UMD Data Challenge 2021

NCSG: Behavioral Changes Regarding Covid-19

Introduction:

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Content Outline

The Data

The UMD National Center for Smart Growth (NCSG) collected form data with intent to monitor the behavioral changes that resulted from the Covid-19 crisis

Data Analysis

Our Approach

The data was recorded by asking how they felt before and after the pandemic so we had to create a few measures to monitor their change.

Jupyter Notebook & Tableau

Ultimately we used these software to create two way tables and pie charts to help us gain more insights.

Results

UMD DATA CHALLENGE 2021

Exe Before	PhyAc After	
1-2 times a week	1-2 times a week	31.07%
	3-4 times a week	25.42%
	5+ times a week	23.73%
	None	19.77%
3-4 times a week	1-2 times a week	26.16%
	3-4 times a week	28.49%
	5+ times a week	33.72%
	None	11.63%
5+ times a week	1-2 times a week	16.15%
	3-4 times a week	15.38%
	5+ times a week	56.92%
	None	11.54%
None	1-2 times a week	34.12%
	3-4 times a week	18.82%
	5+ times a week	17.65%
	None	29.41%
Grand Total		100.00%

- Individuals who worked out 3-4 times a week were more likely to increase to working out 5+ times a week during the lockdown
- People who did not work out at all were very likely to start working out during the lockdown
- People who already worked out 5+ times a week were the most consistent.
- Individuals who consistently worked out before the lockdown were more likely to continue working out during the pandemic.

Age Analysis

	Age (bin)									
Exe Diff	10	20	30	40	50	60	70	80	90	Grand To..
Decreased	50.00%	32.63%	27.49%	30.19%	26.04%	17.54%	23.33%	50.00%	100.00%	27.68%
Did not change		35.79%	30.41%	32.08%	37.50%	57.89%	36.67%	50.00%		35.89%
Increased	50.00%	31.58%	42.11%	37.74%	36.46%	24.56%	40.00%			36.43%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

	Age (bin)									
Exe Diff	10	20	30	40	50	60	70	80	90	Grand To..
Decreased	1	31	47	32	25	10	7	1	1	155
Did not change		34	52	34	36	33	11	1		201
Increased	1	30	72	40	35	14	12			204
Grand Total	2	95	171	106	96	57	30	2	1	560

Age Analysis

- We saw people start working out more during the pandemic than stay the same or stop completely.
- 30-40 year olds saw the biggest increase in their workout routines, with 42% beginning to work out more.
- 60-70 year olds were the most likely to keep their routine the same.
- 20-30 year olds were the only age group where individuals were more likely to decrease their workout routine than increase it.

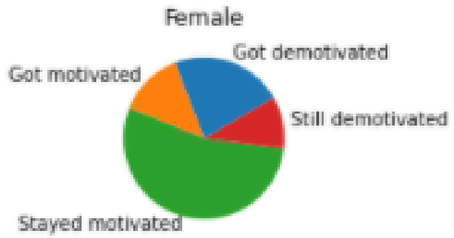
Kid Analysis

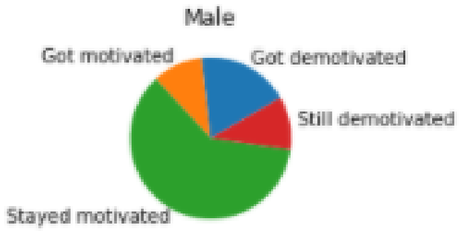
	Kids					
Exe Diff	0	1	2	3	4	Grand To..
Decreased	26.18%	26.97%	29.25%	45.00%	25.00%	27.53%
Did not change	40.00%	23.60%	33.02%	30.00%	62.50%	36.06%
Increased	33.82%	49.44%	37.74%	25.00%	12.50%	36.41%
Grand Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

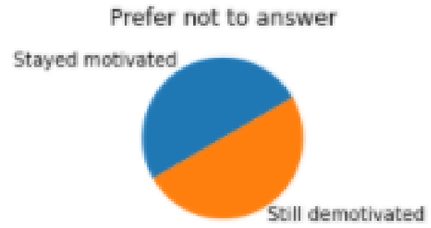
Kid Analysis

- Although the “increased” exercise routine is seen to be the highest, that is mostly due to individuals with 1-2 kids changing their routine.
- Even individuals with 0 kids were most likely to be seen not changing their workout routine than increasing it.
- People with 4 kids were seen at the highest consistency with 62.5% claiming their routine never changed during the pandemic.

