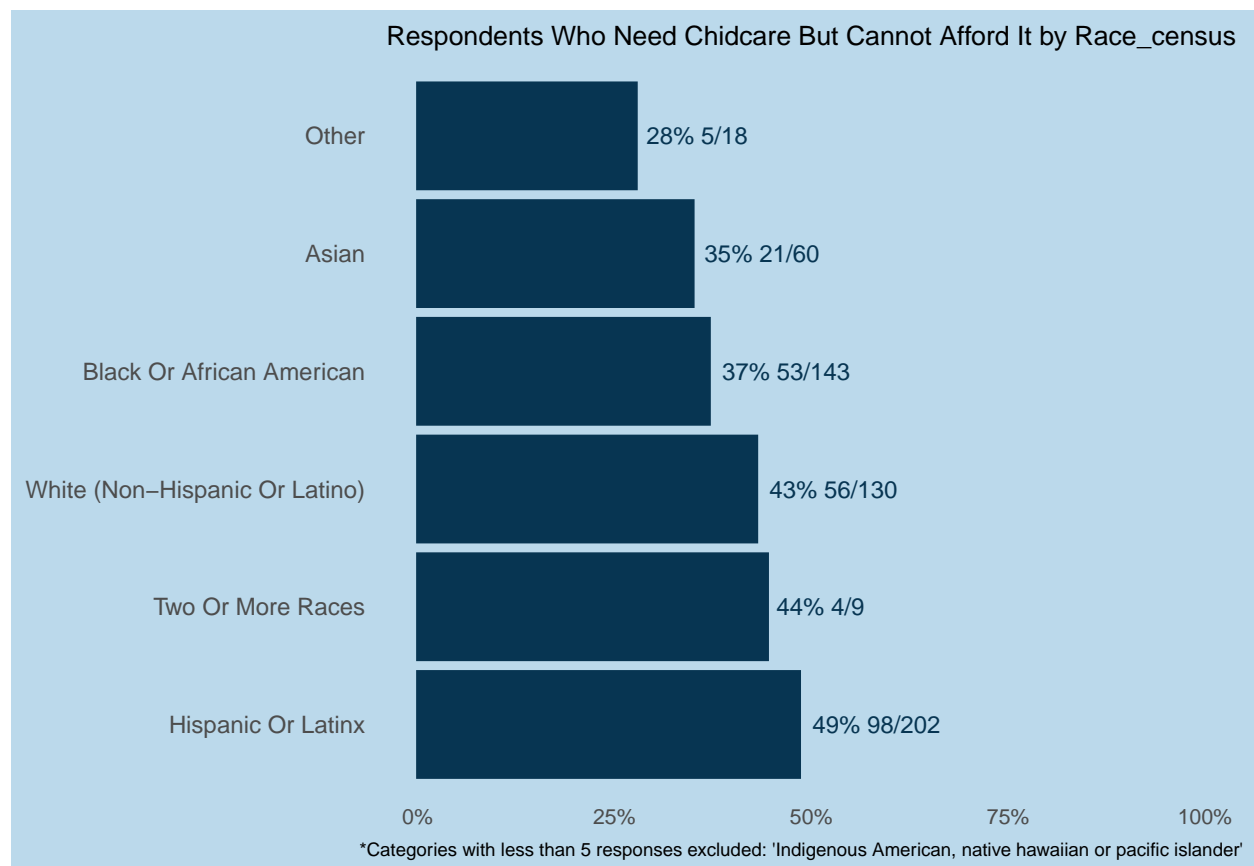
```
## $borough
## $borough$plot
```



```
##
## $borough$p.values
## $borough$p.values$need_cc_bi
##      queens brooklyn manhattan  bronx staten island
## queens      NA      NA      NA 0.0021      0.0038
## brooklyn      NA      NA      NA      NA      NA
## manhattan      NA      NA      NA      NA      NA
## bronx      0.0021      NA      NA      NA      NA
## staten island 0.0038      NA      NA      NA      NA
##
##
##
## $gen
## $gen$plot
```

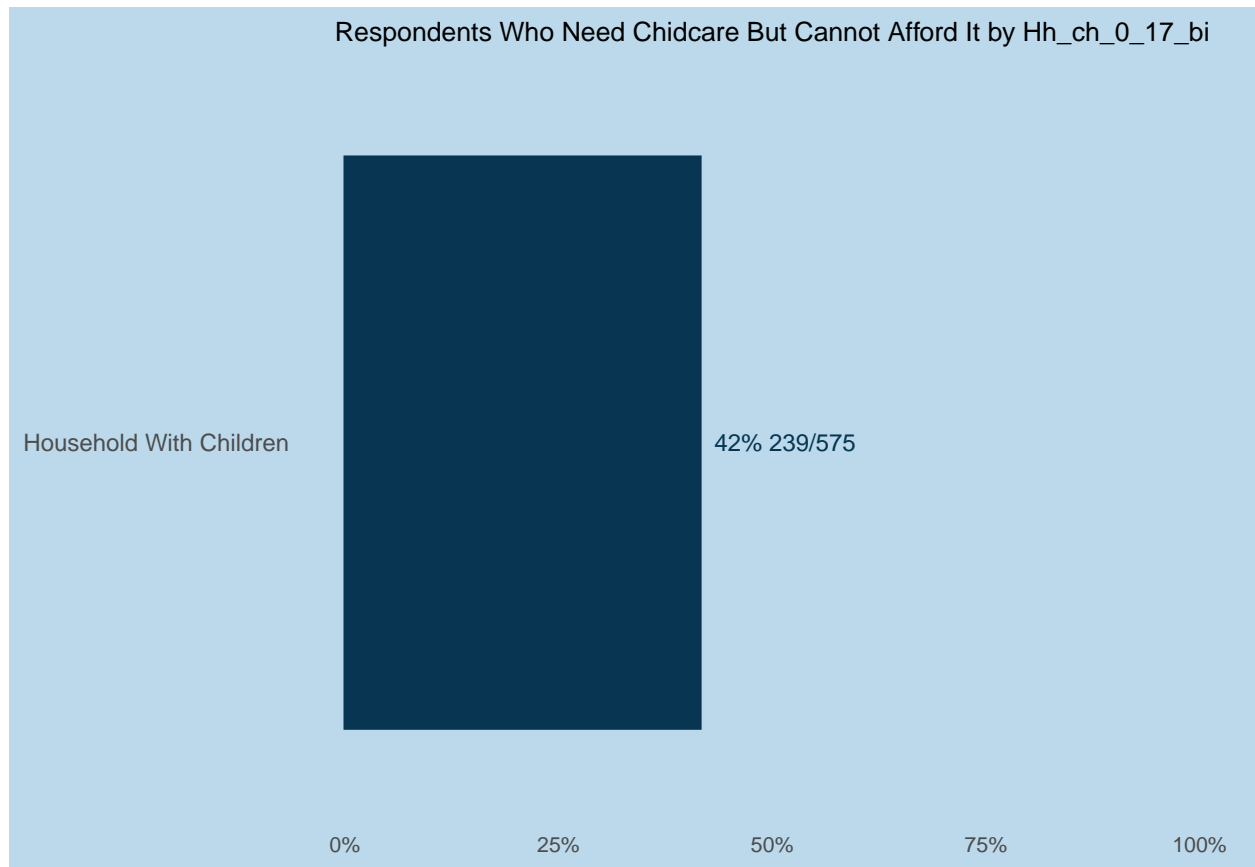


```
##
## $gen$p.values
## $gen$p.values$need_cc_bi
##      male female
## male      NA 0.0073
## female 0.0073      NA
##
##
##
## $race_census
## $race_census$plot
```

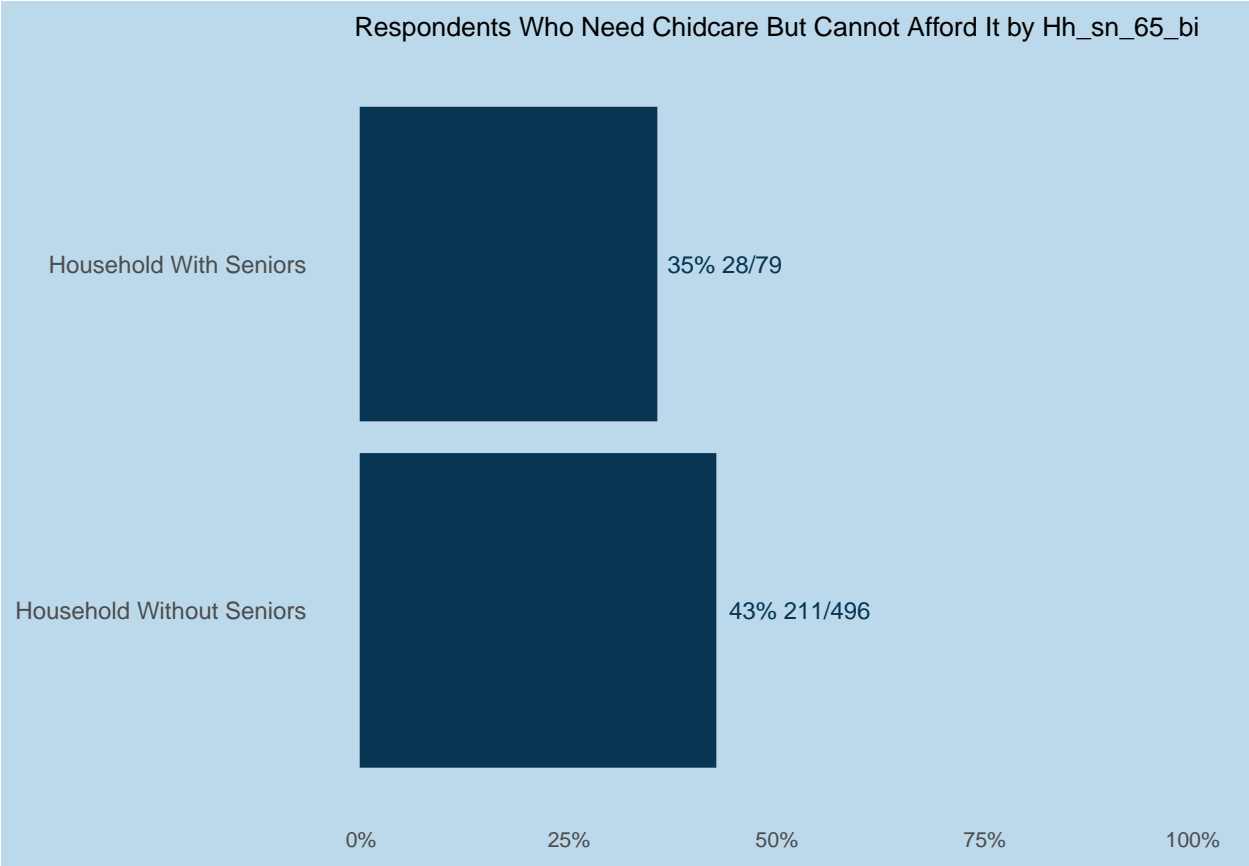



```
##
## $race_census$p.values
## $race_census$p.values$need_cc_bi
##
##           other asian black or african american
## other           NA      NA                      NA
## asian           NA      NA                      NA
## black or african american      NA      NA                      NA
## white (non-hispanic or latino)  NA      NA                      NA
## two or more races              NA      NA                      NA
## hispanic or latinx             NA      NA                      NA
##
##           white (non-hispanic or latino) two or more races
## other                                   NA                      NA
## asian                                   NA                      NA
## black or african american              NA                      NA
## white (non-hispanic or latino)         NA                      NA
## two or more races                      NA                      NA
## hispanic or latinx                    NA                      NA
##
##           hispanic or latinx
## other                               NA
## asian                               NA
## black or african american           NA
## white (non-hispanic or latino)      NA
## two or more races                   NA
## hispanic or latinx                  NA
##
##
```

