

# Ch6 Lab - More on Unique Contribution of Predictors

\*2.

CORR totsleep bodywt exp.

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	TotSleep	BodyWt
<b>BodyWt</b>	-.307	
	.019	
	58	62
<b>Exp</b>	-.642	.338
	.000	.007
	58	62

---

SELECT IF NOT MISSING(totsleep).  
EXEC.

CORR totsleep bodywt exp.

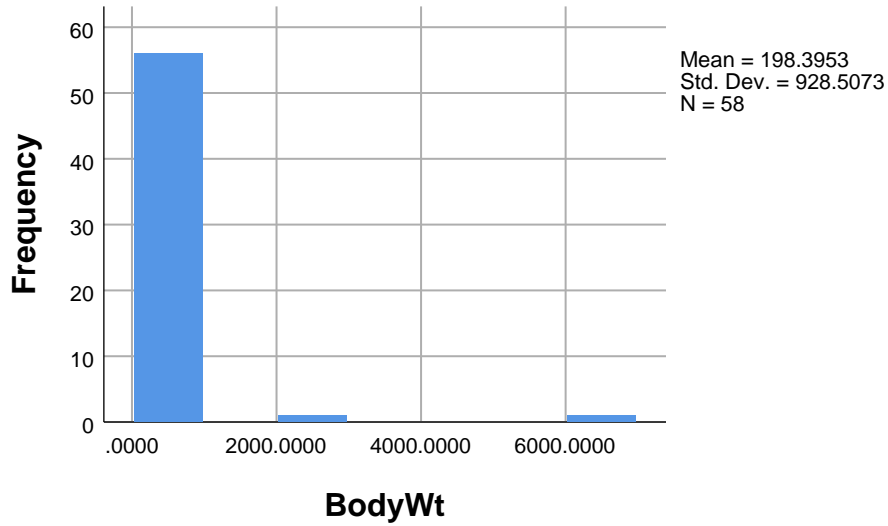
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	TotSleep	BodyWt
<b>BodyWt</b>	-.307	1
	.019	
	58	58
<b>Exp</b>	-.642	.356
	.000	.006
	58	58

---

\*3.

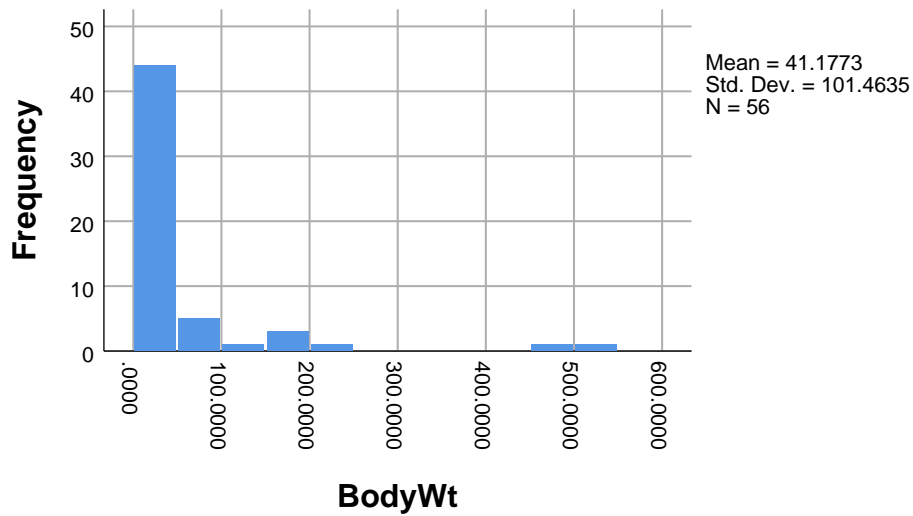
```
FREQ bodywt /FORMAT = NOTABLE /HISTOGRAM
```



```
SELECT IF bodywt < 2500.
```

```
EXEC.
```

```
FREQ bodywt /FORMAT = NOTABLE /HISTOGRAM
```



CORR totsleep bodywt exp /STAT.

