Welcome to processR Shiny App

The `processR` package aims to be a user-friendly way to perform moderation, mediation, moderated mediation and moderated moderation in R.
This package is inspired form famous PROCESS macro for SPSS and SAS created by Andrew Hayes.

Package Homepage: R package processR (http://github.com/cardiomoon/processR)
Package Vignette: R package processR (http://rpubs.com/cardiomoon/468602)
How to use this app: Introduction (http://rpubs.com/cardiomoon/468600)
I will appreciate any comment: cardiomoon@gmail.com (mailto:cardiomoon@gmail.com)

Select Data

Upload File or

Browse... Potthoff-06.csv

Upload complete

Select example

- (•) caskets
- ( ) disaster
- ( ) estress
- ( ) glbwarm
- ( ) pmi
- ( ) protest
- ( ) teams

Data Name

uploaded

☐ show help for data

Show 10 **entries** **Search:**

	GROUP	TIME	EXAM	TIME.x.GROUP	TIME_z	EXAM_z	TIMExG
1	1	101	67	101	0.587496091099717	0.49508396131227	1.099699
2	1	98	83	98	0.430551454118493	1.18389642922499	1.038543
3	1	116	85	116	1.37221927600584	1.26999798771408	1.40548
4	1	103	85	103	0.6921258490872	1.26999798771408	1.140471
5	1	97	81	97	0.378236575124751	1.0977948707359	1.018157
6	1	112	71	112	1.16295976003087	0.667287078290451	1.32394
7	1	100	82	100	0.535181212105976	1.14084564998045	1.079314
8	1	107	86	107	0.901385365062166	1.31304876695863	1.222013
9	1	85	82	85	-0.249541972800147	1.14084564998045	0.7735306
10	1	117	84	117	1.42453415499958	1.22694720846954	1.425869

Showing 1 to 10 of 200 entries Previous 1 2 3 4 5 … 20 Next

Select Process Macro Model Number

Model No

0
1
2
3
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4.2
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6.3
6.4
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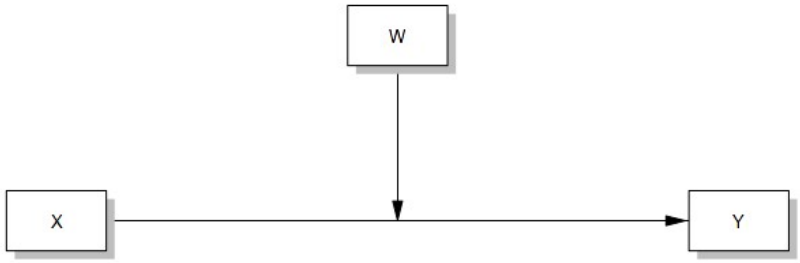
Select Plot

Conceptual Diagram | Statistical Diagram



Assign Variables

TIME
EXAM
TIME.x.GROUP
TIMExGROUP_z

→ **X** EXAM_z

→ **Y** TIME_z

→ **W** GROUP

☐ Treat X as factor

Add Covariates

+ Add Covariate | Remove Covariate | Reset All

Make Equation

make Equation

reset Equation

TIME_z ~
c1*EXAM_z+c2*GROUP+c3*EXAM_z:GRO
UP
GROUP ~ GROUP.mean*1
GROUP ~~ GROUP.var*GROUP

range mode

◉ mean+/-sd
○ probs=c(0.16,0.5,0.84)

