Available online at www.sciencedirect.com
SCIENCE DIRECT®
PERGAMON
Personality and Individual Differences 36 (2004) 1571–1582
PERSONALITY AND INDIVIDUAL DIFFERENCES
www.elsevier.com/locate/paid

Cynical hostility and the psychosocial vulnerability model of disease risk: confounding effects of neuroticism (negative affectivity) bias

Kenneth E. Hart *, Chris W. Hope

Centre for Psychological Intervention and Research, Department of Psychology, 401 Sunset Ave., University of Windsor, Windsor, Ont., Canada N9B 3P4

Received 7 January 2002; received in revised form 27 May 2003; accepted 20 June 2003

Abstract

Results obtained from a sample of young adults showed that, independent of the effects of neuroticism/negative affectivity (NA), Cook–Medley hostility (Ho) scores were significantly associated with life stress, trait anger, loneliness and irrational beliefs but not social support. The strength of relationships linking Ho scores to these risk and protective factors was noticeably stronger when the confounding effects of neuroticism-stability were not statistically controlled. When neuroticism was covaried, there was a 67.7% relative reduction in mean effect size. We tentatively conclude that self-report bias associated with dispositional neuroticism/NA may represent a serious threat to the internal validity of self-report studies that test the psychosocial vulnerability model of disease risk associated with cynical hostility. Results from our partial correlations provide only partial support for the theory that Ho scores confer increased health risk through a negative psychosocial 'profile' characterised by the relative imbalance between factors that are stressors and factors that are coping resources.

Keywords: Cynical hostility; Cook–Medley; Vulnerability; Neuroticism; Negative affectivity; Confounding; Coping resources; Social support

1. Introduction

Numerous studies over the past 30 years have provided evidence to support the conclusion that cynical hostility, as measure by the Cook–Medley Hostility (Ho) scale, is a psychosocial risk

* Corresponding author.
E-mail address: kenhart@uwindsor.ca (K.E. Hart).

0191-8869/$ - see front matter
doi:10.1016/j.paid.2003.06.007

factor for death, medically-related disability, and ill-health (for reviews, see Miller, Smith, Turner, Guijarro, & Hallet, 1996; Smith & Ruiz, 2002). Considerable research has also been done to uncover the mediating biopsychosocial mechanisms or processes through which hostility impacts upon health outcomes.

As articulated by Smith and his colleagues (Smith, 1992; Smith & Christensen, 1992; Smith & Gallo, 1994; Smith & Pope, 1990), the *psychosocial vulnerability model* of health risk posits cynical hostility is associated with a unique 'clustering' of risk and protective factors. In particular, the model argues Ho scores are related to an unhealthy constellation of psychosocial factors that work synergistically to confer increased susceptibility to disease, ill health and medical dysfunction. Essentially, the model represents a stress-vulnerability framework because it argues that high hostile people are at elevated risk for medical problems because they experience an excessive number of external and internal stressors (illness vulnerability factors) concurrent with deficiencies in social support and other types of coping resources (illness protective factors). As noted by Smith (Smith & Christensen, 1992; Smith & Ruiz, 2002), this combination of heightened vulnerability and deficient coping resources may be involved in the onset and maintenance of ill-health in a number of ways: (1) by increasing the frequency, intensity and duration of episodes of physiological reactivity; (2) by increasing health impairing behaviour patterns involving consumption of alcohol/drugs or food or cigarette smoking, (3) by increasing the probability of maladaptive illness behaviours, or (4) by impeding adjustment to and recovery from illness or medically-related disability.

Evidence from a number of studies supports the contention that Ho scores are associated with the presence of stress-related vulnerability factors (Davidson, Prakachin, Lefcourt, & Mills, 1996; Greenglass & Julkunen, 1991; Hardy & Smith, 1988; Houston & Vavak, 1991; McCann, Russo, & Benjamin, 1997; Pope, Smith, & Rhodewalt, 1990; Rosenberg, Ekman, & Blumenthal, 1998; Smith, Pope, Sanders, Allred, & O'Keefe, 1988; Smith, Sanders, & Alexander, 1990) and the absence of coping-related protective factors such as social support (Davidson et al., 1996; Elovainio, Kivimaecki, Kortteinen, & Toumikoski, 2001; Hardy & Smith, 1988; Hart, 1996, 1999; Houston & Vavak, 1991; Kivimaeki et al., 2002; McCann et al., 1997; Raynor, Pogue-Geile, Kamarck, McCaffery, & Manuck, 2002; Smith et al., 1988; Swan, Carmelli, & Rosenman, 1990).

Although the Ho scale has been shown to be related to the presence of risk factors and absence of resource factors in a manner consistent with expectations drawn from the psychosocial vulnerability model, the results of this research are difficult to interpret because of ambiguity regarding the construct validity of the 50-item Ho scale. Empirical findings from a number of studies question the psychological meaning of Ho scores (Contrada & Jussim, 1992; Han, Weed, Calhoun, & Butcher, 1995; Steinberg & Jorgensen, 1996), leading some researchers to reconsider how well the scale actually measures 'cynical hostility'. Of special concern to the present study are findings suggesting the Ho scale contains surplus construct irrelevancies associated with neuroticism/negative affectivity. In particular, previous research has found the Ho scale is so highly correlated with other MMPI-2 subscales as to support the interpretation that Cook–Medley items are confounded by neuroticism or 'negative affectivity' [1] (Han et al., 1995). This finding is consistent with results reported by Denollet (1991), who compared the Ho scale with a measure of

[1] Negative affectivity (or neuroticism-stability) is a construct that refers to a generalized disposition to experience a diverse number of aversive mood states.