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The interplay between emotional exhaustion, common mental disorders, functioning and health care use in the working population

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ABSTRACT

Objectives: Previous research established that emotional exhaustion - the often assumed core dimension of burnout - diminishes job-related functioning, but knowledge of its association with functioning and health care utilization is largely lacking. Moreover, as exhaustion frequently co-occurs with mood and anxiety disorders (i.e. common mental disorders (CMD)), the question should be addressed whether these associations hold after adjustment for CMD, and whether CMD intensifies the burden of exhaustion.

Methods: Cross-sectional data was used from 2902 workers included in the third wave of the Netherlands Mental Health Survey and Incidence Study-2, a nationally representative face-to-face survey. Exhaustion was assessed with the exhaustion scale of the Maslach Burnout Inventory; work loss (including presenteeism and absenteeism) with the WHO Disability Assessment Schedule; and general functioning with the 36-item Short Form. Health care use is defined as ≥ 1 general or mental health care contact for mental health problems. Confounders included sociodemographics, job characteristics, CMD, and physical health. The Composite International Diagnostic Interview assessed CMD.

Results: Mild and severe exhaustion occurred in 14.9% and 2.3% of the workers, respectively, and was significantly associated with work loss, impaired emotional, physical and social functioning, and health care use, even after adjustment for confounders. Co-occurrence of CMD strengthened the association between exhaustion and work loss as well as impaired emotional and social functioning.

Conclusions: Exhaustion is uniquely associated with work loss, impaired functioning and health care use. Moreover, co-occurring CMD intensified impairments in functioning. This stresses the need for clinical attention to the exhaustion dimension of burnout.

1. Introduction

In the 1970s, the concept of burnout was introduced as a negative work-related state of mind which occurred in response to high job demands and overload [1]. Currently, the most frequently used definition stems from the Maslach Burnout Inventory (MBI) which identifies three key elements: emotional exhaustion, cynicism and professional inefficacy [1]. As emotional exhaustion has severe health consequences [2] and is often considered to be the core dimension of burnout [3], we focus on exhaustion as a proxy for burnout. A formal exhaustion rate is not available as there are no cross-national validated cut-off points of the MBI [4]; and neither burnout nor exhaustion is defined in the DSM. Yet, exhaustion is estimated to occur in about 14% of the Dutch working population [5]. Burnout, and especially exhaustion, is associated with job-related functioning, such as job performance [1,6], and increases the risk and duration of sick leave [7,8]. It is, however, likely that exhaustion has a broader impact, affecting other life dimensions too. In order to better comprehend the extent of the impact of exhaustion, we address two issues: 1) a more complete measurement of the associated impact; this implies not only considering whether an individual with exhaustion is able to continue to work, but also whether social, emotional and physical functioning are impaired and whether health care is sought; and 2) examining this wider impact after adjustment for co-occurring mental disorders.

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Regarding the more complete measurement of the impact of exhaustion, the first aspect that we consider is work loss, including both sick leave (absenteeism) and reduced functioning while at work (presenteeism) [9]. A substantial part of work loss related to mental disorders is due to reduced functioning while at work [9,10], which emphasises the need to examine absenteeism and presenteeism simultaneously. Yet, previous studies associated exhaustion with absent days [7,8] or the occurrence of presenteeism [11,12], but not jointly. We expect that severity of exhaustion is associated with work loss, meaning that work loss will mostly consist of shorter periods in people with mild exhaustion and longer periods in those with more severe exhaustion.

Second, due to a spillover effect of work experiences to other life domains [13], exhaustion likely also affects emotional and social functioning, and possibly physical functioning. To our knowledge, such a broad impact of exhaustion has not been examined in the general working population. Studies among specific samples such as surgeons, nurses or home caregivers showed that burnout was related to reduced quality of life in general (for example [14–17]). We therefore hypothesize that exhaustion is associated with impaired emotional, social and physical functioning in the general working population as well.

Lastly, exhaustion may prompt referral to a company doctor or general practitioner, though, as far as we are aware, it is unknown to what extent general health care is sought by workers with exhaustion. In the Netherlands, there are no financial barriers to receiving general health care and company doctors even have guidelines to identify and treat exhaustion [18]. Yet, a formal DSM diagnosis - which is often leading in a mental health care setting - is lacking and this could limit mental health care use for exhaustion. It is likely that such a threshold predominantly relates to mild exhaustion and less to severe exhaustion, as more specialized care is then thought to be essential [19]. We therefore hypothesize that exhaustion is associated with both general and mental health care [20], but that people with mild exhaustion predominantly receive general health care, whereas those with severe exhaustion more frequently receive mental health care.