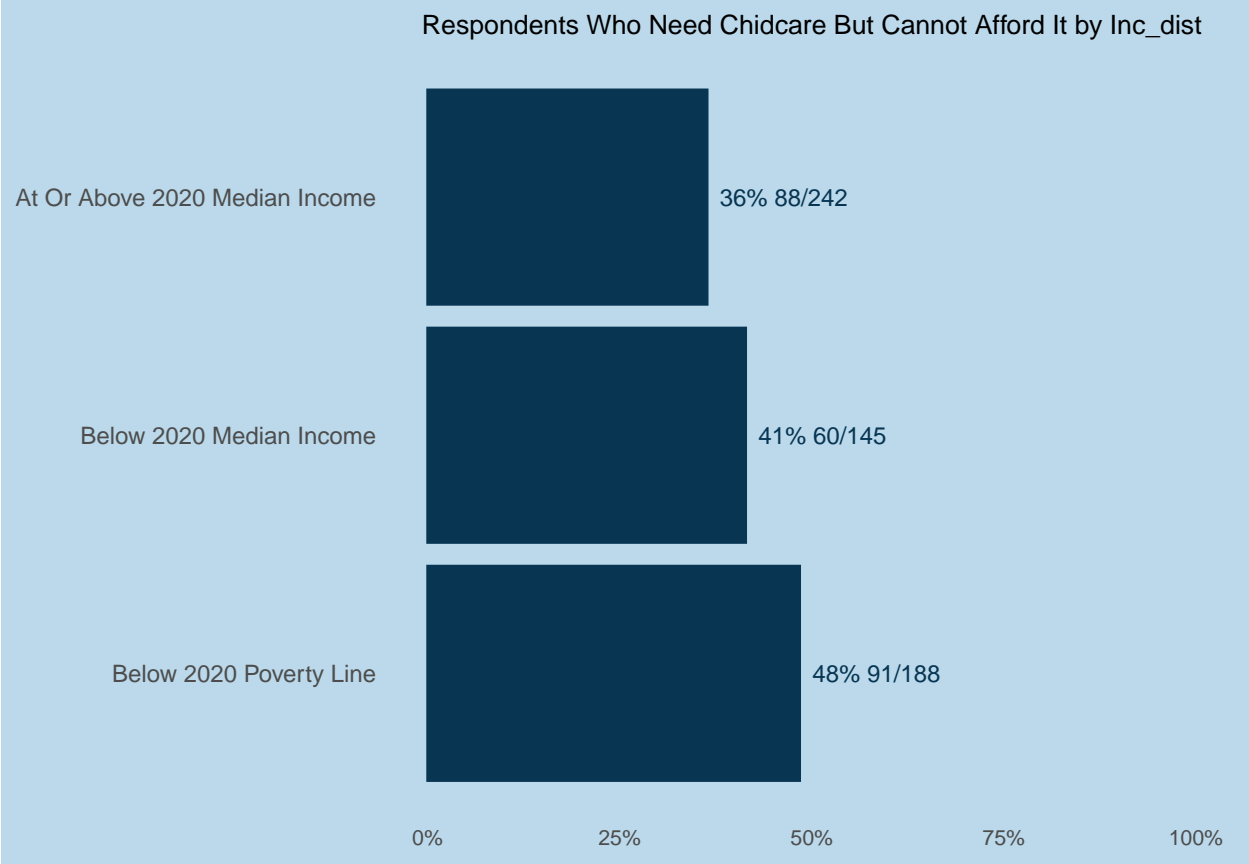
```
##
## $hh_ch_0_17_bi
## $hh_ch_0_17_bi$plot
```



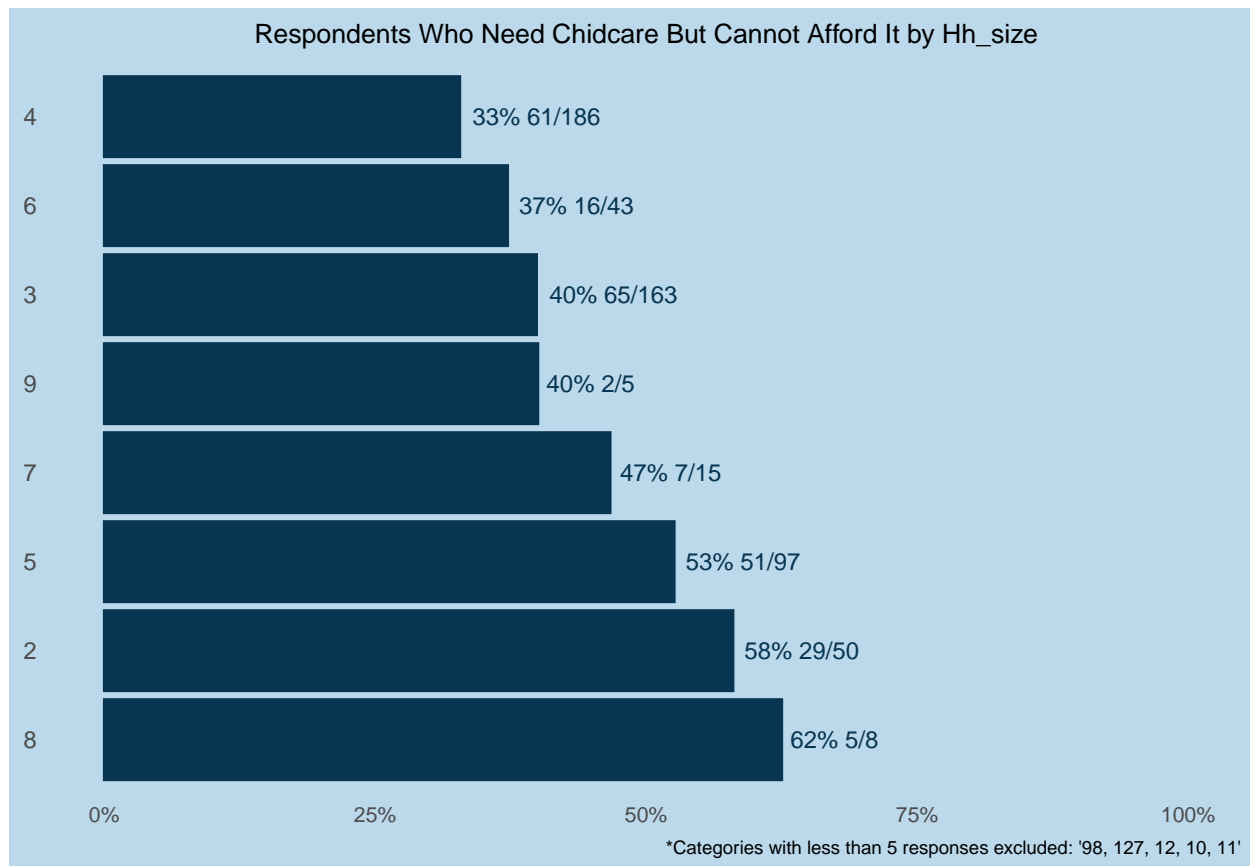
```
##
## $hh_ch_0_17_bi$p.values
## $hh_ch_0_17_bi$p.values$need_cc_bi
## household with children
## household with children NA
##
##
##
## $hh_sn_65_bi
## $hh_sn_65_bi$plot
```



```
##
## $hh_sn_65_bi$p.values
## $hh_sn_65_bi$p.values$need_cc_bi
##           household with seniors household without seniors
## household with seniors           NA           NA
## household without seniors        NA           NA
##
##
##
## $inc_dist
## $inc_dist$plot
```



```
##
## $inc_dist$p.values
## $inc_dist$p.values$need_cc_bi
##
## at or above 2020 median income
## at or above 2020 median income NA
## below 2020 median income NA
## below 2020 poverty line NA
##
## below 2020 median income below 2020 poverty line
## at or above 2020 median income NA NA
## below 2020 median income NA NA
## below 2020 poverty line NA NA
##
##
##
## $hh_size
## $hh_size$plot
```

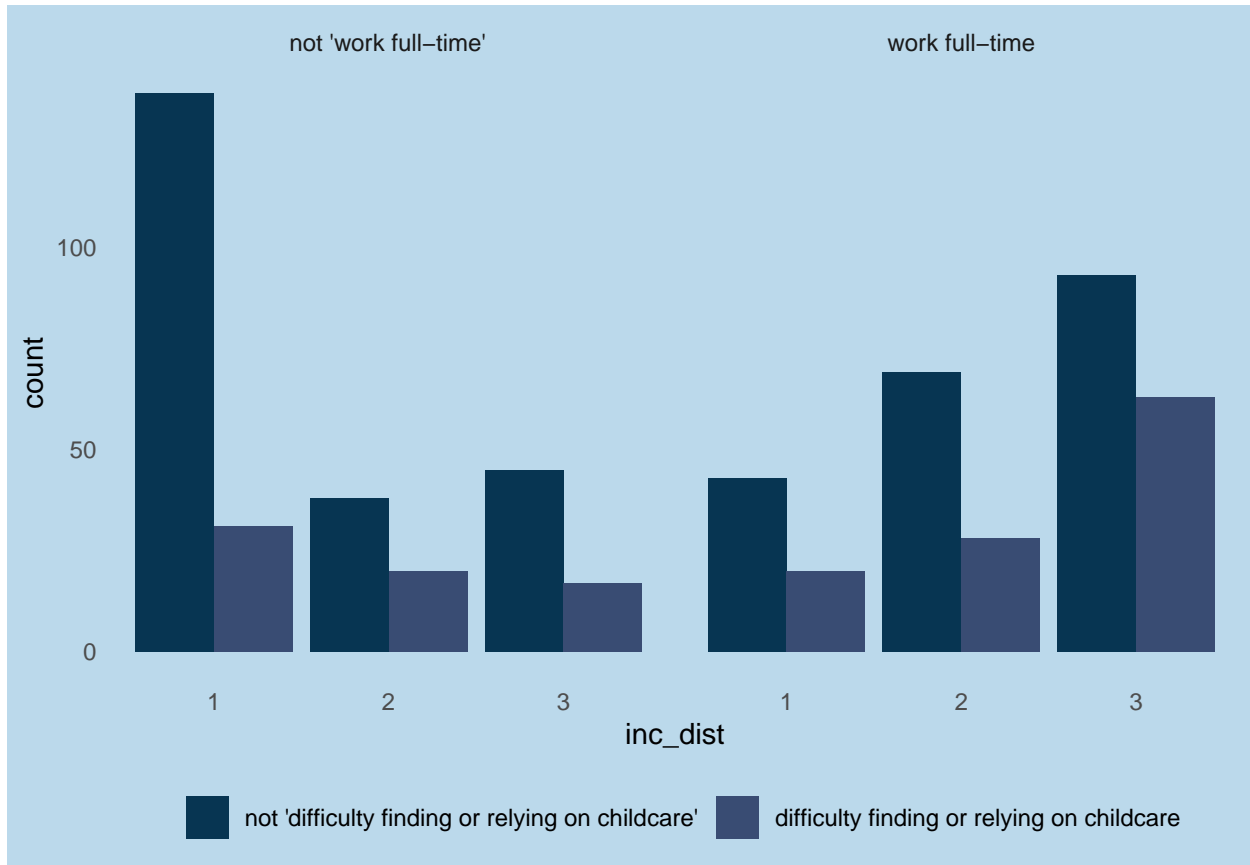


```
##
## $hh_size$p.values
## $hh_size$p.values$need_cc_bi
##      4  6  3  9  7      5      2  8
## 4      NA NA NA NA NA 0.0019 0.002 NA
## 6      NA NA NA NA NA      NA      NA NA
## 3      NA NA NA NA NA      NA      NA NA
## 9      NA NA NA NA NA      NA      NA NA
## 7      NA NA NA NA NA      NA      NA NA
## 5 0.0019 NA NA NA NA      NA      NA NA
## 2 0.0020 NA NA NA NA      NA      NA NA
## 8      NA NA NA NA NA      NA      NA NA
```

3.3) People who have had full-time jobs pre-pandemic and currently are more likely to have or have had difficulties finding childcare [14, 29]

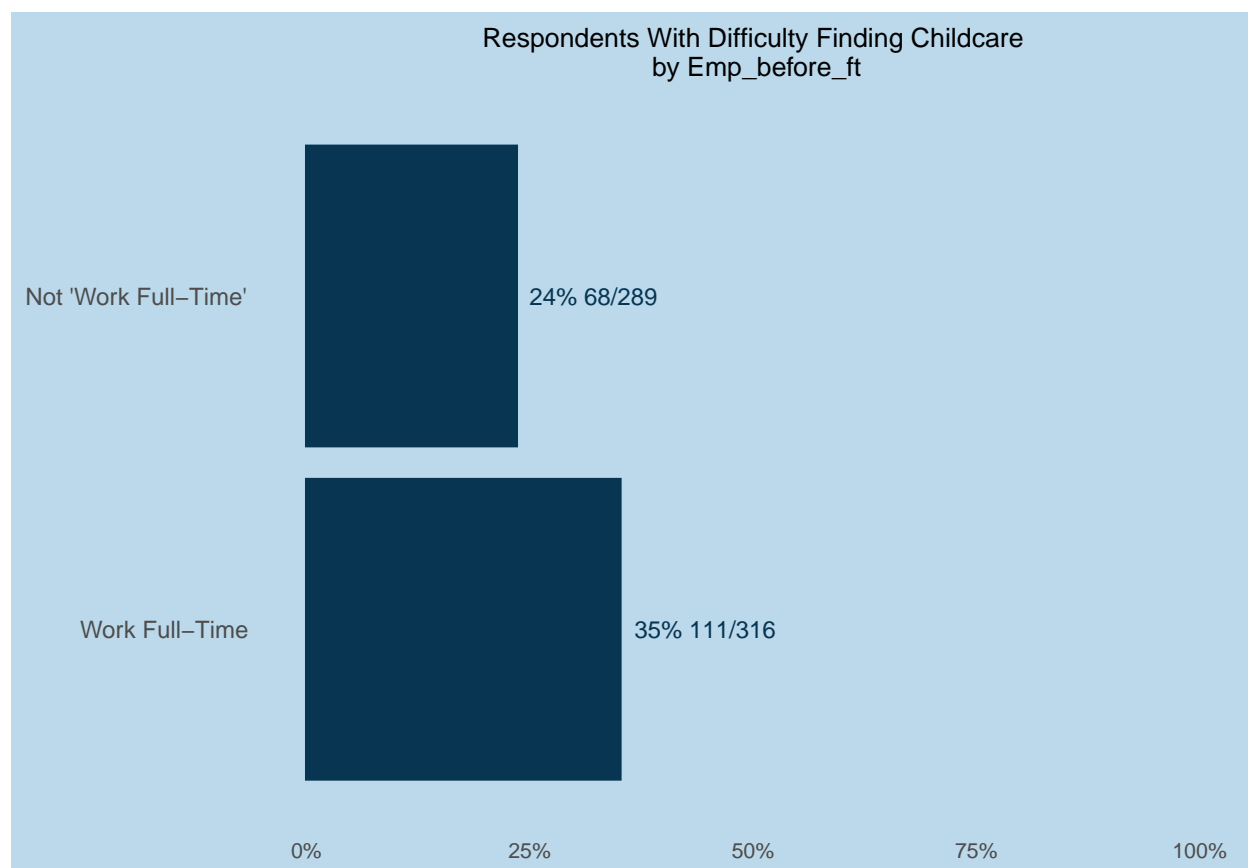
1. Find respondents who indicated they work full-time [14]
 - a. Find proportion of subset who reported having difficulty accessing childcare currently and/or in the past year [21] [29] [29]
 - b. Find proportion not in subset who reported having difficulty accessing childcare currently and/or in the past year and compare (test unequal proportions)

```
ggplot(df_ch %>% filter(!is.na(diff_cc)),
      aes(x = inc_dist, fill = labelled::to_factor(diff_cc))) + geom_bar(position = position_dodge()) +
  facet_wrap(. ~ labelled::to_factor(emp_before_ft)) +
  scale_fill_manual(NULL, values = project_pal) +
  theme(legend.position = "bottom")
```

