

Chapter 9

One-Way Between Groups ANOVA

Canonical Model

Are X and Y Related?

Are X and Y correlated?

What happens to Y when X changes?

Does X effect Y?

Is there a difference in the Y values for a different X?

Are X and Y Related?

Are X and Y correlated?

X = Sex

0 = Girls; 1 = Boys

Y = Maximum Leg Press

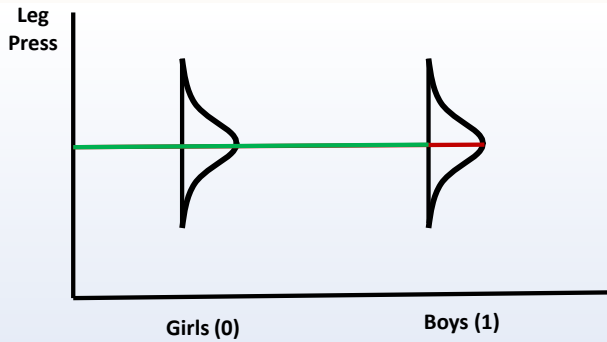
What happens to Y when X changes?

Does X effect Y?

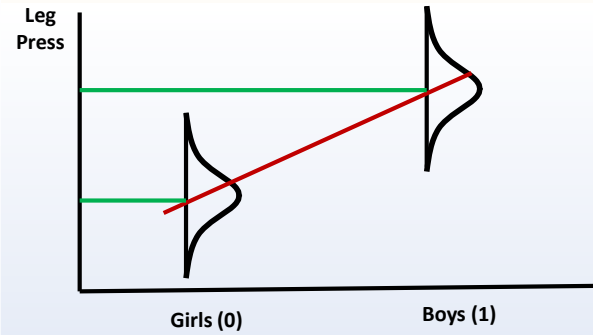
Is there a difference in the Y values for a different X?

Is There a Relationship?

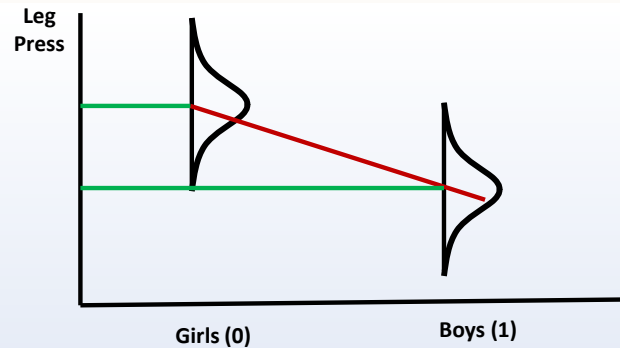
Is there a Relationship?



Is there a Relationship?



Is there a Relationship?



SPSS Output

Correlations

		Sex	MaxLegPress LB
Sex	Pearson Correlation	.1	.034
	Sig. (2-tailed)		.740
	N	100	100
MaxLegPressLB	Pearson Correlation	.034	1
	Sig. (2-tailed)	.740	
	N	100	100

ANOVA

MaxLegPressLB

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	133.749	1	133.749	.111	.740
Within Groups	117949.491	98	1203.566		
Total	118083.240	99			

Group Statistics

	Sex	N	Mean	Std. Deviation	Std. Error Mean
MaxLegPressLB	Girls	42	119.38	30.224	4.664
	Boys	58	121.72	37.579	4.934

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
MaxLegPressLB	Equal variances assumed	1.188	.278	-.333	98	.740	-.2343	7.029	-16.292	11.606
	Equal variances not assumed			-.345	96.863	.731	-.2343	6.790	-15.819	11.133

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SPSS Output

$$t^2 = F$$

$$(-.333)^2 = .111$$

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IDENTICAL Conclusion

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