

A Look Into the American Work Life in 2018

featuring analysis of GSS Data

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Part 1: Coming to Grips with Data

Data Characteristics Abstract/Overview of GSS Data

All of the data in this report comes from the General Social Survey (GSS), which is conducted by the University of Chicago and funded by a generous grant from the National Science Foundation. The GSS has been collecting data on American society since 1972 to help examine and understand the behavior and attitudes of Americans. The GSS covers a wide range of topics pertaining to American life and is a reliable data source to find sociological data regarding the United States.

Part 2: Four Research Questions

- 1) What are the differences in average time worked by race and class status?
- 2) What are the differences in work related stress for men and women? How does that impact their satisfaction with the work they do?
- 3) How does education level affect how fair worker's feel their earnings are?
- 4) How does job satisfaction differ by age?

Variables for Analysis and their Descriptions

- 1) Age- age of respondent
- 2) Sex- respondent's sex
- 3) Degree- respondent's higher degree
- 4) Race- race of respondent
- 5) Fairearn- How fair is what you earn on your job in comparison to others doing the same type of work you do?
- 6) Hrs1- number of hours respondent worked last week
- 7) Satjob- One the whole, how satisfied are you with the work you do?
- 8) Stress- How often do you find your work stressful?
- 9) Class- If you were asked to use one of four names for your social class, which would you say you belong in: lower class, working class, middle class, or upper class?

Part 3: Summary Statistics, Graphs, and their Descriptions

Table of Descriptive Statistics

Numerical Variables

Descriptive Statistic	Age	Hours Worked
Mean	48.97	41.28
Median	48	40
Minimum	18	1
Maximum	89	89
Range	71	88
Variance	326.19	20.968
Standard Deviation	18.06	14.48
Skewness	.2215	0.1458
Kurtosis	2.0875	4.200
Count	2341	1381

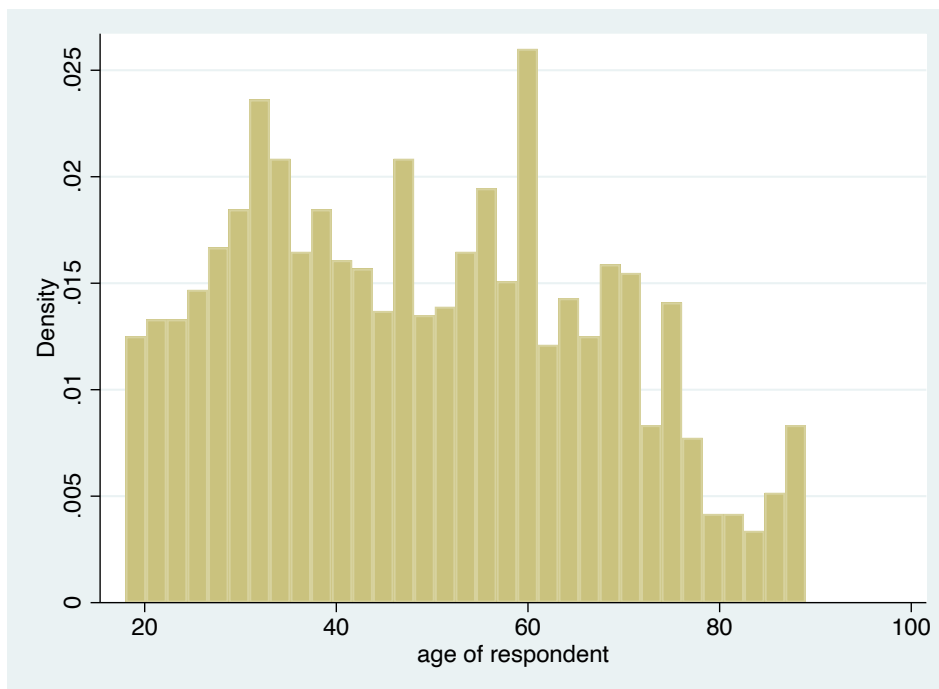
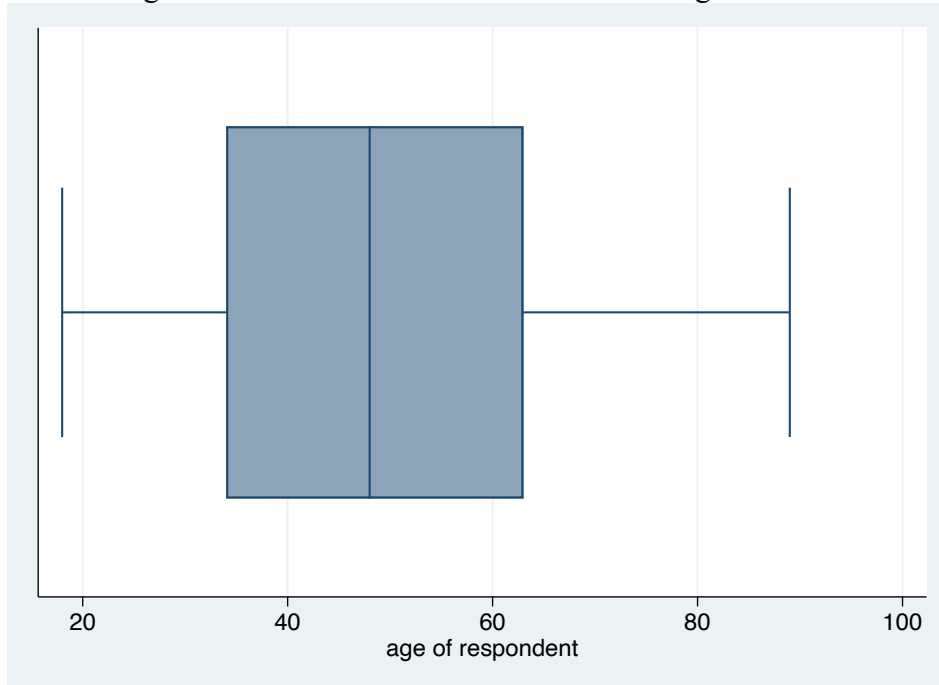
Sample Size – All Variables

Variable	Sample Size
Age of Respondent (age)	2341
Sex of Respondent (sex)	2348
Education of Respondent (degree)	2348
Race of Respondent (race)	2348
Fairness of Earnings (fairearn)	1393
Hours worked (hrs1)	1381
Job Satisfaction (satjob)	1739
Work Stress (stress)	1413
Class of respondent (class)	2333

Variable Analysis

Age

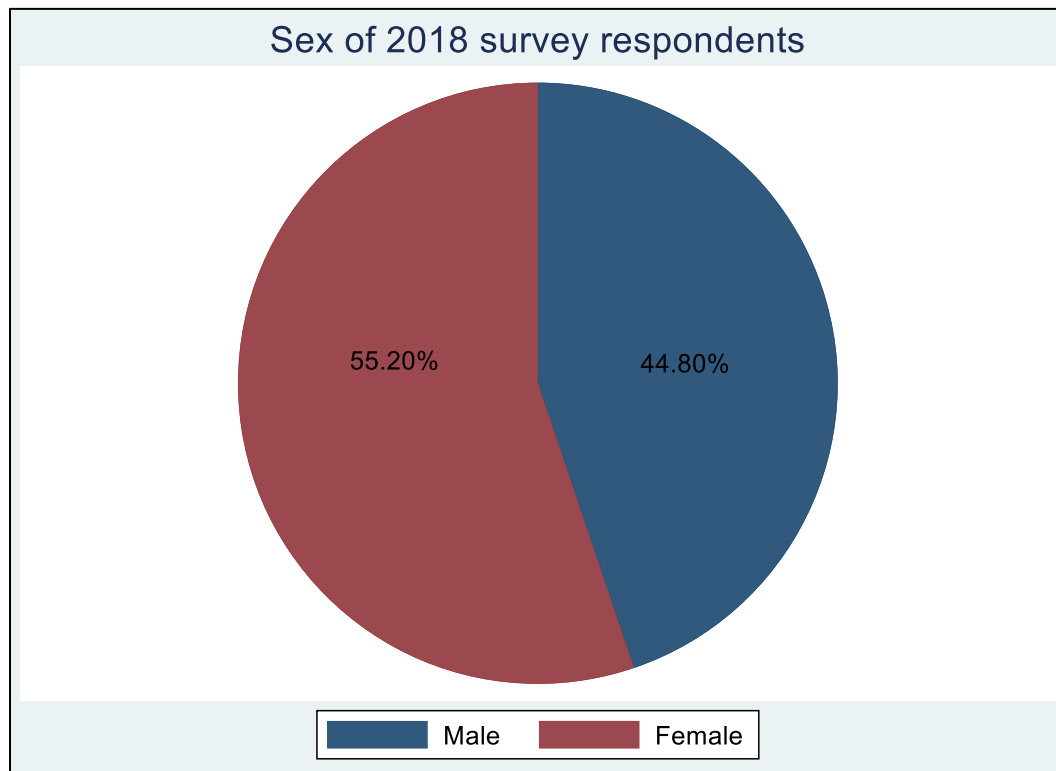
The variable AGE corresponds to the respondent's age at the time of the survey in 2018. The mean for age is 48.97 while the median is 48. The range starts at 18 and ends at 89.



