



Advanced Cognitive Training for Independent and Vital Elderly (ACTIVE)

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Background

- A randomized, controlled, single-blind trial with recruitment conducted from 1998 to 1999 and 2-year follow-up through 2001
- Sample size of 2832 people aged 65 to 94 at enrollment
- Participants were randomly assigned to 1 of 4 groups and received 10 training sessions
 - Memory (verbal episodic memory; n=711)
 - Reasoning (ability to solve problems that follow a serial pattern; n=705)
 - Speed of processing (visual search and identification; n=712)
 - Control group (n=704)



Project overview

- **The primary objective** of the ACTIVE (Advanced Cognitive Training for Independent and Vital Elderly) trial was to test the effectiveness and durability of 3 distinct cognitive interventions in improving the performance of elderly persons on basic measures of cognition and on measures of cognitively demanding daily activities (e.g., food preparation, driving, medication use, financial management).
- There is a current opportunity to examine the timing between credit score changes and cognitive health changes
- My SUMR project is to examine credit score data linked to ACTIVE data



Significance

- To examine and measure if cognitive training could help improve credit scores
- Testing and verifying if the dataset we linked with TransUnion has created any biases



Aims

- Comparing the total active sample to the people who had credit data to see if there are any biases in the dataset



TransUnion Data Overview

- TransUnion is a credit reporting agency
 - The data has credit scores over time
- Submitted Sample Size = 2277
 - Matched = 2058 (had credit data)

ACTIVE respondents who matched with TransUnion based on social security number and date of birth etc.

- Unmatched = 219 (No credit data found)

ACTIVE respondents who didn't match with TransUnion



Methods

Step 1
Understanding the Dataset

Step 2
Learned SAS Procedures

Step 3
Generated new
variables(dummy variables)