	Mean	Std. Deviation	N
TotSleep	10.780357	4.4922729	56
BodyWt	41.177304	101.4634584	56
Exp	2.214286	1.4735768	56

	TotSleep	BodyWt
BodyWt	-.417	
	.001	
	56	56
Exp	-.605	.536
	.000	.000
	56	56

\*4 & 5 - unique contribution of exp.

REGRESS /STAT = DEFAU ZPP CHANGE /DEP = totsleep /ENTER bodywt /ENTER exp.

Model	R	R Square	Change Statistics				
			R Square Change	F Change	df1	df2	Sig. F Change
1	.417	.174	.174	11.347	1	54	.001
2	.615	.378	.205	17.444	1	53	.000

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	192.726	1	192.726	11.347	.001
	Residual	917.202	54	16.985		
	Total	1109.928	55			
2	Regression	419.853	2	209.926	16.123	.000
	Residual	690.076	53	13.020		
	Total	1109.928	55			

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.	Correlations		
		B	Std. Error	Beta	t		Zero-order	Partial	Part
1	(Constant)	11.540	.595		19.391	.000			
	BodyWt	-.018	.005	-.417	-3.368	.001	-.417	-.417	-.417
2	(Constant)	14.634	.906		16.159	.000			
	BodyWt	-.006	.006	-.129	-1.009	.318	-.417	-.137	-.109
	Exp	-1.634	.391	-.536	-4.177	.000	-.605	-.498	-.452

\*6.

REGR /DEP = exp /ENTER bodywt /SAVE RESI(rese.b).

Model	R	R Square
1	.536	.287

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	34.325	1	34.325	21.780	.000
	Residual	85.104	54	1.576		
	Total	119.429	55			

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.894	.181		10.446	.000
	BodyWt	.008	.002	.536	4.667	.000

	Mean	Std. Deviation	N
Predicted Value	2.214286	.7899898	56
Residual	.0000000	1.2439231	56

VARI LABEL rese.b ''.  
CORR rese.b WITH totsleap bodywt.

	TotSleep	BodyWt
rese.b	-.452	.000

\*7.

REGR /DEP = totsleap /ENTER bodywt /SAVE RESI(rest.b).

Model	R	R Square
1	.417	.174

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	192.726	1	192.726	11.347	.001
	Residual	917.202	54	16.985		
	Total	1109.928	55			

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	11.540	.595		19.391	.000
	BodyWt	-.018	.005	-.417	-3.368	.001

	Mean	Std. Deviation	N
Predicted Value	10.780357	1.8719269	56
Residual	.0000000	4.0836755	56

VARI LABEL rest.b ''.  
CORR rest.b WITH rese.b bodywt.

	rese.b	BodyWt
rest.b	-.498	.000

\*8 NB - missing cases & elephants excluded (see 2 3).  
 DESCR totsleap bodywt exp.

	Mean	Std. Deviation
TotSleep	10.780357	4.4922729
BodyWt	41.177304	101.4634584
Exp	2.214286	1.4735768

COMPUTE zsleep = (totsleap-10.780357)/4.4922729.  
 COMPUTE zwt = (bodywt-41.177304)/101.4634584  
 COMPUTE zexp = (exp-2.214286)/1.4735768.

DESCR zsleep zexp zwt.

	Mean	Std. Deviation
zsleap	.00000	1.000000
zexp	.00000	1.000000
zwt	.00000	1.000000

REGRESS /DEP = zsleep /ENTER zexp zwt.

Model	R	R Square
1	.615	.378

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.805	2	10.402	16.123	.000
	Residual	34.195	53	.645		
	Total	55.000	55			

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-7.265E-8	.107		.000	1.000
	zexp	-.536	.128	-.536	-4.177	.000
	zwt	-.129	.128	-.129	-1.009	.318

```
*9 compare simple and part rs.  
*plot predicted surface.  
input program.  
loop e = 1 to 5 by .5.  
leave e.  
loop b = 0 to 600 by 50.  
end case.  
end loop.  
end loop.  
end file.  
end input program.  
comp t = 14.634 - 1.634*e - .006*b.
```

GRAPH /SCATTERPLOT(XYZ)= b WITH t WITH e.

