**Home assignment 10**

**T-tests, ANOVA, non-parametric tests**

Please, use RStudio for your solution. **Deadline for this HA is 9, February 23:59 Moscow time.**

Name your file as «*Surname\_Name\_H109*» and put in Yandex folder (<https://disk.yandex.ru/d/D8xcpgNlV-FagQ> )

Additionally, you can read the online lecture on chi-square “(Introduction to Statistics”, 2.2-2.3)

<https://stepik.org/lesson/27793/step/1?unit=9066>

Report means (medians, proportions) and p-values while interpreting data

**Part 1.**

1. Download the 6th wave of the WVS
2. Select Russia and Sweden.
3. Create an index of generalized trust (strangers V105, another nationality V107, another religion V106).
4. Create an index of particularized trust (known people V104, neighbors V103).

**Part 2.**

In all tasks in part 2-4 you have to check normality and equality of variances assumptions (if needed). After that you have to choose the correct test, run and interpret results.

1. Check if Russia and Sweden have similar levels of particularized trust. Provide interpretation.
2. Check if Russia and Sweden have similar levels of generalized trust. Provide interpretation.
3. Check if level of particularized trust is identical to the level of generalized trust in Russia. Provide interpretation.
4. Check if level of generalized trust is identical to the level of generalized trust in Russia. Provide interpretation.

**Part 3**

1. Recode happiness (V10) into dummy variable (0-unhappy, 1-happy). Check recoding, assign labels.
2. Check if there is a difference in particularized trust between unhappy and happy people in Russia. Provide interpretation.
3. Check if there is a difference in particularized trust between unhappy and happy people in Sweden. Provide interpretation.
4. Check if there is a difference in generalized trust between unhappy and happy people in Russia. Provide interpretation.

Check if there is a difference in generalized trust between unhappy and happy people in Sweden. Provide interpretation.

**Part 4.**

1. Check if there is a difference between people with different happiness (*3-point scale*) levels in Russia in terms of particularized trust. If yes, use post hoc comparisons to detect which groups are different. Provide interpretation and draw conclusions about the link between particularized trust and happiness in Russia.
2. Check if there is a difference between different happiness levels in Sweden in terms of particularized trust. If yes, use post hoc comparisons to detect which groups are different. Provide interpretation and draw conclusion about the link between particularized trust and happiness in Sweden.
3. Check if there is a difference between people with different happiness levels in Russia in terms of generalized trust. If yes, use post hoc comparisons to detect which groups are different. Provide interpretation and draw conclusions about the link between generalized trust and happiness in Russia.
4. Check if there is a difference between different happiness levels in Sweden in terms of generalized trust. If yes, use post hoc comparisons to detect which groups are different. Provide interpretation and draw conclusion about the link between generalized trust and happiness in Sweden.

**Part 5.**

1. Compare results of part 3 and 4. Theorize on why they are different or similar.