Sex

Regarding SEX, this variable has a good level of precision, with the option for Female and Male values offering only two potential responses. This binary characteristic is useful for comparing how men and women experience the workplace; an examination that has strong validity and relevance in today's society. It also ensures a good rate of response, with responses available for all participants to the question of sex. However one should note some potential limitations. Given recent prominence and interest on the national scale of gender equality and gender rights, the absence of other options for respondents to pick from does lessen the timeliness and completeness of the variable and prevents some interesting analysis had options such as transgender or intersex been included.

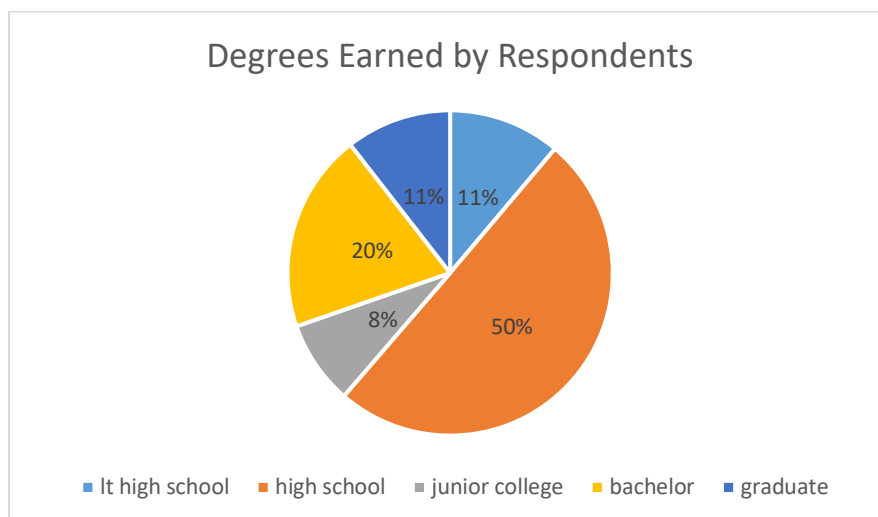
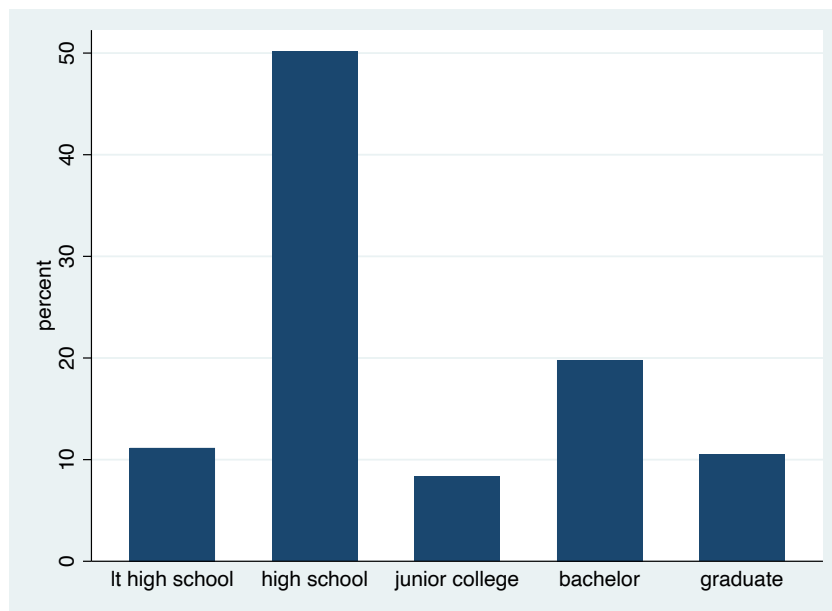
Sex of survey respondents in 2018	Frequency	Percentage	Cumulative
Male	1052	44.80%	44.80%
Female	1296	55.20%	100.00%
	2348	100%	



Degree

We selected the variable DEGREE to represent the level of education respondent's attained. GSS defines it as respondent's degree and has 5 levels including: Lt High School, High School, Junior College, Bachelor, and Graduate.

Respondent's Highest Degree	Frequency	Percentage	Cumulative
Lt High School	262	11.16%	11.16%
High School	1178	50.17%	61.33%
Junior College	196	8.35%	69.68%
Bachelor	465	19.80%	89.48%
Graduate	247	10.52%	100.00%
Total	2348	100%	



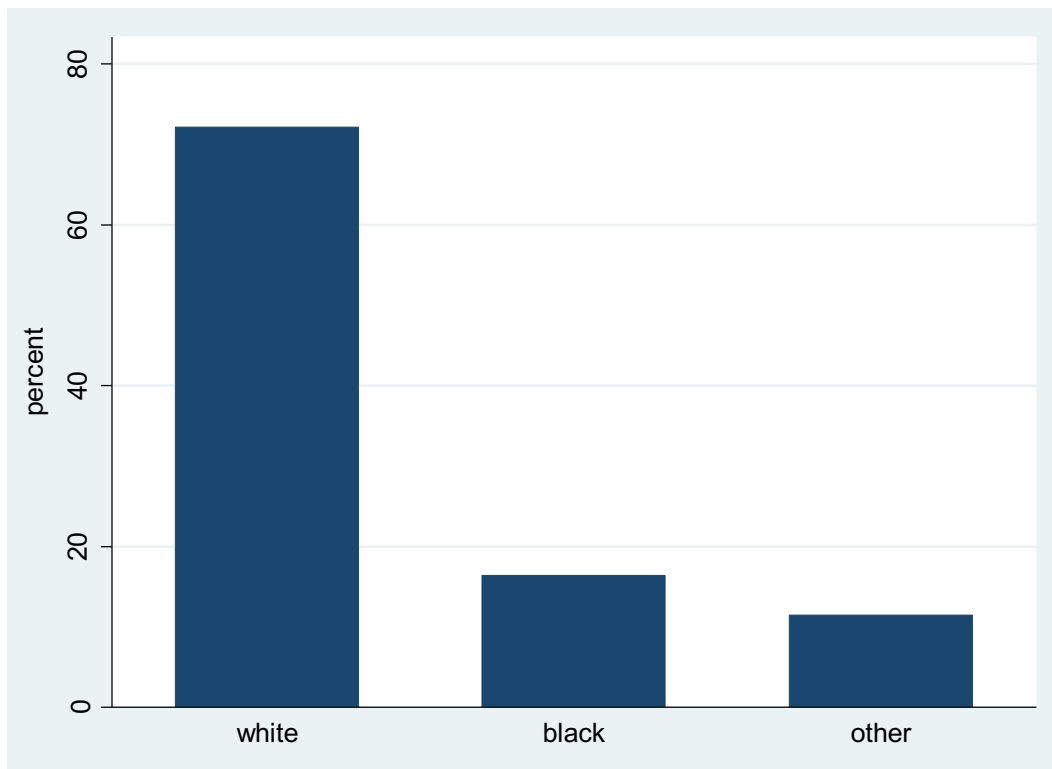
Race

When looking at the descriptive statistics for RACE, we find that most respondents identify as white (72%), that 16% identify as black, and 11.50% identify as other race (ex: Hispanic, Asian, etc). So based on our findings, we see that the majority of Americans in 2018 identify themselves as white while around 16% identify as black and a little under 12% identify as other races.

