

## Accepted Manuscript

Title: Hair cortisol as a biological marker for burnout symptomatology

Authors: Marlene Penz, Tobias Stalder, Robert Miller, Vera M. Ludwig, Magdalena K. Kanthak, Clemens Kirschbaum



PII: S0306-4530(17)30377-3  
DOI: <http://dx.doi.org/doi:10.1016/j.psyneuen.2017.07.485>  
Reference: PNEC 3678

To appear in:

Received date: 18-4-2017  
Revised date: 5-7-2017  
Accepted date: 18-7-2017

Please cite this article as: Penz, Marlene, Stalder, Tobias, Miller, Robert, Ludwig, Vera M., Kanthak, Magdalena K., Kirschbaum, Clemens, Hair cortisol as a biological marker for burnout symptomatology. *Psychoneuroendocrinology* <http://dx.doi.org/10.1016/j.psyneuen.2017.07.485>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Marlene S. Penz

## Hair cortisol as a biological marker for burnout symptomatology

Marlene Penz<sup>1a</sup>, Tobias Stalder<sup>a,b</sup>, Robert Miller<sup>a,c</sup>, Vera M. Ludwig<sup>a</sup>, Magdalena K. Kanthak<sup>a</sup>,

Clemens Kirschbaum<sup>a</sup>

<sup>a</sup>Department of Biological Psychology, Technische Universität Dresden, Dresden, Germany

<sup>b</sup>Clinical Psychology, University of Siegen, Siegen, Germany

<sup>c</sup>Department of Medical Epidemiology and Biostatistics, Karolinska Institute, Stockholm, Sweden

<sup>1</sup>corresponding author: marlene.penz@tu-dresden.de; phone: +49-351463-32862

### Research Highlights

- Burnout symptoms are associated with glucocorticoid levels at a certain level of severity.
- Depressivity does not significantly contribute to hair cortisol concentrations.
- According to biomarkers, burnout and depression are distinct entities.
- Dichotomization is advisable for assessing burnout symptoms.
- Results support hair cortisol concentrations as a biomarker of burnout.

### Abstract

Burnout is a syndrome with negative impact on cognitive performance and mood as a consequence of long-term stress at work. It is further associated with increased risk for mental and physical diseases. One potential pathway to mediate chronic work-stress and adverse health conditions in burnout is through alterations in long-term glucocorticoid secretion. Here, we present cross-sectional data on hair cortisol / cortisone (hairF / hairE) concentrations and burnout from a population-based sample of the Dresden Burnout Study (DBS; N = 314 hair samples). Burnout symptoms (emotional exhaustion, cynical attitudes toward work, and reduced efficacy) were assessed with the Maslach Burnout Inventory-General Survey (MBI-GS). To control for potential confounds, depressivity was as well assessed using the Patient Health Questionnaire (PHQ-9) screening instrument for major depression. The present findings indicate specific hypercortisolism in participants who suffer from burnout. No significant associations were found between depressivity and hairF/hairE.

word count (abstract): 145

keywords: burnout; depression; glucocorticoids; hair cortisol; biomarkers

### 1. Introduction

Download English Version:

<https://daneshyari.com/en/article/6817861>

Download Persian Version:

<https://daneshyari.com/article/6817861>

[Daneshyari.com](https://daneshyari.com)