

Assignment #2

*** Before you start, read this file carefully.

Start Time: June 5 (Friday) at 6pm

Due Date: June 16 (Saturday) at 6pm

- Late submission will be discounted 10 % per hour late.

Special office hour: June 6 (Friday) from 6-7pm

If you have any question about Assignment #2, stop by a special online office hour in Blackboard Collaborate.

Data to download

You can download your own data from the location you downloaded yours for Assignment #1. Note that your data set name is “survey_**.txt” where ** varies by students.

Students who have not submitted Assignment @1, log in Blackboard. In Assignment tab, click “Download data” and send me a message by clicking “저널 쓰기”. Then, you can find the data in my reply.

Report

There is no required format, but your report should include the following contents:

- (1) Introduction of the factor analysis
- (2) Explanation of data
- (3) Exploring data
- (4) How you conduct the factor analysis for 25 questions named Q1-Q25 using two or more estimation methods.
- (5) Analysis result
- (6) Interpretation of the analysis results
- (7) Compare the factor analysis with principal component analysis for this data
- (8) Discuss whether or not factor analysis is useful for your data
- (9) Discuss whether factor analysis results are different among student's gender and different types of guardians.
- (10) Conclusion

The recommended maximum length of the report is 5 pages single-spaced, inclusive of figures or tables.

The report should be written in English. *If you submit the report written in Korean, you will not get any point.*

File Format: The report should be written in one of the following format

DOCX, DOC, PPT, PPTX, PDF, TXT, ODT, RTF, or HTML

(NO hwp files are not accepted.)

I strongly recommend checking the Safeassign originality report before submitting the report.

Things to submit: You should submit a report. You have to submit your program code separately.

Plagiarism

This assignment is provided to substitute a part of your midterm. Therefore, it is strictly prohibited to discuss your analysis and report contents with other people. You should write your original report and its originality will be checked in Blackboard as well as by TA and me. If it turns out that more than 40% of your report overlaps with published contents or other student's report, you will receive zero point for the assignment. If some portion of your report matches with others, your score will be discounted 10% every time it matches. Remember that even when the originality score of your report is low, you can be penalized if other student's report overlap with yours.

Data

This survey asks questions about the relationship between you and your parents (or guardians) in your first 16 years. The following table describes the measured variables and their descriptions.

Variable	Description
SID	Student ID
Guardian	Types of guardian answered
Gender	Gender of students
Q1	Spoke to me in a warm and friendly voice.
Q2	Did not help me as much as I needed.
Q3	Let me do those things I liked doing.
Q4	Seemed emotionally cold to me.
Q5	Appeared to understand my problems and worries.
Q6	Was affectionate to me.
Q7	Liked me to make my own decisions.
Q8	Did not want me to grow up.
Q9	Tried to control everything I did.
Q10	Invaded my privacy.
Q11	Enjoyed talking things over with me.
Q12	Frequently smiled at me.
Q13	Tended to baby me.
Q14	Did not seem to understand what I needed or wanted.
Q15	Let me decide things for myself.
Q16	Made me feel I wasn't wanted.
Q17	Could make me feel better when I was upset.
Q18	Did not talk with me very much.
Q19	Tried to make me feel dependent on her/him.
Q20	Felt I could not look after myself unless she/he was around.
Q21	Gave me as much freedom as I wanted.
Q22	Let me go out as often as I wanted.
Q23	Was overprotective of me.
Q24	Did not praise me.
Q25	Let me dress in any way I pleased.

Your data include the variable names on the first line and variables are separated by TAB.
The purpose of this assignment is to conduct the factor analysis for the 25 questions, Q1-Q25.
You may consider relabel the values as follows:

{ 3 if Very like
2 if Moderately like
1 if Moderately unlike
0 if Very unlike