Variable: race

Sample size	2,348
Mean	1.394
Median	1
Standard deviation	0.6848
Min value	1
Max value	3

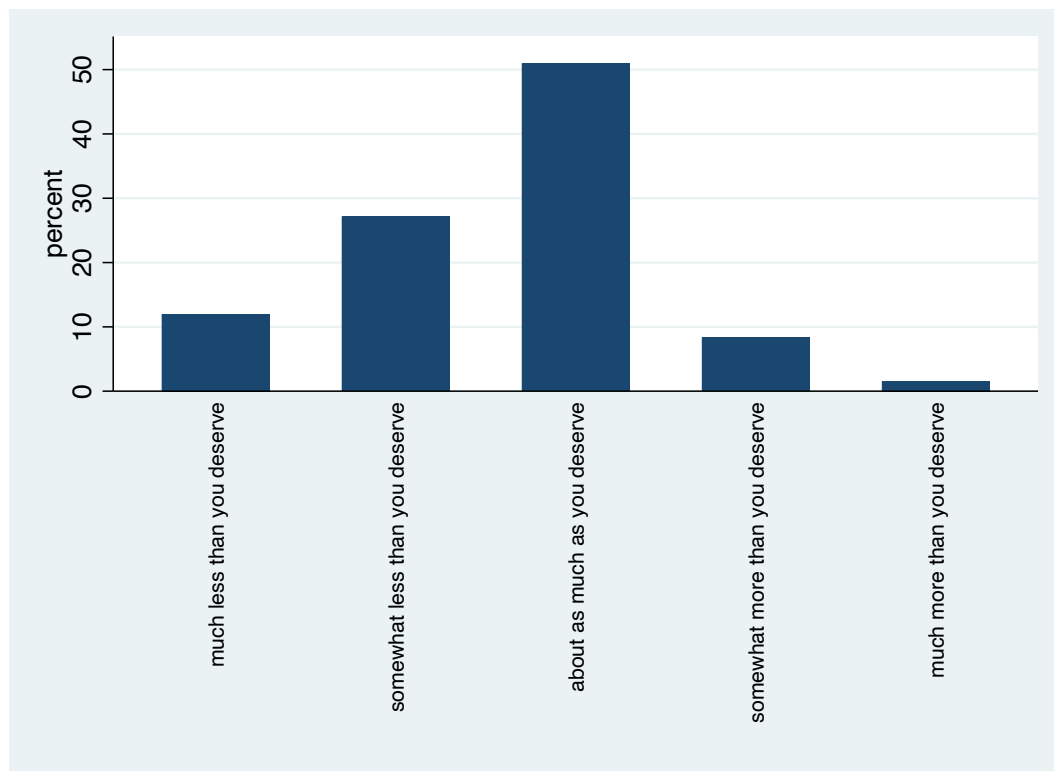
Race of respondent	Frequency	Percentage	Cumulative
White	1,693	72.10	72.10
Black	385	16.40	88.50
Other	270	11.50	100.00
Total	2,348	100.00	

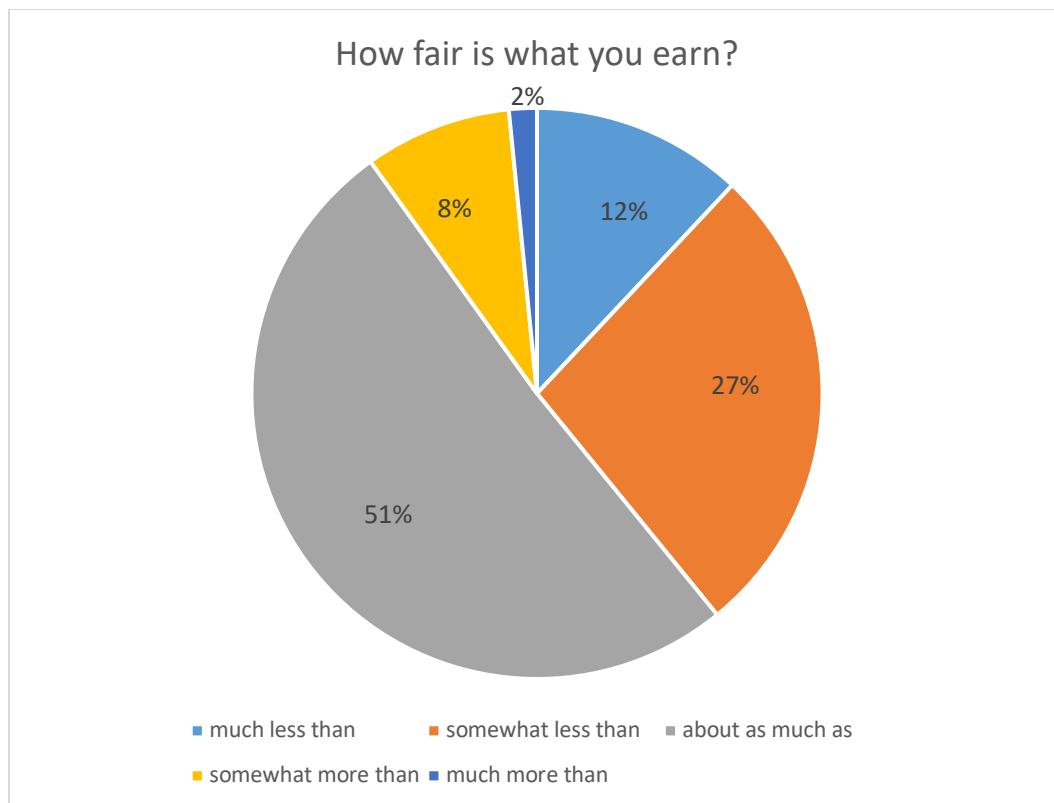


Fairness of Earnings

We chose the variable FAIREARN to view how respondent's felt about how fair their earnings are. The question respondents are asked is "How fair is what you earn on your job in comparison to others doing the same type of work you do?" Respondents could choose one of five different applicable options including "much less than you deserve", "somewhat less than you deserve", "about as much as you deserve", "somewhat more than you deserve", and "much more than you deserve".

