

Path Analysis

Introduction

A team of researchers were interested to know the effect of openness on the subjective well-being of college students. They reasoned that openness would be positively predictive of subjective well-being. However, they also had reason to believe that this relationship would be fully indirect, or fully mediated, through self-compassion. Accordingly, they used self-report instruments to measure openness, self-compassion, and subjective well-being in college students. Your task is to check assumptions and address the questions of mediation using path analysis. In your answer, please provide details about:

- 1) The data analysis methodology and justification (approx. 15%)
 - How the student intends to analyze the data and why this approach is chosen.
- 2) The preliminary analyses (approx. 10%)
- 3) Data screening and assumptions
- 4) The primary analyses (approx. 60%)
 - The primary data analysis with findings supplemented using relevant Tables and Figures
- 5) The interpretations for each research question (approx. 15%)
 - What do the analyses reveal in terms of each of the research questions?

Research Questions

- 1) Does the hypothesized mediation model fit the data?
- 2) Is the relationship between openness and subjective well-being mediated by self-compassion in college students?

Participants

- 211 college students

Completed a number of items relating to the variables of interest

- Respondents were asked to indicate the extent to which agreed with several items tapping their openness to experience. The items are coded in the data set as:

STEM – “I am a person who..”

open1 – “Is original, comes up with new ideas”

open2 – “Is curious about many different things”

open3 – “Is ingenious, a deep thinker”

open4 – “Has an active imagination”

- Participants indicate the extent to which they agree with each item on a 7-point Likert-type scale ranging from 1 (*not at all true*) to 7 (*very true*).

NOTE: The items together measure openness so code the variable as “meanopen” in the dataset following screening and cleaning.

- Respondents were asked to rate their perceptions of self-compassion. The items are coded in the data set as:

STEM – “In general..”

sc1 – “I try to be understanding and patient towards those aspects of my personality I don’t like”

sc2 – “I try to see my failings as part of the human condition.”

sc3 – “When something upsets me I try to keep my emotions in balance.”

sc4 – “When something painful happens I try to take a balanced view of the situation.”

- Participants indicate the extent to which they believed each of the items to be true on a 7-point Likert-type scale ranging from 1 (*not at all true*) to 7 (*very true*).

NOTE: The items together measure self-compassion so code the calculated variable as “meansc” in the dataset following screening and cleaning.

- Respondents were asked to rate their general level of subjective well-being. The items in are coded in the data set as:

STEM – “In general, I feel..”

swb1 – “I feel satisfied with life.”

swb2 – “I feel positive and happy.”

swb3 – “I feel I am flourishing.”

- Participants indicate the extent to which they believed each of the items to be true on a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

NOTE: The items together measure subjective well-being, so code calculated variable as “menaswb” in the dataset following screening.

Assignment structure

Please structure your answer using the following headings:

[TITLE]

[RESEARCH QUESTIONS]

[DATA ANALYSIS METHOD AND JUSTIFICATION]

[PRELIMINARY ANALYSES]

[PRIMARY ANALYSES]

[INTERPRETATIONS]

Data file

The data file is called 'college.csv' and can be downloaded from [here](#). It can also be accessed on the GitHub in PB4A7 → SDA → Path Analysis → college.csv.