To determine the relationship of exhaustion with work loss, functioning and health care use, adjustment for potential confounders (i.e. sociodemographics [21], job characteristics [22], mental health [23] and physical health [24,25]) is required. The relationship between exhaustion and depression is particularly marked [23] and it has even been suggested that these two constructs represent the same phenomenon [26]. Yet, as not all individuals with exhaustion have a depressive disorder, it seems more likely that exhaustion and depression are related but not identical concepts [1,27]. A recent study confirmed this assumption and observed a subtype of burnout characterized by high levels of both depression and anxiety without fully coinciding with DSM diagnoses of mood and anxiety disorders (i.e. common mental disorders (CMD)) [28]. Assuming that exhaustion is a unique phenomenon, we hypothesize that the relationship between exhaustion and work loss, functioning and health care used is maintained after adjustment for confounders including CMD. Importantly, if this is true, the following issue arises: namely, the co-occurrence of exhaustion and CMD may point to a subgroup [28] with an especially high burden; i.e. more work loss and poorer functioning. This is supported by findings from a clinical study suggesting that the large majority of people in treatment for exhaustion also have a CMD and that this co-occurrence might result in a more severe course of exhaustion symptoms [29]. Therefore, we hypothesize that the co-occurrence of exhaustion and CMD results in a higher burden than what would be expected from the sum of their separate burdens.

Using cross-sectional data from the third wave (T_2) of the Netherlands Mental Health Survey and Incidence Study-2 (NEMESIS-2), a representative psychiatric epidemiological study, we address the following hypotheses: 1) exhaustion is associated with work loss, impaired emotional, physical and social functioning, and the use of general and mental health care, 2) these associations are maintained after adjustment for confounders including CMD; and 3) the co-occurrence of exhaustion and CMD results in a higher burden than what would be expected from the sum of their separate burdens.

2. Methods

NEMESIS-2 is based on a multistage, stratified random sampling of households, with one respondent randomly selected in each household. Face-to-face interviews were conducted at the respondent's home. A comprehensive description of the design is provided [30]. Exhaustion was assessed at T_2 and therefore data from this wave were used for the present study, resulting in a cross-sectional design.

In the first wave (T_0), performed from November 2007 to July 2009, 6646 persons were interviewed (response = 65.1%). This sample was nationally representative, although younger subjects were somewhat underrepresented [30]. All T_0 respondents were approached for follow-up (T_1) three years after T_0 (November 2010–June 2012) and 5303 persons were interviewed again (response = 80.4%). All T_1 respondents were approached for a second follow-up (T_2) three years after T_1 (November 2013–June 2015) and 4618 persons were interviewed again (response = 87.8%). Attrition between T_0 and T_2 was not significantly associated with all individual 12-month mental disorders at T_0 after controlling for sociodemographics, except for bipolar disorder [31].

For the present study, this sample was limited to the working population, i.e. subjects younger than 65 (the official age of retirement during the study period) working ≥ 12 h a week (n = 2902).

2.1. Emotional exhaustion

The emotional exhaustion scale of the Utrecht Burnout Scale (the Dutch version of the MBI – General Survey [32,33]) was used. Exhaustion was calculated as the mean score of five items (Cronbach's alpha = 0.85), with scores ranging from never (0) to daily (6). As in [27], three severity categories were created: no (0–1.49), mild (1.50–3.49) and severe exhaustion (3.50–6).

2.2. Work loss

Work loss consisted of both sick leave and reduced functioning while at work [9]. Specifically, a count of work loss days was based on three questions of the WHO Disability Assessment Schedule [34] assessed at T_2: How many days out of the past 30 days: 1) were you totally unable to work or carry out your normal activities (absenteeism)?; 2) were you able to work and carry out your normal activities, but had to cut down on what you did, or did not get as much done as usual (presenteeism)?; 3) did you cut back on the quality of your work or how carefully you worked (presenteeism)? Number of work loss days is the sum of the days of these three types of loss, where 1 day of reduced functioning (i.e. presenteeism) was counted as half, as in [9,10]. Because this variable was not normally distributed, three categories were created: no (0 days), short (0.5–7 days), and extended work loss (> 7 days) in the past month [35].

2.3. Functioning

Functioning in the past 4 weeks was assessed at T_2 with three subscales of the Medical Outcomes Study Short Form Health Survey [36,37]. Emotional functioning involves general role limitations due to personal or emotional problems (3-item, 2-point scale; Cronbach's alpha = 0.85). Physical functioning involves general role limitations due to physical problems (4-item, 2-point scale; alpha = 0.88). Social functioning involves problems in one's normal social activities due to emotional or physical problems (2-item, 6-point scale; alpha = 0.77). The scores of these scales were transformed so that all scales varied from 0 to 100, and were then dichotomized into no impairment