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Guest Editorial

Specification and analysis of the effects of coping in research on the relationship between psychosocial stress and periodontal disease

Focused Perspective on Trombelli et al., J Clin Periodontol 2005; 32: 1143–1150

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This issue of the Journal includes a fascinating paper by Trombelli et al. (2005) exploring the relationship between psychosocial stress, coping and periodontal disease. This paper is part of a growing body of research into the impact of psychosocial stressors on the health of the periodontium (Aleksejuniene et al. 2002, Vettore et al. 2003, Solis et al. 2004, Klages et al. 2005), much of which has focussed on teasing out the mechanism by which stress might affect the tissue, either through a direct change in physiology (Roberts et al. 2003, Waschul et al. 2003, Kamma et al. 2004) or through changes in behaviour and their consequent impact on health (Deinzer et al. 2001, Hugoson et al. 2002), the putative mechanisms outlined by Genco et al. (1998).

The research described by Trombelli and colleagues represents a significant advance in the area in two ways. First, the definition of stress is well developed and operationalized in terms of standardized measures. Second, they have sought to incorporate measures of coping and social support which are important components of psychological models of stress (see e.g. Vingerhoets 2004). While coping has been a topic of psychological research for some time, there has been little work on coping, stress and periodontal disease. However the authors' conclusions concerning the relationship between psychological variables and the clinical indices may need to be tempered by a consideration of the theoretical approach taken to understanding the data.

Theoretical approaches to coping have largely arisen out of the work of Lazarus & Folkman (1984) and Lazarus (1993). In Lazarus' model coping is defined as 'constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person' (Lazarus & Folkman 1984, p. 141). Thus Lazarus suggests that coping operates not directly by affecting disease status but by moderating the impact of the stress. Consider the example of an individual who has little stress in their life, it seems reasonable to propose that their routine coping mechanism for stress (e.g. resigning themselves to their fate) will have little bearing on their disease state as they will not be operating it, coping mechanisms will be important for those individuals facing stress as it may attenuate the effect of the stress. This calls for careful consideration of the statistical analysis of data involving data on stressors faced, and coping mechanisms. In order to detect the moderating effect of a variable, Holmbeck (1997) suggests including interaction terms in regression models, or alternatively Structural Equation Modelling can be used.

The growing inclusion of social and psychological factors in the study of the aetiology and maintenance of periodontal diseases is to be welcomed, but should be founded upon a proper consideration and understanding of the mechanisms through which such factors may operate. This will require a review of the theoretical underpinnings of our understanding of psychosocial factors. Conversely diseases such as periodontal disease have much to offer as models to develop our understanding of the role of psychological factors in disease, because they are relatively prevalent, they have a strong behavioural component and the pathogenesis is fairly well understood.

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