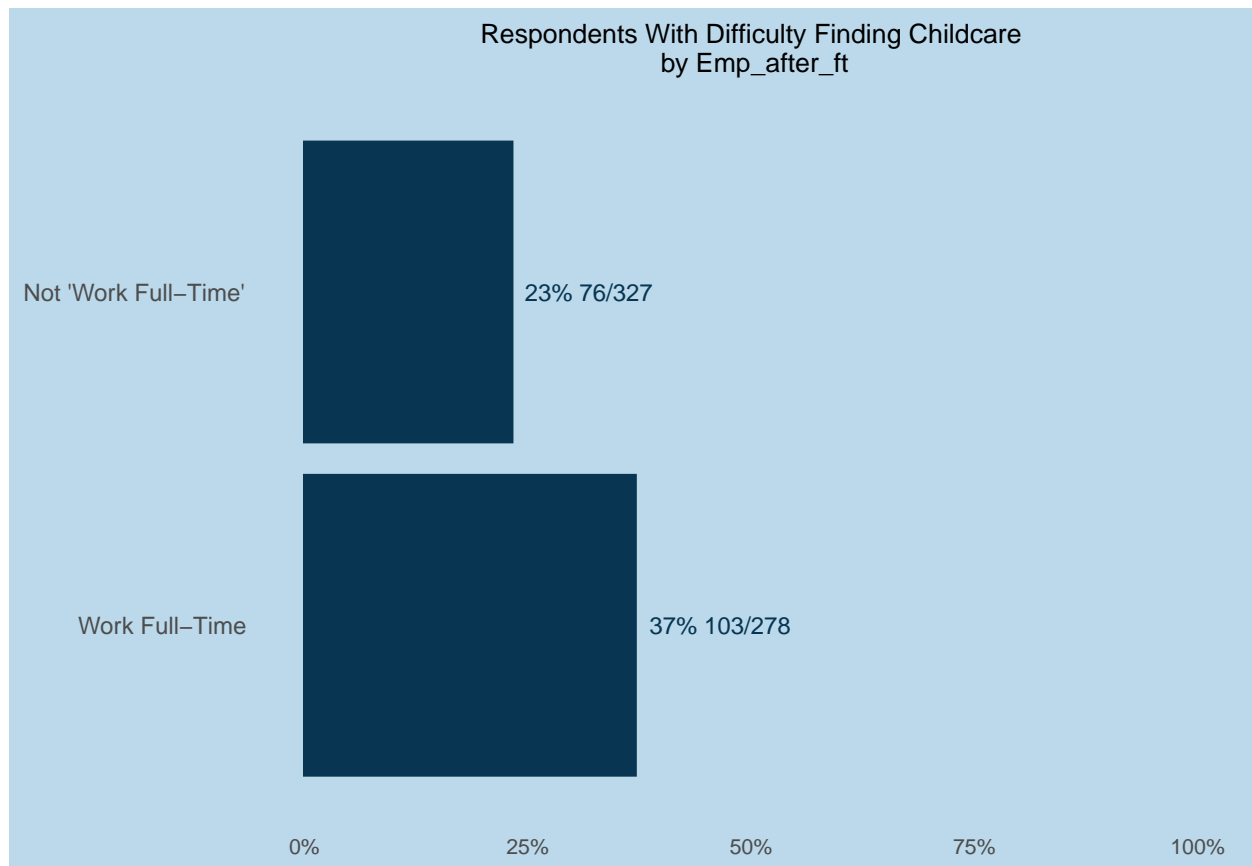


```
make_plots(df_ch, c("emp_before_ft", "emp_after_ft"), "diff_cc",
          title = "Respondents with difficulty finding childcare\n")
```

```
## $emp_before_ft
## $emp_before_ft$plot
```



```
##
## $emp_before_ft$p.values
## $emp_before_ft$p.values$diff_cc
##           not 'work full-time' work full-time
## not 'work full-time'           NA           0.0024
## work full-time           0.0024           NA
##
##
##
## $emp_after_ft
## $emp_after_ft$plot
```



```
##
## $emp_after_ft$p.values
## $emp_after_ft$p.values$diff_cc
##               not 'work full-time' work full-time
## not 'work full-time'              NA             3e-04
## work full-time                    3e-04             NA
```

3.4, 3.11, 3.13, 3.14

3.4) People who returned to work in-person are more likely to have difficulties finding childcare

1. Find respondents who indicated they returned to work in-person [19]
 - a. Find proportion of subset who reported having difficulty accessing child care currently and/or in the past year [21]
 - b. Find proportion not in subset who reported having difficulty accessing childcare currently and/or in the past year and compare (test unequal proportions)

3.11) Households in Bronx and Queens are more likely to not be able to afford childcare/had difficulty with childcare

1. Find proportions of households who could not afford childcare/had difficulty with childcare who are from Bronx/Queens

2. Compare with families from other boroughs

3.13) Households that had difficulty accessing childcare during the pandemic are more likely to be concerned about their students' academic level

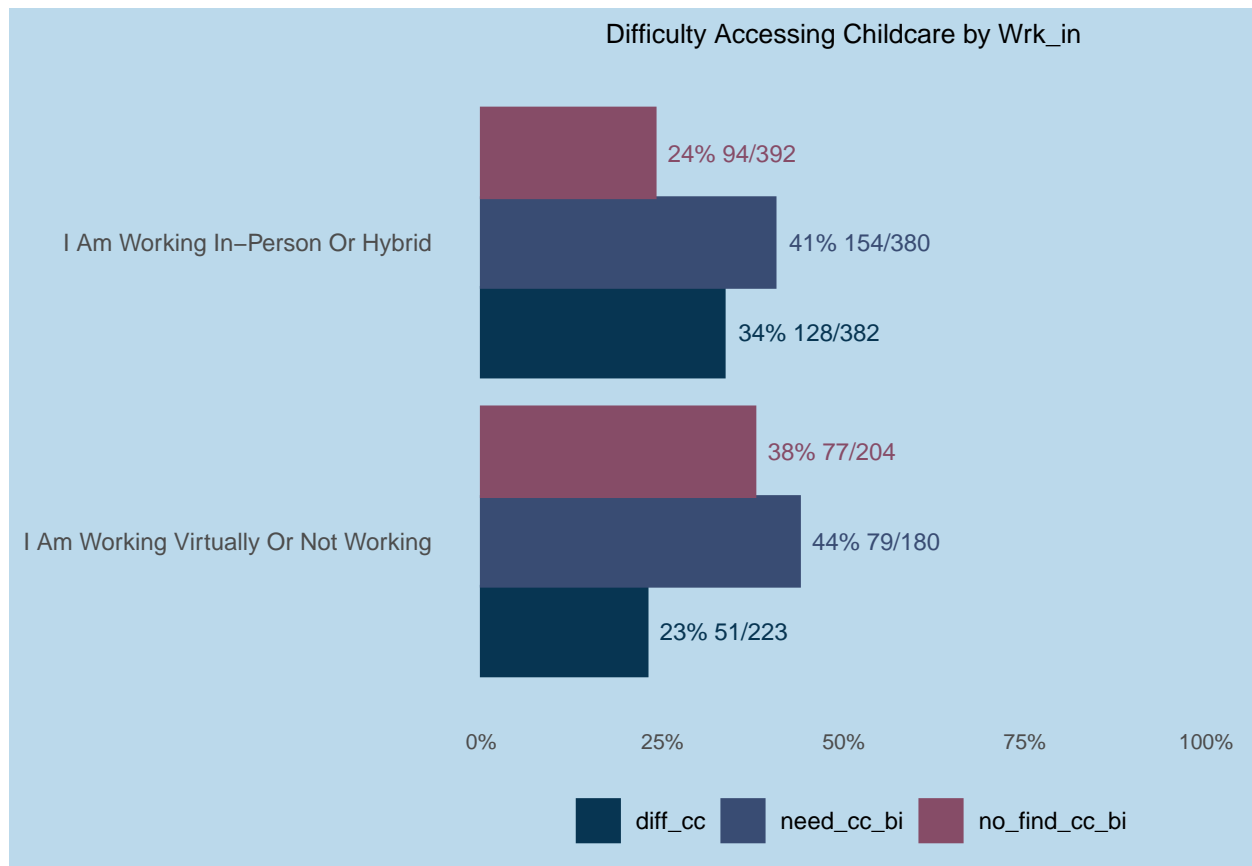
1. Find households that indicated they are concerned about their children's academic level [28]
 - a. Find proportion of subset that had difficulty accessing childcare over the past year [21]
 - b. Find proportion not in subset and compare (test unequal proportions)

3.14) Households that had difficulty accessing childcare during the pandemic are more likely to be concerned about their students' comfort around other students

2. Find households that indicated they are concerned about their children's comfort around other students [28]
 - a. Find proportion of subset that had difficulty accessing childcare over the past year [21]
 - b. Find proportion not in subset and compare (test unequal proportions)

