Feedback for Assignment 5

Answers:

#1:

a)  

<table>
<thead>
<tr>
<th></th>
<th>Church attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gender</td>
</tr>
<tr>
<td></td>
<td>Gun ownership</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>70.4</td>
<td>59.0</td>
</tr>
<tr>
<td>29.6</td>
<td>41.0 (.7)</td>
</tr>
</tbody>
</table>

V = 0.119** (.8)

Prob. = 0.000 (.8)

Yes (.8)

People who attend religious services (and, as in Assignment 3 these do not only include church!) more often are less likely to own a gun. Conversely, people who attend religious services less often are more likely to own a gun. (4.3)

b)

(Note that I accepted minor variations of this diagram, as well as all the diagrams in the other questions, as long as your diagram showed a reasonable representation of the relationship between the variables.)

c) Control category MALE:

<p>| | |</p>
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<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>91.9</td>
<td>94.4</td>
</tr>
<tr>
<td>8.1</td>
<td>5.6 (.8)</td>
</tr>
</tbody>
</table>

V = 0.045 (.8)

Prob. = 0.408 (.8)

No (.8)
Control category FEMALE:

38.3   35.0
61.7   65.0 (.8)

V = 0.034 (.8)

Prob. = 0.553 (.8)

No (.8)

d) Yes (2.4)

e) There is a spurious relationship between gun ownership and attendance of religious services. Gender affects both gun ownership and religious attendance, such that when we control for gender, there is no longer any relationship between gun ownership and religious attendance. Note that, in order to assert that the relationship is spurious, it is necessary to show that the relationship disappears for all levels (all values) of the control variable – so, in this case, it was necessary to show that there was no relationship between gun ownership and religious attendance for both males and females. If the relationship between gun ownership and religious attendance was significant for either males or females (or both), then we would not be able to conclude that the relationship was spurious. (4.3)

#2:

a) 50.4  31.2  22.0

49.6  68.8  78.0 (.8)

V = 0.218** (.8)

Prob. = 0.000 (.8)

Yes (.8)

b)

Education Level

\[\begin{array}{c}
\text{Biblical Literalism} \\
\text{Housewife Role} (4.3)
\end{array} \]
c) Control category NOT HI SCH:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>60.5</td>
<td>56.3</td>
<td>41.7</td>
</tr>
<tr>
<td>39.5</td>
<td>43.7</td>
<td>58.3 (.8)</td>
</tr>
</tbody>
</table>

V = 0.111 (.8)

Prob. = 0.229 (.8)

No (.8)

Control category HI SCH:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>48.3</td>
<td>31.0</td>
<td>23.8</td>
</tr>
<tr>
<td>51.7</td>
<td>69.0</td>
<td>76.2 (.8)</td>
</tr>
</tbody>
</table>

V = 0.191** (.8)

Prob. = 0.000 (.8)

Yes (.8)

Control category SOME COLL:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>44.3</td>
<td>24.6</td>
<td>17.1</td>
</tr>
<tr>
<td>55.7</td>
<td>75.4</td>
<td>82.9 (.8)</td>
</tr>
</tbody>
</table>

V = 0.203** (.8)

Prob. = 0.000 (.8)

Yes (.8)

d) No (2.4)

For two of the three levels of education (high school and some college), the relationship between biblical literalism and support for a housewife role for women was significant. This shows that the relationship still exists (at least for some levels of education) even when we control for level of education, so we cannot conclude that the relationship is spurious. (4.3)
a) Either hypothesis was acceptable

b) 67.3 48.1
   32.7 51.9 (.8)

V = 0.194** (.8)

Prob. = 0.000 (.8)

Yes (.8)

Do these results support the hypothesis you specified? People with lower incomes: answer is no. People with higher incomes: answer is yes. (2.4)

c) Income
   Education
   Personal Trust (4.3)

d) Control category NO COLLEGE:

73.4 61.5
26.6 38.5 (.8)

V = 0.123** (.8)

Prob. = 0.005 (.8)

Yes (.8)

Control category YES:

58.8 42.9
41.2 57.1 (.8)

V = 0.154** (.8)

Prob. = 0.000 (.8)
The relationship between income and personal trust is still statistically significant after controlling for education level. Furthermore, the strength of the relationship (as indicated by Cramer’s V) is about the same within each education category as it was before controlling. (4.3)

<table>
<thead>
<tr>
<th>Education</th>
<th>Personal Trust</th>
<th>Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>#4:</td>
<td></td>
<td>(4.3)</td>
</tr>
<tr>
<td>a) 87.1</td>
<td>74.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12.9</td>
<td>25.5</td>
</tr>
<tr>
<td>V = 0.156**</td>
<td>(.8)</td>
<td></td>
</tr>
<tr>
<td>Prob. = 0.000</td>
<td>(.8)</td>
<td></td>
</tr>
<tr>
<td>Yes (.8)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b) Political Knowledge

<table>
<thead>
<tr>
<th>College Degree</th>
<th>Political Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>#4:</td>
<td>(4.3)</td>
</tr>
<tr>
<td>c) Control category LOW:</td>
<td></td>
</tr>
<tr>
<td>96.6</td>
<td>93.1</td>
</tr>
<tr>
<td>3.4</td>
<td>6.9 (.8)</td>
</tr>
<tr>
<td>V = 0.078 (.8)</td>
<td></td>
</tr>
<tr>
<td>Prob. = 0.156 (.8)</td>
<td></td>
</tr>
<tr>
<td>No (.8)</td>
<td></td>
</tr>
</tbody>
</table>
Control category AVERAGE:
87.6  82.9
12.4  17.1 (.8)
V = 0.064 (.8)
Prob. = 0.170 (.8)
No (.8)

Control category HIGH:
67.5  63.3
32.5  36.7 (.8)
V = 0.038 (.8)
Prob. = 0.403 (.8)
No (.8)

d) Yes (2.4)

When we control for political knowledge, there is no longer a relationship between political participation and having a college degree. Thus, having a college degree leads to higher political participation only if it leads to higher political knowledge. (4.3)

Comments: Judging from the grades, this was a difficult assignment. The average score was 75.43. Interpreting whether a relationship is shown to be spurious after introducing a control variable can take a little practice. Talk to me if you had trouble with this assignment. I want to comment on one more thing. No one has turned in a late assignment for the last two weeks. That’s pretty awesome. Keep up the good work.

Grading scale:
A+: 100-98
A: 97-94
A-: 93-90
B+: 88-86
B: 85-83
B-: 82-80
C+: 79-77
C: 76-73
C-: 72-70
D+: 69-67
D: 66-63
D-: 62-60
F+: 59-55
F: 54-below