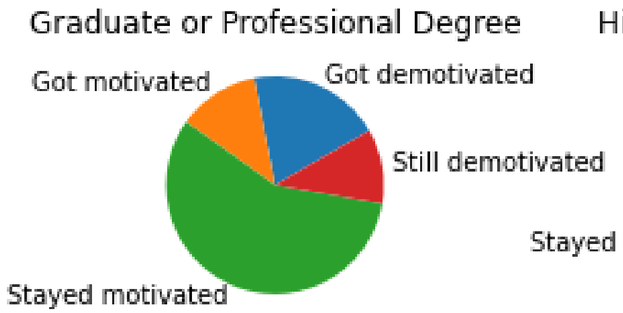
- The task of showing how sociodemographic affected behavioral change towards physical health
- I used information from the CDC website to create criteria
- Used this metric to chart how peoples motivation towards being healthy changed

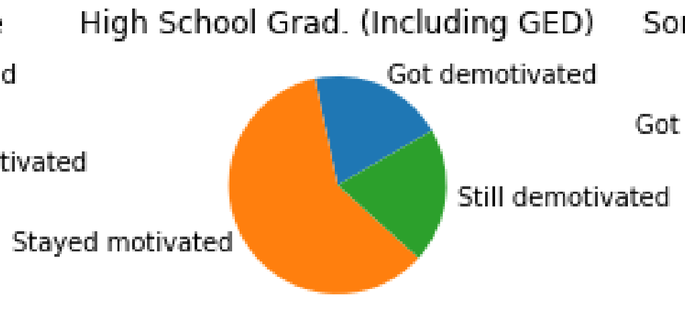


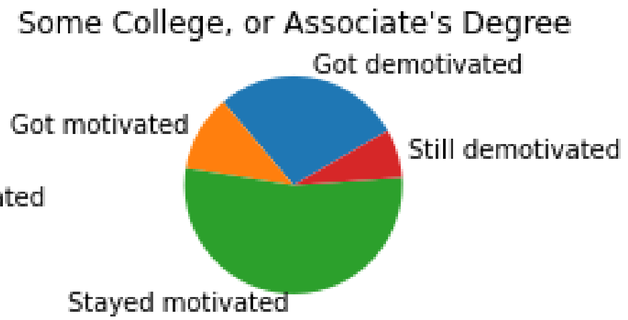




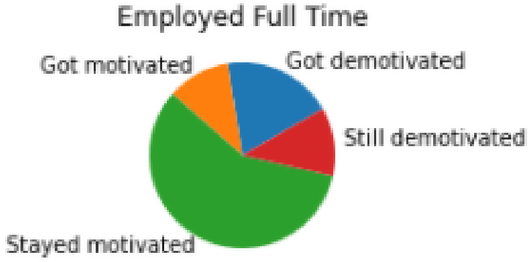
- **Higher portion of males were able to stay motivated to stay healthy and smaller portion of the prepandemic healthy males became demotivated**

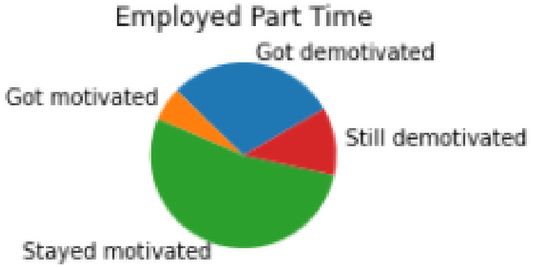


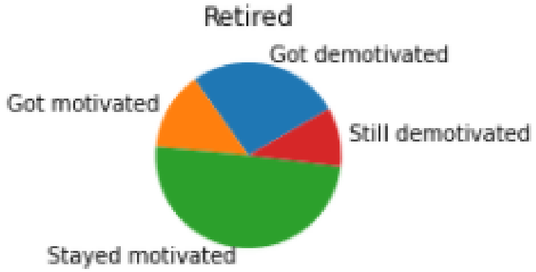


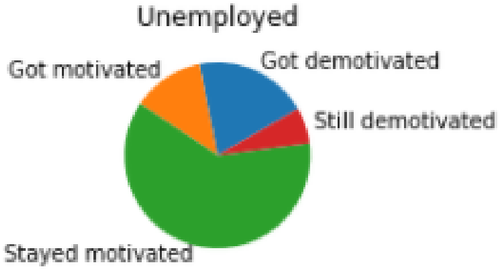


- **More formal education was linked to being physically healthy in the pandemic**
- **Whether you stayed motivated or gained it**









- **People with more free time were more likely to become motivated**
- **Part-time workers became or stayed unhealthy in portions larger than full-time employees**

Challenges

- The format of the data
- Creating an indicator of good health
- Finding information
- Time management

Conclusion

- Our experience
- Guidance from our mentor
- Regrets on data viz choices
- The usefulness of the data