



ELSEVIER

International Journal of Psychophysiology 37 (2000) 267–273

INTERNATIONAL
JOURNAL OF
PSYCHOPHYSIOLOGY

www.elsevier.nl/locate/ijpsycho

Cardiovascular reactivity during public speaking as a function of personality variables

L. Victor Fichera^{a,b}, John L. Andreassi^{a,*}

^a*Psychophysiology Laboratory, Department of Psychology, Baruch College and the Graduate School of the City University of New York, 17 Lexington Avenue, New York, NY 10010, USA*

^b*New York City Board of Education, New York, NY, USA*

Received 15 December 1999; received in revised form 10 March 2000; accepted 17 March 2000

Abstract

An experiment was conducted to assess the effects of a real-life stressor (public speaking) upon cardiovascular reactivity (CVR). Changes in blood pressure and heart rate from baseline to task were measured in a sample of 86 men and women. The purpose was to examine the effects of individual differences (Type A personality, hostility and gender) on CVR. Participants gave a 6-min oral presentation during which they were evaluated by their professor and with classmates as the audience. Results indicated that all participants had marked CVR during public speaking. There were differences in reactivity patterns between men and women, but personality did not play a role except for high hostile men. It is suggested that intense stressors may result in high levels of CVR independent of personality variables that moderate reactivity at lower levels of stress. © 2000 Elsevier Science B.V. All rights reserved.

Keywords: Cardiovascular reactivity; Blood pressure; Heart rate; Type A/B personality; Hostility; Real-life stressor; Public speaking

1. Introduction

Cardiovascular reactivity may be defined as a change in a relevant variable, such as blood pressure, from resting baseline to task conditions. Typically, the task involves mental effort, psychomotor skill, social evaluation or some other

psychological or physical threat. There is evidence supporting the idea that the tendency to react strongly to psychological or physical challenge is a reliable individual trait, demonstrating test–retest reliability over a period of 10 years or more (Sherwood and Turner, 1992; Sherwood et al., 1997). A body of literature has developed to indicate that the tendency to show cardiovascular reactivity is influenced by personality variables for Type A (Juszczak and Andreassi, 1987; Ganster et

* Corresponding author.

al., 1991; Sundin et al., 1995) and hostile men (Brown and Smith, 1992; Bongard et al., 1998). Not as much research has been devoted to personality factors as moderators of CVR in women, and the results have been largely negative. A review by Lawler et al. (1990) led to a conclusion that small sample sizes may have accounted for the mixed findings regarding personality and CVR for women. Lawler et al. (1989) did report greater CVR for Type A women when a real-life stressor was used (a midterm examination). Later, Fichera and Andreassi (1998) observed greater CVR for Type A and for hostile women in two tasks (an oral quiz and reaction time). The objective in the present investigation was to determine the CVR of both men and women to a task that is likely to be very stressful, a real-life classroom speech for which the student receives a grade. The personality variables selected for study were Type A/B behavior and hostility. It was expected that Type A men and women would demonstrate higher CVR in terms of blood pressure (systolic, diastolic and mean arterial pressure) and heart rate (HR) than Type Bs in this public speaking task. It was also predicted that women and men scoring high on a measure of hostility (Cook–Medley Hostility Scale) would demonstrate higher blood pressure and HR than those scoring low on the scale. Previous findings (Matthews and Stoney, 1988; Girdler et al., 1990; Stoney, 1992) also suggest that men and women would differ in their reactivity profile, with men showing higher reactivity on all variables except heart rate.

2. Method

2.1. Participants:

A total of 86 individuals (56 women) participated in this experiment. They were all recruited from psychology courses that required a classroom presentation as a course requirement. Ages ranged 17–45 with a mean of 26. Since many of the participants were evening students they tended to be older than the usual college student. They came from diverse ethnic backgrounds: 28%

White, 26% Asian, 24% Black, and 22% Hispanic.

Research participants completed several forms prior to the study. One was a questionnaire covering demographics and factors related to cardiovascular reactivity such as personal and parental history of hypertension and use of vasoactive substances (e.g. caffeine). Another was an informed consent form that described the procedures of the study and the rights of participants. The study protocol was approved by the Institutional Review Board at Baruch College. In addition, participants completed the paper and pencil Jenkins Activity Survey (JAS), consisting of 52 items, and commonly used to designate Type A/B personality, and they also completed the Hostility Scale developed by Cook and Medley (1954) derived from items contained in the Minnesota Multiphasic Personality Inventory (MMPI). Type A individuals placed in the 75th percentile and above on the JAS and Bs in the 25th percentile and below. A third category (neither A nor B) was established for those scoring within the 26–74th percentiles on the JAS. The assessment procedure described identified 27 Type As, 20 Type Bs and 39 individuals who scored in the intermediate range. High hostile individuals were those who scored above the median for the group and low hostiles scored below the median. Approximately 2 weeks after the completion of these forms one of the experimenters returned and scheduled a session to obtain baseline physiological measures for those who wished to participate.

Baseline physiological measures were obtained in a separate room in the psychophysiology laboratory. This room isolates the participant from changes in temperature, light and sound levels. A Critikon Dinamap 8100 was used to obtain measures of systolic blood pressure (SBP) diastolic blood pressure (DBP) mean arterial pressure (MAP) and HR while the participant was asked to ‘rest quietly’. Mean arterial pressure refers to the average pressure in blood vessels during the cardiac cycle and is estimated by the following formula: $MAP = 1/3 (DBP - DBP) + DBP$. Papillo and Shapiro (1990) observed that MAP is an important measure of BP because it reflects the average effective pressure that drives the blood

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات