

For each question, you were asked to respond using a scale from 0 = 'Not at all' to 10 = 'A great deal'.

Therefore, for each question, your answer corresponds to a value between 0 and 10."

Suppose you answered three questions related to the topic that is most relevant to you, and let's call your answers to the three questions y_1 , y_2 , and y_3 .

Another participant did the same. And let's call their answers o_1 , o_2 , and o_3 .

Now, the degree of similarity (or distance) between your answers and those of the other participant can be calculated using the following formula:

$$distance = \sqrt{(y_1 - o_1)^2 + (y_2 - o_2)^2 + (y_3 - o_3)^2}$$

As you easily see, if you and the other participant gave exactly the same answers to all questions, this value is 0. So we would say that the distance between your answers and those of the other participant is zero.

Let's make another example: suppose you answered 4 to the first question, 6 to the second, and 0 to the third; the other person answered 0 to the first question, 2 to the second, and 1 to the third.

So the distance between your answers and those of the other person is

$$distance = \sqrt{(4 - 0)^2 + (6 - 2)^2 + (0 - 1)^2} = 5.74$$

The maximum value of the distance is obtained when for each question the distance between your answers and those of the other person is maximum and equal to 10, as in the following example:

$$distance = \sqrt{(10 - 0)^2 + (0 - 10)^2 + (10 - 0)^2} = 17.32$$