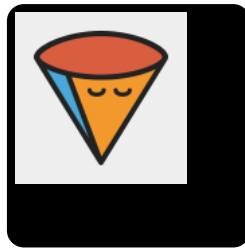




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ARCHIVE

Testing moderation in Anova

```
LIBNAME mydata "/courses/d1406ae5ba27fe300" access=readonly;  
DATA new; set mydata.nesarc_pds;
```

```
/*Data management for Alcohol consumption*/
```

```
IF S2AQ8A=99 THEN S2AQ8A=.;
```

```
IF S2AQ8A=10 THEN S2AQ8A=.;
```

```
IF S2AQ8A=. THEN S2AQ8E=11;
```

```
IF S2AQ8E=11 THEN S2AQ8E=.;
```

```
IF S2AQ8E=99 THEN S2AQ8E=.;
```

```
NUMDRINKSWEEK=(S2AQ8A*S2AQ8B)/52; /*Calculating 52 weeks per year*/
```

```
IF MUMDRINKSWEEK LE 17 THEN DRINKGROUP=1; /*Soft drinker*/
```

```
ELSE IF NUMDRINKSWEEK LE 17 THEN DRINKGROUP=2; /*Hard drinker*/
```

```
/*Data management for age*/
```

```
IF AGE LE 24;
```

```
IF AGE LE 21 THEN AGEGROUP=1;
```

```
ELSE IF AGE LE 23 THEN AGEGROUP=2;
```

```
ELSE AGEGROUP=3;
```

```
PROC FREQ; TABLES S2AQ8A S2AQ8E AGE SEX AGEGROUP NUMDRINKSWEEK SEX;  
LABEL S2AQ8A="How often drank any alcohol in last 12 months" S2AQ8E="How often drank  
5+ drinks of any alcohol in last 12 months" S11AQ1A4="Ever run away from home"  
NUMDRIKSWEEK="Drinks per week estimated";
```

```
PROC SORT; by SEX;
```

```
PROC ANOVA; CLASS AGEGROUP;
```

```
MODEL NUMDRINKSWEEK=AGEGROUP;
```

MEANS AGEGROUP; BY SEX;
RUN;

In this week I decide to compare the same variables than first week. In my Anova analysis I compared the number of drinks consumed per week by people surveyed. In the analysis of variance this variable is used as a quantitative variable.

Another variable studied was the age of participants. I divided the age in three groups (18 to 21, 21 to 22 and 23-24 years old). This variable is a categorical variable with three categories.

In the first analysis I could reject the null hyphotesis accepting the alternative hyphotesis. But now I will make an Anova analysis with “sex” like a moderation variable. Once the analysis is done, we can see the sex is an influential variable in the number of drinks and age groups compared. We can accept the alternative hyphothesis for males ($p\text{-value}=0,008$) and we can't do the same thing with females (0,1587). So sex is a determinant factor if we compare age groups from young people and number of drinks per week.

Procedimiento ANOVA

SEX=1

Información de nivel de clase		
Clase	Niveles	Valores
AGEGROUP	3	1 2 3

Número de observaciones leídas	2410
Número de observaciones usadas	1555

Procedimiento ANOVA
Variable dependiente: NUMDRINKSWEEK

SEX=1

Fuente	DF	Suma de cuadrados	Cuadrado de la media	F-Valor	Pr > F
Modelo	2	8.456218	4.228109	4.83	0.0081
Error	1552	1358.807261	0.875520		
Total corregido	1554	1367.263479			

R-cuadrado	Coef Var	Raiz MSE	NUMDRINKSWEEK Media
0.006185	195.8736	0.935692	0.477702

Fuente	DF	Anova SS	Cuadrado de la media	F-Valor	Pr > F
AGEGROUP	2	8.45621768	4.22810884	4.83	0.0081

Procedimiento ANOVA

SEX=2

Información de nivel de clase		
Clase	Niveles	Valores
AGEGROUP	3	1 2 3

Número de observaciones leídas	2789
Número de observaciones usadas	1479

Procedimiento ANOVA
Variable dependiente: NUMDRINKSWEEK

SEX=2

Fuente	DF	Suma de cuadrados	Cuadrado de la media	F-Valor	Pr > F
Modelo	2	0.4667136	0.2333568	1.84	0.1587
Error	1476	186.9150602	0.1266362		
Total corregido	1478	187.3817738			

R-cuadrado	Coef Var	Raíz MSE	NUMDRINKSWEEK Media
0.002491	103.0478	0.355860	0.345335

Fuente	DF	Anova SS	Cuadrado de la media	F-Valor	Pr > F
AGEGROUP	2	0.46671362	0.23335681	1.84	0.1587

Mar 6th, 2016

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