

Survey32 Writeup

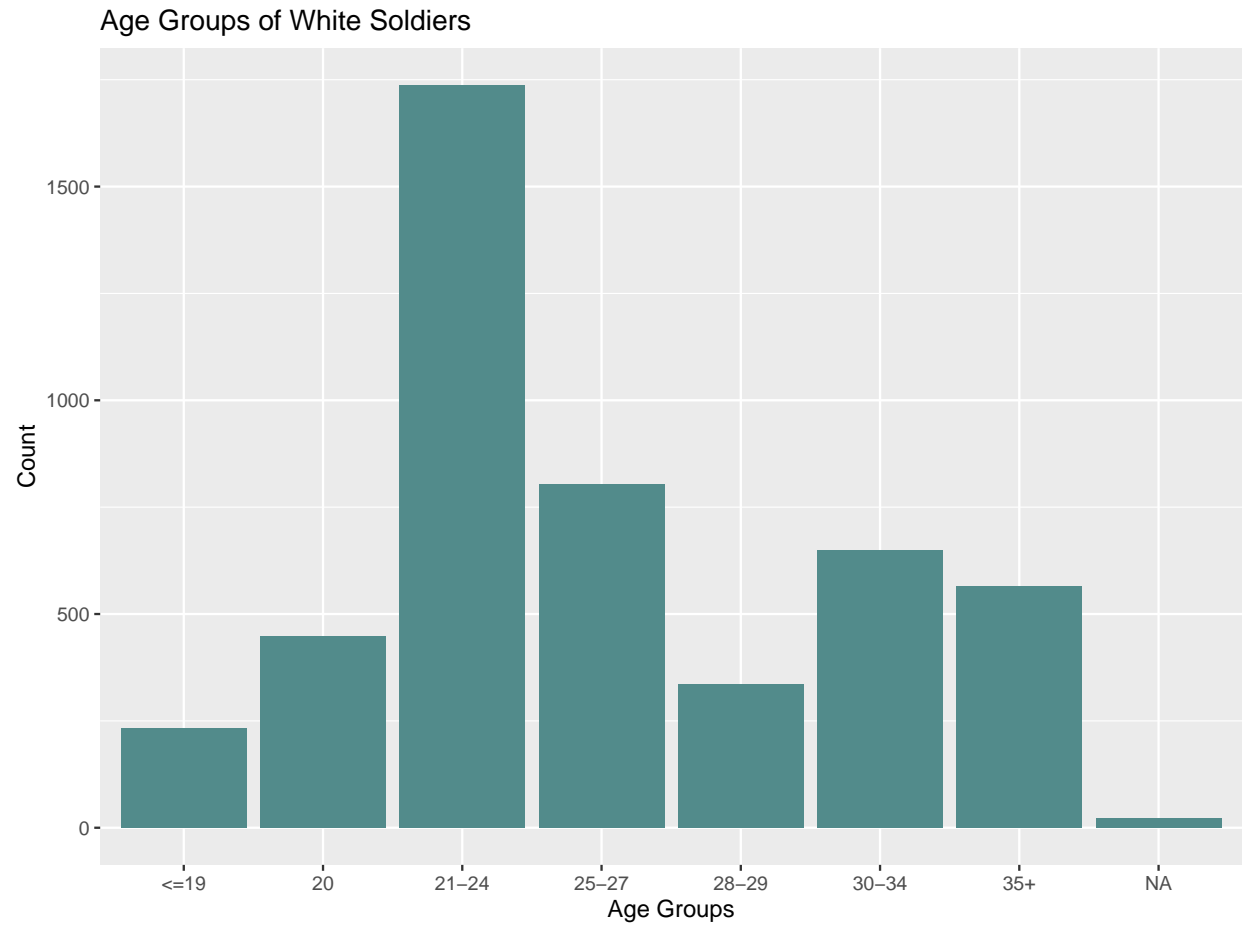
Who Are the Soldiers?

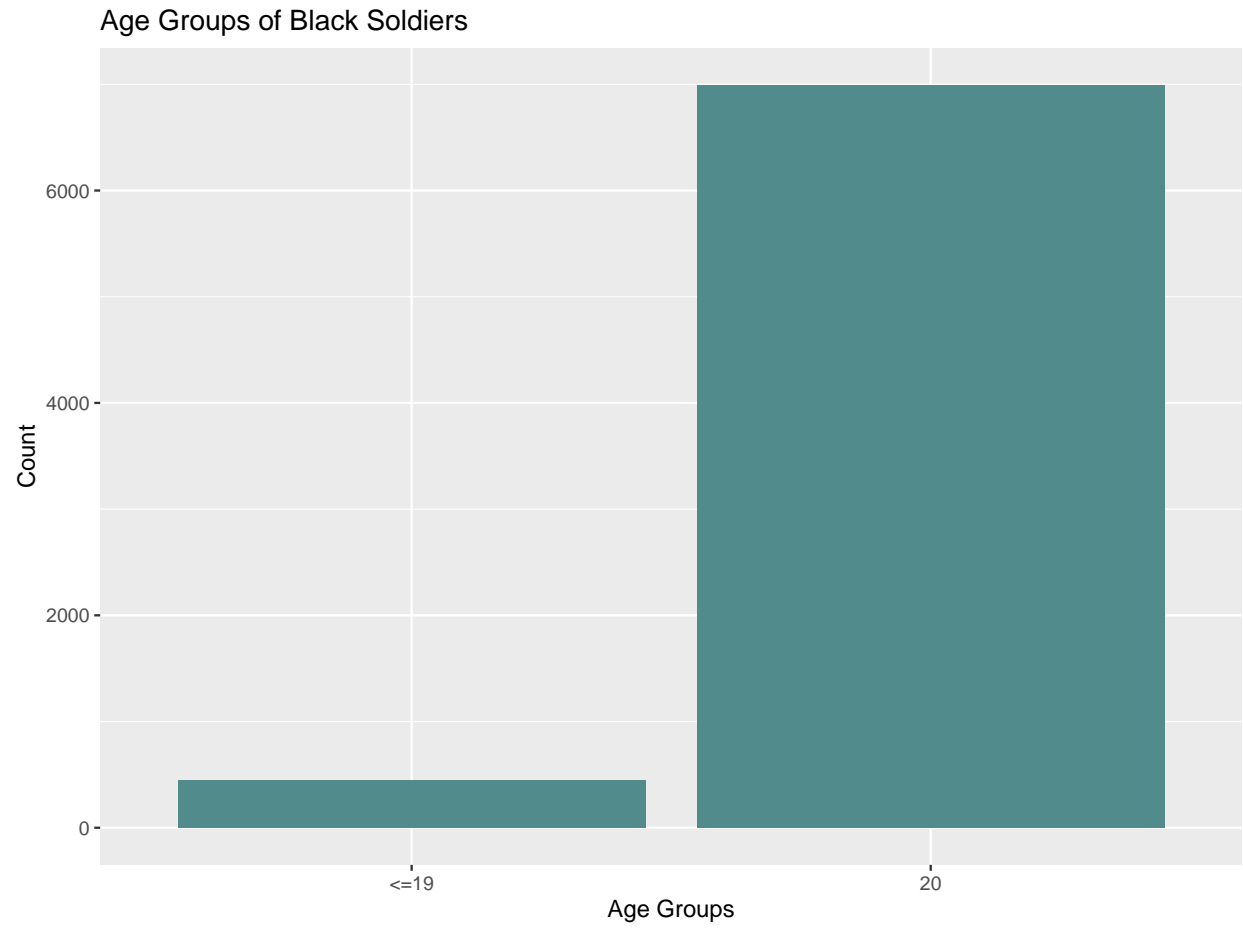
Survey 32 was given out to soldiers in 1943, approximately 5 years before the military was integrated. The survey was passed out to 7442 black soldiers and 4793 white soldiers and asked for basic demographic information, career aspirations, and more but of interests to us, Survey 32 asked the soldiers for their opinions on integration of military outfits. Our questions of interest are regarding age, education, enlistment, state, community type, and of course their opinions on outfits. On the survey these questions were asked in Questions 1,2,3,13,14, and 77 (63 for white soldiers), respectively.

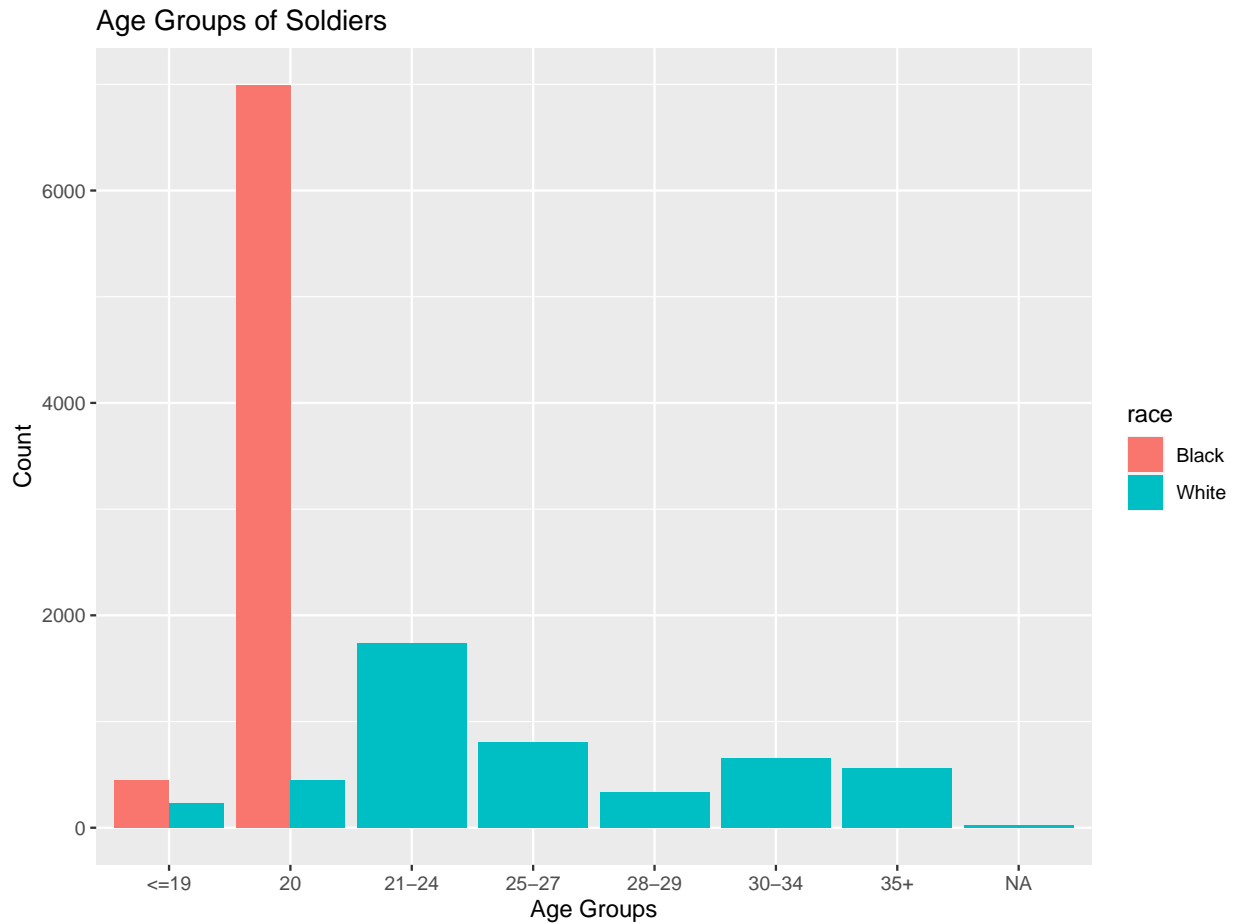
```
##      age      edu      enlist      outfits      state
## 1      20      4TH GRADE VOLUNTEERED      Together      TENNESSEE
## 2      20      4TH GRADE VOLUNTEERED      Together      PENNSYLVANIA
## 3      20      4TH GRADE VOLUNTEERED      Doesn't Matter      ARKANSAS
## 4      20      4TH GRADE VOLUNTEERED      Together      ILLINOIS
## 5      20      4TH GRADE VOLUNTEERED      Doesn't Matter      ALABAMA
## 6      20      4TH GRADE VOLUNTEERED      Seperated      NEW YORK
## 7      20      4TH GRADE VOLUNTEERED      Doesn't Matter      MISSOURI
## 8 21-24      HIGH SCHOOL      DRAFTED      Seperated      ILLINOIS
## 9 <=19 SOME HIGH/TRADE SCHOOL VOLUNTEERED      Seperated      OKLAHOMA
## 10     20      4TH GRADE VOLUNTEERED      Together      MICHIGAN
##      community race
## 1      City Black
## 2 Large City Black
## 3      Town Black
## 4 Large City Black
## 5      Town Black
## 6 Large City Black
## 7 Large City Black
## 8      Farm White
## 9      City White
## 10 Large City Black
```

How Old Are the Soldiers

Age was not collected on a continuous scale and was discretized into a few different age groups. We see that the overwhelming bulk of black soldiers who were survived were 20 years old with a small portion who were 19 or younger. In the meanwhile, the white soldiers had more spread to their ages with most soldiers being between the ages of 21 and 24.

