MAT5317 Categorical Assignment 1

Teng Li(7373086)
Zhize Lu(300075114)
Chutong Zhang(300311325)

Introduction

We aim to study the relationship between the weight variable and the other health related variables of the data.

Method

We began our study by doing an exploratory analysis among the variables through various tables and charts. We then performed several hypothesis tests on some of the variables. Lastly we did a linear regression model fit to the response variable "weight" with other variables and confounders.

Table 1: Data Variable Definition

Variables	Size	Type	Example	Number.Unique	Number.Missing	Comment
id	6482	integer	1, 2, 3	6482	0	Identification Code (1 - 6482)
gender	6482	factor	Male, Female	2	0	Gender (1: Male, 2: Female)
age	6482	integer	34, 16, 60	65	0	Age (Years)
marstat	6482	factor	Married, NA, Widowed	7	629	Marital Status (1: Married, 2: Widowed, 3: Divorced, 4: Separated, 5: Never Married, 6: Living Together)
samplewt	6482	numeric	80100.544, 13953.078, 20090.339	2499	0	Statistical Weight (4084.478 - 153810.3)
psu	6482	integer	1, 2	2	0	Pseudo-PSU (1, 2)
strata	6482	integer	9, 10, 1	15	0	Pseudo-Stratum (1 - 15)
tchol	6482	integer	135, 192, 202	252	395	Total Cholesterol (mg/dL)
hdl	6482	integer	50, 60, 45	113	395	HDL-Cholesterol (mg/dL)
sysbp	6482	integer	114, 112, 154	62	553	Systolic Blood Pressure (mm Hg)
dbp	6482	integer	88, 62, 70	41	594	Diastolic Blood Pressure (mm Hg)
wt	6482	numeric	87.400002, 72.300003, 116.8	958	37	Weight (kg)
ht	6482	numeric	164.7, 181.3, 166	528	37	Standing Height (cm)
bmi	6482	numeric	32.22, 22, 42.39	2277	37	Body mass Index (Kg/m^2)
vigwrk	6482	factor	No, Yes, NA	3	1	Vigorous Work Activity (1: Yes, 2: No)
modwrk	6482	factor	No, Yes, NA	3	1	Moderate Work Activity (1: Yes, 2: No)
wlkbik	6482	factor	No, Yes, NA	3	1	Walk or Bicycle (1: Yes, 2: No)
vigrecexr	6482	factor	No, Yes, NA	3	1	Vigorous Recreational Activities (1: Yes, 2: No)
modrecexr	6482	factor	No, Yes, NA	3	2	Moderate Recreational Activities (1: Yes, 2: No)
sedmin	6482	integer	480, 240, 720	38	79	Minutes of Sedentary Activity per Week (1: Yes, 2: No)
obese	6482	factor	No, Yes, NA	3	37	BMI>35 (1: No, 2: Yes)

Result

Discussion

Conclusion

References