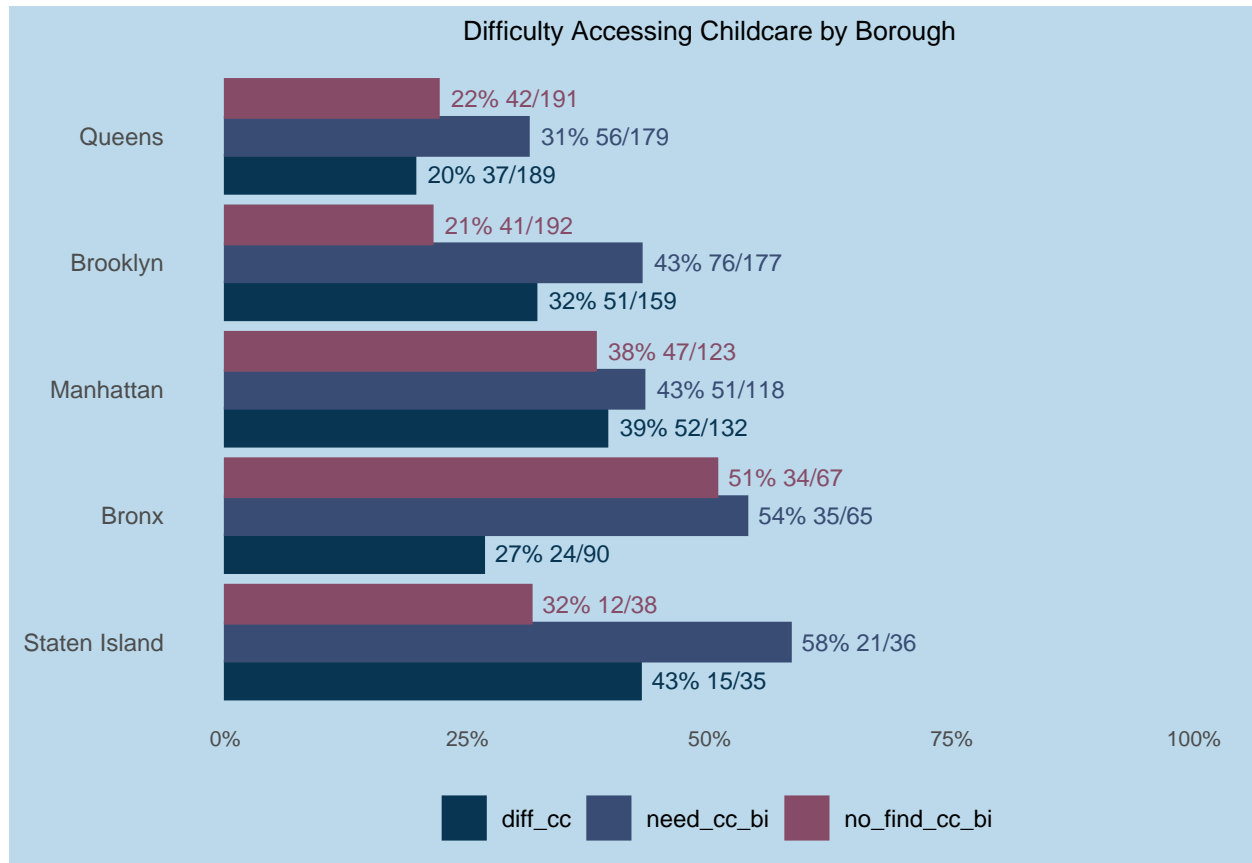
```
make_plots(df_ch, c("wrk_in", "borough", "att_con_acad", "att_con_comf"),  
            c("diff_cc", "need_cc_bi", "no_find_cc_bi"),  
            title = "Difficulty Accessing Childcare")
```

```
## $wrk_in  
## $wrk_in$plot
```



```
##
## $wrk_in$p.values
## $wrk_in$p.values$diff_cc
## I am working virtually or not working NA
## I am working in-person or hybrid 0.0075
## I am working in-person or hybrid
## I am working virtually or not working 0.0075
## I am working in-person or hybrid NA
##
## $wrk_in$p.values$need_cc_bi
## I am working in-person or hybrid NA
## I am working in-person or hybrid NA
## I am working virtually or not working NA
## I am working in-person or hybrid NA
## I am working virtually or not working NA
##
## $wrk_in$p.values$no_find_cc_bi
## I am working in-person or hybrid NA
## I am working in-person or hybrid 6e-04
## I am working virtually or not working 6e-04
## I am working in-person or hybrid NA
## I am working virtually or not working NA
##
```

```
##
##
## $borough
## $borough$plot
```



```
##
## $borough$p.values
## $borough$p.values$diff_cc
##      queens bronx brooklyn manhattan staten island
## queens      NA   NA      NA    0.00016      0.0055
## bronx        NA   NA      NA      NA      NA
## brooklyn      NA   NA      NA      NA      NA
## manhattan    0.00016 NA      NA      NA      NA
## staten island 0.00550 NA      NA      NA      NA
##
## $borough$p.values$need_cc_bi
##      queens brooklyn manhattan bronx staten island
## queens      NA      NA      NA 0.0021      0.0038
## brooklyn      NA      NA      NA  NA      NA
## manhattan      NA      NA      NA  NA      NA
## bronx        0.0021  NA      NA  NA      NA
## staten island 0.0038  NA      NA  NA      NA
##
## $borough$p.values$no_find_cc_bi
##      brooklyn queens staten island manhattan bronx
```

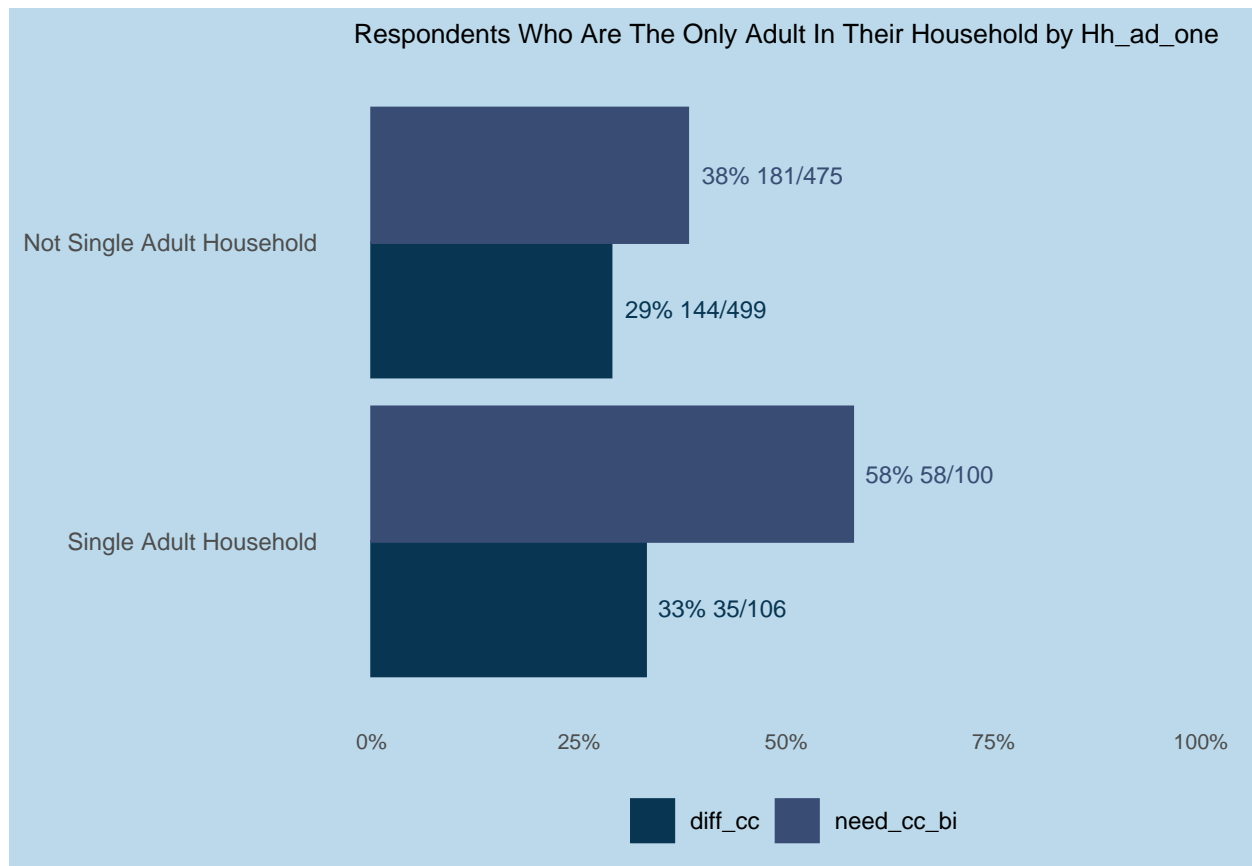
```
## brooklyn      NA      NA      NA      0.0018 1.0e-05
## queens        NA      NA      NA      0.0028 1.8e-05
## staten island NA      NA      NA      NA      NA
## manhattan     0.00180 2.8e-03      NA      NA      NA
## bronx         0.00001 1.8e-05      NA      NA      NA
##
##
##
## $att_con_acad
## NULL
##
## $att_con_comf
## NULL
```

3.5) Single person households with children are more likely to have or have had difficulties accessing childcare [25,21]

1. Find respondents who are single person households [25]
 - a. Find proportion of subset who reported having difficulty accessing child care currently and/or in the past year [21]
 - b. Find proportion not in subset who reported having difficulty accessing childcare currently and/or in the past year and compare (test unequal proportions)
2. Find respondents who are single person households [24]
 - a. Find proportion of subset who reported that they need childcare but cannot afford it [30]
 - b. Find proportion not in subset who reported that they need childcare but cannot afford it and compare (test unequal proportions)

```
make_plots(df_ch, "hh_ad_one", c("diff_cc", "need_cc_bi"),
           title = "Respondents Who are the only adult in their household")
```

```
## $hh_ad_one
## $hh_ad_one$plot
```



```
##
## $hh_ad_one$p.values
## $hh_ad_one$p.values$diff_cc
##           not single adult household single adult household
## not single adult household           NA                      NA
## single adult household               NA                      NA
##
## $hh_ad_one$p.values$need_cc_bi
##           not single adult household single adult household
## not single adult household           NA                      0.00037
## single adult household              0.00037                  NA
```

3.6) Households with children in public schools were more likely to have difficulty accessing childcare in the past year

1. Find households with children in all public schools and traditional public schools [26]
 - a. Find proportion of subset (public school, traditional public school - separate tests) that had difficulty accessing childcare in the past six months [21]
 - b. Find proportion not in subset that had difficulty accessing childcare in the past six months and compare (test unequal proportions) [30]

```
mean(df_ch$att_sch_pub, na.rm = TRUE)
```

```
## [1] 0.5829016
```

```
make_plots(df_ch, "att_sch_pub", c("diff_cc", "need_cc_bi"))
```

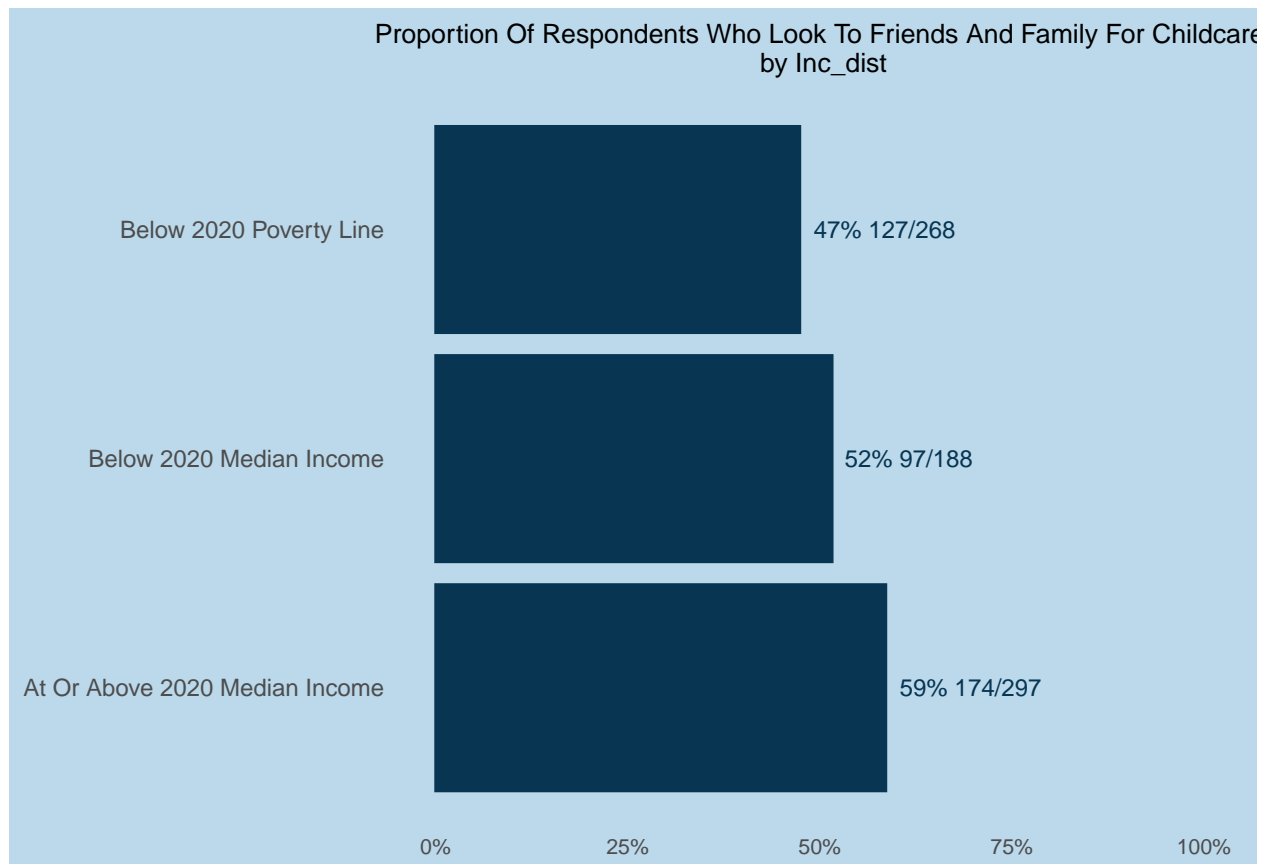
```
## $att_sch_pub  
## NULL
```

3.7) Households above the median income were more likely to look towards friends/families for childcare needs rather than government resources

1. Find respondents who are above median income and have children in the household [13, 25]
 - a. Find proportion of subset who looks towards friends and family for childcare needs [33]
2. Find respondents who indicated they are below median income and have children in the household [14, 25]
 - a. Find proportion of subset who looks towards friends and family for childcare needs [33]
 - b. Compare both proportions (test unequal proportions)

```
make_plots(df_ch, "inc_dist", "lr_cc_fam",  
           title = "Proportion of Respondents who look to friends and family for childcare\n")
```

```
## $inc_dist  
## $inc_dist$plot
```



```
##
## $inc_dist$p.values
## $inc_dist$p.values$lr_cc_fam
##          below 2020 poverty line below 2020 median income
## below 2020 poverty line          NA                      NA
## below 2020 median income          NA                      NA
## at or above 2020 median income    0.0099                  NA
##          at or above 2020 median income
## below 2020 poverty line          0.0099
## below 2020 median income          NA
## at or above 2020 median income    NA
```