Step 4
Calculated means, standard
deviations and frequency for
two groups

Step 5
Merged Datasets

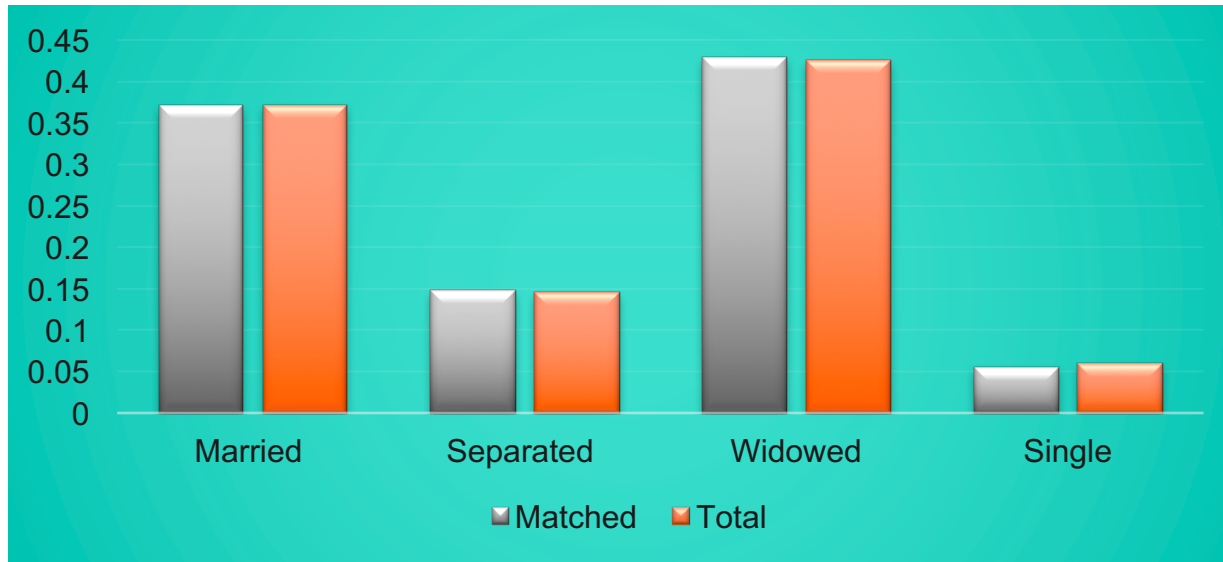
Step 6
Created Final Table



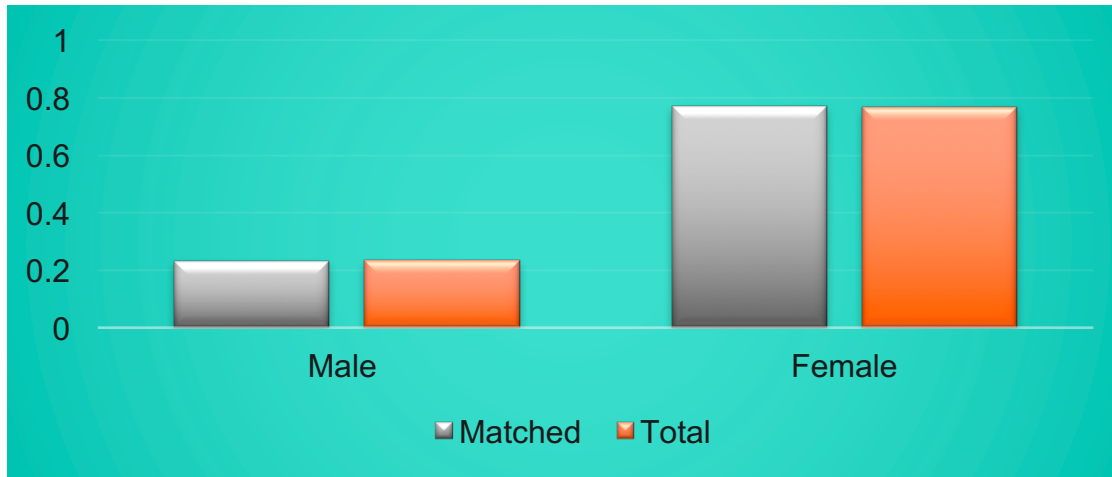
Total vs Matched Comparison

Obs	VariableName	MATCHED	TOTAL
1	Depression Scale	4.976 (4.632)	5.034 (4.635)
2	Married	0.37 (0.483)	0.371 (0.483)
3	Separated	0.147 (0.354)	0.145 (0.352)
4	Widowed	0.428 (0.495)	0.425 (0.494)
5	Single	0.055 (0.227)	0.059 (0.235)
6	Memory	0.251 (0.434)	0.252 (0.434)
7	Reasoning	0.249 (0.432)	0.247 (0.432)
8	Speed	0.255 (0.436)	0.251 (0.434)
9	Control	0.245 (0.43)	0.25 (0.433)
10	Education(<12)	0.113 (0.317)	0.119 (0.324)
11	Education(=12)	0.3 (0.459)	0.305 (0.46)
12	Education(13-15)	0.33 (0.47)	0.325 (0.469)
13	Education(>=16)	0.257 (0.437)	0.251 (0.434)
14	Female	0.771 (0.421)	0.768 (0.422)
15	Male	0.229 (0.421)	0.232 (0.422)
16	White	0.713 (0.452)	0.705 (0.456)
17	black	0.287 (0.452)	0.295 (0.456)
18	Age(65-69)	0.318 (0.466)	0.313 (0.464)
19	Age(70-74)	0.317 (0.465)	0.316 (0.465)
20	Age(75-79)	0.222 (0.416)	0.221 (0.415)
21	Age(>80)	0.143 (0.35)	0.15 (0.357)