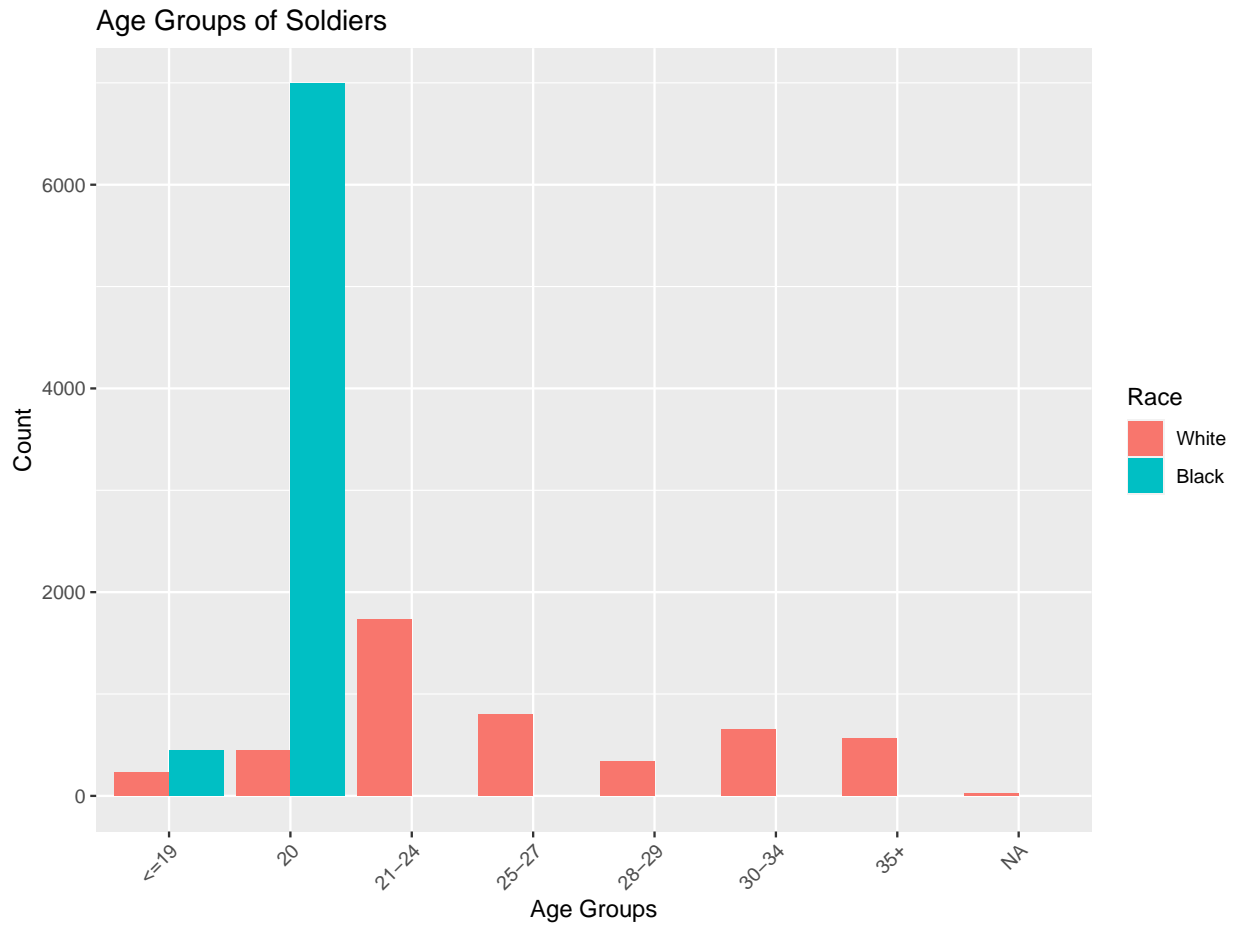






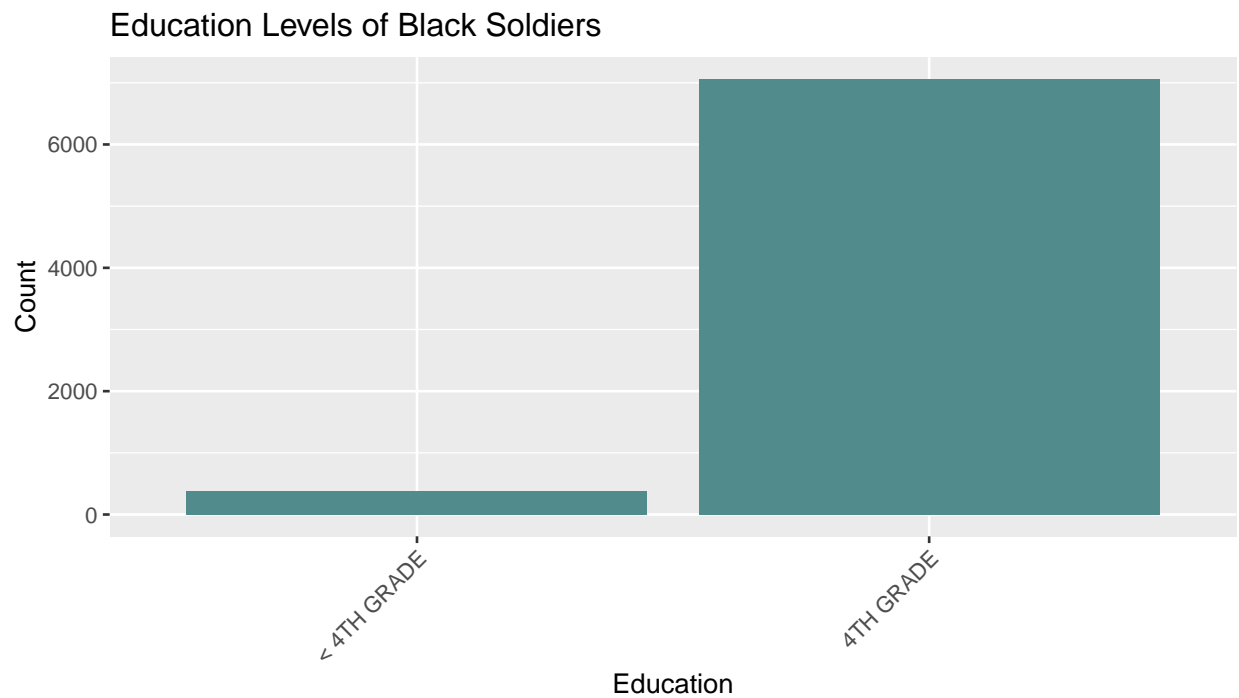
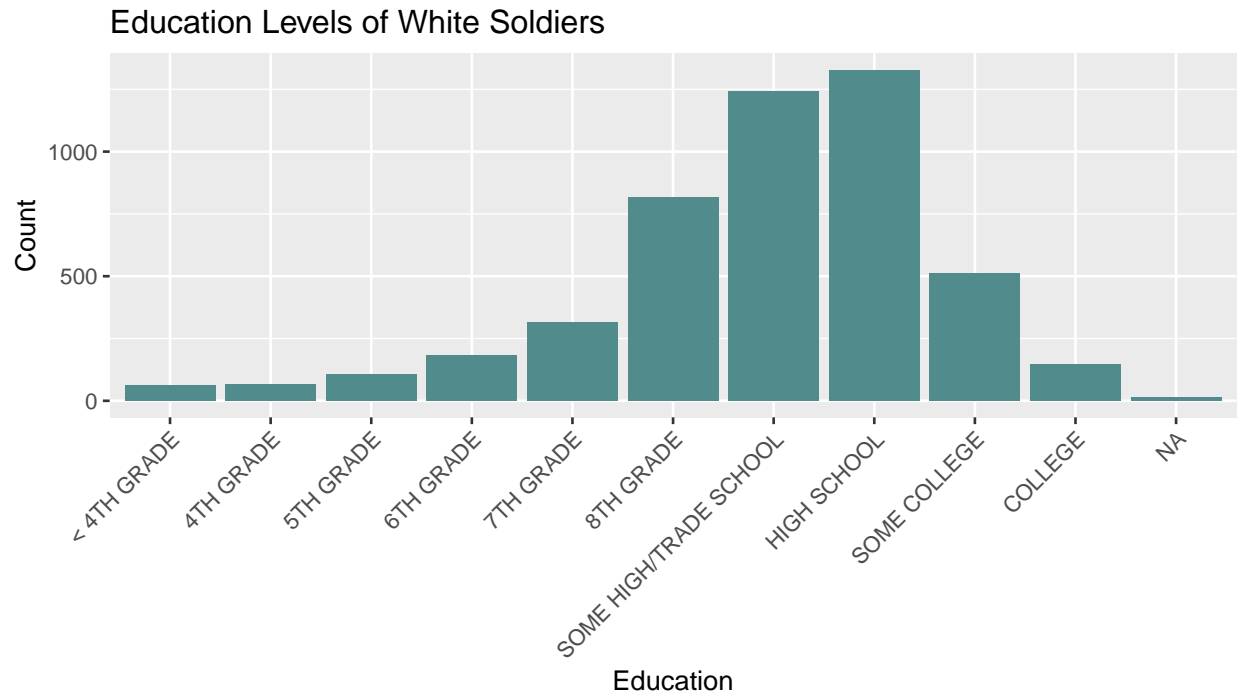
```
## Warning in melt(., id.vars = "age"): The melt generic in data.table has been
## passed a data.frame and will attempt to redirect to the relevant reshape2
## method; please note that reshape2 is deprecated, and this redirection is now
## deprecated as well. To continue using melt methods from reshape2 while both
## libraries are attached, e.g. melt.list, you can prepend the namespace like
## reshape2::melt(.). In the next version, this warning will become an error.
```

```
## Warning: Removed 6 rows containing missing values (geom_bar).
```



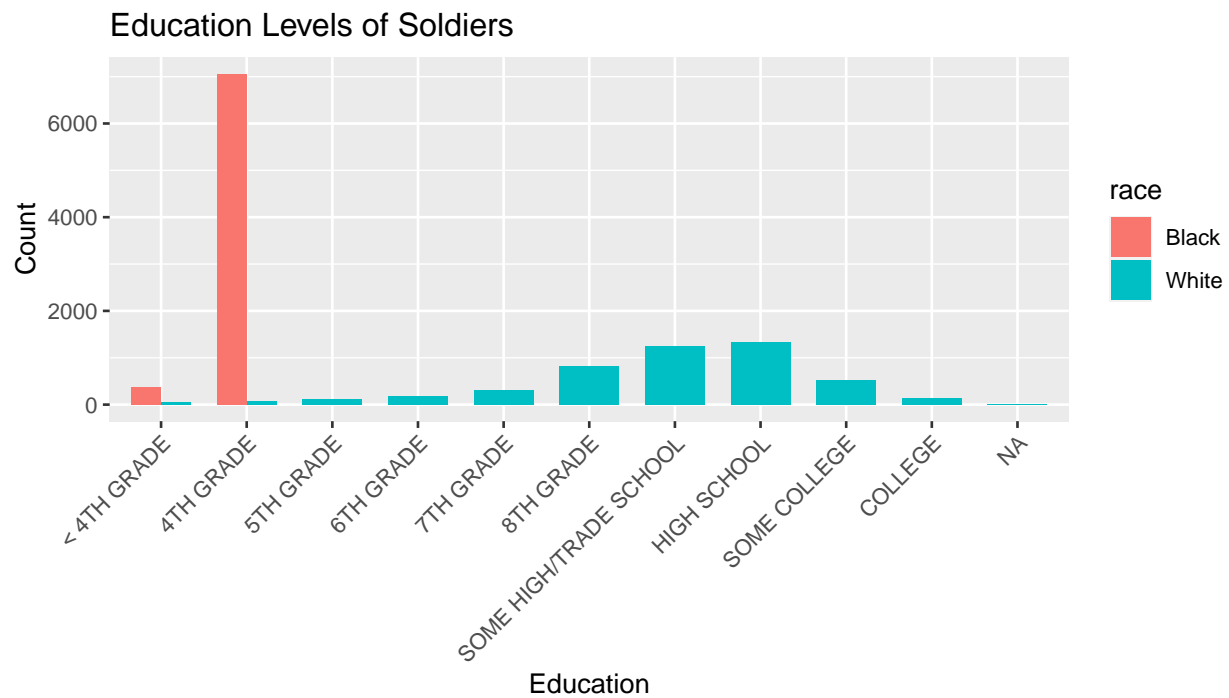
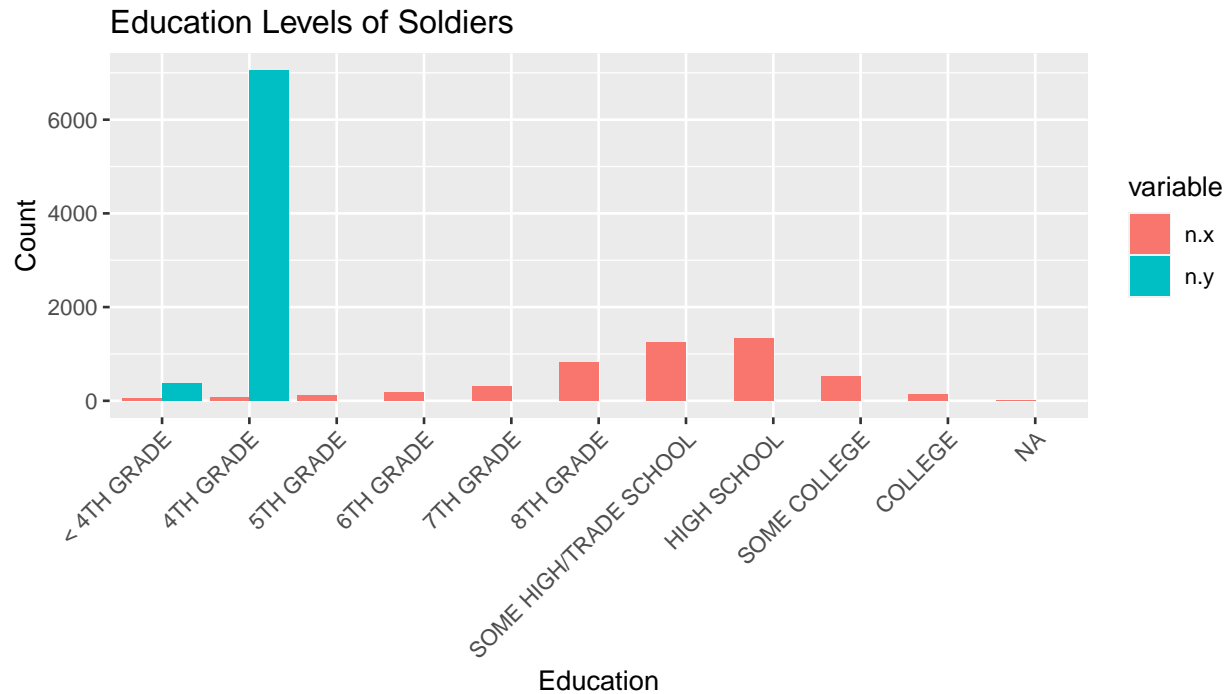
How Far in School Were They?

If we look at education now we see that again black soldiers have littel spread in their education. Remarkably, all of the black soldiers survied have less than a 5th grade education at the time. Meanwhile, the bulk of the white soldiers have had a high school/some high school.



```
## Warning in melt(., id.vars = "edu"): The melt generic in data.table has been
## passed a data.frame and will attempt to redirect to the relevant reshape2
## method; please note that reshape2 is deprecated, and this redirection is now
## deprecated as well. To continue using melt methods from reshape2 while both
## libraries are attached, e.g. melt.list, you can prepend the namespace like
## reshape2::melt(.). In the next version, this warning will become an error.
```