How fair are your earnings?	Frequency	Percentage	Cumulative
Much less than you deserve	167	11.99%	11.99%
Somewhat less than you deserve	378	27.14%	39.12%
About as much as you deserve	710	50.97%	90.09%
Somewhat more than you deserve	116	8.33%	98.42%
Much more than you deserve	22	1.58%	100.00%
Total	1393	100.00%	





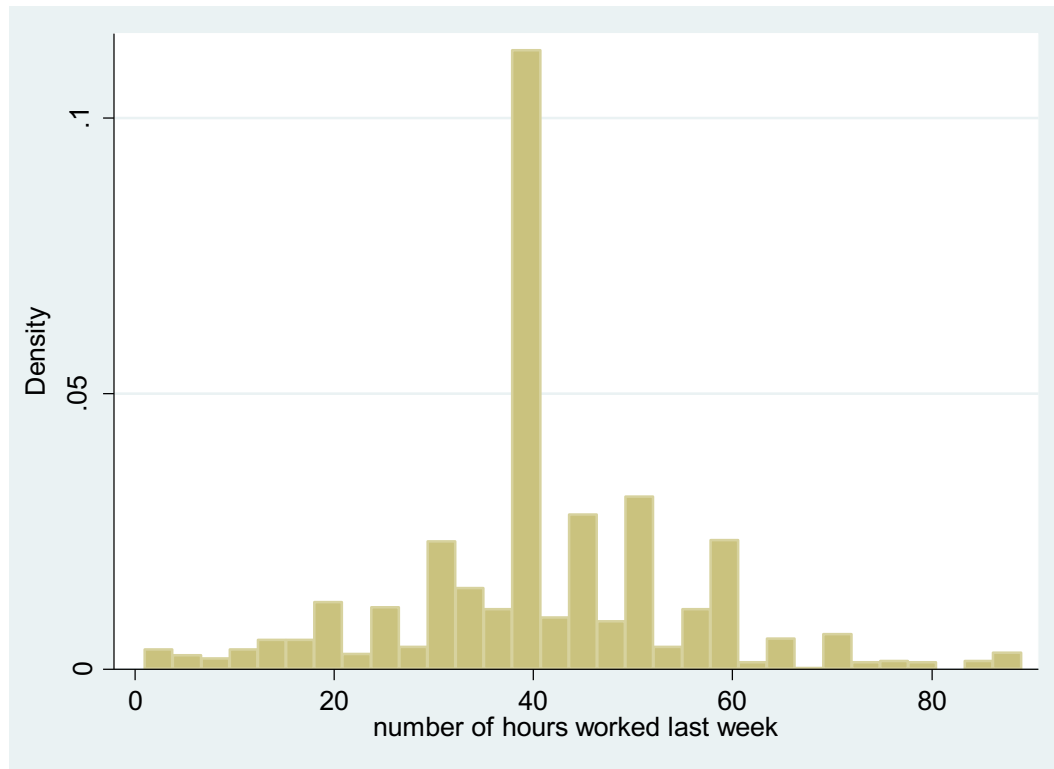
Hours Worked

Variable: hrs1

Sample size	1, 381
Mean	41.28
Median	40
Standard deviation	14.48
Min value	1
Max value	89
Skewness	0.1458
Kurtosis	4.200

When looking at the descriptive statistics for hours worked (**hrs1**), we find that the mean number of hours worked is 41.28 with a standard deviation of around 14.5 while the median number of hours worked is 40. In the number of hours worked, we see a range of hours starting from working 1 hour a week and going all the way up to 89 hour work weeks.

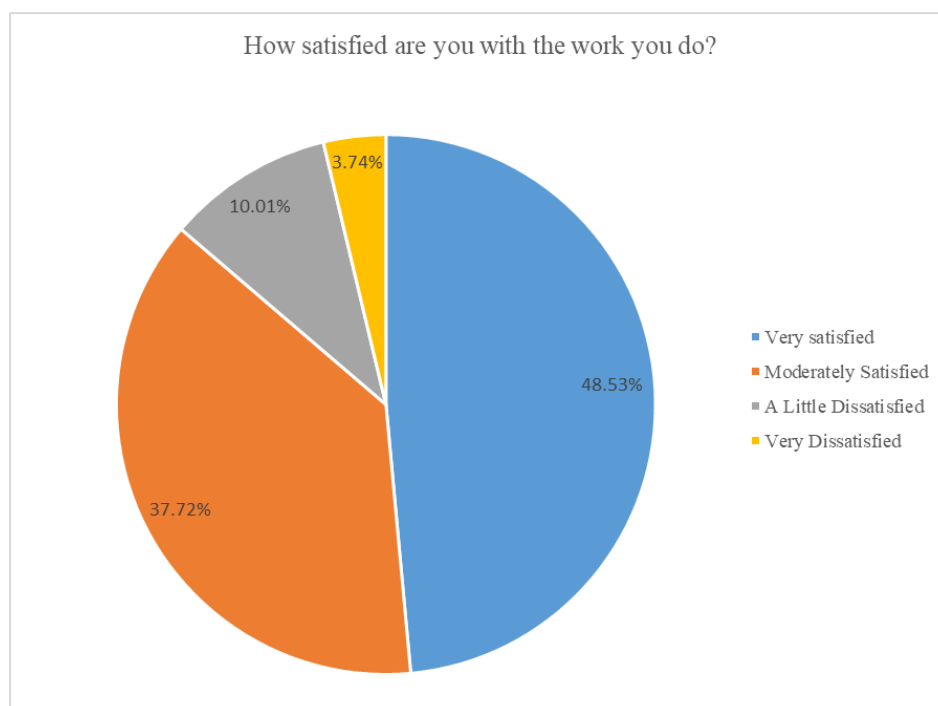
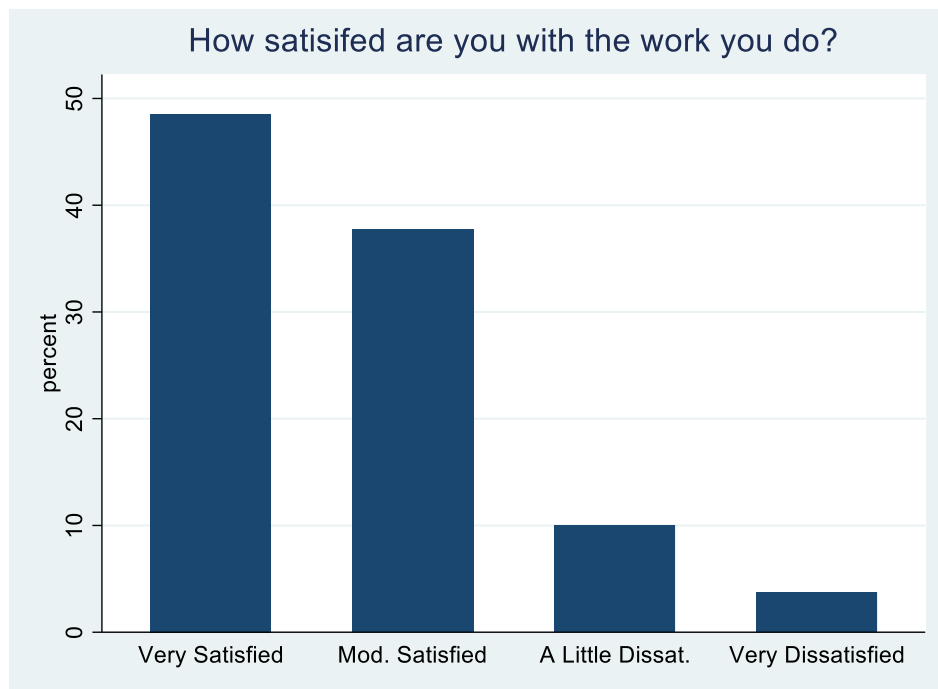
The number of hours worked has a kurtosis of 4.2 which means that the data has heavier tails than a normal distribution. The number of hours worked has a skewness of 0.1458 which means that the data is fairly symmetrical. So based on our findings, we see that the majority of Americans in 2018 have 40 hour work weeks, but differences exist amongst the population.



Work Satisfaction

The main thing to note regarding the variable SATJOB is that the definition of work in this question includes “keeping house”. Although this may initially seem to confuse the question regarding work satisfaction, if one understands that in the 21st Century “keeping house” is viewed as an equal part of a family dynamic, and is a role that can be filled by either sex, then looking at the satisfaction one feels in one’s workplace, whether that be inside or outside of the home, is a legitimate and interesting notion. Although this variable was not applicable for almost 25% of respondents, ~1750 useful responses were collected, providing a good sample size for analysis. One potential problematic characteristic of this variable is the wording of the option values. For instance, the options jump from "A Little Dissatisfied" to "Very Dissatisfied", whereas one could perhaps see the benefit of having an intermediate option between these two values.