3.8) Households at or below median income were more likely to rely on the government for childcare

1. Find households whose reported 2021 income was below the median [13]
 - a. Find proportion of subset who rely on government resources for childcare needs [33]
 - b. Find proportion not in subset and compare (test unequal proportions)

```
make_plots(df_ch, "inc_dist", "lr_cc_gov")
```

```
## $inc_dist
## NULL
```

3.9) Households that did/did not send their children back to in-person school

1. Households that did send their children back to in person school
 - a. Find proportion of of households that did send their children back to in person school [26]
2. Households that did not send their children back to in person school
 - a. Run distribution over sub demographics(a-o)
 - b. Run distribution over reason for not returning to school
 - c. Run distribution over sub demographics (a-o) for each concern

```
mean(df_ch$att_prsn_bi, na.rm = TRUE)
```

```
## [1] 0.9613181
```

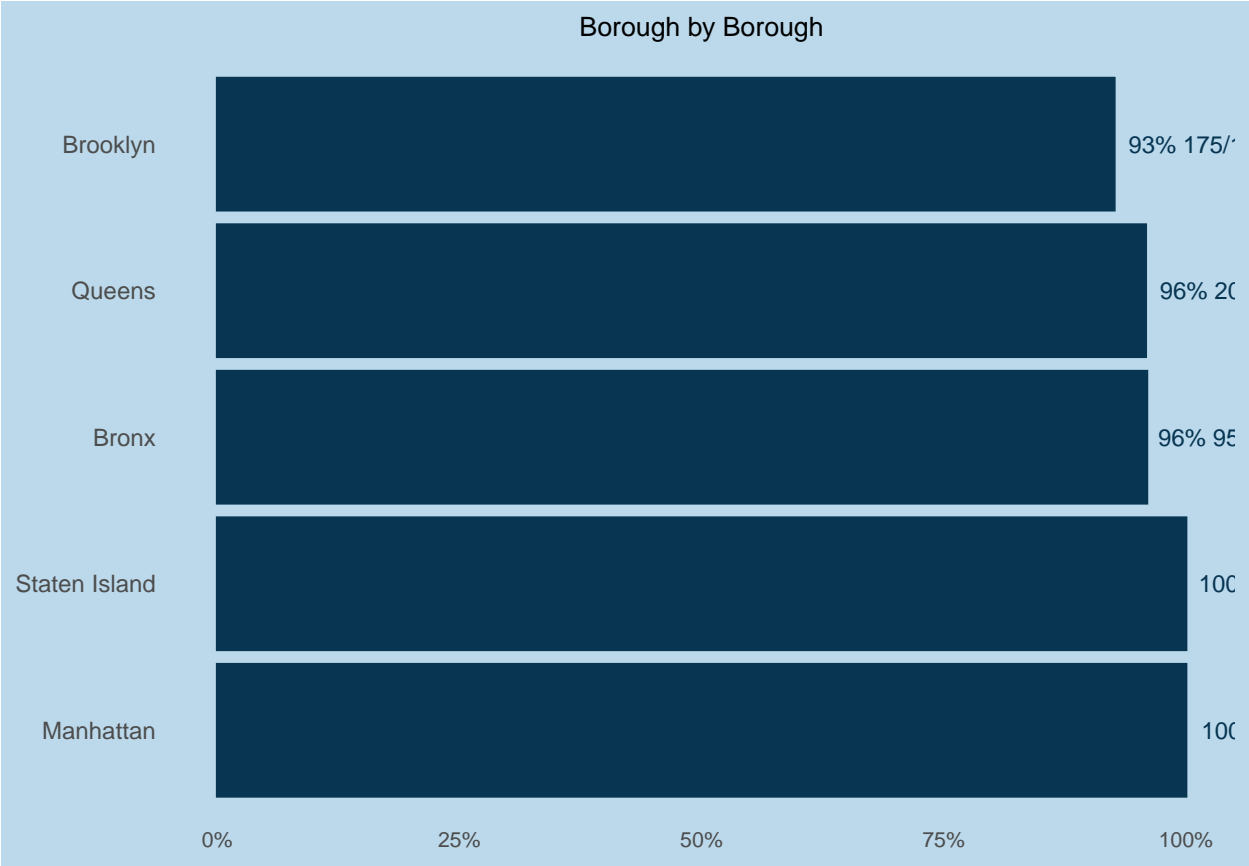
```
df_ch %>% count(att_prsn_bi, att_not) %>% mutate_if(haven::is_labelled, labelled::to_factor)
```

```
## # A tibble: 6 x 3
##   att_prsn_bi att_not          n
##   <fct>      <fct>      <int>
## 1 no        i am concerned about covid-19    3
## 2 no        my family has left new york city 7
## 3 no        i am concerned about academic support for my child 6
## 4 no        other                          11
## 5 yes       <NA>                        671
## 6 <NA>      <NA>                        75
```

```
concerns <- wrangled %>% select(starts_with("att_con_") & !ends_with("text")) %>% colnames()

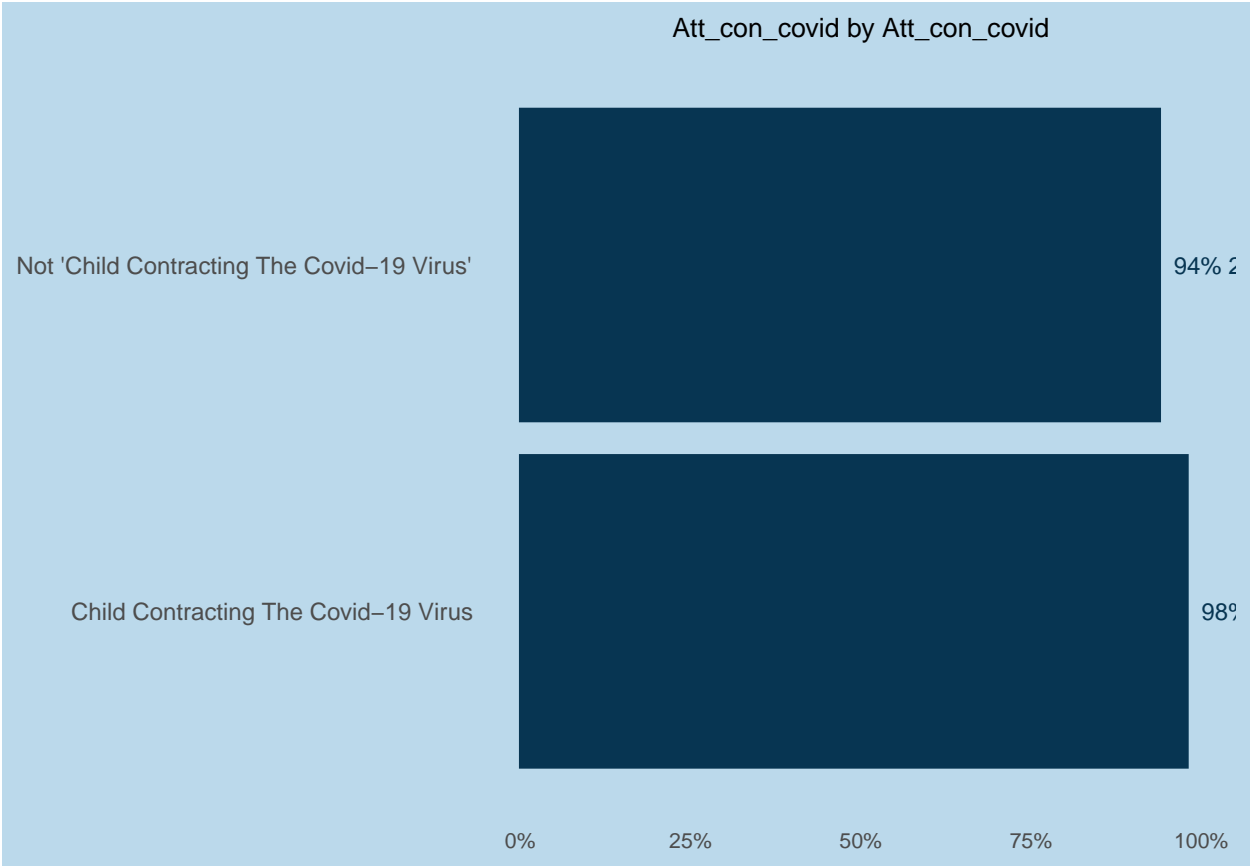
lapply(c(demographics, concerns), function(item) {
  make_plots(df_ch, item, "att_prsn_bi", title = item)
})
```

```
## $borough
## $borough$borough
## $borough$borough$plot
```

```
##
## $borough$borough$p.values
## $borough$borough$p.values$att_prsn_bi
##      brooklyn queens bronx manhattan staten island
## brooklyn      NA      NA      NA      0.0017      NA
## queens        NA      NA      NA      NA      NA
## bronx          NA      NA      NA      NA      NA
## manhattan      0.0017      NA      NA      NA      NA
## staten island   NA      NA      NA      NA      NA
##
##
##
## $gen
## $gen$gen
## NULL
##
##
## $race_census
## $race_census$race_census
## NULL
##
##
## $hh_ch_0_17_bi
## $hh_ch_0_17_bi$hh_ch_0_17_bi
## NULL
```

```
##
##
## $hh_sn_65_bi
## $hh_sn_65_bi$hh_sn_65_bi
## NULL
##
##
## $inc_dist
## $inc_dist$inc_dist
## NULL
##
##
## [[7]]
## [[7]]$att_con_covid
## [[7]]$att_con_covid$plot
```



```
##
## [[7]]$att_con_covid$p.values
## [[7]]$att_con_covid$p.values$att_prsn_bi
## not 'child contracting the covid-19 virus' NA
## child contracting the covid-19 virus 0.01
## child contracting the covid-19 virus
## not 'child contracting the covid-19 virus' 0.01
## child contracting the covid-19 virus NA
```

```
##
##
##
##
## [[8]]
## [[8]]$att_con_acad
## NULL
##
##
## [[9]]
## [[9]]$att_con_comf
## NULL
##
##
## [[10]]
## [[10]]$att_con_exp
## NULL
##
##
## [[11]]
## [[11]]$att_con_size
## NULL
##
##
## [[12]]
## [[12]]$att_con_trans
## NULL
##
##
## [[13]]
## [[13]]$att_con_none
## NULL
##
##
## [[14]]
## [[14]]$att_con_other
## NULL
##
##
## [[15]]
## [[15]]$att_con_num
## NULL
```

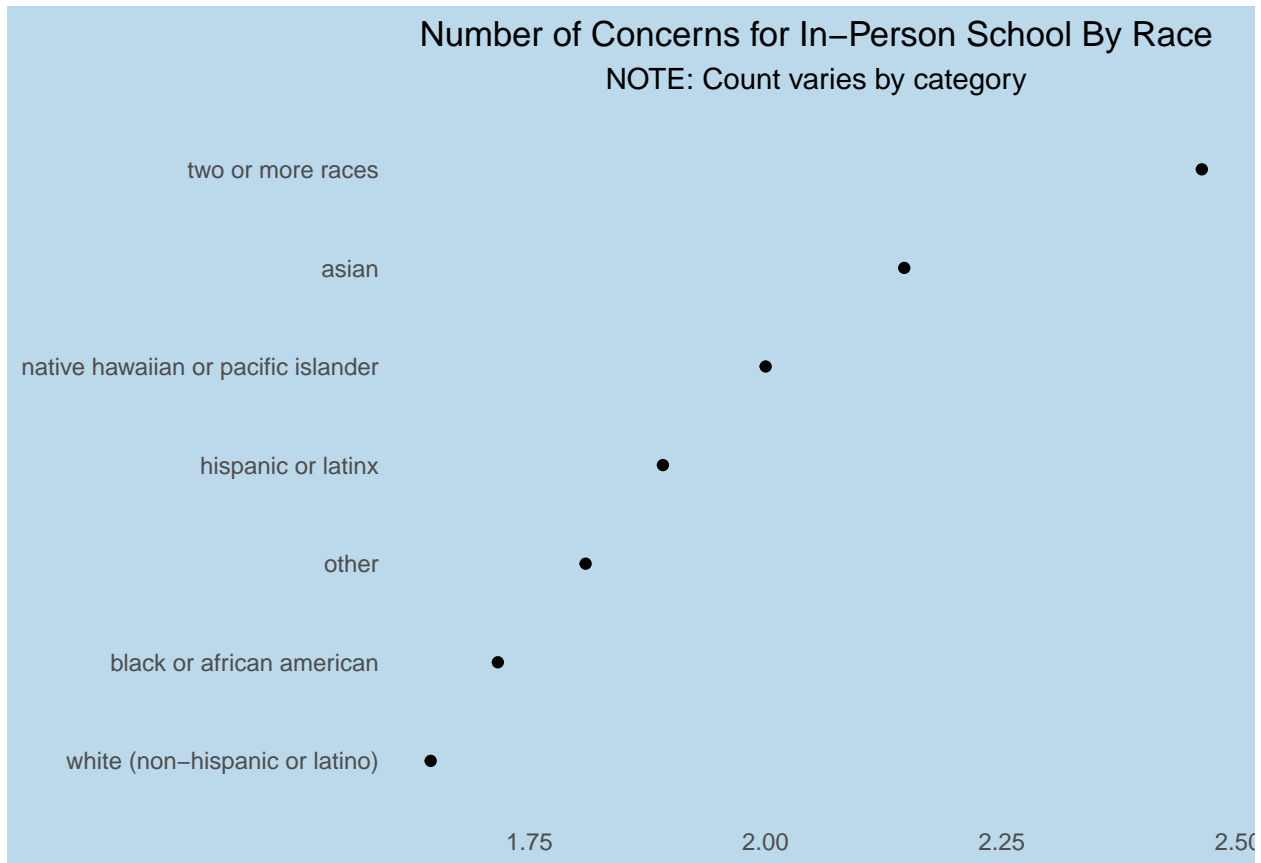
3.10) Summary of all concerns regarding children attending full-time schools [28]