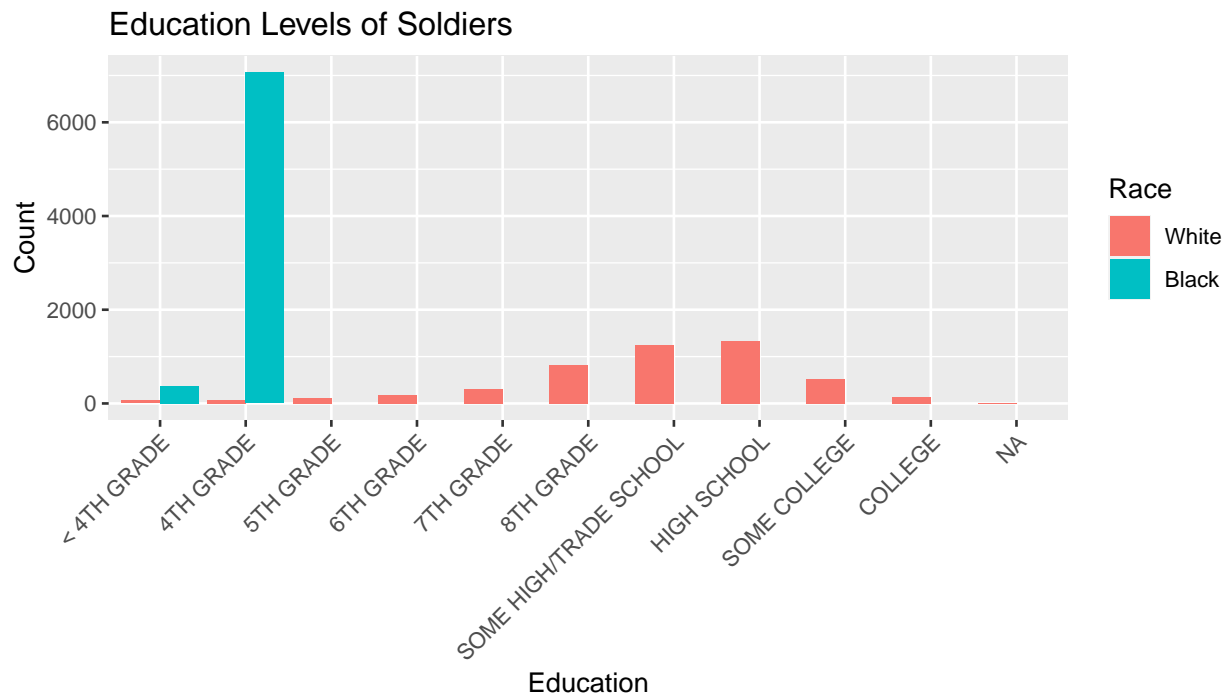
```
## Warning: Removed 9 rows containing missing values (geom_bar).
```



```
## Warning in melt(., id.vars = "edu"): The melt generic in data.table has been
## passed a data.frame and will attempt to redirect to the relevant reshape2
## method; please note that reshape2 is deprecated, and this redirection is now
## deprecated as well. To continue using melt methods from reshape2 while both
## libraries are attached, e.g. melt.list, you can prepend the namespace like
## reshape2::melt(.). In the next version, this warning will become an error.
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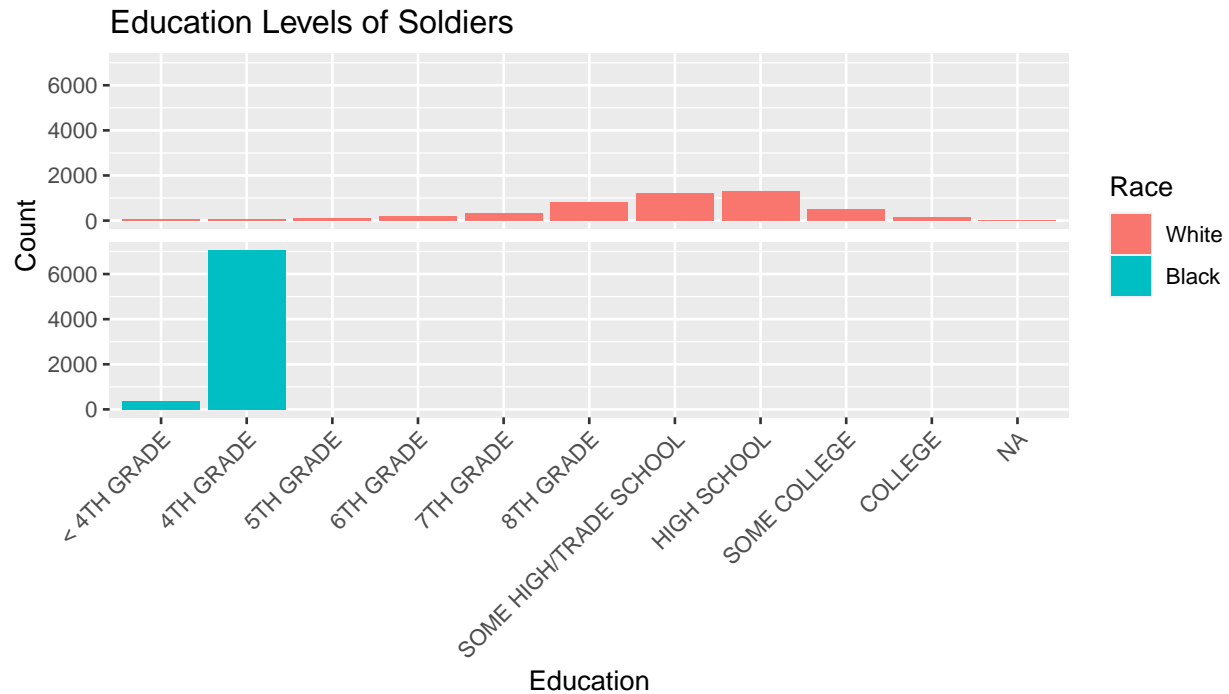
```
## Warning in melt(., id.vars = "edu"): Removed 9 rows containing missing values
```

```
## (geom_bar).
```



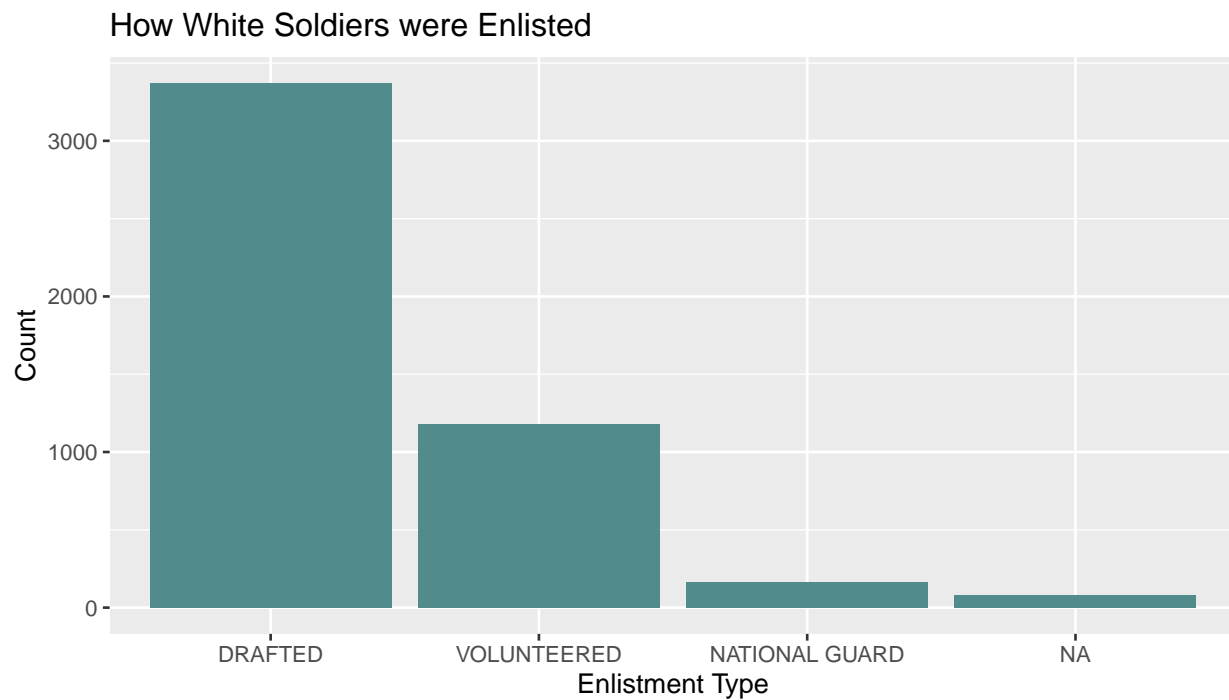
```
## Warning in melt(., id.vars = "edu"): The melt generic in data.table has been
## passed a data.frame and will attempt to redirect to the relevant reshape2
## method; please note that reshape2 is deprecated, and this redirection is now
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## reshape2::melt(.). In the next version, this warning will become an error.
```

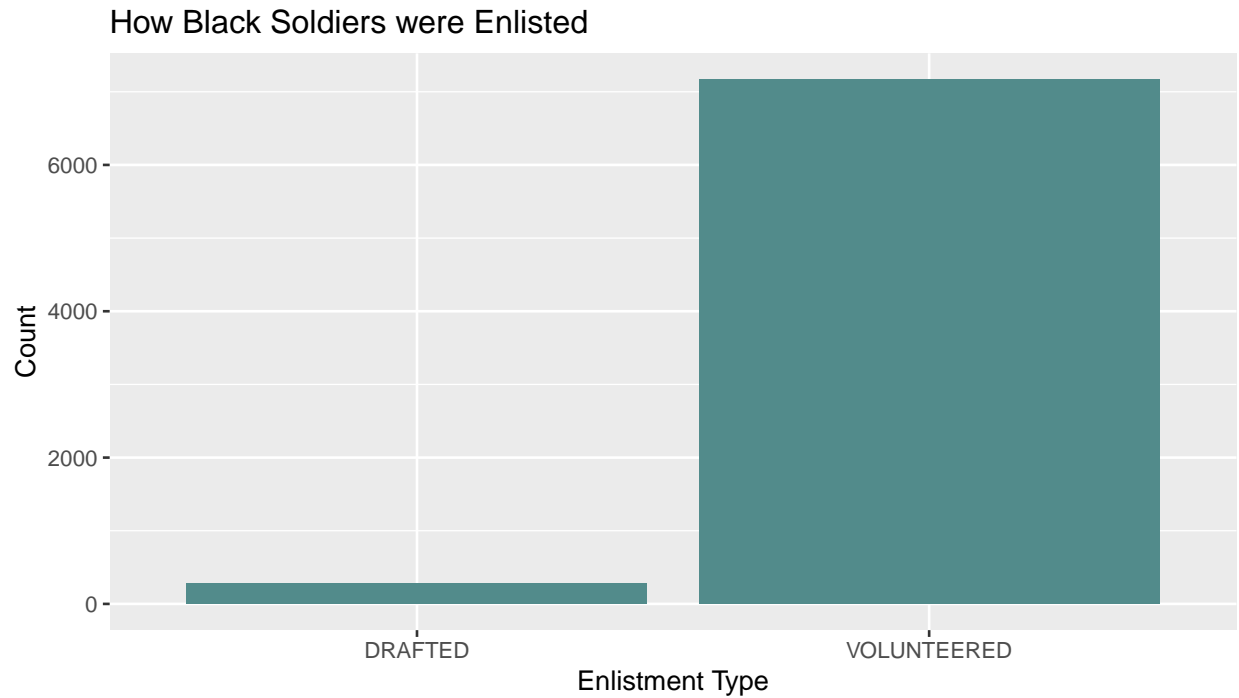
```
## Warning in melt(., id.vars = "edu"): Removed 9 rows containing missing values
## (geom_bar).
```

How Did They End Up in the Military

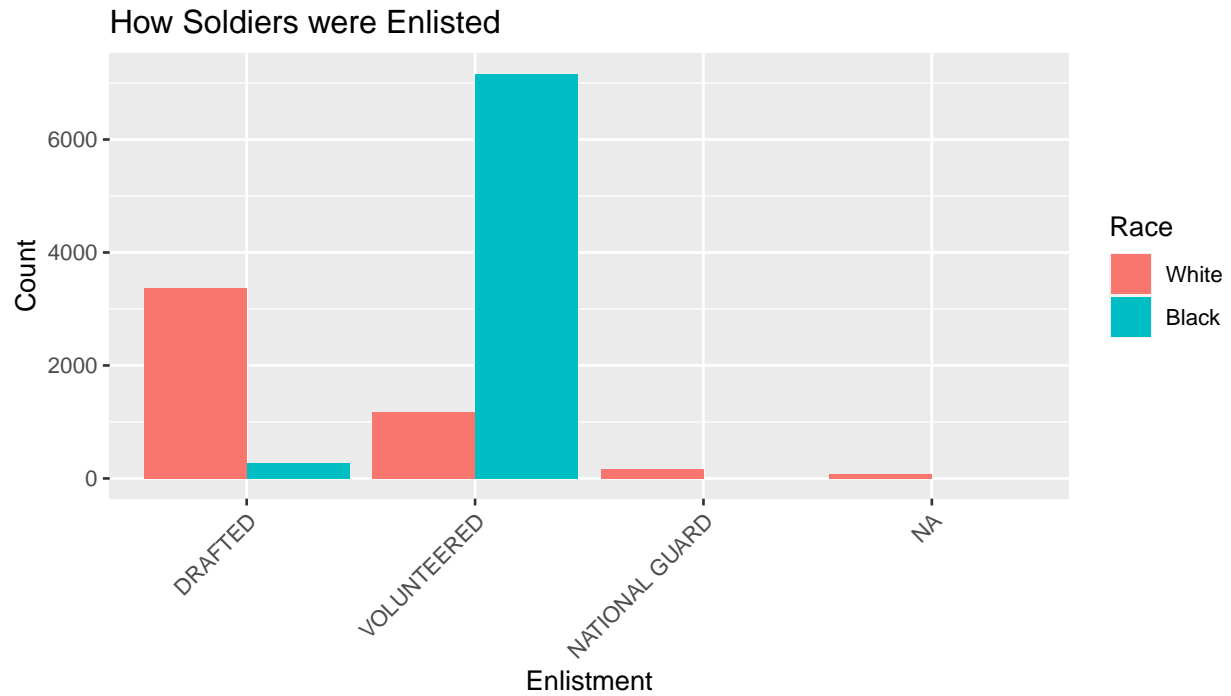
Something interesting arises here were we find that vast majority of the black soldiers actually volunteered to join the military whereas about 3/4 of the survived white soldiers were drafted and the remaining soldiers were mostly volunteers and a few were from the National Guard.





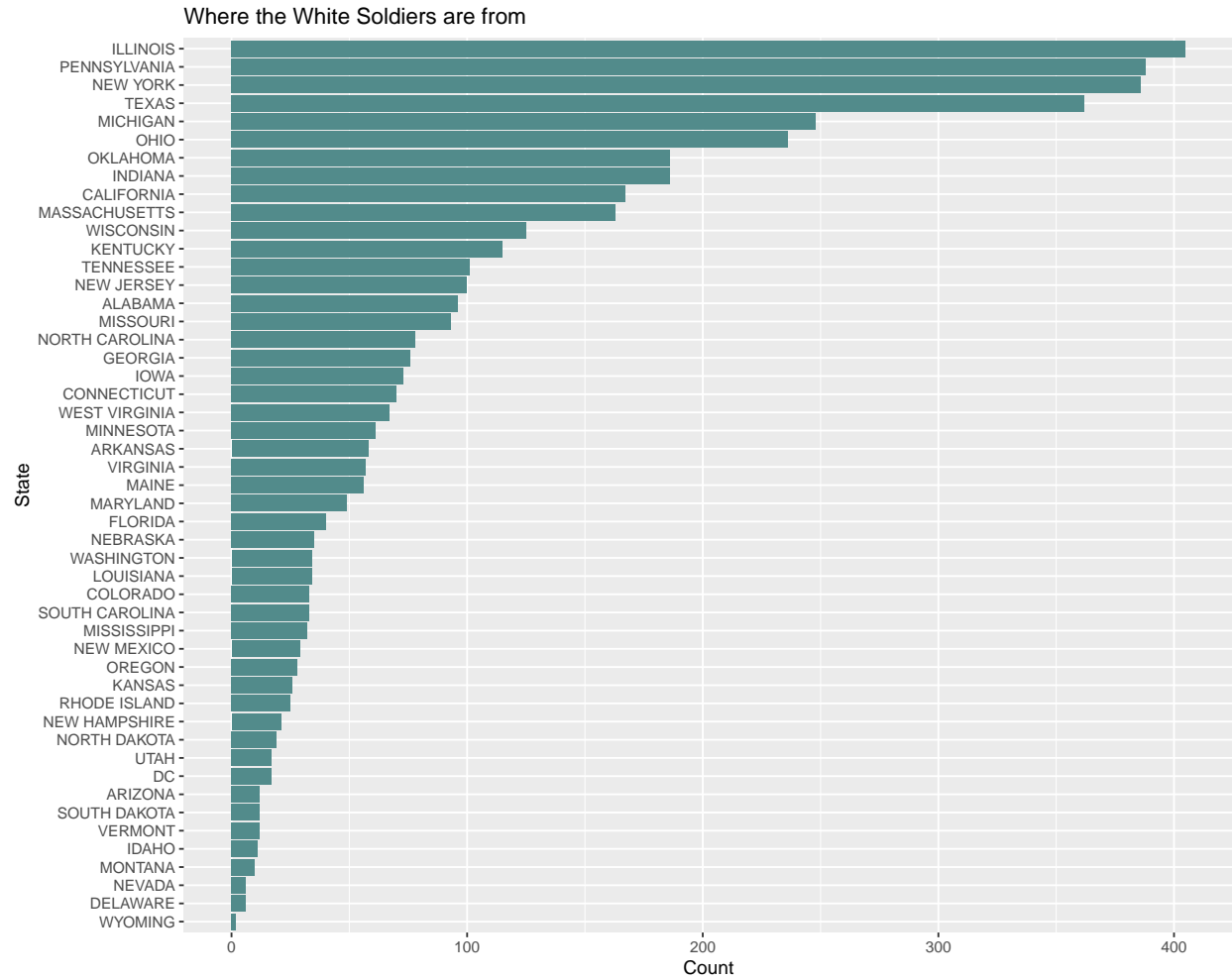
```
## Warning in melt(., id.vars = "enlist"): The melt generic in data.table has  
## been passed a data.frame and will attempt to redirect to the relevant reshape2  
## method; please note that reshape2 is deprecated, and this redirection is now  
## deprecated as well. To continue using melt methods from reshape2 while both  
## libraries are attached, e.g. melt.list, you can prepend the namespace like  
## reshape2::melt(.). In the next version, this warning will become an error.
```

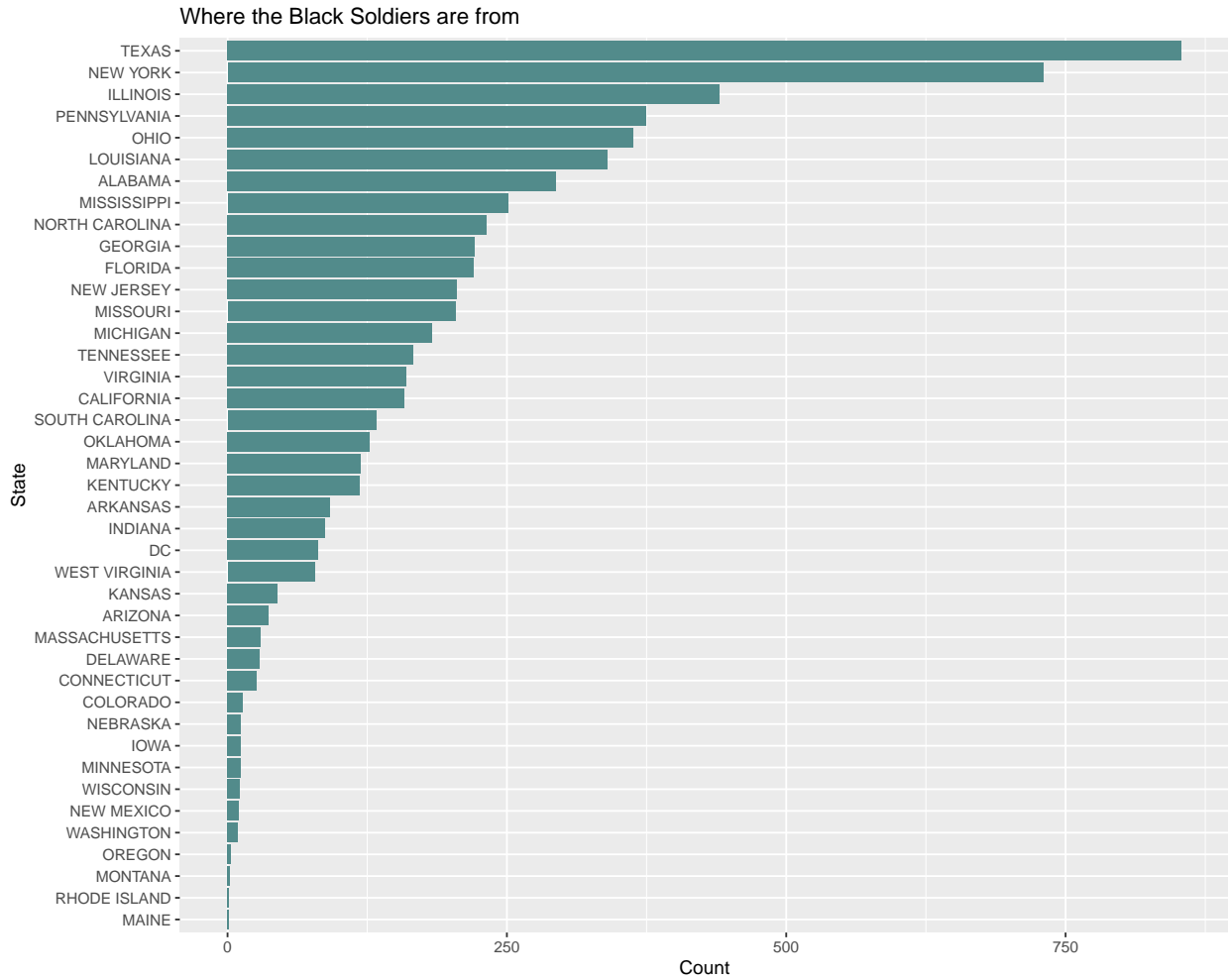
```
## Warning: Removed 2 rows containing missing values (geom_bar).
```



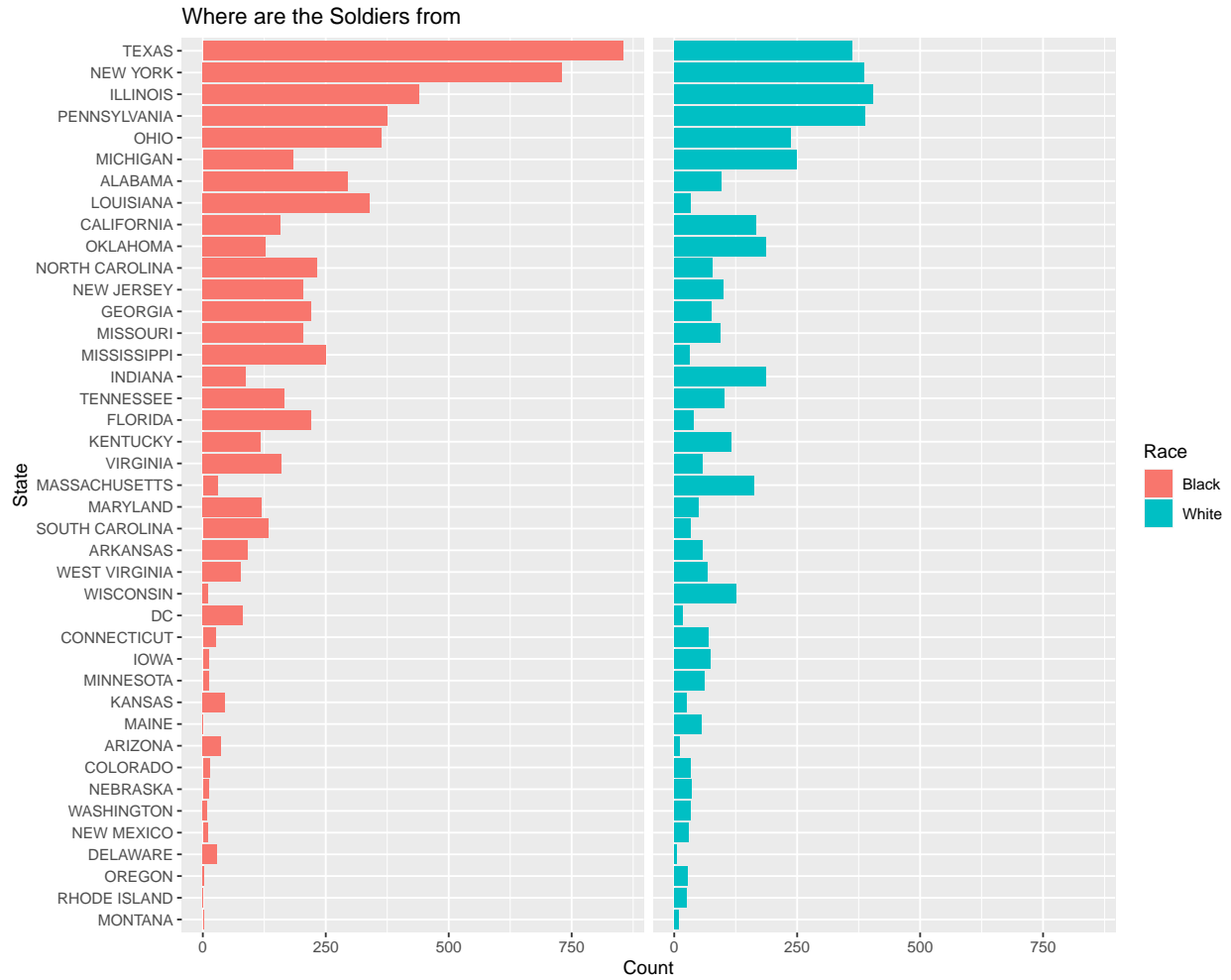
Where Are the Soldiers From?

Expectedly, most of the soldiers hailed from the most populous states at the time. White soldiers were mostly from Illinois, Pennsylvania, New York, Texas, and Michigan while black soldiers were mostly from Texas, New York, Illinois, Pennsylvania, and Ohio. Note that the top 4 states for white soldiers had similar amounts of soldiers but there was a severe drop off in representation of black soldiers from other states after Texas and New York.