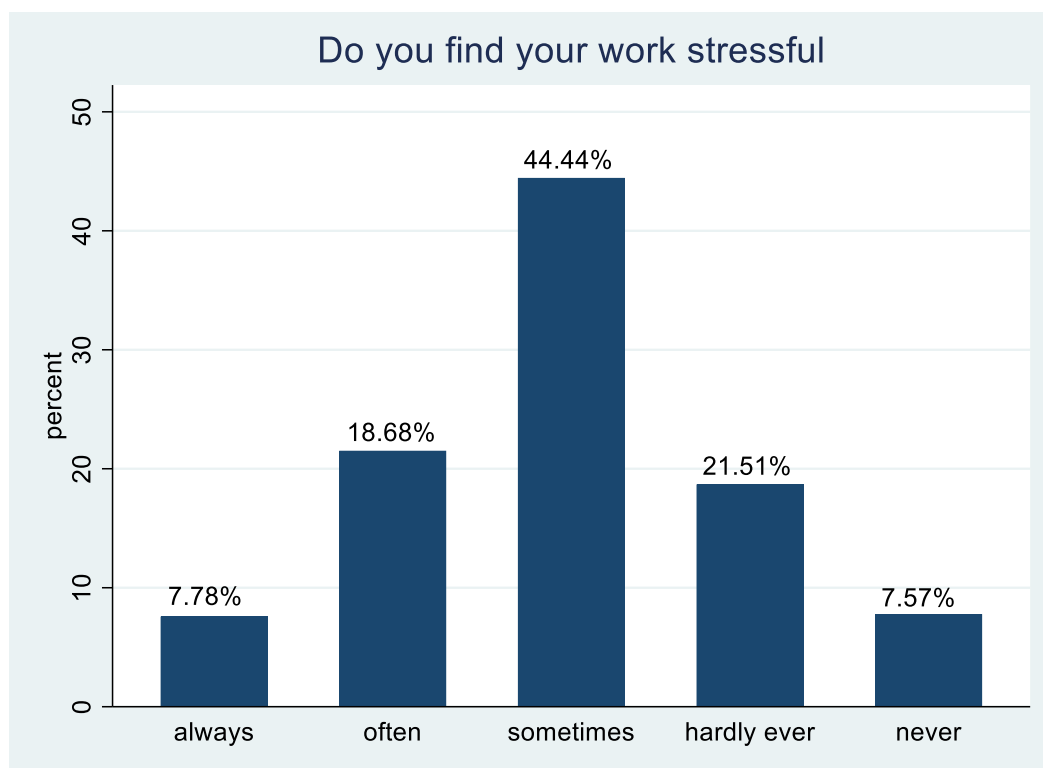
How Satisfied are you with the work you do?	Frequency	Percentage	Cumulative
Very Satisfied	844	48.53%	48.53%
Moderately Satisfied	656	37.72%	86.26%
A little Dissatisfied	174	10.01%	96.26%
Very Dissatisfied	65	3.74%	100.00%
	1739	100%	

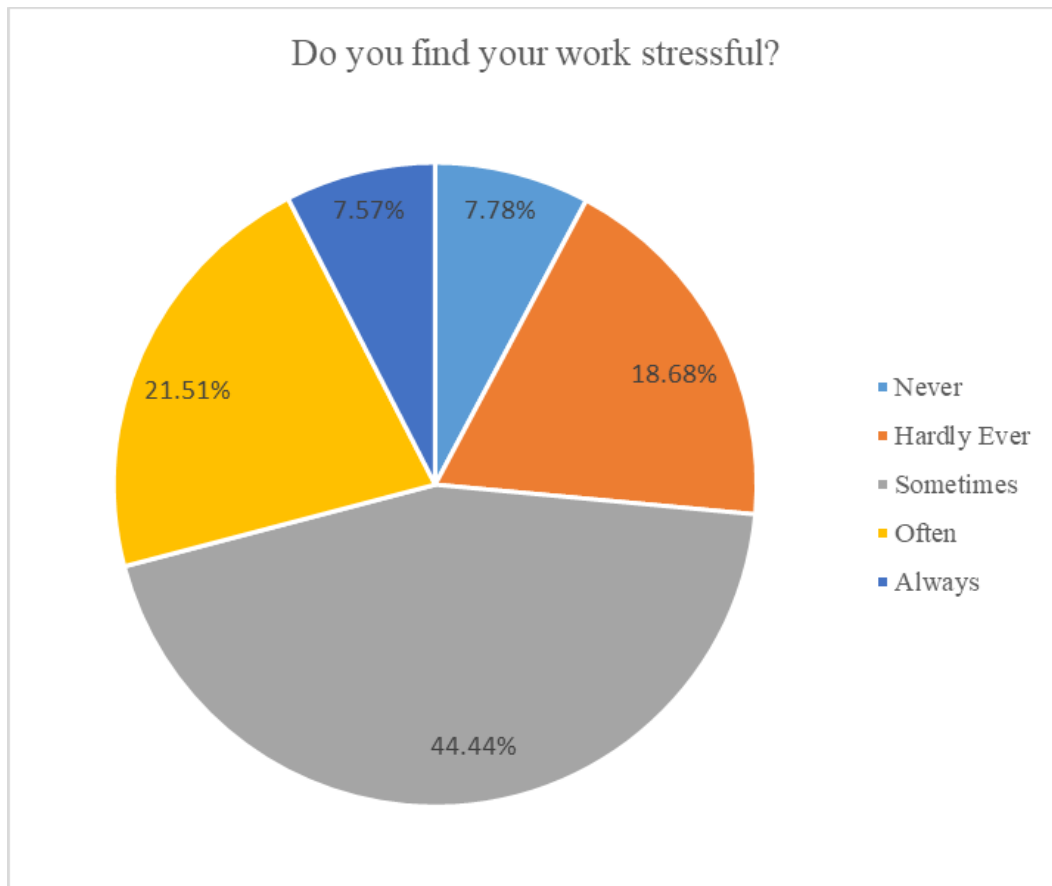


Stress

The breakdown of the variable STRESS in to its component options is a strength of this variable, providing a good descriptive scale, from never feeling stressed on the one hand, to always feeling stressed on the other. There appears to be sufficient options to allow respondents to accurately categorize their feelings of stress. Asking respondents to pick from a list of qualitative options rather than quantify their amount of stress in to a numerical value allows is also a positive trait of this variable. The variable was not applicable for 38% of respondents; whilst this decreases the quantity of data for analysis, ensuring that only those for whom such a question is applicable provide an answer emphasizes the reliability and validity of this data.

Do you find your work stressful?	Frequency	Percentage	Cumulative
Always	107	7.57%	7.57%
Often	304	21.51%	29.09%
Sometimes	628	44.44%	73.53%
Hardly Ever	264	18.68%	92.22%
Never	110	7.78%	100.00%
	1413	100%	





