

CRITICAL THINKING EXERCISE 5.1**Is Popularity Protective Against Stress?**

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CONCEPT

As we learned in effective ways to deal with stress, having a good social support system has been shown to be a positive factor. In this research study, Dr. Hamrick and Dr. Cohen looked at whether being popular made you more stressed and therefore prone to respiratory infections. Please read the summary of the research study and answer the following questions. The purpose for this activity is to help students accomplish the following:

- APA National Standards (Health Standard Area): 1.2 Explain sources of stress across the life span
- APA National Standards (Health Standard Area): 1.3 Explain physiological and psychological consequences of stress for health and wellness
- Evaluate and understand the independent, dependent variables of the study, critique the study, and determine whether the hypothesis was supported.

MATERIALS

- *Is Being Popular Good or Bad for Your Health Worksheet*

INSTRUCTIONS

- This activity takes 20-30 minutes to complete.
- Have students read the summary of the research study titled *Being Popular Can Be Healthy or Unhealthy* (Hamrick et al., 2002).
- Students will answer the questions following the summary.
- When students have finished page 1 or are unable to finish, inform them to move onto page two.

IS BEING POPULAR GOOD OR BAD FOR YOUR HEALTH WORKSHEET**Being popular can be healthy or unhealthy:****Stress, social network diversity, and incidence of upper respiratory infection.**

Authors: Hamrick, N., Cohen, S., & Rodriguez, M. S. (2002)

Brief Article Summary: Hamrick et al. (2002) use the term “popular” to refer to social network diversity. A person with a diverse social network interacts with people who represent different types of relationships (e.g., spouses, family members, friends, classmates, coworkers, fellow club members, and teammates). Research suggests that having a diverse social network is health-protective. Hamrick et al. (2002) wanted to know if having a diverse social network is always protective. Specifically, they suggested that having a diverse social network might increase risk of exposure to infections due to the high number of social contacts and that people with high levels of stress might be vulnerable to infections because stress compromises immune functioning. They predicted when stress is low, people with more diverse networks would be less likely to develop upper respiratory infections than people with less diverse networks. They made the opposite prediction for high stress. They predicted when stress is high, people with more diverse networks would be more likely to develop upper respiratory infections than people with less diverse networks.

The researchers recruited participants through electronic bulletin boards, school newspapers, and word-of-mouth. Of the 151 individuals who met age (18-30), student status, and health criteria, 115 completed the study. Participants completed the Major Stressful Life Events Scale (negative life events), the Social Network Index (social network diversity), the Neuroticism subscale from the Eysenck Personality Questionnaire (neuroticism), and provided information about age, sex (male/female), and race (White, African American/Black, or other). Participants reported the presence/severity of eight upper respiratory infection symptoms each week and were instructed to contact the study coordinator if they believed they had a cold or the flu. A large number of participants (43%) who reported symptoms of upper respiratory infection did not contact the study coordinator to verify the infection and those who did contact the study coordinator to verify upper respiratory infection were more likely to have more diverse social networks. The researchers found that participants with low levels of stress and high network diversity experienced the fewest upper respiratory infections and participants with high levels of stress and high network diversity experienced the most upper respiratory symptoms.

Please answer the following questions after reading the research summary:

What type of research is being conducted and how do you know?

What was the hypothesis?

How were the participants selected?

What was the independent variable?

What was the dependent variable?

What was the control group?

What was the experimental group? Were there multiple conditions?

Was the hypothesis confirmed?

Can these results be generalized to a larger population? How do you know?

What are some criticisms of the study?

TEACHER ANSWER KEY**What type of research is being conducted and how do you know?**

A quasi-experimental design. I know this because groups (high/low life event stress; high/low network diversity) are formed by measurement (answers to the Major Stressful Life Events Scale and Social Network Index) rather than manipulation (i.e., the researchers did not assign people to high/low stress or to high/low network diversity).

What was the hypothesis?

They predicted when stress is low, people with more diverse networks would be less likely to develop upper respiratory infections than people with less diverse networks. They made the opposite prediction for high stress. They predicted when stress is high, people with more diverse networks would be more likely to develop upper respiratory infections than people with less diverse networks.

How were the participants selected?

Participants were recruited through electronic bulletin boards, school newspapers, and word-of-mouth.

What was the independent variable?

There were two independent variables (although they were not manipulated variables). One was stress level and the other was social network diversity.

What was the dependent variable?

Symptoms and incidence of upper respiratory infection.

What was the control group?

There was no control group.

What was the experimental group? Were there multiple conditions?

There were two stress groups (low stress/high stress) and there were two social network diversity groups (low social network diversity/high social network diversity).

Was the hypothesis confirmed?

Yes. Participants with low levels of stress and high network diversity experienced the fewest upper respiratory infections and participants with high levels of stress and high network diversity experienced the most upper respiratory symptoms.

Can these results be generalized to a larger population? How do you know?

The generalizability of these results to a larger population is questionable because the sample was recruited using convenience sampling rather than random sampling.

What are some criticisms of the study?

The authors did not measure actual social contact (just the potential for contact via network diversity). Participants with upper respiratory infection symptoms were more likely to contact the study coordinator to verify upper respiratory infection if they had a more diverse social network. Differences in contacting behaviors between the high and low social network diversity groups might indicate an alternative explanation of the results.

Sources

Hamrick, N., Cohen, S., & Rodriguez, M. S. (2002). Being popular can be healthy or unhealthy: Stress, social network diversity, and incidence of upper respiratory infection. *Health Psychology, 21*(3), 294-298. <https://doi.org/10.1037//0278-6133.21.3.294>

Lucas-Thompson, R. G., Miller, R. L., Seiter, N. S., & Prince, M. A. (2019). Dispositional mindfulness predicts cortisol, cardiovascular, and psychological stress responses in adolescence. *Psychoneuroendocrinology, 110*, 1-5. <https://doi.org/10.1016/j.psyneuen.2019.104405>

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