1. Run by population for all responses
2. Run each concern based on all the sub demographic categories

```
mean(df_ch$att_con_num, na.rm = TRUE)
```

```
## [1] 1.836707
```

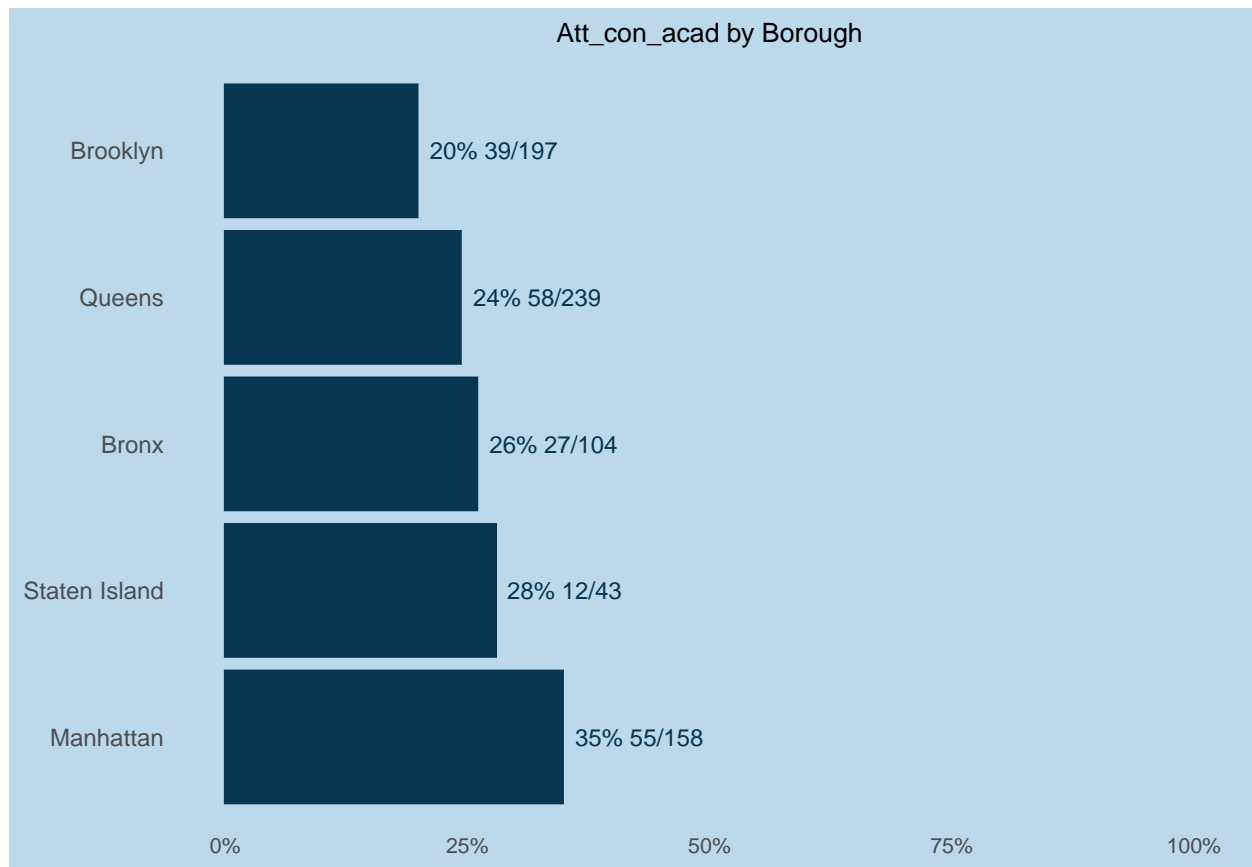
```
# should add a certainty measure
wrangled %>% group_by(race_census) %>% summarize(mean = mean(att_con_num, na.rm = TRUE)) %>%
  na.omit() %>%
  ggplot(aes(x = mean, y = reorder(race_census, mean))) + geom_point() +
  ggtitle("Number of Concerns for In-Person School By Race") + xlab(NULL) + ylab(NULL) +
  labs(subtitle = "NOTE: Count varies by category")
```



```
lapply(concerns, function(con) {
  make_plots(df_ch, demographics, con, title = con)
})
```

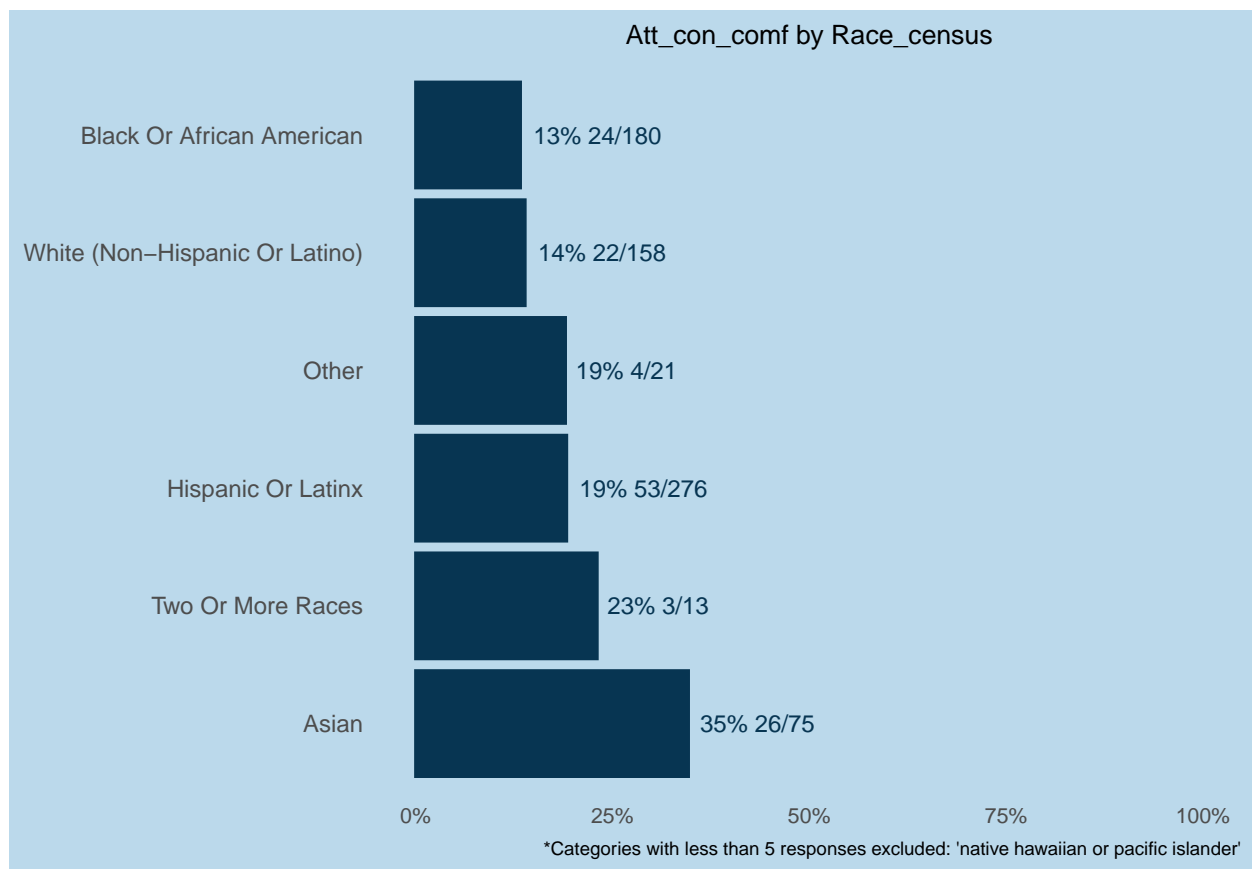
```
## [[1]]
## [[1]]$borough
## NULL
##
## [[1]]$gen
## NULL
##
## [[1]]$race_census
## NULL
##
## [[1]]$hh_ch_0_17_bi
## NULL
##
## [[1]]$hh_sn_65_bi
```

```
## NULL
##
## [[1]]$inc_dist
## NULL
##
##
## [[2]]
## [[2]]$borough
## [[2]]$borough$plot
```



```
##
## [[2]]$borough$p.values
## [[2]]$borough$p.values$att_con_acad
##      brooklyn queens bronx staten island manhattan
## brooklyn      NA      NA      NA      NA      0.0022
## queens        NA      NA      NA      NA      NA
## bronx          NA      NA      NA      NA      NA
## staten island  NA      NA      NA      NA      NA
## manhattan     0.0022      NA      NA      NA      NA
##
##
##
## [[2]]$gen
## NULL
##
```

```
## [[2]]$race_census
## NULL
##
## [[2]]$hh_ch_0_17_bi
## NULL
##
## [[2]]$hh_sn_65_bi
## NULL
##
## [[2]]$inc_dist
## NULL
##
##
## [[3]]
## [[3]]$borough
## NULL
##
## [[3]]$gen
## NULL
##
## [[3]]$race_census
## [[3]]$race_census$plot
```