Class

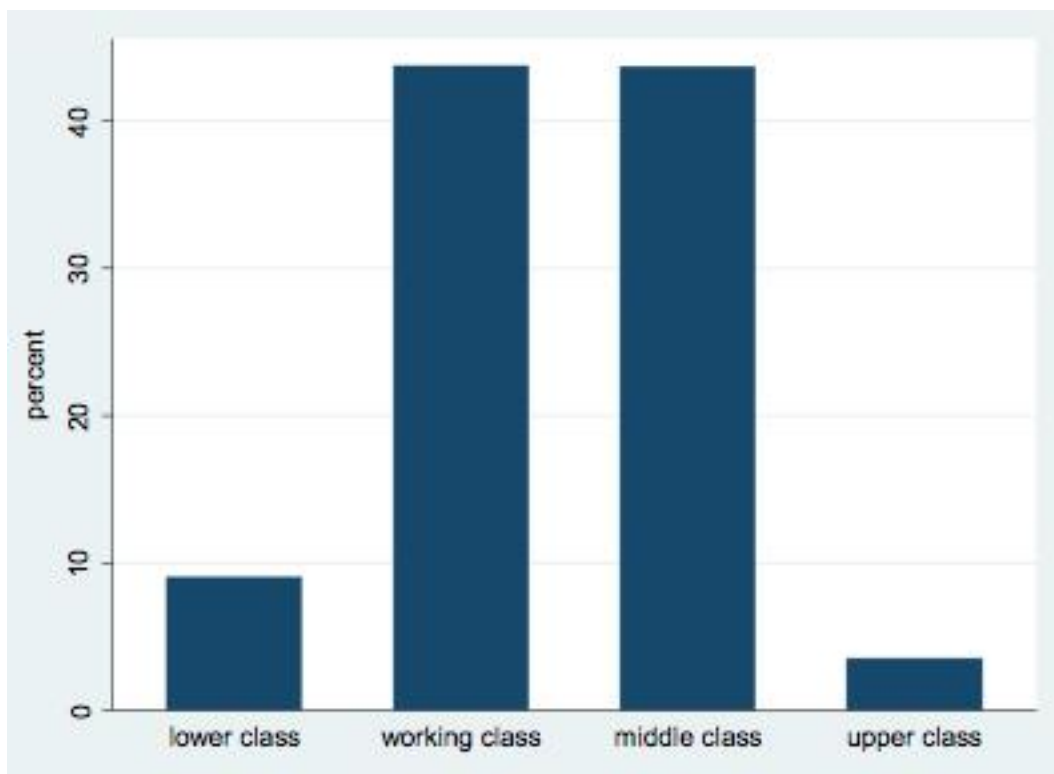
When looking at the descriptive statistics for class, we find that our respondents identify as either working (n=1,020) or middle class (n=1,019) in nearly identical numbers. The respondents who identify as either working or middle class make up more than 80% of our sample size. Only about 211 people in the sample or 9% identify as lower class. For upper class, only 83 people or 3.56% of the sample identify to be members of that social class. So based on our findings, we see that the vast majority of Americans in 2018 identify themselves as either working or middle class while less than 10% identify as lower class. We find that very few Americans in 2018 identify themselves as upper class.

Variable: class

Sample size	2,333
Mean	2.417
Median	2
Standard deviation	0.7039
Min value	1
Max value	4

Percentage frequency table for class

Class identification	Frequency	Percentage	Cumulative
Lower class	211	9.04	9.04
Working class	1,020	43.72	52.76
Middle class	1,019	43.68	96.44
Upper class	83	3.56	100.00
Total	2,333	100	



Part 4: Analysis of Relationships between Two or More Variables

Q1: What are the differences in average time worked by race and class status?



When looking at the graph, we find that lower class Americans who identify as White work the least amount of hours per week at around 34 hours. While lower class Americans who identify as Other work the most at 40 hours per week with Black Americans coming in at second place with around 36 hour work weeks. For working class Americans, Black and White Americans work the same amount of hours per week at 41 hours while Other continues to work the most per week. For middle class Americans, those who identify as Black or Other work the same amount per week at around 40 hours while White Americans work the most at 42 hours. When looking at upper class Americans, we find that those who identify as Other work the most at 60 hours per week while White Americans work 45 hour weeks and Black Americans work 41 hour weeks.

Through our graph, we find that there are stark differences in average work weeks of Americans based on their race and class. We see that White Americans work more hours per week as their class status goes up. We see that Black Americans tend to work less hours per week as they go from working to middle to upper class. We see that Americans who identify as Other work the most amongst all class statuses with the exception for middle class and that when they reach upper class, they work an average 15 hours more than their White peers. This trend of Other Americans working the most per week could be explained by the fact that they most likely come from an immigrant background where they work jobs that require long hours for lower pay. In our data, the category for race is a bit limiting as it only has 3 options: White, Black,

or other. We assume that respondents who identified as Other are Hispanic, Asian, etc. where their families had to immigrate to the US thus starting their lives over in a new country and facing barriers in their social mobility. The Other Americans might feel as though they have to work harder to be able to enjoy the same standard of living as White and Black Americans, so that could help explain why they have longer work weeks than other races.

Q2: What are the differences in work related stress for men and women? How does that impact their satisfaction with the work they do?

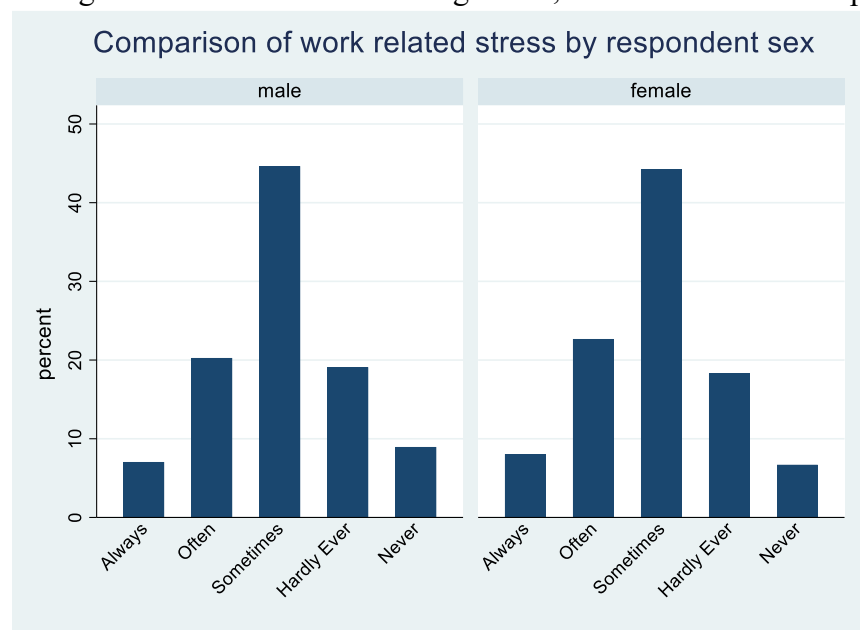
Contingency Table (Frequency)

Stress Level	Male	Female	Total
Never	61	49	110
Hardly ever	130	134	264
Sometimes	304	324	628
Often	138	166	304
Always	48	58	107
Total	681	732	1413

(Percentage – Column Totals)

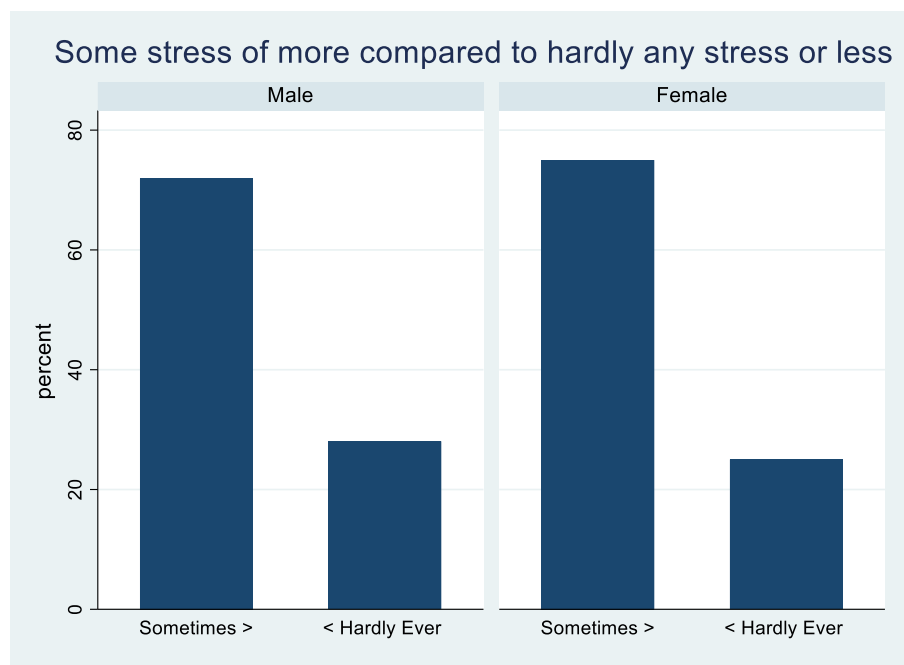
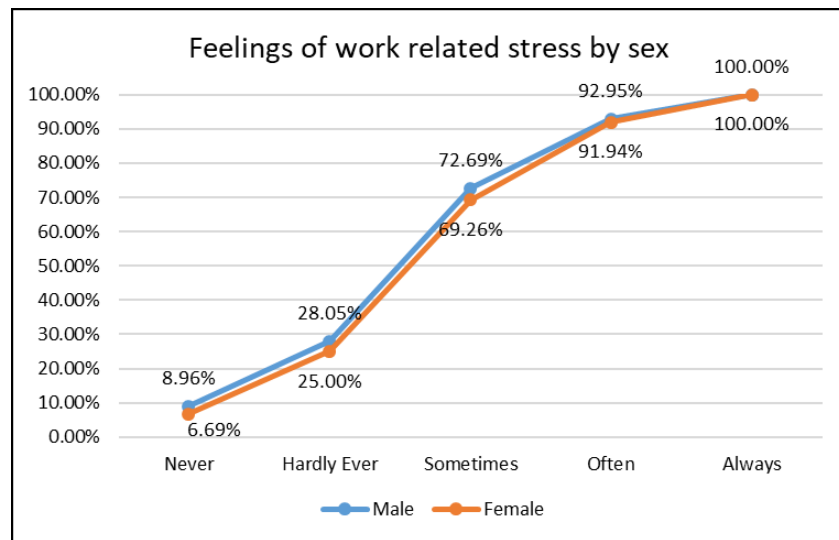
Male	Female	Total
8.96%	6.69%	7.78%
19.09%	18.31%	18.68%
44.64%	44.26%	44.44%
20.26%	22.68%	21.51%
7.05%	8.06%	7.57%
100.00%	100.00%	100.00%

