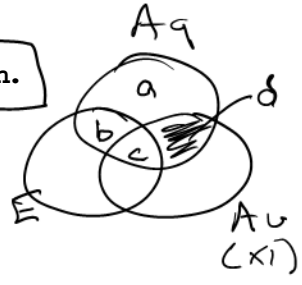


Ch6 - Ex 1 - Child aggression (aggr) as a function of mother's education (educ) and authoritarian parenting style (auth).

REGRESS /STAT = DEFAULT CHANGE ZPP /DEP = aggr /ENTER educ /ENTER auth.

unique



Same ChS →

Model	R	R Square	Change Statistics				
			R Square Change	F Change	df1	df2	Sig. F Change
1	.467	.218	.218	6.425	1	23	.019
2	.744	.554	.335	16.521	1	22	.001

$R_{CH} = .336$

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	128.267	1	128.267	6.425	.019
	Residual	459.173	23	19.964		
	Total	587.440	24			
2	Regression	325.201	2	162.601	13.641	.000
	Residual	262.239	22	11.920		
	Total	587.440	24			

$SS_{CH} = SS_{y.2} - SS_{y.1}$

$325.201 - 128.267 = 196.934 = d$

$r^2_{y(2)} = \frac{196.934}{587.440}$

$= .335$

$\sqrt{} = .579$

$= r_{y(1,2)}$

Model		B	Beta	Correlations		
				Unstandardized Coefficients	Standardized Coefficients	Zero-order
1	(Constant)	52.531				
	educ	-1.236	-.467	-.467	-.467	-.467
2	(Constant)	19.096				
	educ	.315	.119	-.467	.124	.084
	auth	.874	.824	.739	.655	.579

a+b+c+d

← Same as ChS

$r_{y1} \quad \sqrt{r_{y1,2}} \quad r_{y(1,2)}$

$SS_{CH} = 459.173 \text{ a+d} - 262.239 - a = 196.934 = d$



$r^2_{y1,2} = \frac{d}{a+d} = \frac{196.934}{459.173}$

$= .429$

$\sqrt{} = .655$

REGRESS /DEP = auth /ENTER educ /SAVE RESID(resa.e).

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.712	.506	.485	3.3473051

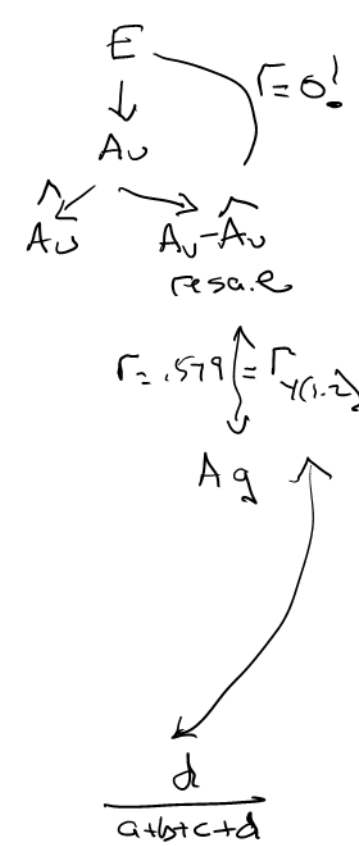
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	264.298	1	264.298	23.589	.000
	Residual	257.702	23	11.204		
	Total	522.000	24			

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	8.092857	25.830952	19.800000	3.3184938	25
Residual	-6.2833333	8.2642860	.0000000	3.2768276	25

VARI LABEL resa.e ''.
CORR resa.e WITH aggr educ.

	aggr	educ
resa.e	.579	.000

$$r_{Y(1,2)} \quad r_{e(0-\hat{a}_e)} = 0$$



Standardized Coeff.

DESCR aggr auth educ.

	Mean	Std. Deviation
aggr	39.680000	4.9473899
auth	19.800000	4.6636895
educ	10.400000	1.8708287

influences size of unstandardized coeff's

COMPUTE zaggr = (aggr - 39.68)/4.9474.
 COMPUTE zauth = (auth - 19.80)/4.6637.
 COMPUTE zeduc = (educ - 10.40)/1.8708.

$\bar{z} = 0 \quad S_z = 1$

DESCR zaggr zauth zeduc.

	Mean	Std. Deviation
zaggr	.000000	.9999980
zauth	.000000	.9999978
zeduc	.000000	1.0000153

Signif. Unique Au

$F_{4} = \frac{146.9341}{17.92} = 16.521$
 $\sqrt{16.521} = 4.065$
 $= t_{Au}$

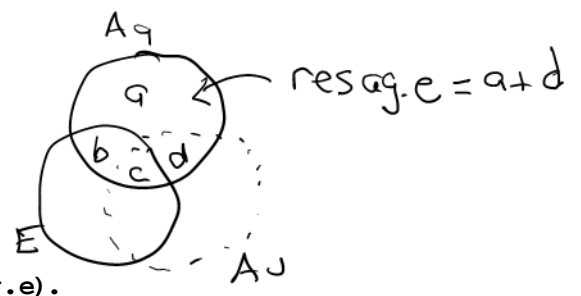
REGRESS /DEP = zaggr /ENTER zauth zeduc.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.019E-16	.140		.000	1.000
	zauth	.824	.203	.824	4.065	.001
	zeduc	.119	.203	.119	.587	.563

Unstandardized!
 SE not shown - see Ch 5

$t_{Au} = \frac{.824}{.203} = 4.064$
 $= \sqrt{F_{4}}$

$SE = \sqrt{\frac{11.920}{(1-.506)522.0}}$
 $= .215$



REGRESS /DEP = aggr /ENTER educ /SAVE RESID(resag.e).

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.467	.218	.184	4.4681134

MR

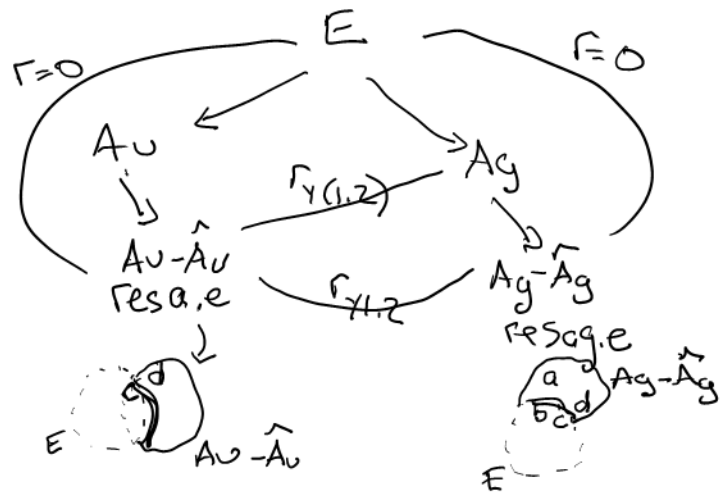
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	128.267	1	128.267	6.425	.019
	Residual	$a+d$ 459.173	23	19.964		
	Total	587.440	24			

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	31.524286	43.881428	39.680000	2.3118097	25
Residual	-6.4099998	10.0614290	.0000000	4.3740373	25

VARI LABEL resag.e ''.
CORR resag.e WITH resa.e educ.

	resa.e	educ
resag.e	.655	.000

$r_{y1.2}$



$$r_{y1.2}^2 = \frac{d}{a+d}$$

vs

$$r_{y(1.2)}^2 = \frac{d}{a+b+c+d}$$

