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Doer/non-doer analysis to specify the critical behavioral factors

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Doer/non-doer analysis is a method of identifying the factors that critically steer the target behavior. These have to be tackled by behavior change techniques (BCTs) to induce behavior change. A doer/non-doer analysis compares the responses of people who do a behavior (doers) to the responses of those who do not (non-doers). A large difference between doers and non-doers in responses to a question about a behavioral factor indicates that that factor is critical. A doer/non-doer analysis involves three steps. First, the sample is divided into doers and non-doers. Second, mean scores are calculated separately for doers and non-doers. Third, the mean scores are compared between doers and non-doers. The three steps are explained in more detail here.

Divide the sample into doers and non-doers

For most behaviors, there is no predefined value to divide the sample into doers and non-doers. Instead, a cut-off point has to be determined based on the data. For handwashing, for example, we could decide to categorize only people who fully comply (100% handwashing at key times) as doers and all who wash their hands less than 100% of key times as non-doers. However, such a division might be too strict and unrealistic in many populations. Therefore, a more reasonable cut-off point might be 90% handwashing at key times. In this case, people who wash hands at 90% of key times and more are doers; people who wash hands at less than 90% are non-doers. When we have defined a cut-off point, we divide the sample into doers and non-doers.

Calculate the mean scores of each behavioral factor separately for doers and non-doers

For each behavioral factor (i.e. for each question), the mean score in the responses is calculated separately for doers and non-doers. Below you find a fictional example for the behavioral factors *health knowledge* and *others' behavior.*

Table: Example of a doer/non-doer comparison					
Doers **90% or more handwashing at key times**			**Non-doers** **Less than 90% handwashing at key times**		
Person	**Score in health knowledge**	**Score in others' behavior**	**Person**	**Score in health knowledge**	**Score in others' behavior**
A	2	4	B	4	4
D	3	3	C	2	0
F	4	4	E	2	1
H	2	2	G	1	1
I	1	1	K	3	2
J	3	4	M	2	2
L	3	4	N	3	2
P	3	3	O	1	1
R	0	0	Q	0	0
S	4	4	T	1	0
U	3	3	X	1	1
V	2	4	Y	2	2
W	2	3	Z	4	3
Mean score	**2.46**	**3.00**	**Mean score**	**2.00**	**1.46**

Compare the mean scores between doers and non-doers

Next, we compare the mean scores of doers and non-doers for each behavioral factor. We can do this in two ways. Either we can calculate the differences in mean scores between doers and non-doers or we can plot graphs depicting the mean scores of doers and non-doers per behavioral factor. In either case, the critical behavioral factors are those with the largest differences between doers and non-doers. For the example above, the difference between doers and non-doers in health knowledge is $2.46 - 2 = 0.46$; the difference in others' behavior is $3.00 - 1.46 = 1.54$. As the difference in mean scores between doers and non-doers is larger for others' behavior (1.54) than for health knowledge (0.46), others' behavior is more critical. We draw the same conclusion when depicting the differences between doers and non-doers through a graph (see Figure). Therefore, others' behavior should be targeted through BCTs.
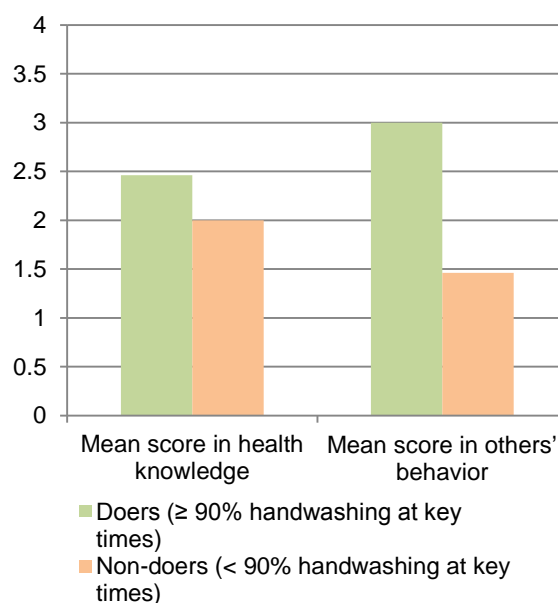

Figure: Graph comparing doers and non-doers.