The main take away from an analysis of the data is that there is no significant difference between how stressed men and women feel at work. The percentages of those reporting feelings at all levels of stress were similar for both men and women. Specifically, 7.05% of men and 8.06% of women reported always feeling stressed at work whilst 8.96% of men and 6.69% of women reported never feeling stressed at work. For both genders, the most common response was that sometimes they



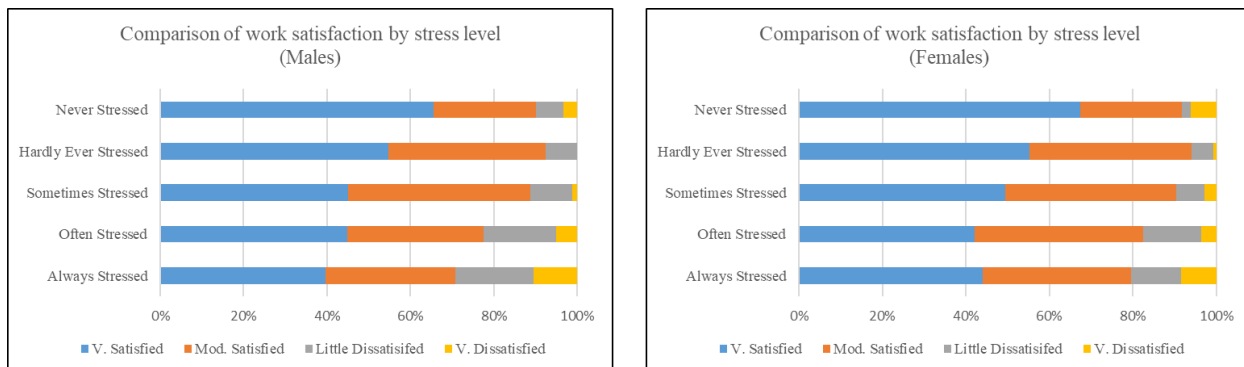
feel stressed at work, with 44.64% of men and 44.44% of women providing this response. Overall, slightly more women than men reported feeling stressed either sometimes, often, or always at work (74.69%) compared to men (71.95%). For the sample as a whole, 73.53% of men and women find work stressful at a frequency of sometime or more, whilst only 26.47% (roughly one in four) were hardly ever or never stressed.

I find these similarities in stress levels between males and females interesting, somewhat unexpected, and – although a stressed work force is not a positive thing – reassuring. Given the supposed difference between men and women in things such as attitude, confidence, pay equality, responsibilities, and expectations, one may have expected there to be noticeable differences in workplace stress between the sexes. Although the gender gap is closing in the 21st Century, we are often reminded of how men and women experience the workplace differently; workplace equality is advancing, but there are still many roles in the workforce that are predominantly executed by a specific gender. As such, it would be fair to hypothesize that stress levels between the genders might be different, but that is not illustrated by the data. Of course, it may be that different things are making men and women stressed (such as work expectations versus external pressures as one example), however, the end result is the same – both men and women experience stress in the workplace at a similar rate. I believe this can actually be an important realization in helping further workplace equality and helping both genders find common ground on which to improve the work experience and reduce stress for everyone.



Regarding workplace satisfaction and stress, the experience for men and women is also similar. As one might expect, those reporting the highest levels of stress in the workplace also reported the lowest rates of job satisfaction. 66% of men and 67% of women who reported never being stressed at work also reported being very satisfied at work, whereas only 40% of men and 44% of women that reported always feeling stressed

were very satisfied with their work. Although being moderately satisfied with one's work is better than being dissatisfied, moderate satisfaction should hardly be the goal for something many people spend the majority of their lives doing. So if we combine those who are moderately satisfied with those who are a little or very dissatisfied, we see that low levels of work satisfaction are the norm for the majority of people who are sometimes (Men 55%; Women 51%), often (Men 55%; Women 58%), or always (Men 60%; Women 56%) stressed, whereas only the categories of hardly ever or never stressed show a majority of respondents that are very satisfied with their work.



The data reveal a couple of curious instances in the comparison of stress and satisfaction, such as less women who are often stress being very satisfied with their work than those that are always stressed (42% compared to 44%), and work satisfaction being the same (45%) for men who are sometimes stressed as those that are often stressed. However, overall the variables of stress and satisfaction do present a strong relationship, with the trend for both sexes being that work satisfaction increases as the level of stress one experiences in the work place decreases.

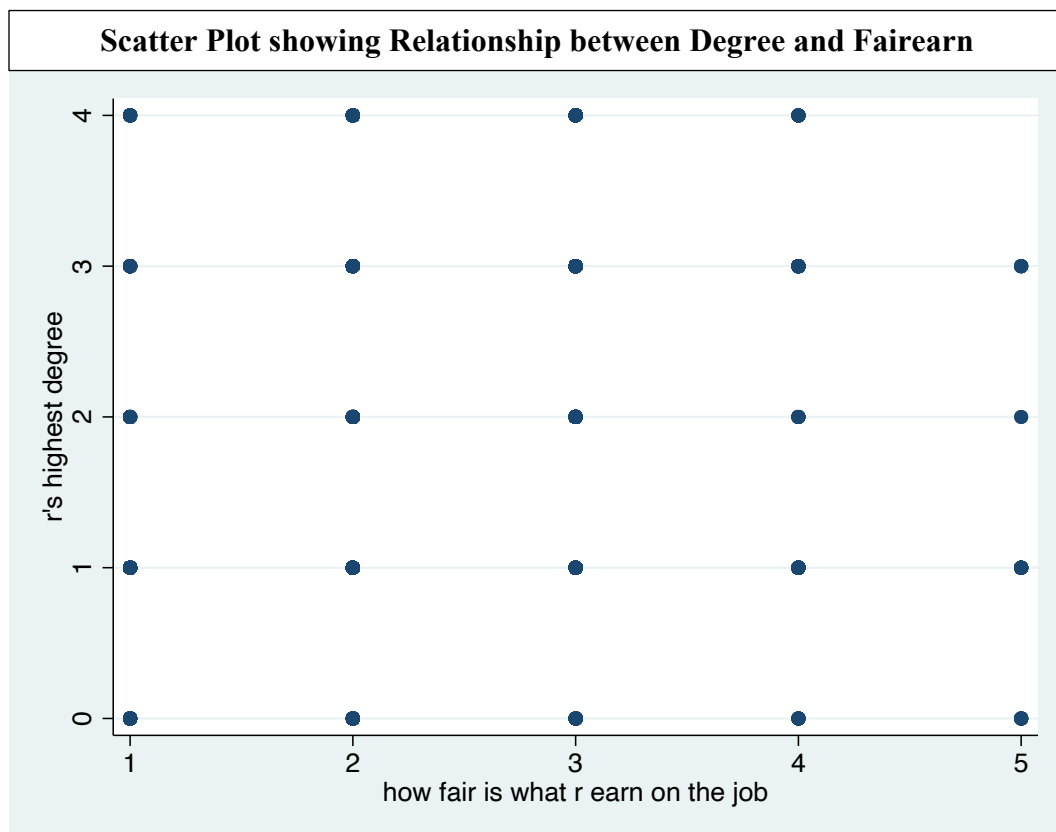
Q3: How does education level affect how fair worker's feel their earnings are?

