PROCESS 中介效应检验结果的解读

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Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 4.2 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2022). www.guilford.com/p/hayes3

**************************************************************************
Model  : 4
    Y  : Y
    X  : M1
    M  : M2

Sample
Size:  732

**************************************************************************
OUTCOME VARIABLE:
 M2

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .6138      .3768     1.1654   441.3674     1.0000   730.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     -.0312      .0399     -.7822      .4344     -.1096      .0471
M1            .7775      .0370    21.0087      .0000      .7048      .8501

Standardized coefficients
        coeff
M1      .6138

**************************************************************************
OUTCOME VARIABLE:
 Y

Model Summary
```

- 批注[张庆垚 1]: 注意 PROCESS 的版本
- 批注[张庆垚 2]: 模型编号
- 批注[张庆垚 3]: PROCESS 中的变量与数据中的变量的对应关系
- 批注[张庆垚 4]: 样本量
- 批注[张庆垚 5]: 第一个回归的结果
- 批注[张庆垚 6]: 以 M2 为结果变量的回归
- 批注[张庆垚 7]: 回归模型的拟合情况
- 批注[张庆垚 8]: 基于 Delta 方法的置信区间
- 批注[张庆垚 9]: 中介效应的前半路径 a
- 批注[张庆垚 10]: 标准化的回归系数
- 批注[张庆垚 11]: 第二个回归的结果

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          R       R-sq        MSE          F        df1        df2          p
      .5182      .2685     1.0066   133.7812     2.0000   729.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     -.0667      .0371    -1.7964      .0728     -.1395      .0062
M1            .1806      .0436     4.1444      .0000      .0950      .2661
M2            .3422      .0344     9.9477      .0000      .2747      .4097

Standardized coefficients
        coeff
M1      .1663
M2      .3992

************************** TOTAL EFFECT MODEL ****************************
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批注[张庆垚 12]: 与路径 c 有关

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OUTCOME VARIABLE:
 Y

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .4113      .1692     1.1417   148.6582     1.0000   730.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     -.0773      .0395    -1.9579      .0506     -.1549      .0002
M1            .4466      .0366    12.1925      .0000      .3747      .5185

Standardized coefficients
        coeff
M1      .4113


************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI       c_cs
      .4466      .0366    12.1925      .0000      .3747      .5185      .4113
```

批注[张庆垚 13]: 总效应

批注[张庆垚 14]: 完全标准化的总效应

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Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI      c'_cs
      .1806      .0436     4.1444      .0000      .0950      .2661      .1663
```

批注[张庆垚 15]: 完全标准化的直接效应

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Indirect effect(s) of X on Y:
       Effect     BootSE   BootLLCI   BootULCI
```

批注[张庆垚 16]: 基于 bootstrap 法的标准误

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M2      .2660     .0289     .2087     .3242

Completely standardized indirect effect(s) of X on Y:
       Effect     BootSE   BootLLCI   BootULCI
M2      .2450     .0247     .1956      .2932

*********** BOOTSTRAP RESULTS FOR REGRESSION MODEL PARAMETERS ************

OUTCOME VARIABLE:
 M2

             Coeff   BootMean     BootSE   BootLLCI   BootULCI
constant    -.0312     -.0323      .0401    -.1090      .0434
M1           .7775      .7753      .0372     .7025      .8517

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OUTCOME VARIABLE:
 Y

             Coeff   BootMean     BootSE   BootLLCI   BootULCI
constant    -.0667     -.0647      .0365    -.1377      .0079
M1           .1806      .1795      .0425     .0906      .2607
M2           .3422      .3418      .0330     .2766      .4113

*********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  1000

------ END MATRIX -----
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批注[张庆垚 17]: 95%Bootstrap 百分位置信区间

批注[张庆垚 18]: 完全标准化的间接效应

批注[张庆垚 19]: 对回归系数的 bootstrap 检验

批注[张庆垚 20]: 置信区间的水平

批注[张庆垚 21]: Bootstrap 取样次数