Chapter 9 Bivariate Statistics: Crosstab

Crosstab is the most efficient way to organize relations between two discrete variables, considering the following set of raw data

Case #	gender	Afraid of walking at night	Case #	gender	Afraid of walking at night
1	M	Yes	7	W	No
2	M	No	8	W	Yes
3	W	Yes	9	M	No
4	W	Yes	10	W	Yes
5	W	Yes	11	M	No
6	M	Yes	---	---	---

Being afraid of Walking at night (yes/no)	Gender		RM (Row Margins)
	Men	Women	
Yes	2 (2/5=40%)	5 (5/6 = 83%)	7
No	3 (3/5 = 60%)	1 (1/6 = 17%)	4
CM (Column Margins)	5	6	N = 11

A) Always arrange groups of independent variable across different columns
B) Always arrange groups of dependent variable across different rows
C) RM is the summation of the cell frequencies across different columns within a given row
D) CM is the summation of the cell frequencies across different rows within a given column
E) N (total number of cases) is the summation of either RMs or CMs, which should produce the same number
F) Cell percentage is calculated by dividing the cell frequency by its CM

Exercise

Case #	gender	Type of vehicle (pickup truck/SUV/others)	Case #	gender	Type of vehicle (pickup truck/SUV/others)
1	M	Pickup	8	M	SUV
2	M	Pickup	9	M	Pickup
3	W	SUV	10	M	SUV
4	W	SUV	11	W	SUV
5	W	Others	12	M	Pickup
6	M	Others	13	W	Pickup
7	W	Others	---	---	---

	Men	Women	RM
Pickup	4 (57%)	1 (17%)	5
SUV	2 (29%)	3 (50%)	5
Others	1 (14%)	2 (33%)	3
CM	7	6	N = 13