```
## Warning in melt(., id.vars = "state"): The melt generic in data.table has
## been passed a data.frame and will attempt to redirect to the relevant reshape2
## method; please note that reshape2 is deprecated, and this redirection is now
## deprecated as well. To continue using melt methods from reshape2 while both
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```



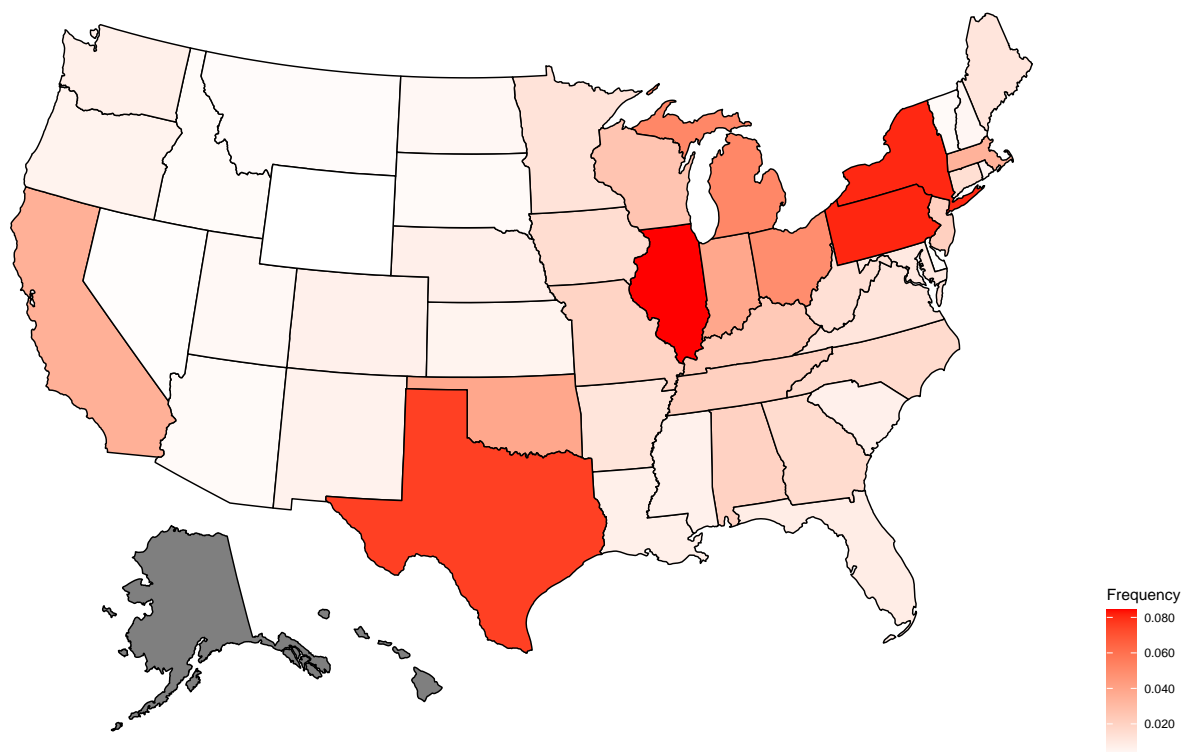
```
## 'summarise()' ungrouping output (override with '.groups' argument)

## Warning: Use of 'map_df$x' is discouraged. Use 'x' instead.

## Warning: Use of 'map_df$y' is discouraged. Use 'y' instead.

## Warning: Use of 'map_df$group' is discouraged. Use 'group' instead.
```

