**Annotated Output of Mediation Analysis (PROCESS Model 4, Parallel Mediation)**

**Model Used**: Model 4 (Simple Mediation model with 2 mediators). *X* (Independent Variable): cond (Condition: Front-page vs. Not), *Y* (Dependent Variable): reaction (Intention to Buy Sugar), *Mediators:* M1: pmi (Presumed Media Influence) and M2: import (Perceived Importance of Article). The sample size is small: 123.

**1st Outcome Variable: PMI (Mediator M1)**

* This model estimates how the independent variable (cond) affects the first mediator (pmi).

**Model Summary**

| Metric | Value |
| --- | --- |
| R (Correlation Coefficient) | 0.1808 |
| R² (Variance Explained) | 0.0327 (3.27% of variance in PMI is explained by cond) |
| MSE (Mean Squared Error) | 1.7026 |
| F-statistic | 4.0878 (tests overall model fit) |
| df1 (Predictor Degrees of Freedom) | 1 |
| df2 (Residual Degrees of Freedom) | 121 |
| p-value | 0.0454 (significant at p < 0.05) |

**Effect of Condition on PMI**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Predictor** | **Coefficient (Effect)** | **SE** | **t** | **p** | **95% CI (LLCI, ULCI)** |
| Constant | 5.3769 | 0.1618 | 33.22 | 0.0000 | (5.0565, 5.6973) |
| Condition (X → M1) | 0.4765 | 0.2357 | 2.02 | 0.0454 | (0.0099, 0.9431) |

Being in the front-page condition significantly increases PMI by 0.4765 units on average (p = 0.0454), meaning that front-page placement increases people's belief in the media's influence.

**2nd Outcome Variable: IMPORT (Mediator M2)**

* This model estimates how cond affects the second mediator (import).

**Model Summary**

| Metric | Value |
| --- | --- |
| R | 0.1809 |
| R² | 0.0327 (3.27% of variance in import is explained by cond) |
| MSE | 2.9411 |
| F-statistic | 4.0942 |
| df1 | 1 |
| df2 | 121 |
| p-value | 0.0452 (significant at p < 0.05) |

**Effect of Condition on IMPORT**

| **Predictor** | **Coefficient (Effect)** | **SE** | **t** | **p** | **95% CI (LLCI, ULCI)** |
| --- | --- | --- | --- | --- | --- |
| Constant | 3.9077 | 0.2127 | 18.37 | 0.0000 | (3.4866, 4.3288) |
| Condition (X → M2) | 0.6268 | 0.3098 | 2.02 | 0.0452 | (0.0135, 1.2401) |

Being in the front-page condition significantly increases **IMPORT** by **0.6268** units (**p = 0.0452**), meaning that front-page placement increases people's perception of the article's importance.

**3rd Outcome Variable: REACTION (Final DV, Y)**

* This model estimates how **both mediators** (pmi and import) influence reaction, while also assessing the direct effect of cond on reaction.

**Model Summary**

| Metric | Value |
| --- | --- |
| R | 0.5702 |
| R² | 0.3251 (32.51% of variance in reaction is explained by the model) |
| MSE | 1.6628 |
| F-statistic | 19.1118 |
| df1 | 3 |
| df2 | 119 |
| p-value | 0.0000 (highly significant) |

**Effect of Condition and Mediators on Reaction**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Predictor** | **Coefficient (Effect)** | | **SE** | **t** | **p** | **95% CI (LLCI, ULCI)** |
| Constant | -0.1498 | 0.5298 | | -0.2828 | 0.7778 | (-1.1989, 0.8993) |
| Condition (X → Y) | 0.1034 | 0.2391 | | 0.4324 | 0.6662 | (-0.3701, 0.5768) |
| PMI (M1 → Y) | 0.3965 | 0.0930 | | 4.2645 | 0.0000 | (0.2124, 0.5806) |
| IMPORT (M2 → Y) | 0.3244 | 0.0707 | | 4.5857 | 0.0000 | (0.1843, 0.4645) |

The **direct effect of X on Y is not significant** (**p = 0.6662**), meaning that front-page placement **does not directly** influence purchase intentions. **Both mediators significantly predict reaction** (**p < 0.0001**), meaning that PMI and IMPORT are key pathways through which the front-page article influences buying intentions.

