Experiment HP-6: Cynicism/Hostility and the "Hot Reactor"

Background

Coronary heart disease (CHD) is the leading cause of death in the United States. The standard risk factors for CHD include genes, diet, smoking, alcohol, and a sedentary lifestyle. However, when all these risk factors are accounted for there are still many cases of CHD which are unexplained. Health psychologists have investigated the psychosocial factors which might put one at risk for CHD, with hostility-related variables receiving the most attention.

Three decades of research on personality and CHD (starting with the Type-A behavior pattern research of the 1960s) have resulted in a prevailing viewpoint that one toxic personality factor is that of cynicism and mistrust combined with a disposition for hostile and angry behaviors, particularly in situations that involve interpersonal stress (Houston, 1994; Suls & Wan, 1993).

The mechanism by which cynicism/hostility might influence CHD is thought to be that of chronic heightened cardiovascular reactivity (the "reactivity hypothesis"). Cardiovascular reactivity includes elevations in heart rate and/or blood pressure to everyday life events. Persons who have come to be known as "hot reactors" show exaggerated responses to stressful life events (particularly interpersonal ones) and additionally may not show fast recovery to pre-stress values after the event is over. The chronic nature of this heightened reactivity may ultimately contribute to hypertension and the damage to coronary arteries seen in CHD.

There are many unanswered questions about personality and CHD and health psychologists are hard at work trying to devise ways of identifying the psychosocial variables that might act as buffers (e.g. social support) for heart disease, as well as those which might be toxic. Early identification of these variables could make possible psychological interventions which might reduce the tendency to a "hot reactor" lifestyle.

At the end of this experiment you will find a few references to research in this field which you might want to explore. There are many interesting experiments being done in this area of health psychology and you may find it valuable to search the literature with the following terms: [cynicism or hostility or anger or personality] X [CHD or heart disease or cardiovascular reactivity or heart rate or blood pressure].

In this experiment, students will participate anonymously in an assessment for the personality trait of cynicism/hostility; collect and analyze heart rate and blood pressure data during a baseline period, a social issues debate, and a recovery period; and test some experimental hypotheses about personality and changes in heart rate and/or blood pressure that occurred during a debate on social issues.

Before Coming to Lab

1. Complete the 50 item Cook-Medley Hostility (HO) Inventory (Cook & Medley, 1954) before coming to the laboratory session.
2. Score your own Cook-Medley HO Inventory. Follow the directions of the instructor for coding the results so that only you know which data is yours.
3. The coded data from all the students in the class are collected and entered in a class data sheet. After the "hot reactor" experiment is completed, the cardiovascular reactivity scores for each student will be added to the class data sheet.

4. Scores for the Cook-Medley HO Inventory range from 0 to 50; higher scores representing greater cynicism/hostility. Use the Cook-Medley HO scores to divide the class results into two groups. Those subjects with scores above the median value are assigned to the high cynicism/hostility group and those with scores below the median value are assigned to the low cynicism/hostility group.

Before Lab

1. Each person in your group will be a subject for this experiment. Use a random drawing procedure to determine the order of participation then use the procedures which follow for each subject in turn.
2. Compile a list of some social issues about which people may have differing views. Some suggestions of social issues that can be debated are listed in Table HP-6-B1. Write the title of each social issue on a separate slip of paper, and place the folded slips of paper in a container.
3. Make sure all subjects in the debate understand the rules of the debate:
    - Each subject will randomly draw the topic of his or her debate by selecting a slip of paper imprinted with the title of the social issue from the container.
    - Each subject will be given two minutes to outline some salient points to be made in the context of a 5-minute debate about the issue.
    - The subject will begin the debate by voicing a particular point of view on the issue.
    - After the subject's initial statement, other members of the lab group will voice alternative points of view while attempting to criticize the subject's stated point of view.
    - The subject is given ample time to respond to criticisms of her or his point of view. Even though this is a debate, the subject should receive the bulk of the time period to defend his or her point of view.

Table HP-6-B1: Examples of Topics for Debate

• abortion ("right to choose/right to life") • affirmative action • animal experimentation • assisted suicide • biological warfare • cloning of human body parts • coeducational military training • death penalty • gun control	• homosexual or lesbian marriages • homosexuals or lesbians in the military • legalization of marijuana • legalization of other drugs (e.g. heroine, cocaine) • prayer in schools • prenatal gene selection (to chose sex or genetic trait) • welfare (financial support) programs • women in combat