Heat Map of Relative Frequency of White US Soldiers by State



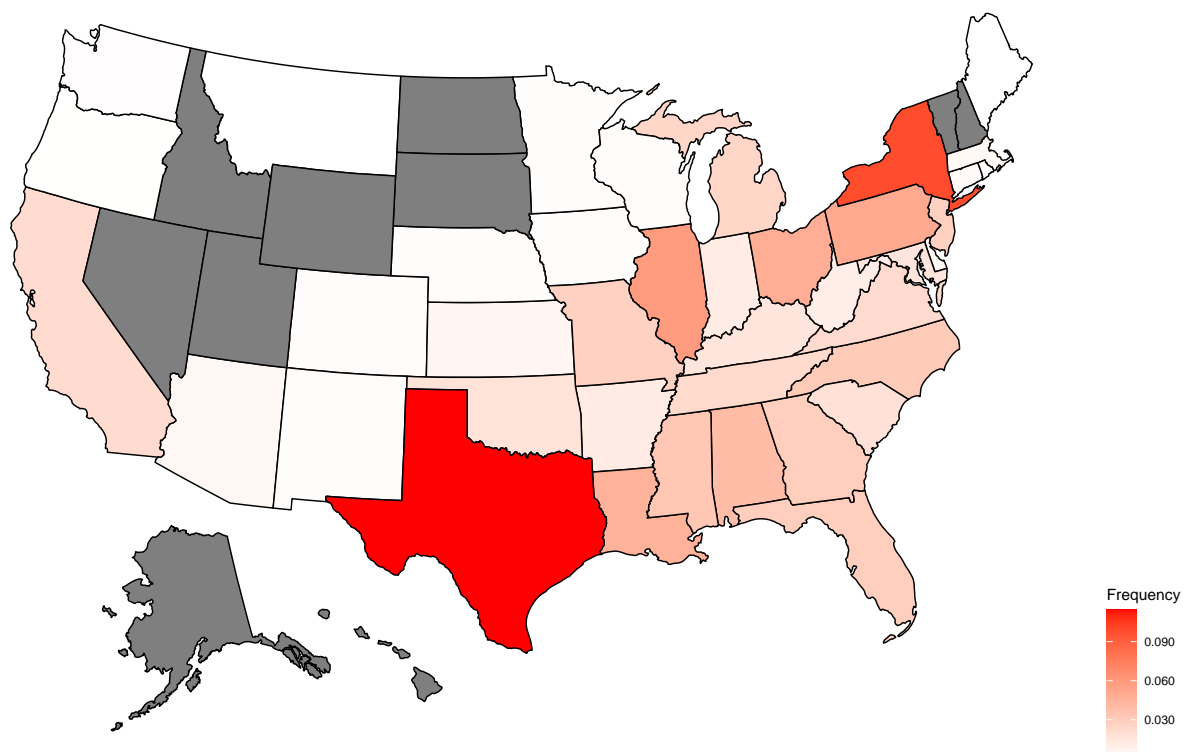
```
## 'summarise()' ungrouping output (override with '.groups' argument)

## Warning: Use of 'map_df$x' is discouraged. Use 'x' instead.

## Warning: Use of 'map_df$y' is discouraged. Use 'y' instead.

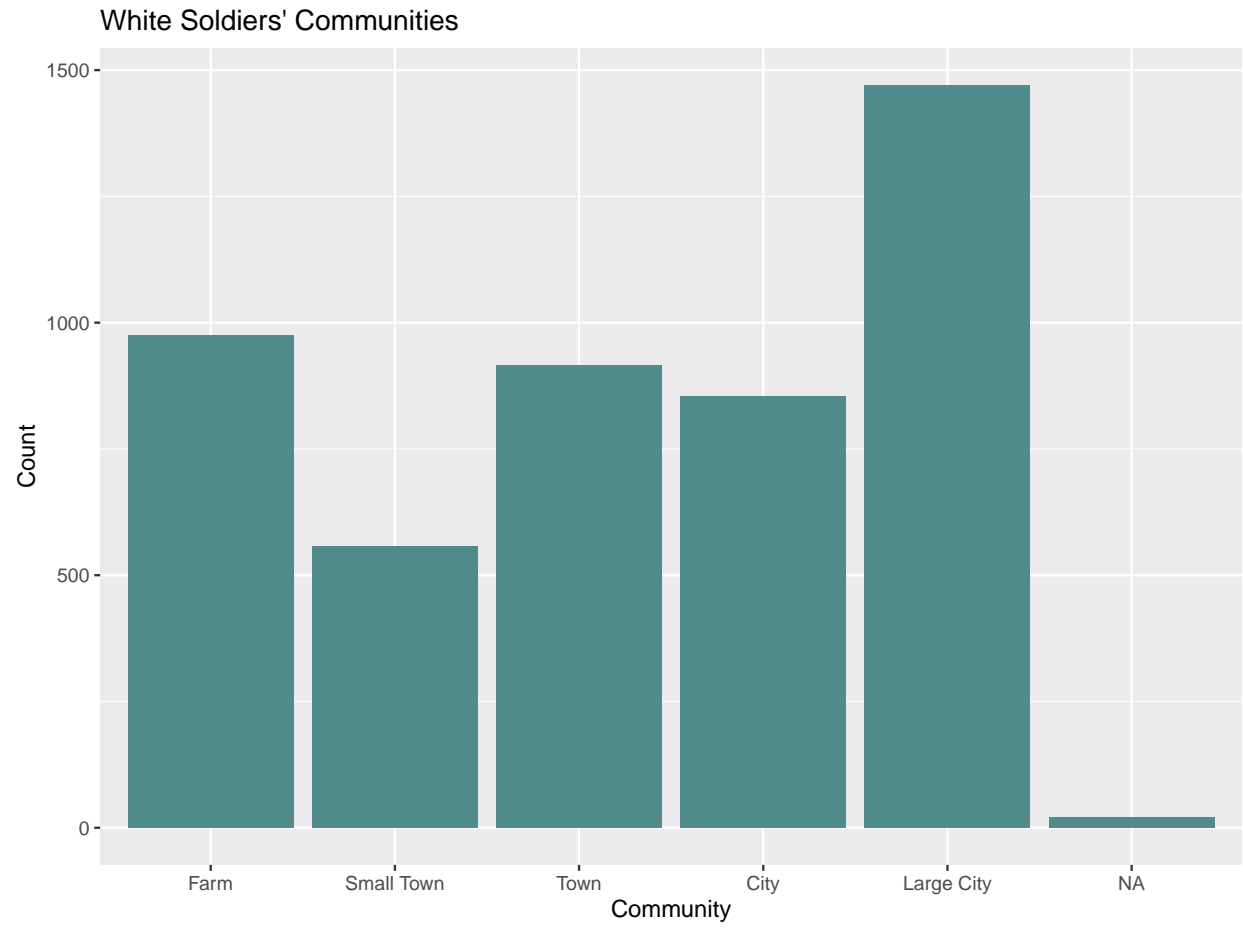
## Warning: Use of 'map_df$group' is discouraged. Use 'group' instead.
```

Heat Map of Relative Frequency of Black US Soldiers by State

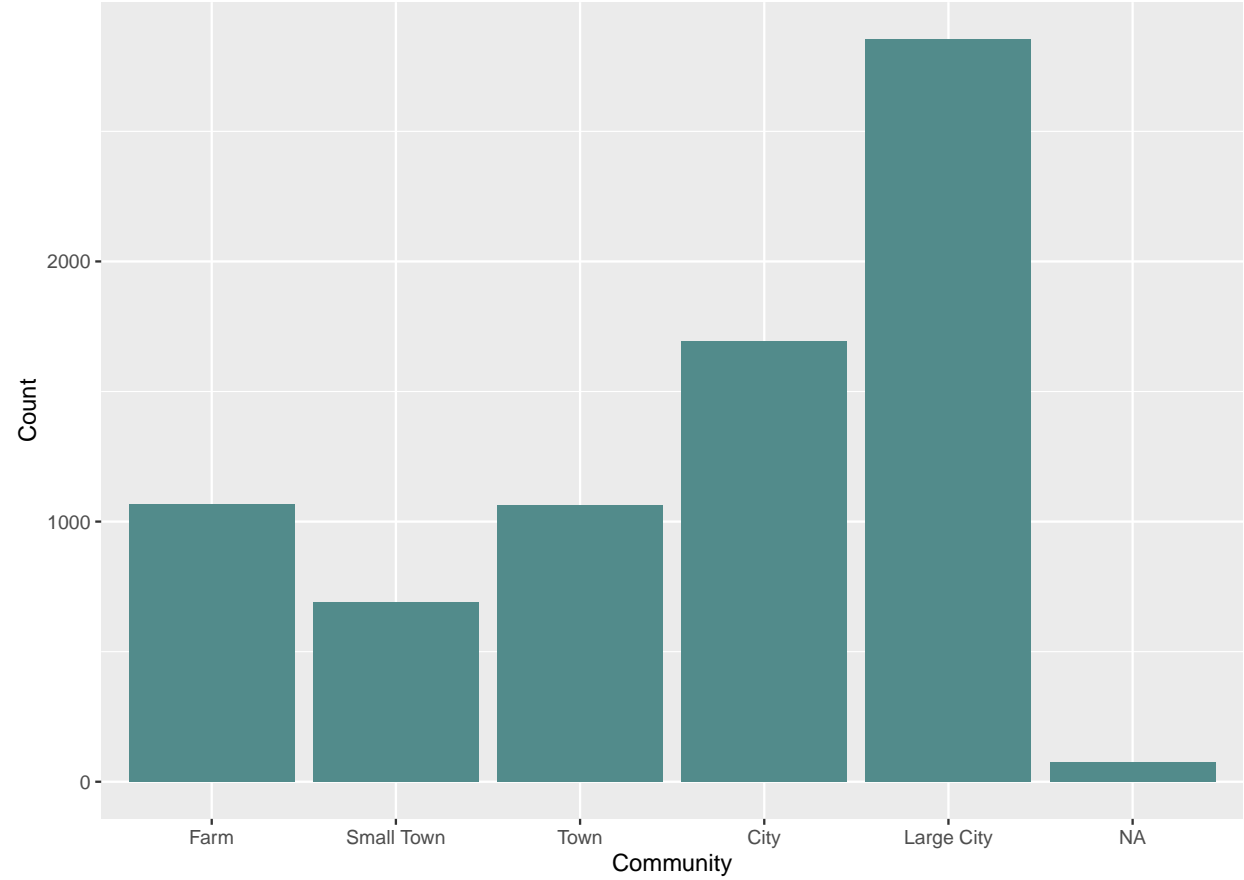


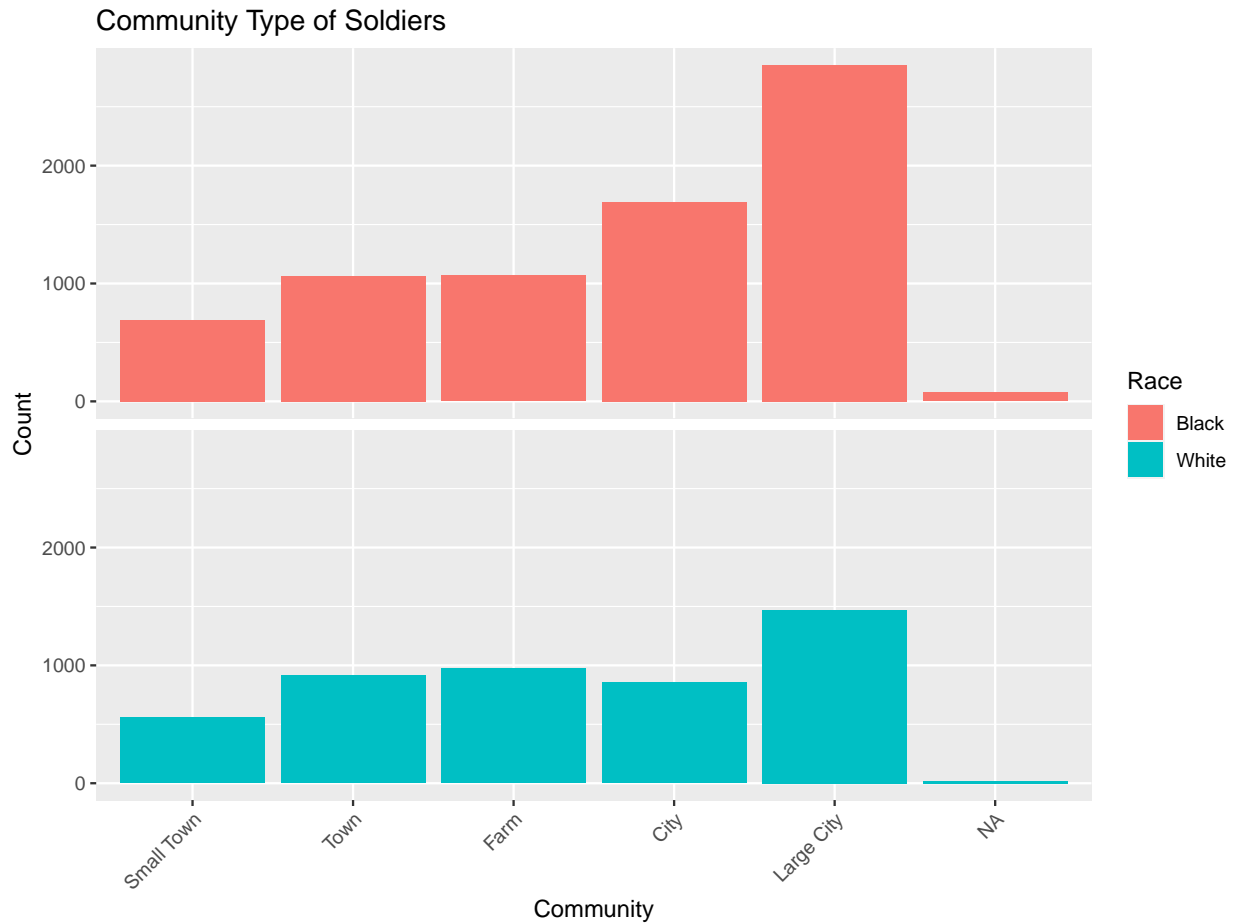
What sort of places did they live in?

As expected, most soldiers whose home communities are large cities had the most representation across both groups. White soldiers saw roughly equal representation from soldiers who came from a farm, town, or city with actually slightly less people from cities. On the otherhand, the next community with the largest representation for black soldiers was a city followed by farms and towns which had approximately similar contributions.



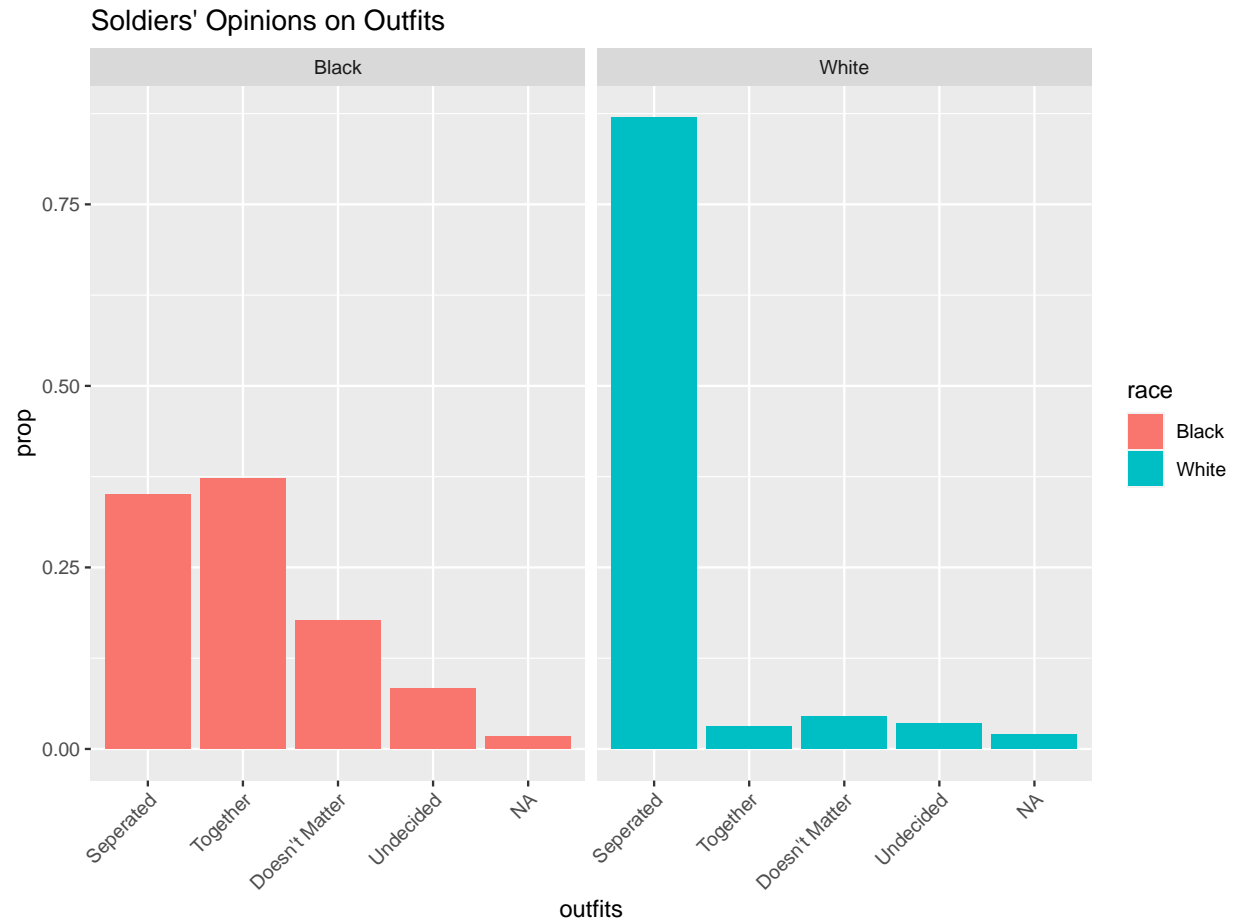
Black Soldiers' Communities





Integrating Outfits

Our key variable of interest from this survey is the soldiers opinions on integrating their outfits. Expectedly, we see the vast majority of white soldiers are against integrating however the black soldiers seem to be divided on whether they want integration or not. They are roughly evenly split on keeping outfits separated and integrating them and a good amount are also undecided or indifferent.