Options

missing

pairwise

Analysis

Analysis | download PPTx (session/9fcd5701c964b5e66555b96d56fe0c13/download/downloadPPTx?w=)

select plot font

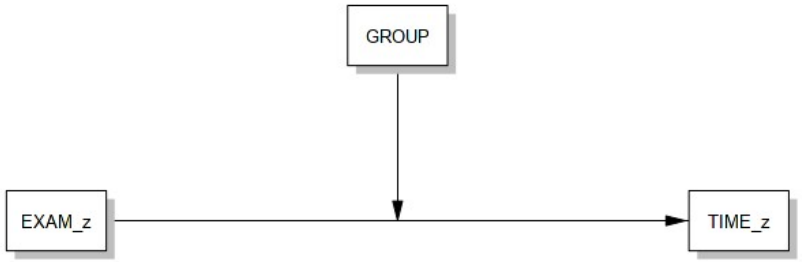
sans

☑ vanilla table

```
model='
TIME_z ~ c1*EXAM_z+c2*GROUP+c3*EXAM_z:GROUP
GROUP ~ GROUP.mean*1
GROUP ~~ GROUP.var*GROUP
 '
fit=sem(model=model,data=uploaded,se='bootstrap',bootstrap=10,missing='pairwise')
summary(fit,fit.measures = FALSE,standardize = TRUE, rsquare = TRUE)

lavaan 0.6-3 ended normally after 36 iterations

  Optimization method                           NLMINB
  Number of free parameters                         12

  Number of observations                           200
  Number of missing patterns                         1

  Estimator                                         ML
  Model Fit Test Statistic                     487.562
  Degrees of freedom                                 2
  P-value (Chi-square)                           0.000

Parameter Estimates:

  Standard Errors                             Bootstrap
  Number of requested bootstrap draws                10
  Number of successful bootstrap draws               10

Regressions:
                   Estimate  Std.Err  z-value  P(>|z|)   Std.lv  Std.all
  TIME_z ~
    EXAM_z    (c1)    1.084    0.252    4.297    0.000    1.084    0.511
    GROUP     (c2)   -2.421    0.307   -7.876    0.000   -2.421   -0.572
    EXAM_:GRO (c3)    0.862    0.428    2.012    0.044    0.862    0.218

Covariances:
                   Estimate  Std.Err  z-value  P(>|z|)   Std.lv  Std.all
  EXAM_z ~~
    EXAM_z:GROUP      0.511    0.023   22.296    0.000    0.511    0.958

Intercepts:
                   Estimate  Std.Err  z-value  P(>|z|)   Std.lv  Std.all
    GROUP   (GROU)    0.500    0.018   27.692    0.000    0.500    1.000
   .TIME_z            0.802    0.267    3.004    0.003    0.802    0.379
    EXAM_z            0.000    0.036    0.000    1.000    0.000    0.000
    EXAM_:G           0.475    0.025   19.318    0.000    0.475    0.888

Variances:
                   Estimate  Std.Err  z-value  P(>|z|)   Std.lv  Std.all
    GROUP   (GROU)    0.250    0.000  678.905    0.000    0.250    1.000
   .TIME_z            0.676    0.057   11.836    0.000    0.676    0.151
    EXAM_z            0.995    0.036   27.425    0.000    0.995    1.000
    EXAM_:G           0.286    0.017   17.158    0.000    0.286    1.000

R-Square:
                   Estimate
    TIME_z            0.849

parameterEstimates(fit,boot.ci.type = 'bca.simple',level = .95,
ci = TRUE,standardized = FALSE)

            lhs op          rhs      label    est    se       z pvalue ci.lower
1        TIME_z  ~       EXAM_z         c1  1.084 0.252   4.297  0.000    0.658
2        TIME_z  ~        GROUP         c2 -2.421 0.307  -7.876  0.000   -2.873
3        TIME_z  ~ EXAM_z:GROUP         c3  0.862 0.428   2.012  0.044    0.381
4         GROUP ~1              GROUP.mean  0.500 0.018  27.692  0.000    0.475
5         GROUP ~~        GROUP  GROUP.var  0.250 0.000 678.905  0.000    0.250
6        TIME_z ~~       TIME_z             0.676 0.057  11.836  0.000    0.586
7        EXAM_z ~~       EXAM_z             0.995 0.036  27.425  0.000    0.925
8        EXAM_z ~~ EXAM_z:GROUP             0.511 0.023  22.296  0.000    0.483
9  EXAM_z:GROUP ~~ EXAM_z:GROUP             0.286 0.017  17.158  0.000    0.272
10       TIME_z ~1                          0.802 0.267   3.004  0.003    0.467
11       EXAM_z ~1                          0.000 0.036   0.000  1.000   -0.024
12 EXAM_z:GROUP ~1                          0.475 0.025  19.318  0.000    0.457
   ci.upper
```

```
1     1.430
2    -1.926
3     1.591
4     0.535
5     0.250
6     0.757
7     1.033
8     0.558
9     0.332
10    1.267
11    0.062
12    0.529
```