The unfortunate reveal from the data is that education does not significantly affect how fair worker's feel their earnings are.

The correlation coefficient for the variables degree and fairearn is 0.0281, which is very near 0 showing they have a very small positive correlation.

	degree	fairearn
-----+-----		
degree	1.0000	
fairearn	0.0281	1.0000

The points on the scatter plot are spread out nearly evenly. This scatter plot provides a graphical display showing that these variables are barely related. Perhaps this should not be a shocking reveal. When the variable fairearn is evaluated by itself, over 39% of respondents polled said that they earned either much or somewhat less than deserved. Only 9.88% of respondents feel they earn somewhat more or much more than deserved. Almost 51% of respondents felt they earned about as much as deserved.



how fair is what r earn on the job	r's highest degree					Total
	lt high s	high scho	junior co	bachelor	graduate	
much less than you de	25 21.01	82 12.29	18 14.29	27 8.52	15 9.15	167 11.99
somewhat less than yo	28 23.53	183 27.44	39 30.95	77 24.29	51 31.10	378 27.14
about as much as you	52 43.70	328 49.18	63 50.00	180 56.78	87 53.05	710 50.97
somewhat more than yo	8 6.72	63 9.45	5 3.97	29 9.15	11 6.71	116 8.33
much more than you de	6 5.04	11 1.65	1 0.79	4 1.26	0 0.00	22 1.58
Total	119 100.00	667 100.00	126 100.00	317 100.00	164 100.00	1,393 100.00

The cross tabulation shows that while there is no significant correlation between “degree” and “fairearn” upon closer examination of the data a relationship does seem to exist. If you add together the three categories, “about as much as you deserve”, “somewhat more than you deserve” and “much more than you deserve” for each level of schooling, an interesting trend appears. Workers with Bachelor’s degrees feel their work falls into one of those three categories 67.19% of the time. Graduate School (59.22%) and High School (60.28%) graduates have similar rates. Lt High School (54.76%) and Jr. College (54.76%) also have similar rates. Lt High School has the highest percentage of workers who feel they earn less than they deserve at 21.01%. That rate is higher than doubled for workers who have a Bachelor’s degree or a Graduate degree. Upon closer inspection education does seem to affect how fair people feel their earnings are. Generally the more well educated the worker is, the more likely they are to feel their earnings are what they deserve or more than they deserve.

Q4: How does job satisfaction differ by age?

In this instance the data paints a clear picture regarding differences in work satisfaction and age: as a respondents age increases, so does the likelihood that they will be very satisfied in their work. For instance, as is indicated from the following contingency table and bar charts comparing age groups and levels of work satisfaction, higher percentages of respondents in later career and post-retirement work categories (ages 51-65 and 66+ respectively) report higher percentages of being very satisfied with work than those in the early and mid-career categories (ages 18-35 and 36-50). Whilst only 39.11% of 18-35 year olds reported being very satisfied with their work, 57.17% of respondents aged 51-65 claimed to be very satisfied with their work.

Contingency Table (Frequency/Percentage – Colum Totals)

Work Satisfaction	18-35 Early Career	36-50 Mid Career	51-65 Late Career	66+ Heading to Retirement
Very Satisfied	228 (39.11)	262 (47.21)	267 (57.17)	83 (64.84)
Mod. Satisfied	258 (44.25)	225 (40.54)	133 (28.48)	39 (30.47)
A Little Satisfied	70 (12.01)	49 (8.83)	49 (10.49)	5 (3.91)
Very Dissatisfied	27 (4.63)	19 (3.42)	18 (3.85)	1 (0.78)
Total	583 (100)	555 (100)	467 (100)	128 (100)

From a review of the data we can also identify that the increase in high levels of job satisfaction as one ages is a gradual one, increasing at a roughly equal rate over time (ranging from 7.67% to 9.96% increases). If instead of breaking down the data in to larger career stage groupings, but rather base our categorizations on roughly 10 year periods, we further confirm that during the usual term of a career (through the mid to late 60s) this increase in job satisfaction is a steady one. For instance, we see that the percentage of people very satisfied with their work increases by a range of 4.81% to 6.86% at each age group between 18-29 and 60-69. Although after the 60-69 age grouping the trend in increasing high levels of job satisfaction continues, the steady increases over time cease, with an increase of 8.59% from the 60-69 group to the 70-79 group, and the changes become erratic thereafter. One potential reason for this is the drop in respondents once one reaches the higher post-retirement age groups.



Contingency Table (Frequency/Percentage – Colum Totals)

Work Satisfaction	18-29	30-39	40-49	50-59	60-69	70-79	80-88	89+
Very Satisfied	123 (37.61)	179 (42.42)	173 (48.87)	192 (53.78)	114 (60.64)	45 (69.23)	10 (66.67)	4 (80.00)
Mod. Satisfied	149 (45.57)	185 (43.84)	135 (38.14)	107 (29.97)	54 (28.72)	20 (30.77)	4 (26.67)	1 (20.00)
A Little Satisfied	43 (13.15)	40 (9.48)	32 (9.04)	42 (11.76)	15 (7.98)	0 (0)	1 (6.67)	0 (0)
Very Dissatisfied	12 (3.67)	18 (4.27)	14 (3.95)	16 (4.48)	5 (2.66)	0 (0)	0 (0)	0 (0)
Total	327 (100)	422 (100)	354 (100)	357 (100)	188 (100)	65 (100)	15 (100)	5 (100)

Although they do not exhibit the same uniform trends as is evident for the option of being very satisfied with ones work, the other levels of work satisfaction (moderately satisfied, a little satisfied, very dissatisfied) do show a clear change as one ages, albeit a negative rather than positive one. As one would expect given the rise in respondents identifying as very satisfied, the percentages for the other satisfaction levels illustrate a downward trend over time. Whilst those aged between 18-35 are 16.64% likely to be either a little satisfied or very dissatisfied with their work, those aged 36-50 have only a 12.25% likelihood of having the same level of work satisfaction. This percentage drops to 4.69% for those aged 66 or above.

One could posit a number of reasons why younger respondents are less likely to be very satisfied with their work than their older colleagues, but perhaps the most apparent reason would be directly related to this younger age, i.e. the early stage of their career. Individuals just starting out in the workforce are likely to be filling entry level roles with less responsibility and without the freedom to make decisions afforded to someone in a supervisor role. The pay for these positions may also be lower than is paid to a more senior colleague doing a similar role. Also, the lack of experience in the work one is doing, and therefore the lower levels of expertise, could also result in lower levels of satisfaction. Additionally, a person may not immediately find a role in the workforce in their desired area or that they ultimately find themselves suited for. Doing a job one is not interested in will no doubt impact upon the levels of satisfaction one feels with such a job. All this is to say that it is not surprising that potentially lower paid, inexperienced, individuals entering the workplace to begin their careers would be less likely to be very satisfied with their work than those in the later stages of their careers.