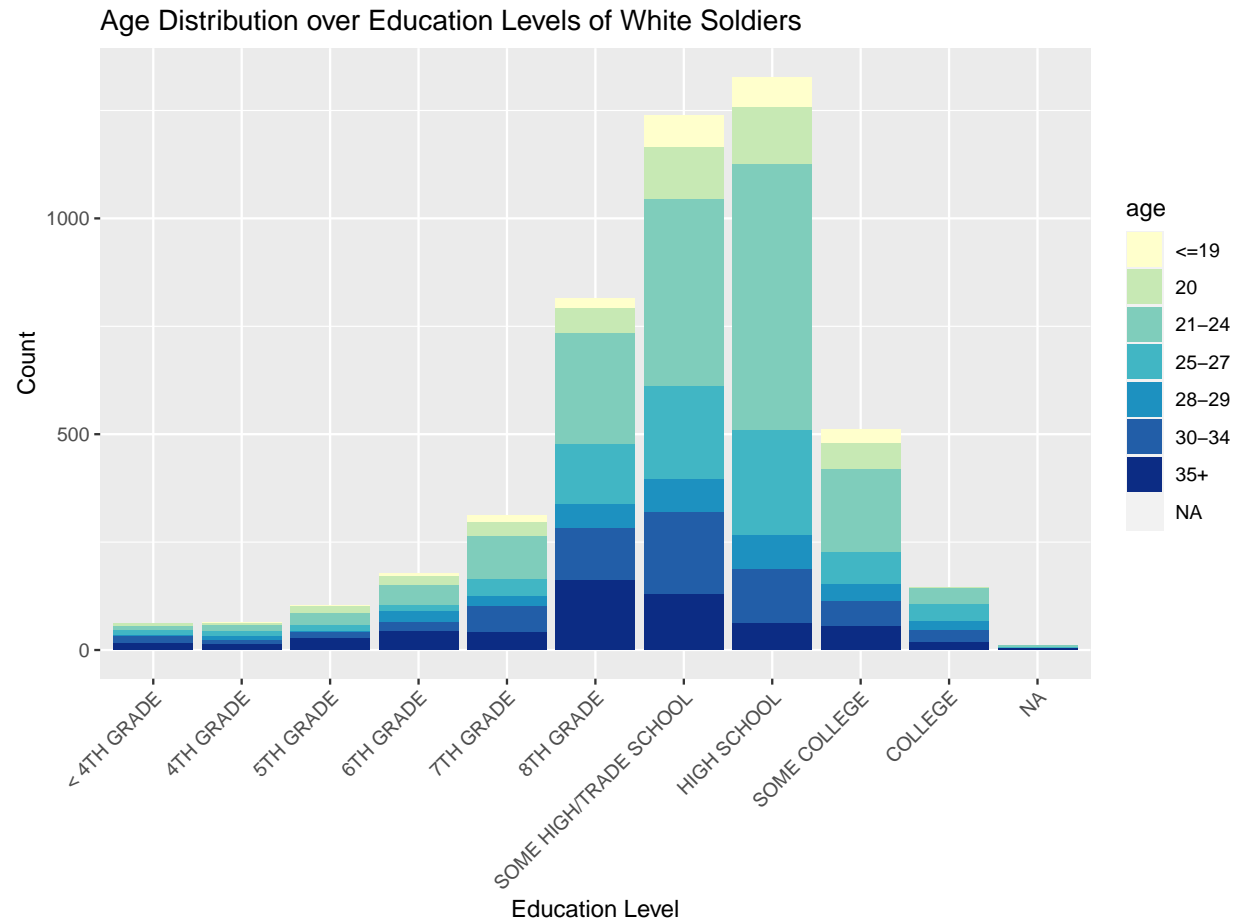


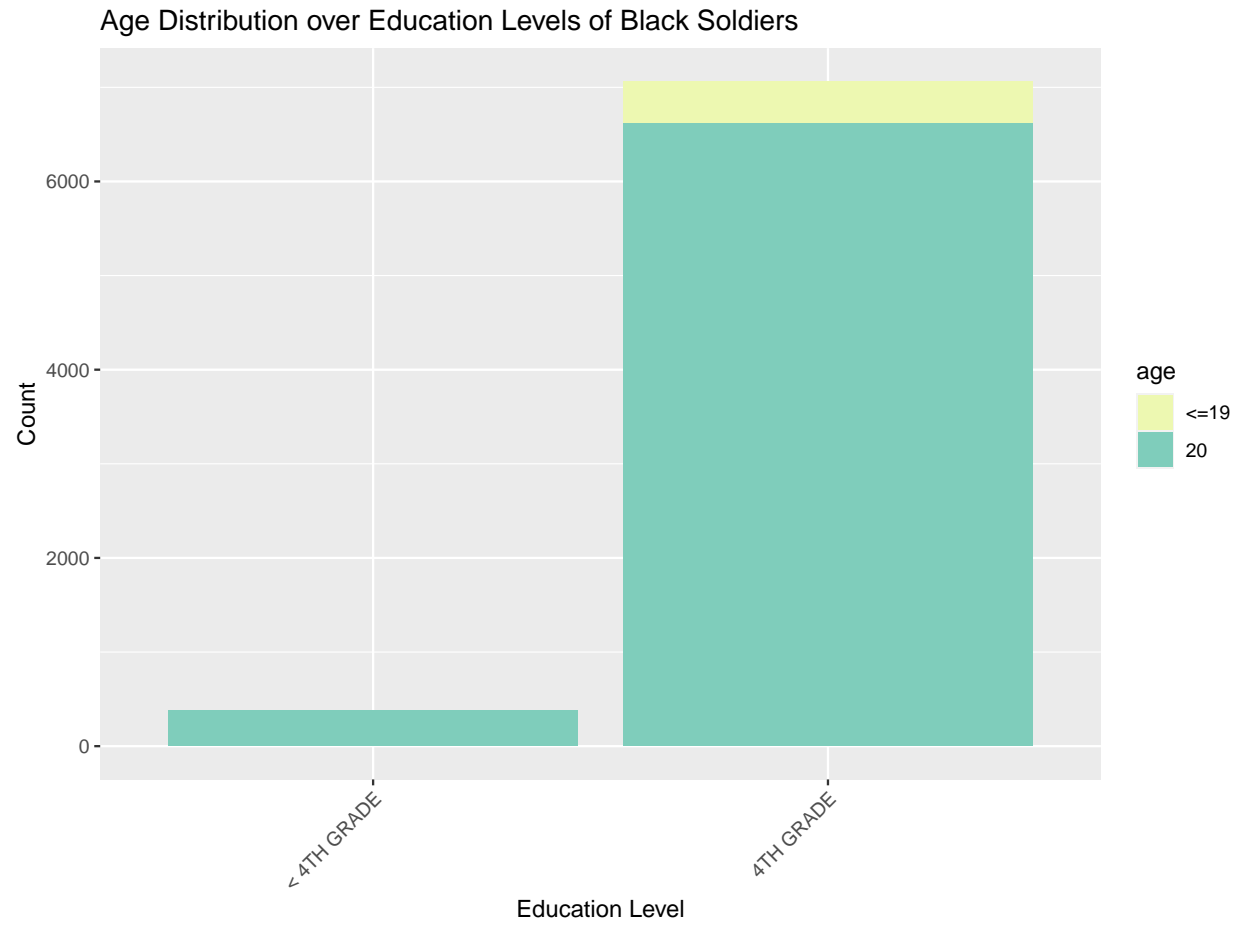
Deeper relationships

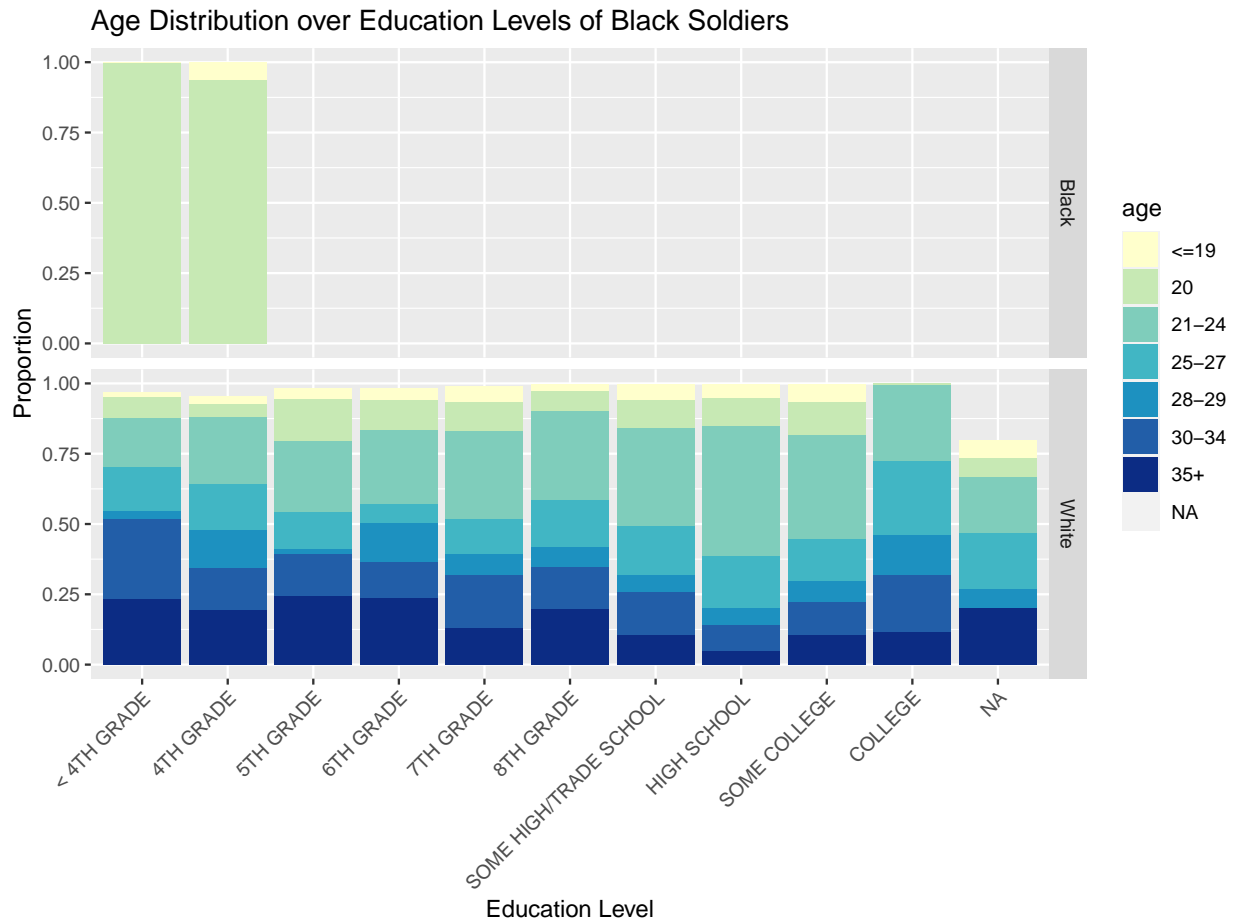
Of course, we are interested in seeing how these variables interact with one another to understand and reveal any deeper intricacies in the data.

Breaking down Education

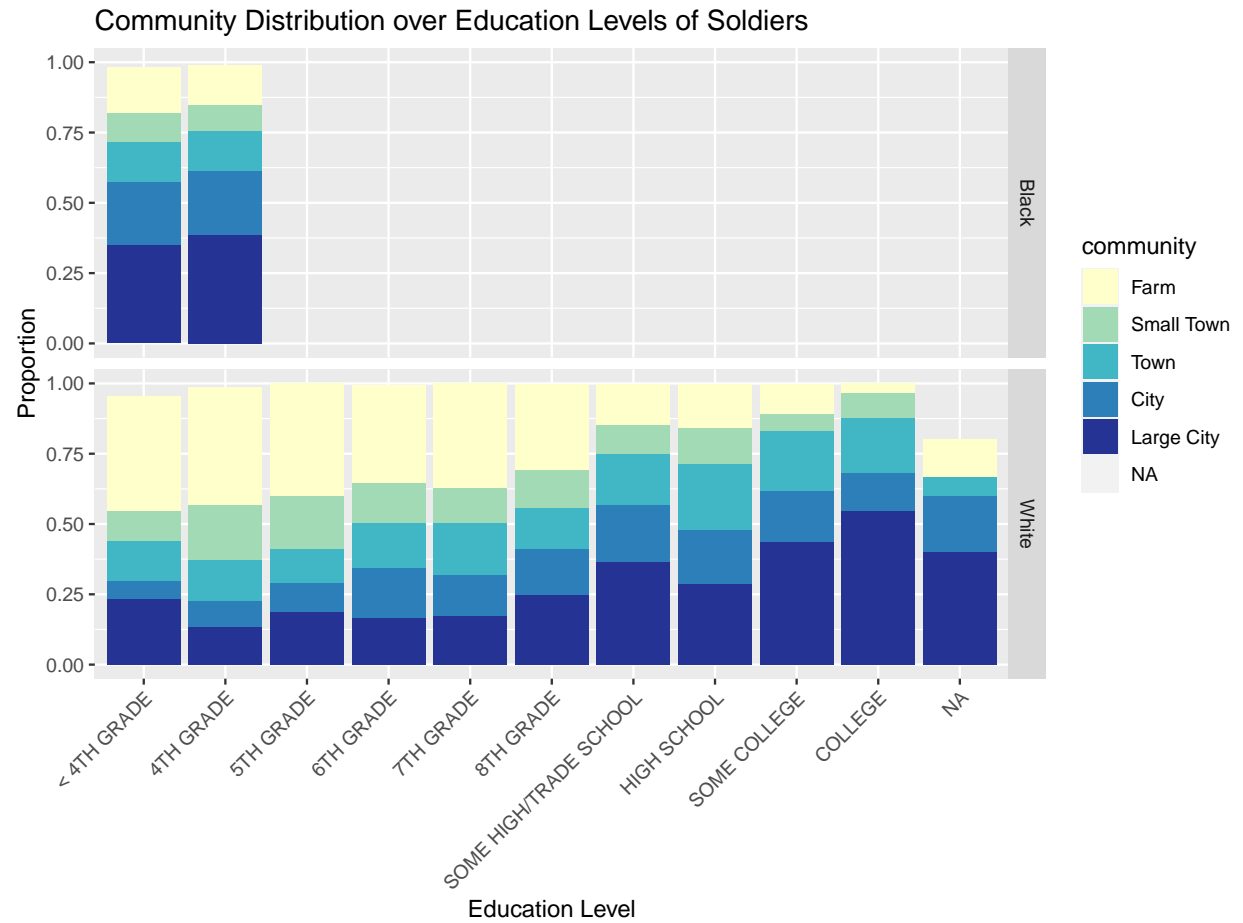
When we overlay the distribution of education levels with age ranges, we see that older white soldiers made up a larger proportion of white soldiers with less education compared to soldiers with some high school. As a contingent, it appears that soldiers between 21 and 24 with a high school education make up the largest contingent of white soldiers when grouped by education and age.

