

Network analysis tutorial

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Brief introduction to network analysis

A network is a set of nodes connected by a set of edges.

Several packages are used in the network analysis, including **network**, **statnet**, **igraph** and **qgraph**.

qgraph was developed in the context of psychometrics approach by Dr. Sacha Epskamp and colleagues in 2012. For more details, please click this following link for the paper published in *Journal of Statistical Software*:

<https://www.jstatsoft.org/article/view/v048i04>

This package can create graphs to visualize the statistics in different layout modes based on different correlation matrices, such as polychoric correlation, partial correlation.

Example code

Here is some example code to show how to conduct a network analysis.

Estimating networks

How to make a graph

Here is the following steps to make a graph using **qgraph**.

Take **big5** data as an example. This is a dataset of the Big five personality traits assessed on 500 psychology students.

Firstly, **qgraph** package should be activated using `library()`

```
library(qgraph)
```

And then, data need to be imported in the current R project.

```
data(big5)
```