Conceptual Diagram

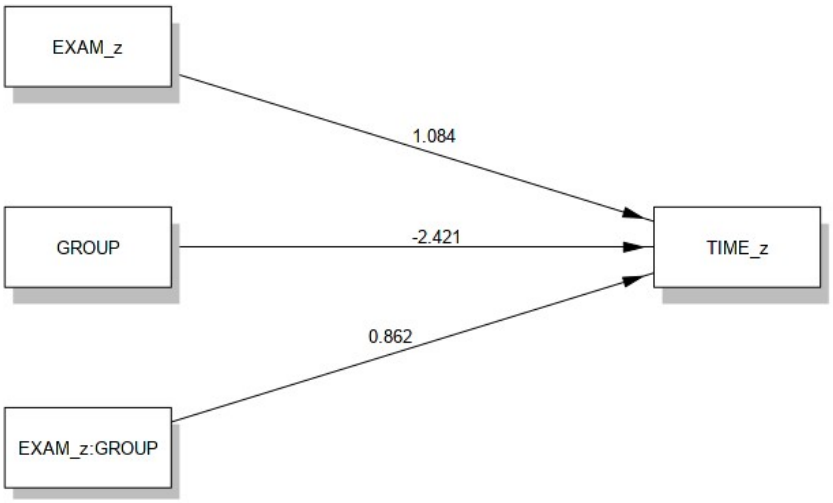


Estimates Table

Variables	Predictors	label	B	SE	z	p	β
TIME_z	EXAM_z	c1	1.084	0.252	4.297	< 0.001	0.511
TIME_z	GROUP	c2	-2.421	0.307	-7.876	< 0.001	-0.572
TIME_z	EXAM_z:GROUP	c3	0.862	0.428	2.012	0.044	0.218

Statistical Diagram

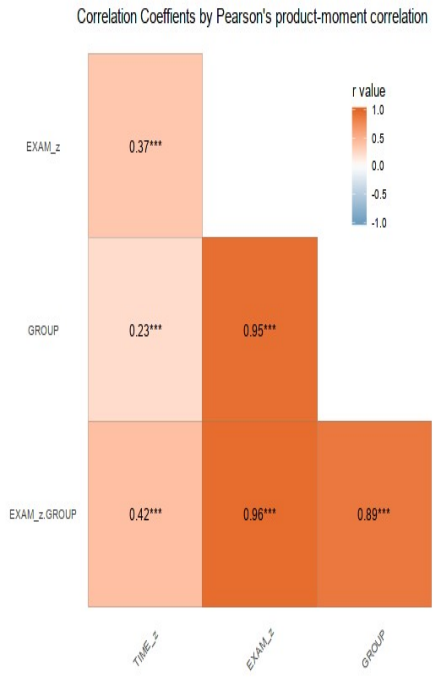
whatLabel est ▾ **digits** 3 ▾ **box width** 0.10 ▾ ☐ **include Latent Vars**



Correlation Table

rowname	TIME_z	EXAM_z	GROUP	EXAM_z.GROUP
TIME_z	1			
EXAM_z	0.37***	1		
GROUP	0.23**	0.95***	1	
EXAM_z.GROUP	0.42***	0.96***	0.89***	1

Correlation Plot



Model Fit Table

chisq	df	x2df	p	CFI	GFI	AGFI	TLI	RMR	SRMR	RMSEA(95% CI)	AIC	BIC
487.56	2.00	243.78	0.00	0.13	0.94	0.56	-1.17	1.02	1.15	1.1(1.02-1.19)	1185.72	1225.30

Summary of Model Coefficient

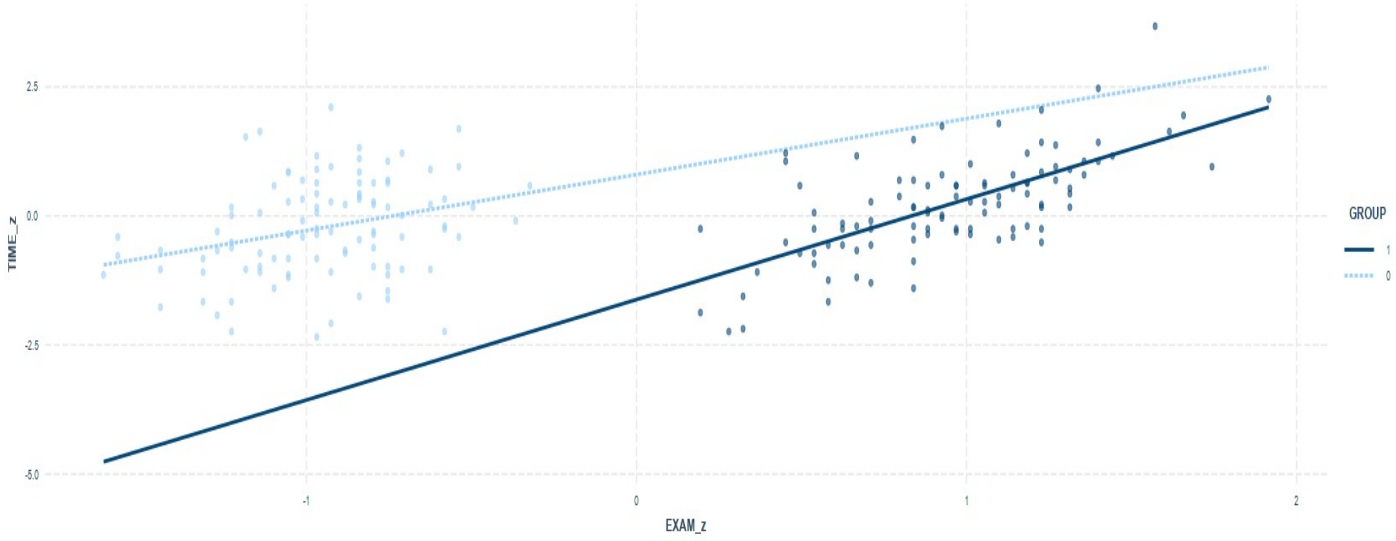
		Consequent			
		TIME_z(Y)			
Antecedent		Coef	SE	t	p
EXAM_z(X)	c_1	1.084	0.321	3.380	.001
GROUP(W)	c_2	-2.421	0.397	-6.093	<.001
EXAM_z:GROUP(X:W)	c_3	0.862	0.400	2.155	.032
Constant	i_Y	0.802	0.315	2.541	.012
Observations		200			
R2		0.321			
Adjusted R2		0.310			
Residual SE		0.830 (df = 196)			
F statistic		F(3,196) = 30.864, p < .001			

Moderation Effect

type

☑ **show points** ☐ **show interval** confidence **width** 0.95 ☐ **linearity check**

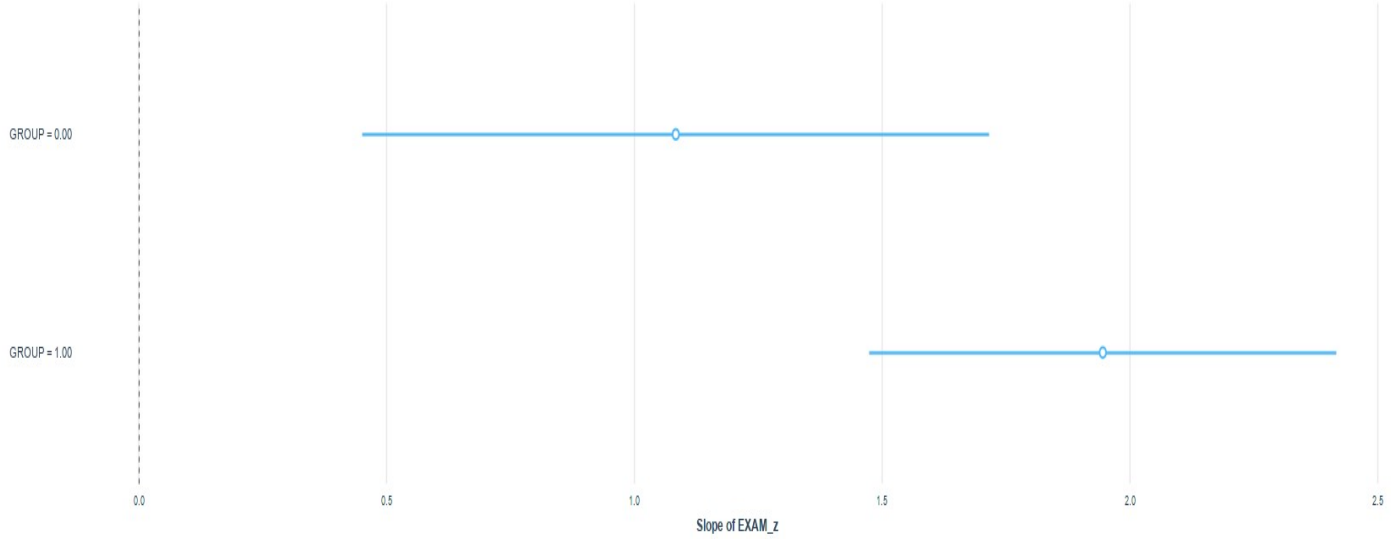
predictor EXAM_z **moderator1** GROUP



Simple Slope Analysis

☑ **show confidence interval**

```
JOHNSON-NEYMAN INTERVAL

When GROUP is OUTSIDE the interval [-21.846, -0.294], the slope of EXAM_z
is p < .05.

Note: The range of observed values of GROUP is [0.000, 1.000]

SIMPLE SLOPES ANALYSIS

Slope of EXAM_z when GROUP = 0.000 (0):

   Est.    S.E.    2.5%   97.5%   t val.       p
------- ------- ------- ------- -------- -------
  1.084   0.321   0.451   1.716    3.380   0.001

Slope of EXAM_z when GROUP = 1.000 (1):

   Est.    S.E.    2.5%   97.5%   t val.       p
------- ------- ------- ------- -------- -------
  1.945   0.239   1.474   2.417    8.137   0.000
```