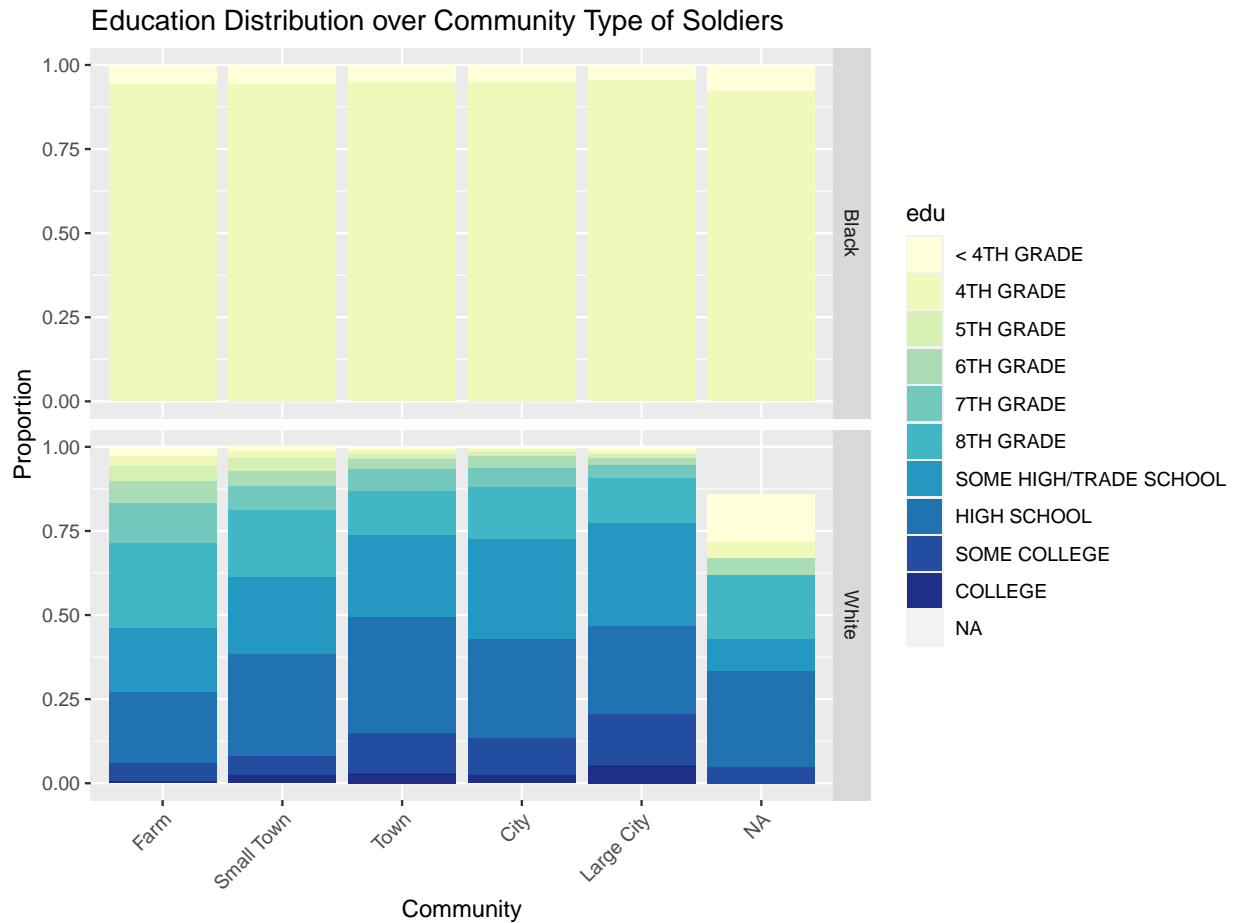






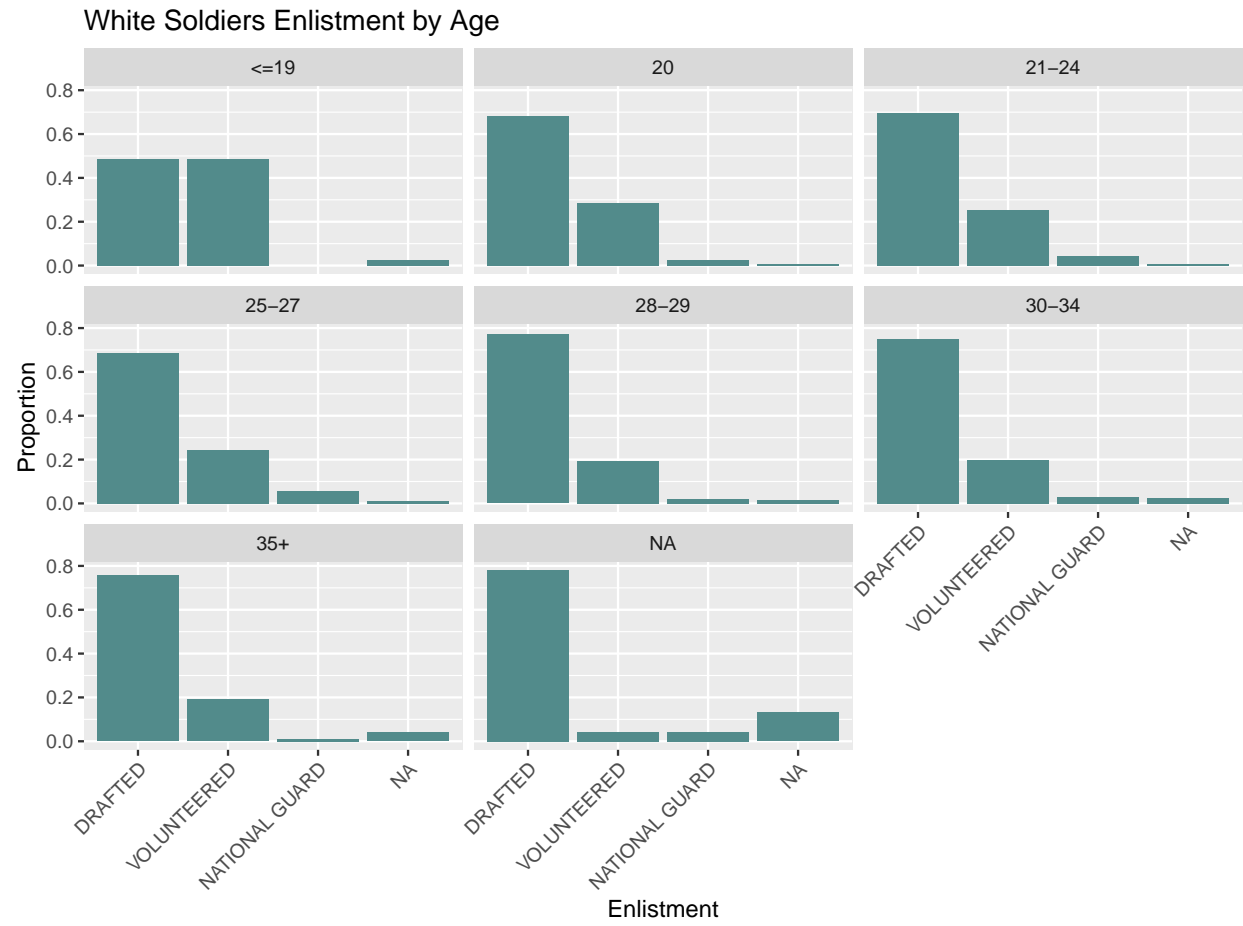
We see that larger portions of soldiers who are more educated come from communities which are larger in population.

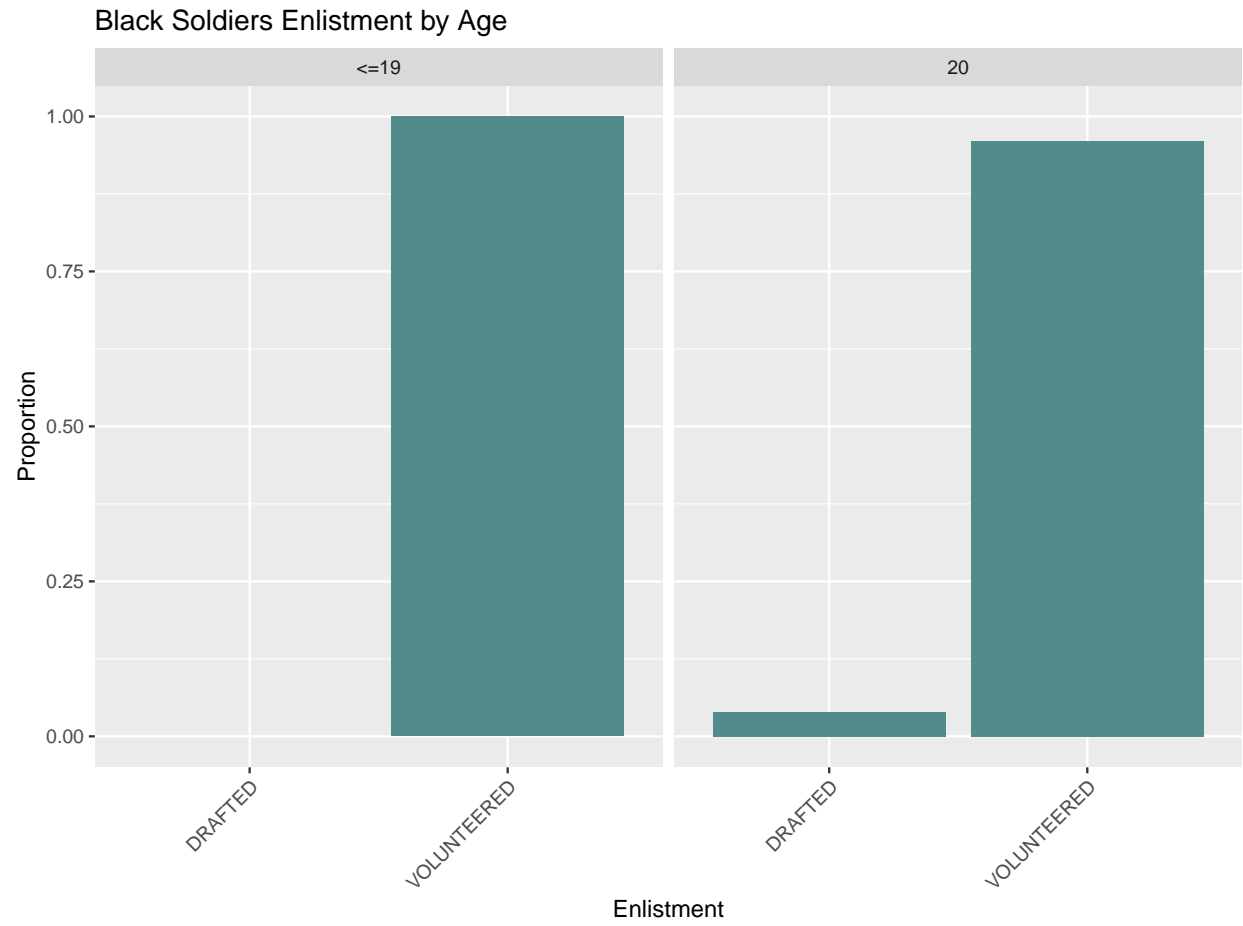




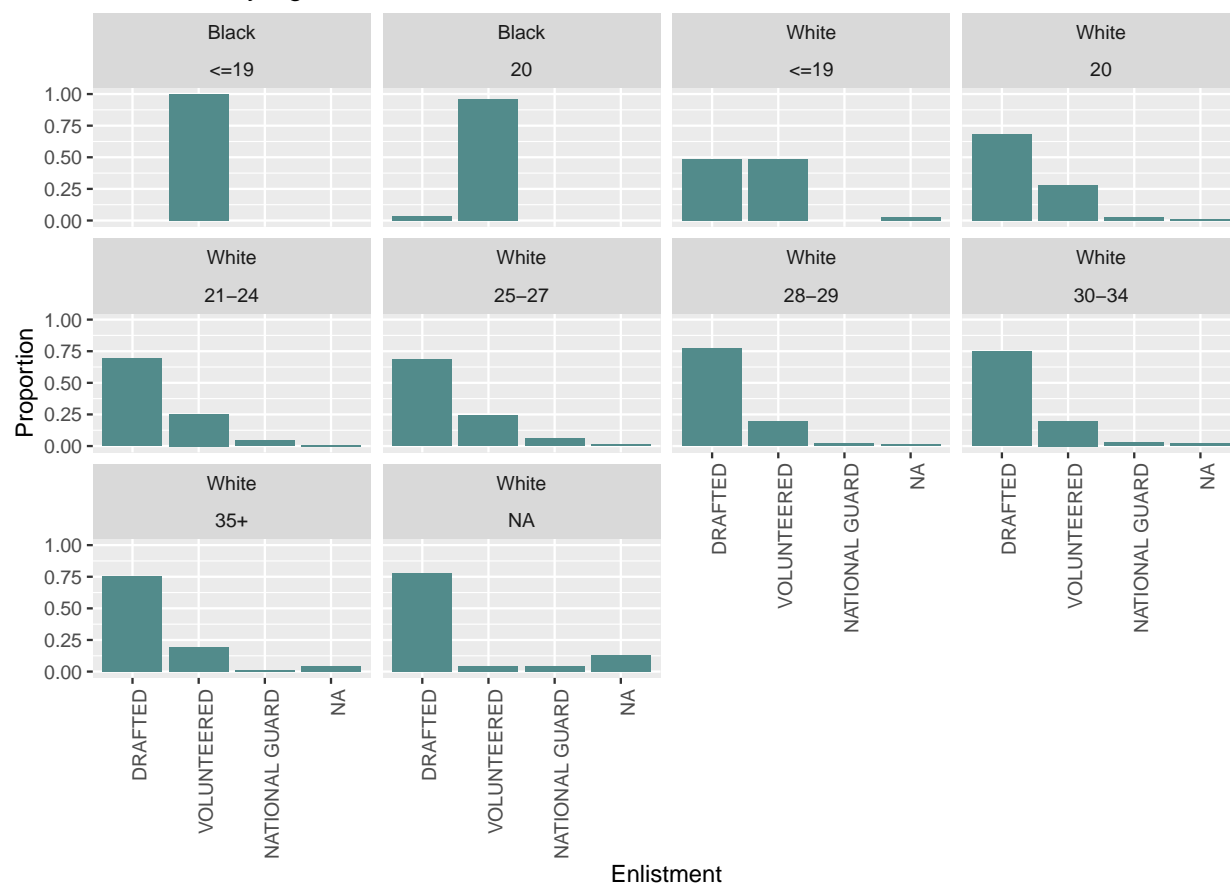
Breaking Down Enlistment

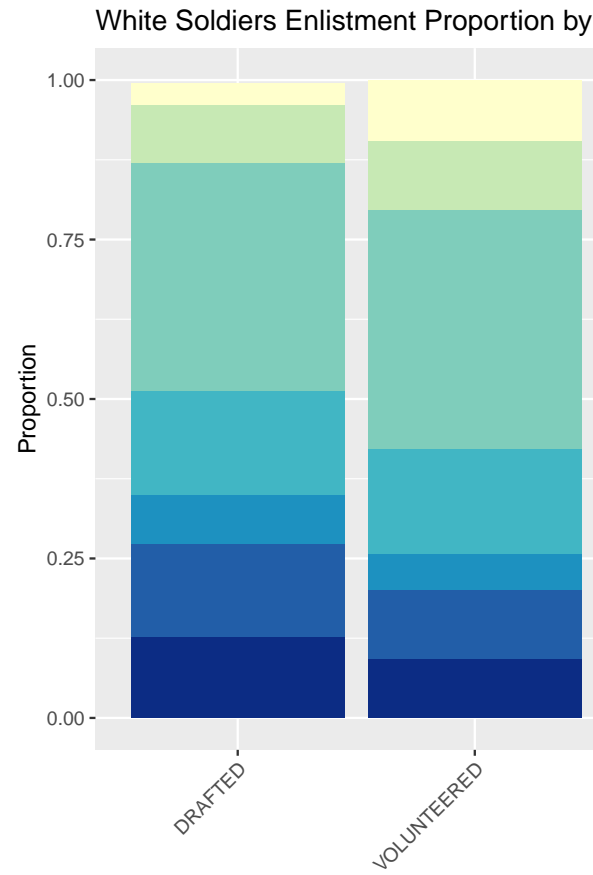
Due to the sample only having black soldiers no older than 20 we can't discern if race may have an impact on how different age groups enlist. For the most part, age makes no difference among the white soldiers in this regard with the exception that those 19 and younger enlisted through the draft and volunteering at similar rates. Of course, we should keep in mind that there were not that many soldiers within this group to begin with.