* **PMI**: Higher perceived media influence increases purchase intention.
* **IMPORT**: Greater perceived importance of the article increases purchase intention.

**Summary of Direct and Indirect Effects of X on Y**

**Direct Effect of X on Y**

| Effect | SE | t | p | LLCI | ULCI |
| --- | --- | --- | --- | --- | --- |
| 0.1034 | 0.2391 | 0.4324 | 0.6662 | -0.3701 | 0.5768 |

The direct effect of cond on reaction is **not significant** (p = 0.6662), meaning the front-page placement **does not directly affect purchase intention**.

**Indirect Effects (Mediated Effects) of X on Y**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Mediator** | **Effect** | **BootSE** | **BootLLCI** | **BootULCI** |
| Total Indirect Effect | 0.3923 | 0.1655 | 0.0899 | 0.7369 |
| PMI | 0.1890 | 0.1049 | 0.0039 | 0.4213 |
| Import | 0.2033 | 0.1138 | 0.0055 | 0.4485 |

**Results**

A parallel mediation analysis was conducted using PROCESS Model 4 to examine whether the placement of an article (front-page vs. non-front-page) influenced intention to purchase sugar and whether this effect was mediated by presumed media influence (PMI) and perceived importance of the article (IMPORT). The model accounted for 32.51% of the variance in purchase intention (R² = 0.3251, F(3, 119) = 19.11, p < .001).

First, we examined whether article placement significantly predicted presumed media influence and article importance. The effect of article placement on PMI was significant, with those in the front-page condition reporting higher levels of PMI (β = 0.4765, SE = 0.2357, t(121) = 2.02, p = 0.0454, 95% CI [0.0099, 0.9431]). Similarly, article placement had a significant effect on article importance, meaning that participants in the front-page condition perceived the article as more important (β = 0.6268, SE = 0.3098, t(121) = 2.02, p = 0.0452, 95% CI [0.0135, 1.2401]). These findings suggest that front-page placement increases perceived media influence and article importance, potentially affecting purchase intentions.

Next, we assessed whether PMI and IMPORT significantly predicted purchase intention. Both mediators were significant predictors of purchase intention, with PMI positively influencing purchase intention (β = 0.3965, SE = 0.0930, t(119) = 4.26, p < .001, 95% CI [0.2124, 0.5806]) and IMPORT also having a significant positive effect (β = 0.3244, SE = 0.0707, t(119) = 4.59, p < .001, 95% CI [0.1843, 0.4645]). These results indicate that higher perceived media influence and greater perceived article importance were both associated with stronger intentions to purchase sugar (in a manuscript I would use the acronym but I find this confusing so its better to spell it out).

To formally test mediation, bootstrap confidence intervals for the indirect effects were examined using 5,000 bootstrap samples. The total indirect effect of article placement on purchase intention was significant (β = 0.3923, SE = 0.1655, 95% CI [0.0899, 0.7369]), indicating that mediation occurred. Specifically, the indirect effect via PMI was marginally significant (β = 0.1890, SE = 0.1049, 95% CI [0.0039, 0.4213]), whereas the indirect effect via IMPORT was significant (β = 0.2033, SE = 0.1138, 95% CI [0.0055, 0.4485]). These results suggest that the influence of article placement on purchase intention is fully mediated through perceptions of media influence and article importance. Despite these significant mediation effects, the direct effect of article placement on purchase intention was not significant (β = 0.1034, SE = 0.2391, t(119) = 0.4324, p = 0.6662, 95% CI [-0.3701, 0.5768]). This suggests that article placement does not directly impact purchase intention but rather the mechanism linking the article’s placement to intention to buy operates through the articles presumed influence and importance (an interesting result, at least if you are a political science or business major).