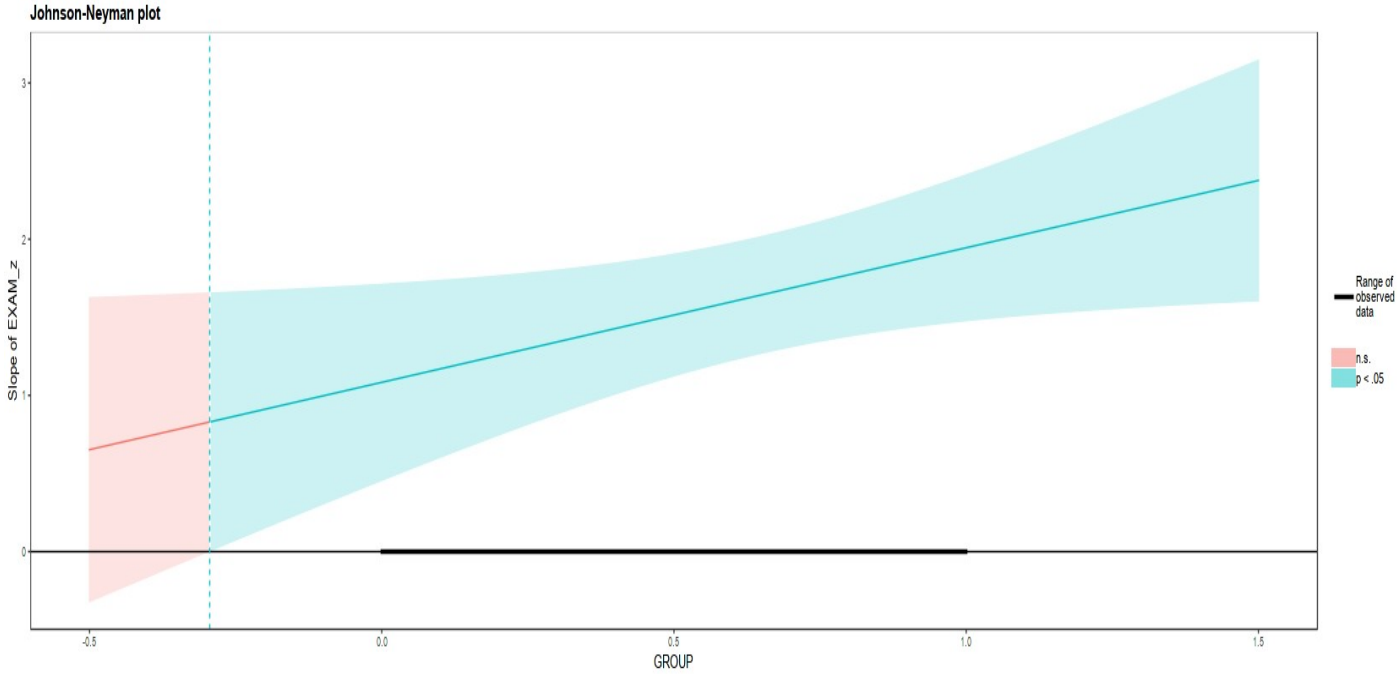


Johnson-Neyman Intervals

```
fit=lm( TIME_z ~  EXAM_z+EXAM_z*GROUP ,data= uploaded )
johnson_neyman(fit,pred=EXAM_z,modx=GROUP,alpha=0.05,plot=FALSE)

JOHNSON-NEYMAN INTERVAL

When GROUP is OUTSIDE the interval [-21.85, -0.29], the slope of EXAM_z is
p < .05.

Note: The range of observed values of GROUP is [0.00, 1.00]
```

alpha

0.05



```
Regression Analysis

fit=lm( TIME_z ~  EXAM_z+EXAM_z*GROUP ,data= uploaded )
summary(fit)

Call:
lm(formula = TIME_z ~ EXAM_z + EXAM_z * GROUP, data = data1)

Residuals:
     Min       1Q   Median       3Q      Max
-2.40931 -0.52218 -0.03846  0.49573  2.30602

Coefficients:
             Estimate Std. Error t value Pr(>|t|)
(Intercept)    0.8016     0.3154   2.541 0.011818 *
EXAM_z         1.0836     0.3206   3.380 0.000874 ***
GROUP         -2.4210     0.3973  -6.093 5.76e-09 ***
EXAM_z:GROUP   0.8616     0.3999   2.155 0.032408 *
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.8304 on 196 degrees of freedom
Multiple R-squared:  0.3208,    Adjusted R-squared:  0.3104
F-statistic: 30.86 on 3 and 196 DF,  p-value: < 2.2e-16
```