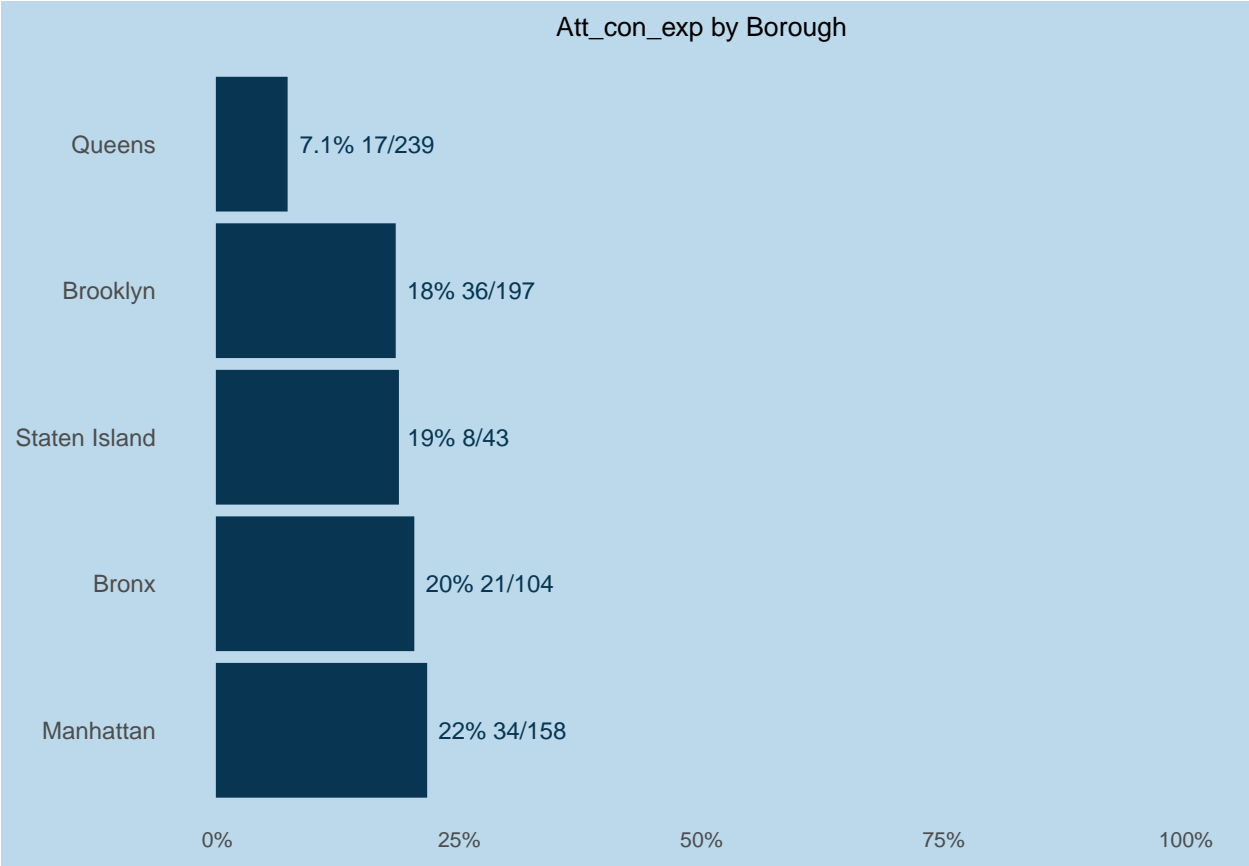


```
##
## [[3]]$race_census$p.values
```

```

## [[3]]$race_census$p.values$att_con_comf
##               black or african american
## black or african american             NA
## white (non-hispanic or latino)         NA
## other                                  NA
## hispanic or latinx                     NA
## two or more races                      NA
## asian                                  0.00019
##               white (non-hispanic or latino) other
## black or african american             NA  NA
## white (non-hispanic or latino)         NA  NA
## other                                  NA  NA
## hispanic or latinx                     NA  NA
## two or more races                      NA  NA
## asian                                  0.00049  NA
##               hispanic or latinx two or more races  asian
## black or african american             NA             NA 0.00019
## white (non-hispanic or latino)         NA             NA 0.00049
## other                                  NA             NA  NA
## hispanic or latinx                     NA             NA 0.00720
## two or more races                      NA             NA  NA
## asian                                  0.0072             NA  NA
##
##
##
## [[3]]$hh_ch_0_17_bi
## NULL
##
## [[3]]$hh_sn_65_bi
## NULL
##
## [[3]]$inc_dist
## NULL
##
##
## [[4]]
## [[4]]$borough
## [[4]]$borough$plot

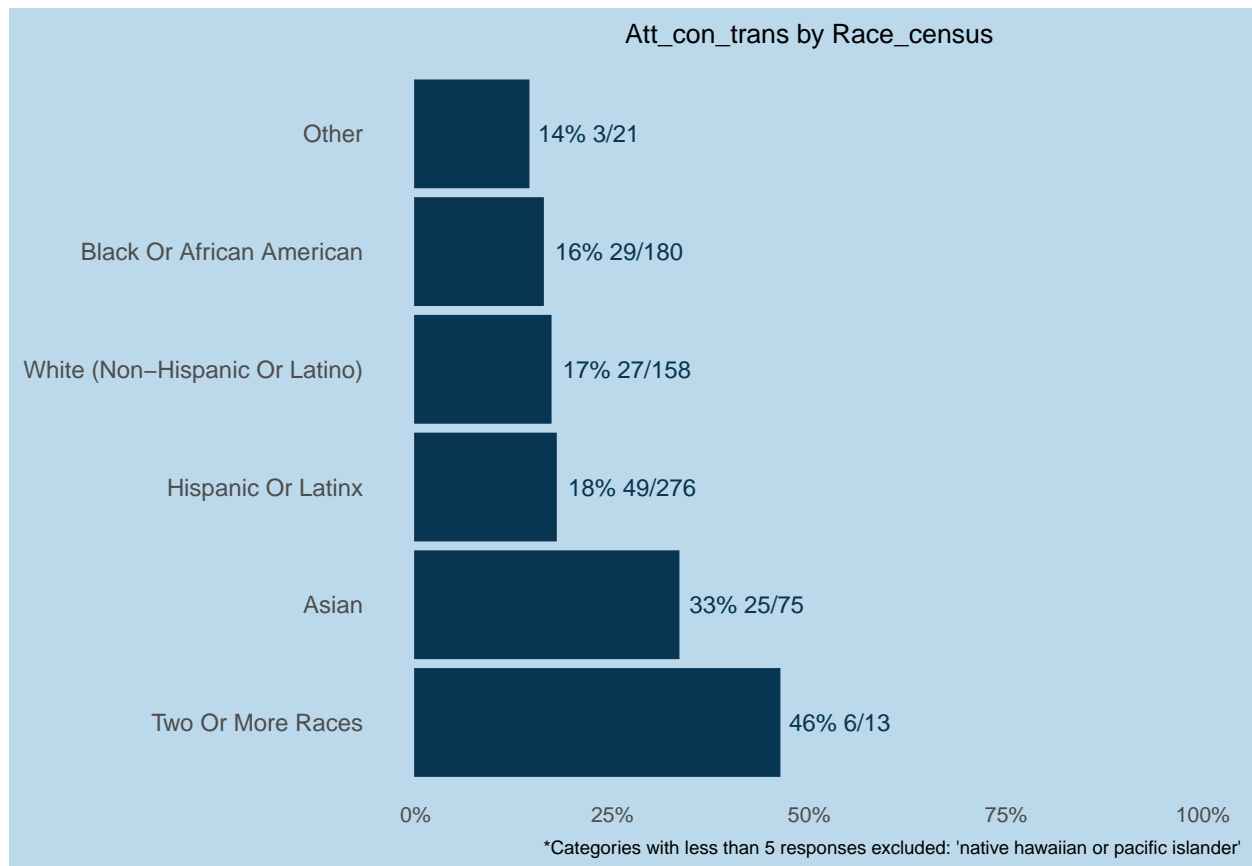
```



```
##
## [[4]]$borough$p.values
## [[4]]$borough$p.values$att_con_exp
##      queens brooklyn staten island  bronx manhattan
## queens      NA  0.00067              NA 0.00078  5.2e-05
## brooklyn    6.7e-04      NA              NA      NA      NA
## staten island      NA      NA              NA      NA      NA
## bronx       7.8e-04      NA              NA      NA      NA
## manhattan    5.2e-05      NA              NA      NA      NA
##
##
##
## [[4]]$gen
## NULL
##
##
## [[4]]$race_census
## NULL
##
##
## [[4]]$hh_ch_0_17_bi
## NULL
##
##
## [[4]]$hh_sn_65_bi
## NULL
##
##
## [[4]]$inc_dist
## NULL
```



```
##
##
## [[5]]
## [[5]]$borough
## NULL
##
## [[5]]$gen
## NULL
##
## [[5]]$race_census
## NULL
##
## [[5]]$hh_ch_0_17_bi
## NULL
##
## [[5]]$hh_sn_65_bi
## NULL
##
## [[5]]$inc_dist
## NULL
##
##
## [[6]]
## [[6]]$borough
## NULL
##
## [[6]]$gen
## NULL
##
## [[6]]$race_census
## [[6]]$race_census$plot
```



```
##
## [[6]]$race_census$p.values
## [[6]]$race_census$p.values$att_con_trans
##          other black or african american
## other          NA                      NA
## black or african american          NA
## white (non-hispanic or latino)      NA
## hispanic or latinx                  NA
## asian                             0.0037
## two or more races                  NA
##          white (non-hispanic or latino)
## other          NA
## black or african american          NA
## white (non-hispanic or latino)      NA
## hispanic or latinx                  NA
## asian                             0.009
## two or more races                  NA
##          hispanic or latinx  asian two or more races
## other          NA          NA          NA
## black or african american    NA 0.0037          NA
## white (non-hispanic or latino) NA 0.0090          NA
## hispanic or latinx          NA 0.0055          NA
## asian          0.0055          NA          NA
## two or more races          NA          NA          NA
##
##
```

```

##
## [[6]]$hh_ch_0_17_bi
## NULL
##
## [[6]]$hh_sn_65_bi
## NULL
##
## [[6]]$inc_dist
## NULL
##
##
## [[7]]
## [[7]]$borough
## NULL
##
## [[7]]$gen
## NULL
##
## [[7]]$race_census
## NULL
##
## [[7]]$hh_ch_0_17_bi
## NULL
##
## [[7]]$hh_sn_65_bi
## NULL
##
## [[7]]$inc_dist
## NULL
##
##
## [[8]]
## [[8]]$borough
## NULL
##
## [[8]]$gen
## NULL
##
## [[8]]$race_census
## NULL
##
## [[8]]$hh_ch_0_17_bi
## NULL
##
## [[8]]$hh_sn_65_bi
## NULL
##
## [[8]]$inc_dist
## NULL
##
##
## [[9]]
## [[9]]$borough
## NULL

```

```
##
## [[9]]$gen
## NULL
##
## [[9]]$race_census
## NULL
##
## [[9]]$hh_ch_0_17_bi
## NULL
##
## [[9]]$hh_sn_65_bi
## NULL
##
## [[9]]$inc_dist
## NULL
```

3.12) Households that did not send their children back to school because they are concerned about COVID-19 are more likely to have had at least one person in the household test positive for COVID-19

1. Find proportion of households with children that are not sending their children to in person school and report the reason they are not sending them back is because of concerns of COVID-19 [27.a]
 - a. Find proportion of subset that had at least one person in their household test positive for COVID-19[36]
 - b. From proportion not in subset and compare (test unequal proportions)

```
mean(df_ch$att_prsn_bi, na.rm = TRUE)
```

```
## [1] 0.9613181
```

```
df_ch %>% filter(att_prsn_bi < 1) %>%
  mutate(att_not = to_factor(att_not)) %>%
  select(att_not, att_not_text)
```

```
## # A tibble: 27 x 2
##   att_not att_not_text
##   <fct>    <chr>
## 1 other    <NA>
## 2 other    only one of my children i-
## 3 other    immunocompromised child a-
## 4 i am concerned about academic support for my child <NA>
## 5 i am concerned about academic support for my child <NA>
## 6 other    <NA>
## 7 i am concerned about academic support for my child <NA>
## 8 my family has left new york city <NA>
## 9 other    no
## 10 i am concerned about covid-19 <NA>
## # ... with 17 more rows
```

```

make_plots(df_ch %>% filter(att_prsn_bi != 1),
           "att_con_covid", "posi_all",
           title = "Proportion of Respondents\n(who didn't send their children back to school and fear c

## $att_con_covid
## NULL

```

3.15) Respondents who have a low income (below median income) are more likely to be worried about transport while their child attends in-person school

1. Find proportion who cite transport as one of their concerns when their child [27]
 - a. Find subset below median income [13]
 - b. Compare with respondents above median income

```

mean(df_ch$att_con_trans, na.rm = TRUE)

```

```

## [1] 0.1902834

```

```

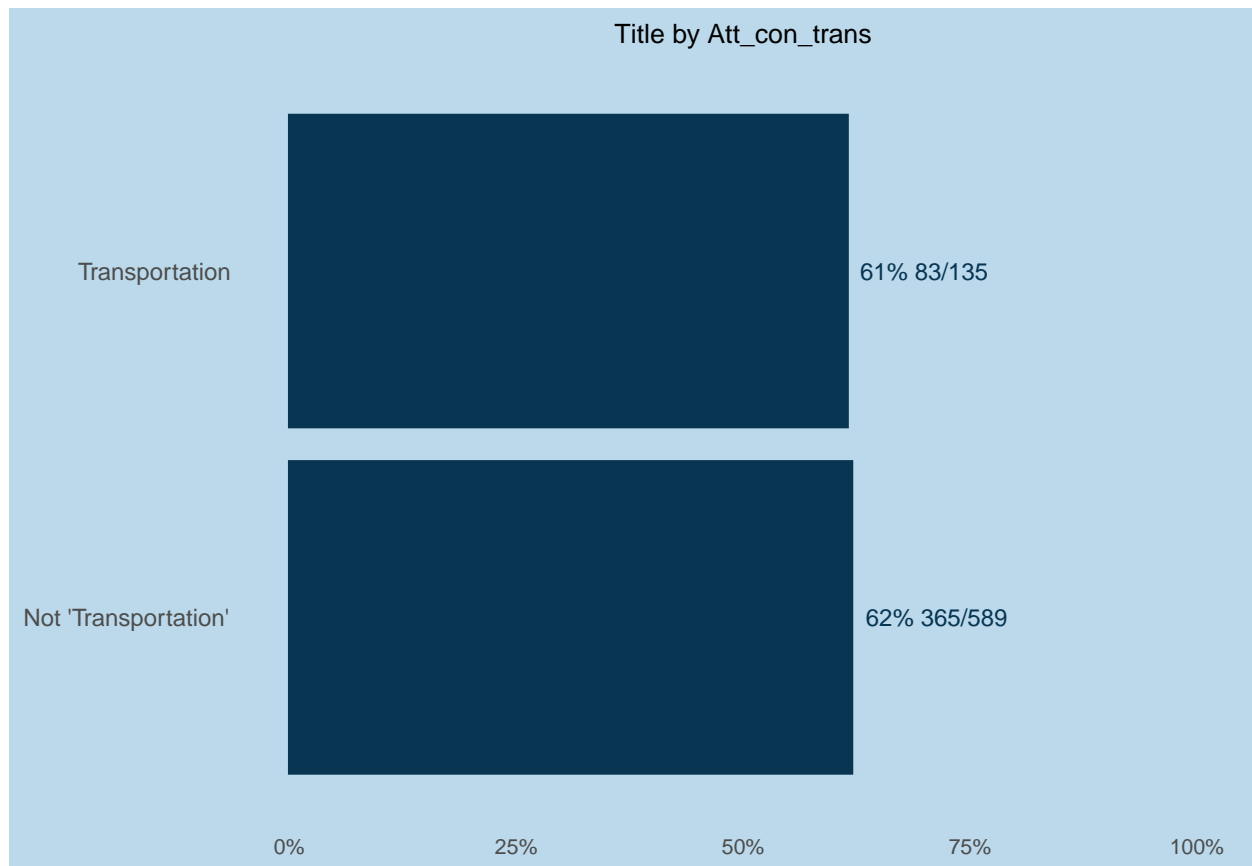
make_plots(df_ch, "att_con_trans", "inc_be_med_before", show = "yes")

