Analyzing Personality and Other Psychological Measures in the Context of Social Networking

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Introduction

The NetHealth study is designed to assess healthy behaviors and their relationship to social networks. These healthy behaviors, including physical activity and regular sleeping habits, may be promoted through social ties in a network, or vice versa.

Examining the extent to which social networks relate to healthy behaviors is thus the primary objective of this study. In particular, the aim is to learn more about the direction of influence between networks and healthy behaviors.

- Do social networks change and build behaviors over time?
- Do behaviors change and build social networks over time?

Methodology

Data from over 700 first-year students at the University of Notre Dame was collected via Fitbit, a downloadable app, and self-report surveys.

- Fitbit data was needed to gather information about physical activity and sleeping habits.
- The app data allowed the research team to identify text messaging patterns and participants’ social ties.
- Survey data provided information about both networking and psychological well-being.

The visualized data on the scatter plots was taken from the survey that assessed psychological well-being.

Area of Focus

My specific contribution involved analyzing psychosocial variables. I examined these variables through correlations to draw conclusions about their effect on social networks.

- The main goal: Assess how these variables could culminate and together affect the formation of social networks.
- The variables in question: Depression, Self-Esteem, Loneliness

The Big Five personality factors (OCEAN):
- Openness
- Conscientiousness
- Extraversion
- Agreeableness
- Neuroticism

References


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Results

Linear regression table and graphical representation of the negative correlation between neuroticism and self-esteem (above).

Linear regression table and graphical representation of the positive correlation between extraversion and self-esteem (above).

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Discussion

- The positive correlation between extraversion and self-esteem suggests that those who tend to display more outgoing qualities also tend to have a higher view of themselves.
- The negative correlation between neuroticism and self-esteem indicates that those who are more prone to anxious thoughts and preoccupation also tend to view themselves more lowly.
- The positive correlation between neuroticism and depression also indicates an adverse consequence of more frequent anxiety: the tendency to be more depressed.

In all, these correlations could potentially explain certain cumulative influences on social network formation.

Questions to consider in the future of Project NetHealth and in general social network research:

- Do networks become weakened or strengthened over time as a result of a feedback system between personality traits, other psychological health factors, and individual ties?

More specifically:

- Does the size of the networks differ?
- Does the diversity of the networks decrease while homophily increases?

More importantly:

- If a single social tie flourishes or diminishes, is it attributable to differences in behavior (e.g. physical activity) or more to differences in personality?

- To improve any future research of this nature, the principle concern is generalizability.

Expand the demographic makeup of future samples. If research will continue to be focused on undergraduate students, other types of schools should be included (i.e. public, non-religious).