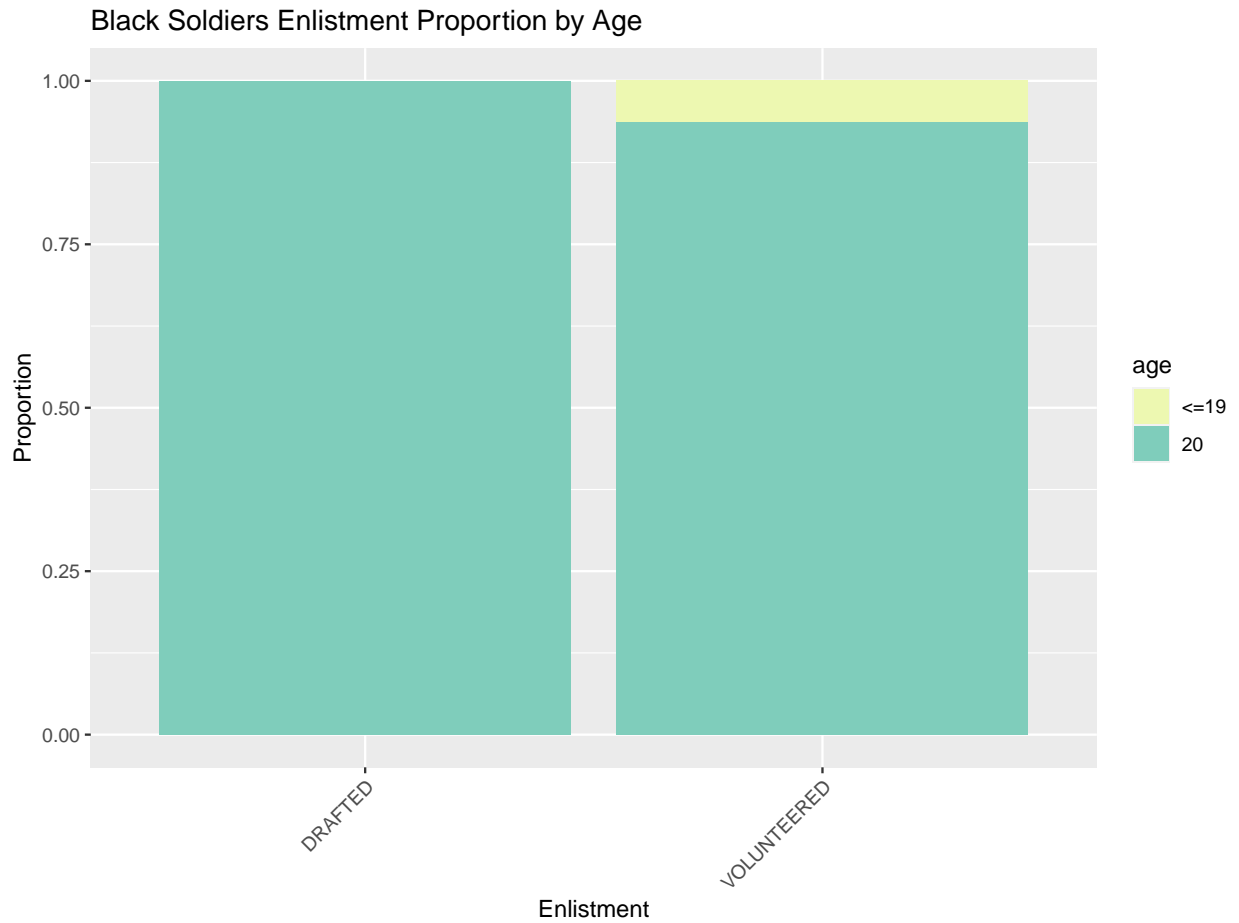
Enlistment by Age and Race





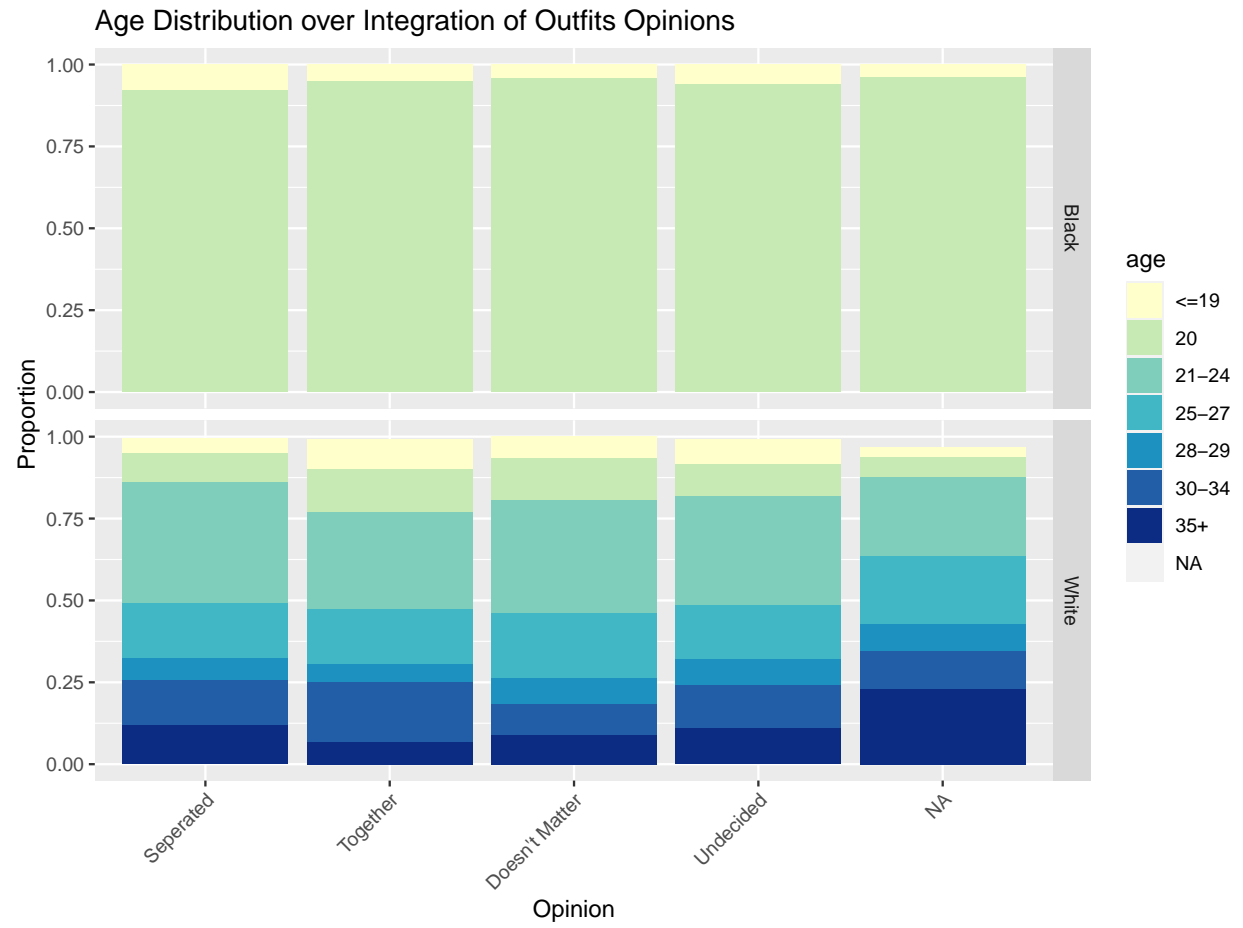
Not too interesting, white volunteered soldiers appear to be slightly younger.

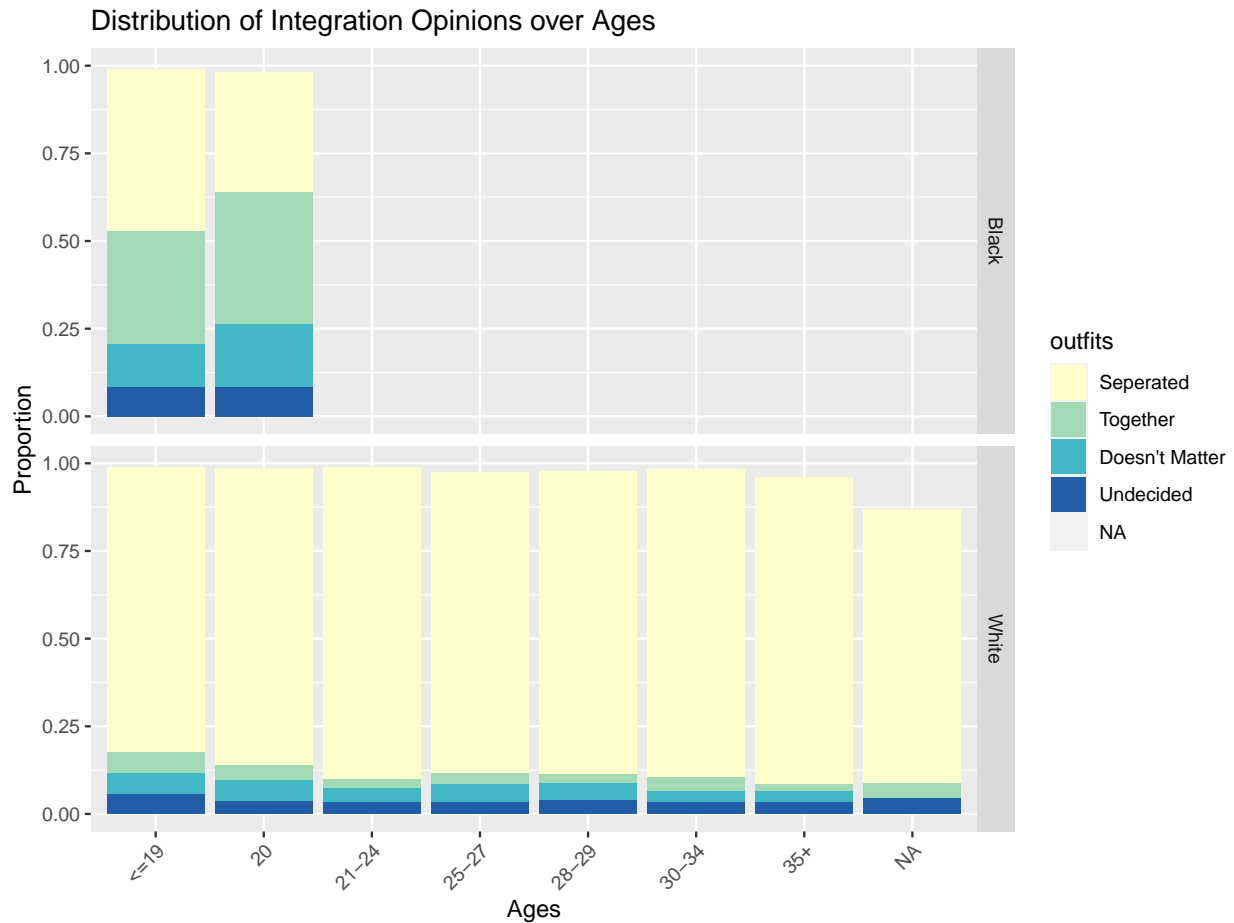
Enlist



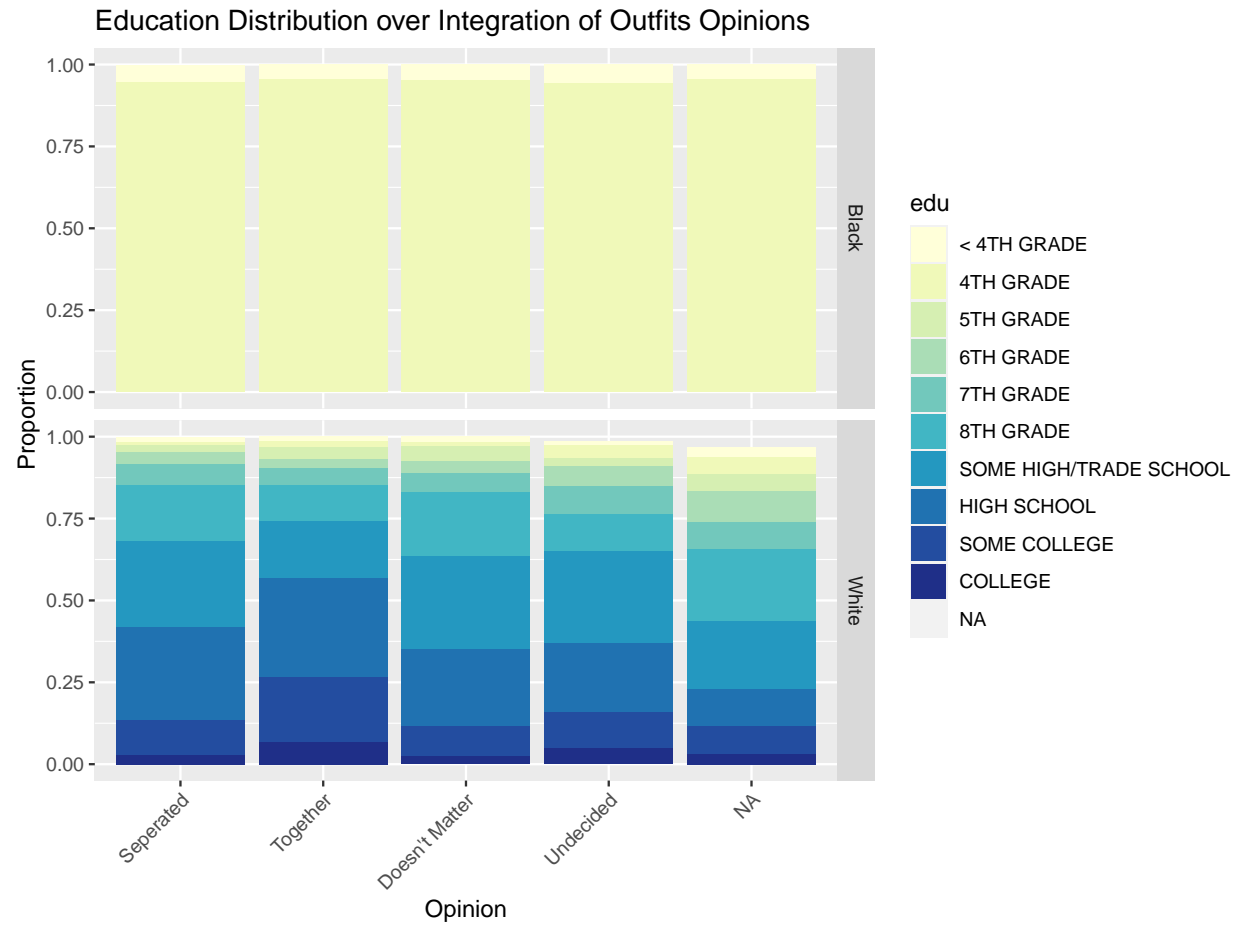
Breaking Down Outfits Opinion

If we look at the proportion of ages who elected for each category we see that the proportions are relatively stable across all opinions towards integration.





Now if we are to overlay the education distribution over the integration opinions we see something more interesting. It appears that the white soldiers that voted for the outfits to be together skew towards being more educated. In fact, over 50% of the soldiers who did vote for integrated units have atleast finished high school. This is not the case for any of the other responses.



Across both races we also see that of those who choose integration a greater portion were from large cities and soldiers who came from more populated voted for separation less proportionally.