Proportion of Martial Status

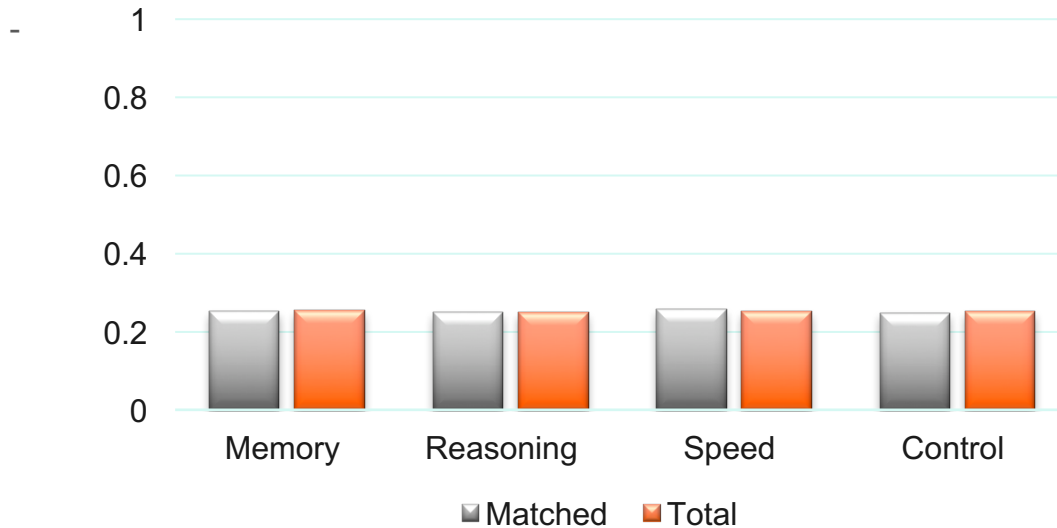


Proportion of Gender



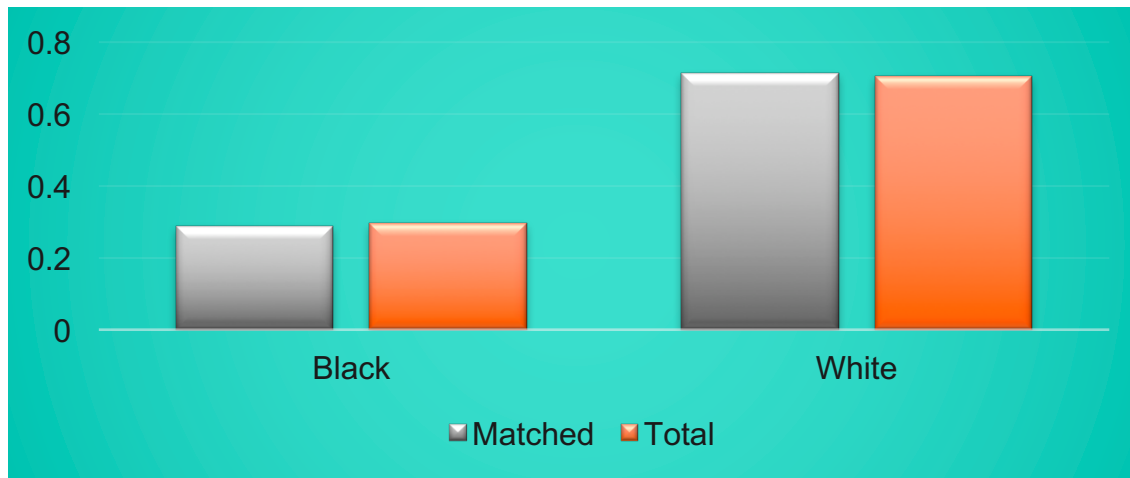


Proportion of Intervention Groups



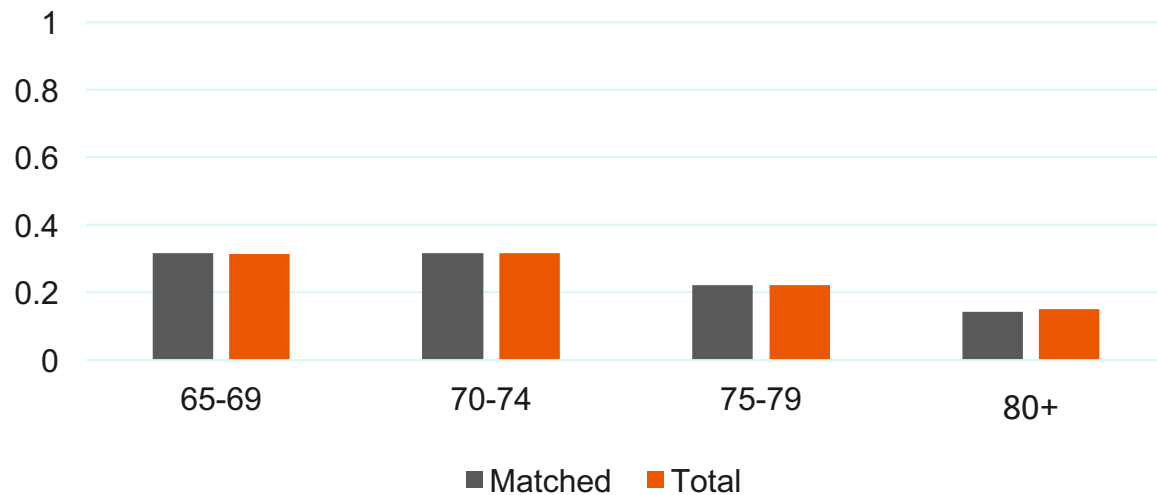


Proportion of Race



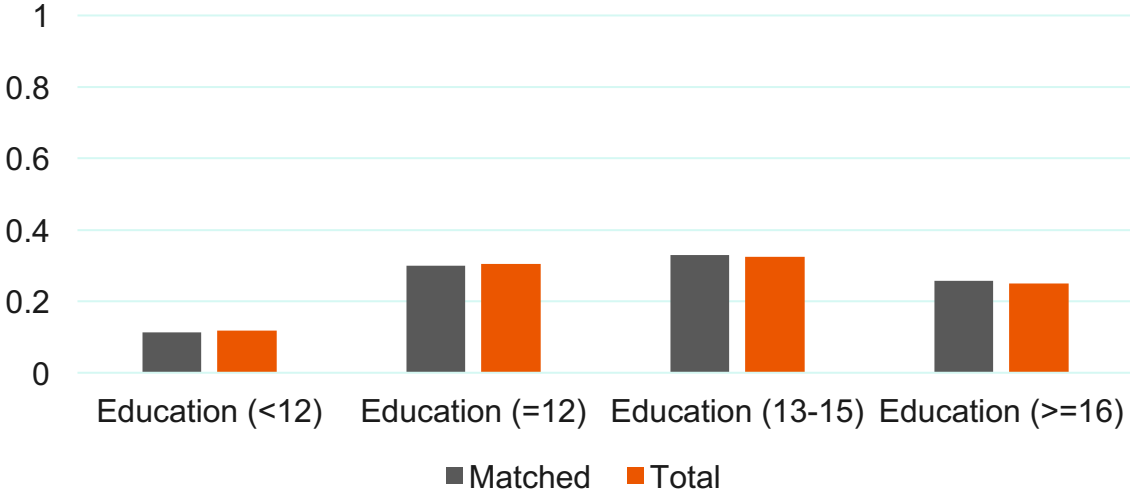


Proportion of Age Group





Proportion of Education





Summary

- This is reassuring that the dataset didn't introduce any biases



Future Directions

- Perform and run different tests on the difference between the matched and total to see if they are statistically significant
- Perform a test on geographic location in the dataset



Lessons Learned

- Gained exposure to SAS
- Introduced to the administrative credit data linked to randomized control trial data
- Leveraged my previous exposure in dementia and cognitive science to understand how cognition is measured in dementia studies in the US through literature reviews



Acknowledgement

Dr. Norma Coe, PhD

Liz Taggert, MPH

Joanne H. Levy, MBA, MCP