DIY Moderation & Mediation in JMP

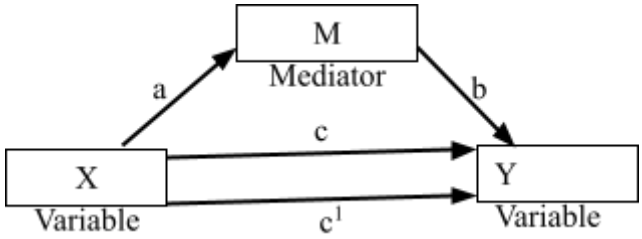
Moderation

1. Clean, code, and standardized your variables
2. Assign roles
    a. X – independent
    b. Y – Dependent
    c. M – Moderator
3. Click Analyze
    a. Then Fit Model
        i. A new window will pop up.
    b. Put your X and M in the construct model effects
        i. Click the name in the select columns box and click add
    c. Put your Y in the Y box under pick role variables
        i. Click the name in the select columns box and click add
    d. Put the cross/moderation term in the construct model effects box
        i. This is your moderation
        ii. Highlight the X and M variables in the select column box
        iii. Click the cross button on the construct model effects
    e. Leave the personality alone
    f. Click the emphasis and select Minimal Report
        i. This is optional but helpful as it cuts down on the clutter.
    g. Click Run
4. A new window should pop up, let's call it an output.
    a. Scroll down the output till you see parameter estimates
        i. This is what we care about most of all. The other stuff is important, but this is what we are here for.
5. Interpreting the results*
    a. If the X does not significantly predict Y, stop there is no moderation
        i. If the moderation term still predicts Y, you have something, but it's not moderation and not in the scope of this document to explain**
    b. If the M does not significantly predict Y, keep going
        i. This is optional and likely to happen if you have moderation
    c. If the cross term does not significantly predict Y, stop there is no moderation
        i. The X and M may still separately predict Y in which case, you have a multiple regression model, congrats.
    d. If the cross term and the X significantly predict Y, congrats!
        i. You have partial moderation, go nuts.
    e. If *only* the cross term significantly predicts Y, congrats!
        i. You have full moderation, pop some champagne
6. Next steps
    a. Journal it
    b. Save it

c. Upload it to dropbox
d. Figure out how to do post-hoc tests with it.

<u>Mediation</u>

1. Clean, code, and standardized your variables
2. Assign roles
    a. X – independent
    b. Y – Dependent
    c. M – Mediation
3. Look at this model ----------
    a. This is the basic mediation model
    b. a, b, c, & c^1 are the relationships between the variables
        i. c^1 is called c prime and is the combined effects of M and X on Y
        ii. This is what will tell us if we have mediation or not.
    c. First, we need to check is a, b, & c are significant.
    d. Then we can check for mediation



4. Click Analyze
    a. Then Fit Model
        i. A new window will pop up.
    b. Analysis One: c
        i. Put the X in the construct model effects
            1. Click the name in the select columns box and click add
        ii. Put Y in the Y box of pick role variables
            1. Click the name in the select columns box and click add
        iii. Leave the personality alone
        iv. Click the emphasis and select Minimal Report
            1. This is optional but helpful as it cuts down on the clutter.
        v. Click Run
        vi. A new window should pop up, let's call it an output.
            1. Scroll down the output till you see parameter estimates
                a. This is what we care about most of all. The other stuff is important, but this is what we here for.
        vii. Interpreting the results*
            1. If X does significantly predict Y, then continue to step c. analysis two
            2. If not, stop and try different variables.
            3. Journal it!
    c. Analysis two: a
        i. Put the X in the construct model effects
            1. Click the name in the select columns box and click add
        ii. Put M in the Y box of pick role variables
            1. Click the name in the select columns box and click add
        iii. Leave the personality alone
        iv. Click the emphasis and select Minimal Report

1. This is optional but helpful as it cuts down on the clutter.

v. Click Run

vi. A new window should pop up, let's call it an output.
    1. Scroll down the output till you see parameter estimates
        a. This is what we care about most of all. The other stuff is important, but this is what we here for.

vii. Interpreting the results*
    1. If X does significantly predict M, then continue to step d. analysis three
    2. If not, stop and try different variables.
    3. Journal it!

d. Analysis three: b

i. Put the M in the construct model effects
    1. Click the name in the select columns box and click add

ii. Put Y in the Y box of pick role variables
    1. Click the name in the select columns box and click add

iii. Leave the personality alone

iv. Click the emphasis and select Minimal Report
    1. This is optional but helpful as it cuts down on the clutter.

v. Click Run

vi. A new window should pop up, let's call it an output.
    1. Scroll down the output till you see parameter estimates
        a. This is what we care about most of all. The other stuff is important, but this is what we here for.

vii. Interpreting the results*
    1. If M does significantly predict Y, then continue to step e. analysis four
    2. If not, stop and try different variables.
    3. Journal it!

e. Analysis four: c^1

i. Put the X and M in the construct model effects
    1. Click the name in the select columns box and click add

ii. Put Y in the Y box of pick role variables
    1. Click the name in the select columns box and click add

iii. Leave the personality alone

iv. Click the emphasis and select Minimal Report
    1. This is optional but helpful as it cuts down on the clutter.

v. Click Run

vi. A new window should pop up, let's call it an output.
    1. Scroll down the output till you see parameter estimates
        a. This is what we care about most of all. The other stuff is important, but this is what we here for.

5. Interpreting the results*
   Of analysis four

    a. If neither X nor M significantly predict Y, then you don't have mediation
        i. However, you do have something very interesting, show someone else
    b. If only X significantly predicts Y, then you don't have mediation
        i. However, you have a very strong X and should be proud, show someone else.
    c. If only M significantly predicts Y, you have full mediation!
        i. To quote Yang, this is as rare as hen's teeth.
            1. Aka very uncommon.
        ii. Check the analyses again and make sure it's right
        iii. Show someone else and pop some champagne.
    d. If both X and M significantly predict Y, then you have partial mediation!
        i. This is good and what normally happens!
        ii. Be proud, do some jazz hands, and then show someone else***
6. Next steps
    a. Journal it
    b. Save it
    c. Upload it to dropbox
    d. Figure out how to do post-hoc tests with it.

Author’s notes
*This is a very simplified version. Don’t take it as gospel.
**I don’t understand what you have in this case. Someone smarter will though.
***By someone else, I basically mean Sandoz, but other labbies work as well.