Reliability Analysis Example

(The first part of this handout illustrates some syntax transformations of the data that are not needed for the problem on Homework 3. Only the highlighted section at the bottom would be necessary for a reliability analysis if you wanted to use syntax).

get file='c:\jason\aps\win\usp532\ahca.sav'.

value labels q15 q15b q15c q15d
  1 'same day' 2 '1-3 days' 3 '4-7 days'
  4 '8-14 days' 5 '15-20 days' 6 '21-28 days' 7 '29 days or longer'
  8 'no experience'
/q2 0 '0-6 months' 1 '6 mo to 1 yr' 2 '1-2 yrs' 3 '2-5 yrs'
  4 '5 yrs or more'
/q3 0 'none' 1 '1 visit' 2 '2-4 visits' 3 '5-9 visits' 4 '10+ visits'
/q7f 1 'no experience' 2 'poor' 3 'fair' 4 'good' 5 'very good' 6 'excellent'
/q11 1 'completely satisfied' 2 'very satisfied' 3 'somewhat satisfied'
  4 'neither satisfied nor dissatisfied' 5 'somewhat dissatisfied' 6 'very dissatisfied'
  7 'completely dissatisfied'
/q14 1 'definitely yes' 2 'probably yes' 3 'probably no' 4 'definitely no'
  5 'already switched'
/q13 1 'definitely yes' 2 'probably yes' 3 'probably no' 4 'definitely no'
/hp 12 'HMO 1' 24 'HMO 2' 26 'HMO 3'
/q38 1 '8th grade or less' 2 'some hs' 3 'hs grad or ged'
  4 'some college or 2 yr degree' 5 '4 yr college grad' 6 'more than 4 yr degree'.

missing values q7f (1)
/q14 (5).
/q15 q15b q15c q15d (8)
.

recode q11 (1=7) (2=6) (3=5) (4=4) (5=3) (6=2) (7=1) into q11r.
recode q15 (1=7) (2=6) (3=5) (4=4) (5=3) (6=2) (7=1) into q15r.
recode q15b (1=7) (2=6) (3=5) (4=4) (5=3) (6=2) (7=1) into q15br.
recode q15c (1=7) (2=6) (3=5) (4=4) (5=3) (6=2) (7=1) into q15cr.
recode q15d (1=7) (2=6) (3=5) (4=4) (5=3) (6=2) (7=1) into q15dr.
recode q13 (1=4) (2=3) (3=2) (4=1) into q13r.

variable labels q11r 'How satisfied with overall plan'
/q13r 'Recommend health plan'
/q15r 'Days waiting for routine care'
/q15br 'Days waiting for minor injury or illness'
/q15cr 'Days waiting for chronic care'
/q15dr 'Days waiting for urgent care'.

value labels q11r 7 'completely satisfied' 6 'very satisfied' 5 'somewhat satisfied'
  4 'neither satisfied nor dissatisfied' 3 'somewhat dissatisfied' 2 'very dissatisfied'
  1 'completely dissatisfied'
/q13r 4 'definitely yes' 3 'probably yes' 2 'probably no' 1 'definitely no'
/q15r q15br q15cr q15dr
  7 'same day' 6 '1-3 days' 5 '4-7 days'
  4 '8-14 days' 3 '15-20 days' 2 '21-28 days' 1 '29 days or longer'.

frequencies vars=q11r q13r q15r to q15dr.
/reliabilities vars=q11r q13r q15r to q15dr
 /scale(satisf)=q11r q13r q15r to q15dr
 /statistics=corr
 /summary=total corr.
Reliability

Warnings

The covariance matrix is calculated and used in the analysis.

Case Processing Summary

<table>
<thead>
<tr>
<th>Cases</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>159</td>
<td>26.6</td>
</tr>
<tr>
<td>Excluded</td>
<td>439</td>
<td>73.4</td>
</tr>
<tr>
<td>Total</td>
<td>598</td>
<td>100.0</td>
</tr>
</tbody>
</table>

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

<table>
<thead>
<tr>
<th>Cronbach's Alpha Based on Standardized Items</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.663</td>
<td>6</td>
</tr>
<tr>
<td>.702</td>
<td></td>
</tr>
</tbody>
</table>

(Inter-item correlation matrix omitted---good to check it though to make sure all items are scored in the same direction)

Summary Item Statistics

<table>
<thead>
<tr>
<th>Inter-Item Correlations</th>
<th>Mean</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Range</th>
<th>Maximum / Minimum</th>
<th>Variance</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.282</td>
<td>.062</td>
<td>.763</td>
<td>.701</td>
<td>12.306</td>
<td>.044</td>
<td>6</td>
</tr>
</tbody>
</table>

The covariance matrix is calculated and used in the analysis.

Item-Total Statistics

<table>
<thead>
<tr>
<th>q11r How satisfied with overall plan</th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Squared Multiple Correlation</th>
<th>Cronbach's Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>q13r Recommend health plan</td>
<td>27.7798742</td>
<td>12.704</td>
<td>.361</td>
<td>.588</td>
<td>.657</td>
</tr>
<tr>
<td>q15r Days waiting for routine care</td>
<td>29.8427673</td>
<td>15.703</td>
<td>.440</td>
<td>.588</td>
<td>.610</td>
</tr>
<tr>
<td>q15br Days waiting for minor injury or illness</td>
<td>27.5911950</td>
<td>14.370</td>
<td>.344</td>
<td>.224</td>
<td>.643</td>
</tr>
<tr>
<td>q15cr Days waiting for chronic care</td>
<td>26.7295597</td>
<td>15.654</td>
<td>.517</td>
<td>.407</td>
<td>.594</td>
</tr>
<tr>
<td>q15dr Days waiting for urgent care</td>
<td>26.8742138</td>
<td>14.085</td>
<td>.462</td>
<td>.461</td>
<td>.594</td>
</tr>
</tbody>
</table>

| q15dr Days waiting for urgent care | 26.2138365                 | 17.258                        | .416                            | .250                         | .631                            |