

Describing the Birth Weight Data with SAS

```
/* bweight1.sas */
options linesize=79 noovp formdlim='-';
title 'Low Birth Weight Data';
title2 'Basic Descriptive Statistics and Consistency Checks';

proc format; /* Value labels used in data step below */
  value lowfmt 0 = '2500 g +' 1 = 'Under 2500 g';
  value racefmt 1 = 'White'
              2 = 'Black'
              3 = 'Other';
  value ynfmt 0 = 'No' 1 = 'Yes';

data bigbaby;
  infile 'bweight.data' firstobs=2; /* Skip the first line that R uses */
  input id low age lwt race smoke ptl ht ui ftv bwt;
  if race = 2 then r2 = 1; else r2=0;
  if race = 3 then r3 = 1; else r3=0;
  label id      = 'Identification Code'
        low     = 'Low Birth Weight'
        lwt     = 'Weight at Last Period'
        smoke   = 'Smoke during Pregnancy'
        ptl     = 'History of Premature Labour (# of times)'
        ht      = 'History of Hypertension'
        ui      = 'Presence of Uterine Irritability'
        ftv     = 'Visits to Doctor During 1st trimester'
        bwt     = 'Birth Weight in Grams'
        r2      = 'Black vs White'
        r3      = 'Other vs White';
  /***** Value labels defined above in proc format *****/
  format low lowfmt.;
  format race racefmt.;
  format ht ui smoke ynfmt.;

proc freq;
  tables low smoke -- ftv;
proc means;
  var age lwt bwt;
proc freq;
  title3 'Some chisquare tests';
  tables low*race / chisq;
  tables race*smoke*low / nocol nopercent chisq;
  /* smoke by low for each race */

proc freq;
  title3 'Consistency Checks';
  tables race * (r2 r3) / norow nocol nopercent;
  tables bwt*low/norow nocol nopercent;
```

The FREQ Procedure

Low Birth Weight

low	Frequency	Percent	Cumulative Frequency	Cumulative Percent
2500 g +	130	68.78	130	68.78
Under 2500 g	59	31.22	189	100.00

Smoke during Pregnancy

smoke	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	115	60.85	115	60.85
Yes	74	39.15	189	100.00

History of Premature Labour (# of times)

ptl	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	159	84.13	159	84.13
1	24	12.70	183	96.83
2	5	2.65	188	99.47
3	1	0.53	189	100.00

History of Hypertension

ht	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	177	93.65	177	93.65
Yes	12	6.35	189	100.00

Presence of Uterine Irritability

ui	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No	161	85.19	161	85.19
Yes	28	14.81	189	100.00

Visits to Doctor During 1st trimester

ftv	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	100	52.91	100	52.91
1	47	24.87	147	77.78
2	30	15.87	177	93.65
3	7	3.70	184	97.35
4	4	2.12	188	99.47
6	1	0.53	189	100.00

Low Birth Weight Data 2
 Basic Descriptive Statistics and Consistency Checks
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The MEANS Procedure

Variable	Label	N	Mean	Std Dev	Minimum
age		189	23.2380952	5.2986779	14.0000000
lwt	Weight at Last Period	189	129.8148148	30.5793804	80.0000000
bwt	Birth Weight in Grams	189	2944.66	729.0269977	709.0000000

Variable	Label	Maximum
age		45.0000000
lwt	Weight at Last Period	250.0000000
bwt	Birth Weight in Grams	4990.00

Low Birth Weight Data
 Basic Descriptive Statistics and Consistency Checks
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The FREQ Procedure

Table of low by race

low(Low Birth Weight)	race			
Frequency	White	Black	Other	Total
Percent				
Row Pct				
Col Pct				
2500 g +	73	15	42	130
	38.62	7.94	22.22	68.78
	56.15	11.54	32.31	
	76.04	57.69	62.69	
Under 2500 g	23	11	25	59
	12.17	5.82	13.23	31.22
	38.98	18.64	42.37	
	23.96	42.31	37.31	
Total	96	26	67	189
	50.79	13.76	35.45	100.00

Statistics for Table of low by race

Statistic	DF	Value	Prob
Chi-Square	2	5.0048	0.0819
Likelihood Ratio Chi-Square	2	5.0104	0.0817
Mantel-Haenszel Chi-Square	1	3.5695	0.0588
Phi Coefficient		0.1627	
Contingency Coefficient		0.1606	
Cramer's V		0.1627	

Sample Size = 189