Internal Consistency Reliability:

Internal consistency reliability includes five types of reliability:

(i) Average inter-item reliability
(ii) Average Item-total reliability
(iii) Split-half reliability
(iv) Cronbach Alpha
(v) Kuder-Richardson Estimate of Reliability

Internal consistency reliability means I am trying to measure the items to access a common characteristics among those items. If I have 5 items and trying to have a common characteristics among those five items. It's a kind of single measurement instruments that can be applied on one occasion to a set of people. It estimates the same constructs usually read same results. So, If I have a same group of variable that I am providing to two sets of population the results should be similar in both the cases. Consistency would be good but different item of scale have different consistency.

NOTES

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Wk	M	T	W	T	F	S	S
5						1	2
6	3	4	5	6	7	8	9
7	10	11	12	13	14	15	16
8	17	18	19	20	21	22	23
9	24	25	26	27	28		

↳ Extent of which the item of a measure access a common characteristics.

↳ Single measurement instrument administered to a group on one occasion.

↳ Estimate how well items that reflect the same construct yield ~~so~~ similar results.

↳ how consistent the result are for different items for the same construct within the measure.

(i) Average Inter-Item correlation –

	1	2	3	4	5
1	X	·8			
2	·6	X	·5		
3	·7		X		
4				X	
5					X

Here I have item and I am trying to find out the correlation between the various items.

NOTES

(ii) Average item-Total correlation —

You have inter-item correlation correlation as well as total correlation for all set of items and you would be finding the average of total with the iter-item total and that could be known as average item.

(iii) Split-half reliability — (on the spot reliability)

It means the deviding the test in two half. It can be on various parameters. I have items

1 — 1 3 5
2 — 2 4 6
3 — 1 2 3
4 — 4 5 6
5

Content sampling error variance

So, it can be various way that I am breaking the test.

What is happening here —

- The length of the test becomes half, so the actual length of the test is six items but here the length of the test becomes half. So what happen?

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you have to estimates the correlation from this half for the full length of the test and for this we use Spearman-Brown Prediction formula, which suggest that if half of the items suppose you have 0.5 as correlation what could be the correlation between the items if there would be all the items presented in test. So this can be calculated by the means of Spearman-Brown prediction formula.

This is must for split-half reliability. So under split-half reliability we split the test into two that can be based on various parameters. (you have odd items and even items and comparing this)

In this method, as the name implies, we randomly devide the items that intends to measure same construct into two sets. The complete instrument is administered on sample of people and total scores are calculated for each randomly devided half; the split half reliability is then simply the correlation between these two scores.

NOTES

A problem with this approach is that when the test are shorter, they run the risk of losing reliability and it can most safely be used in case of long tests only.