```

```

## $att_con_trans
## $att_con_trans$plot

```

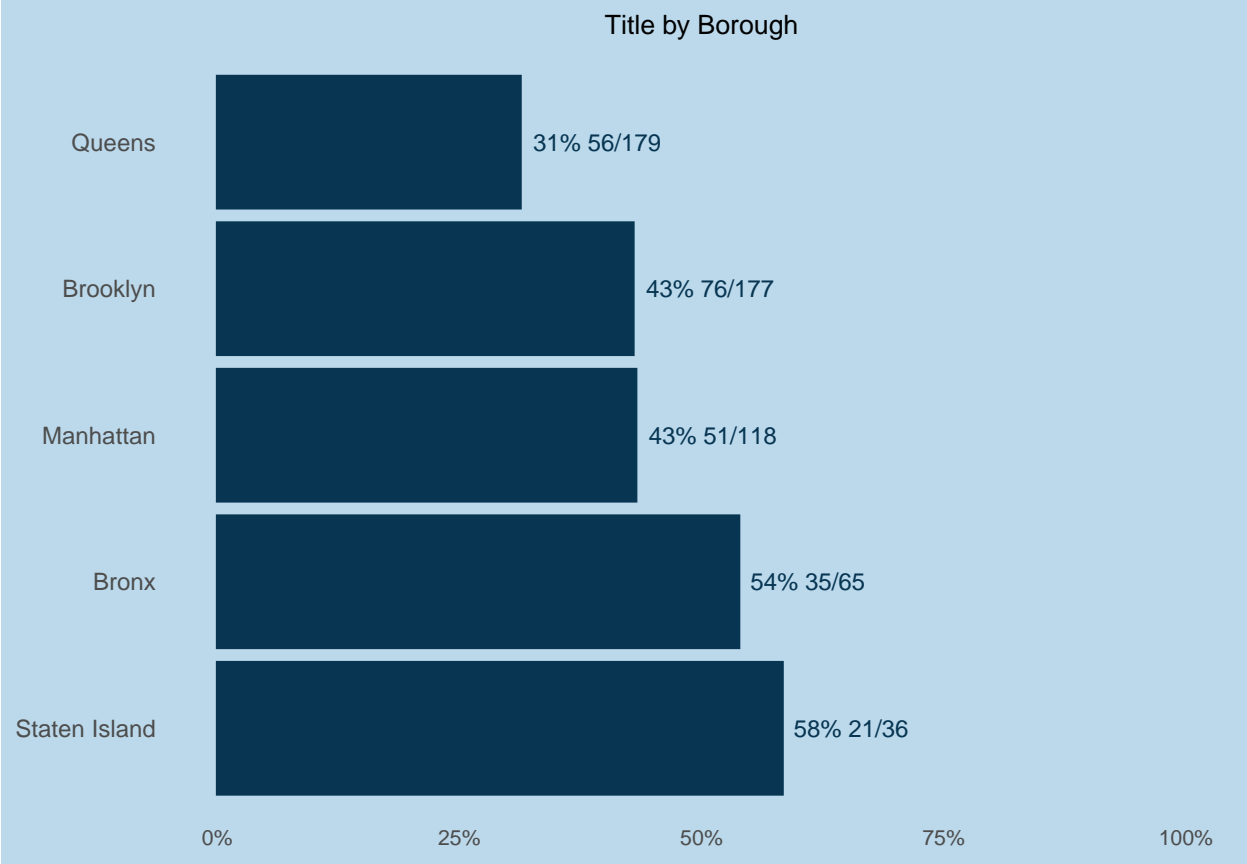


```
##
## $att_con_trans$p.values
## $att_con_trans$p.values$inc_be_med_before
##      transportation not 'transportation'
## transportation      NA      NA
## not 'transportation'  NA      NA
```

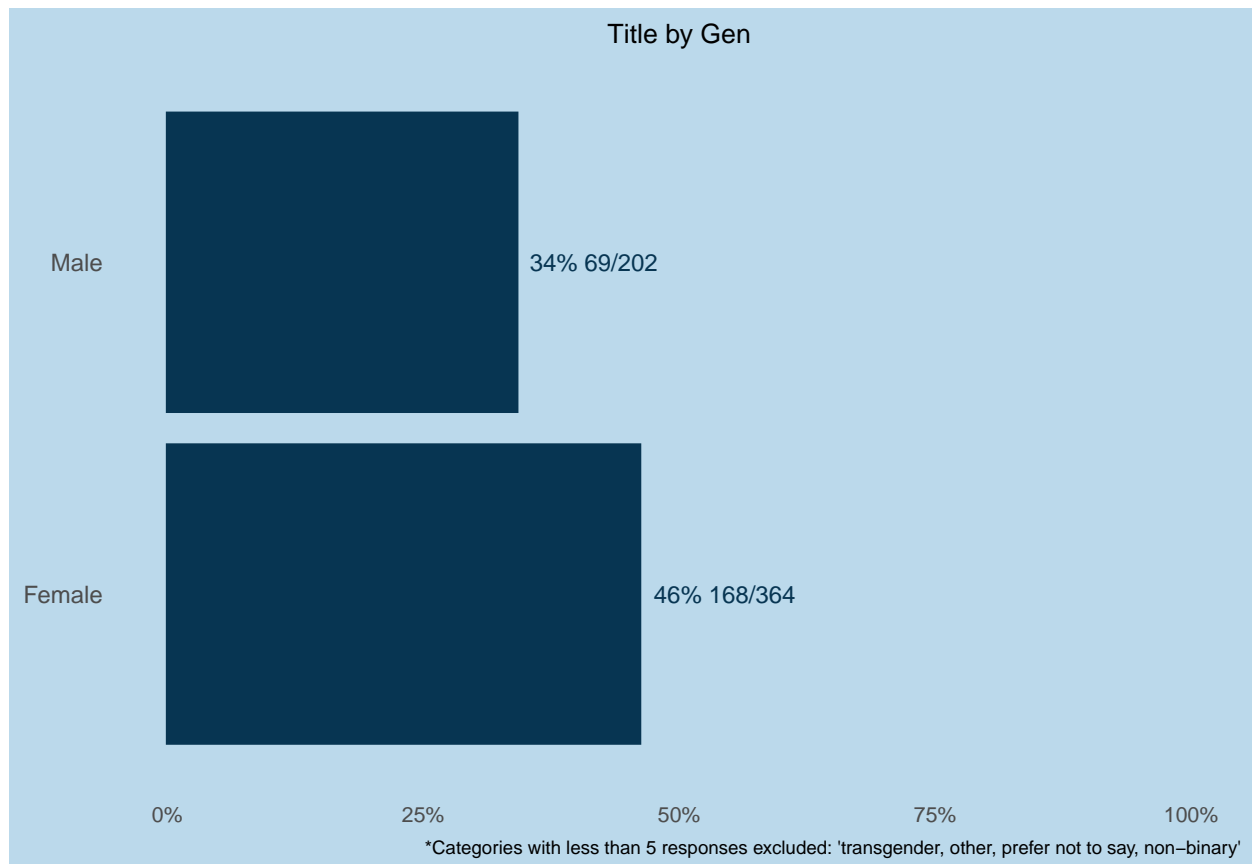
3.16) Households below median income were more likely to struggle with affordability of childcare(run it by ages, 0-14, 4-17) 1. Run it by each sub demographic group

```
make_plots(df_ch, c(demographics, "hh_ch_0_4_bi", "hh_ch_4_17_bi", "inc_be_med"), "need_cc_bi")
```

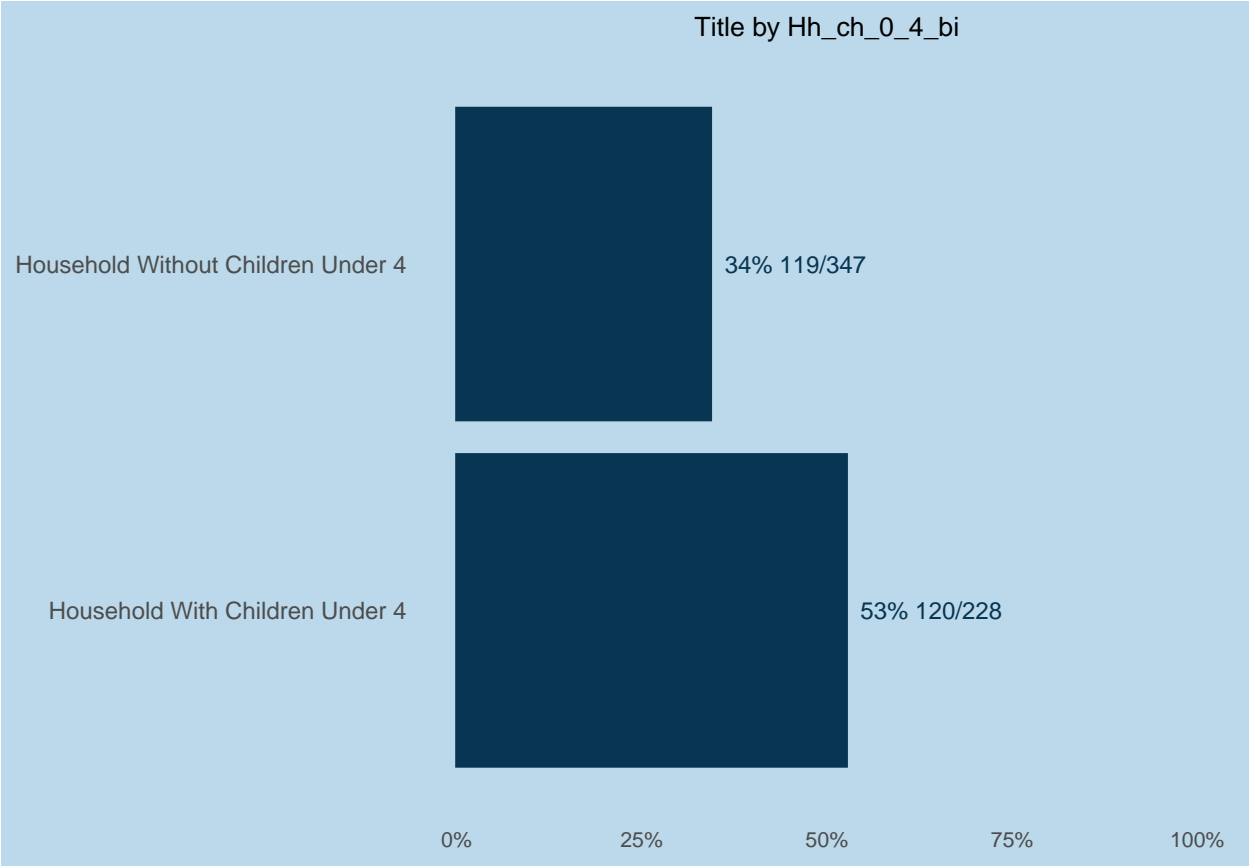
```
## $borough
## $borough$plot
```



```
##
## $borough$p.values
## $borough$p.values$need_cc_bi
##      queens brooklyn manhattan  bronx staten island
## queens      NA      NA      NA 0.0021      0.0038
## brooklyn     NA      NA      NA   NA      NA
## manhattan     NA      NA      NA   NA      NA
## bronx        0.0021     NA      NA   NA      NA
## staten island 0.0038     NA      NA   NA      NA
##
##
##
## $gen
## $gen$plot
```



```
##
## $gen$p.values
## $gen$p.values$need_cc_bi
##      male female
## male      NA 0.0073
## female 0.0073      NA
##
##
##
## $race_census
## NULL
##
## $hh_ch_0_17_bi
## NULL
##
## $hh_sn_65_bi
## NULL
##
## $inc_dist
## NULL
##
## $hh_ch_0_4_bi
## $hh_ch_0_4_bi$plot
```

```
##
## $hh_ch_0_4_bi$p.values
## $hh_ch_0_4_bi$p.values$need_cc_bi
## household without children under 4 NA
## household without children under 4 1.9e-05
## household with children under 4 1.9e-05
## household with children under 4 NA
##
##
## $hh_ch_4_17_bi
## NULL
##
## $inc_be_med
## NULL
```