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Risky alcohol use in Danish physicians: Associated with alexithymia and burnout?

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ABSTRACT

Background: Alcohol abuse may be elicited by psychological problems and can influence physicians' health and patient safety. To act on it, we need knowledge on the prevalence of the disorder and its associations with psychological factors and physicians' well-being. The aim of this study was to explore whether burnout and alexithymia are associated with risky alcohol consumption in physicians and whether burnout mediates the association between alexithymia and risky alcohol consumption.
Methods: In this cross-sectional study, 4,000 randomly selected physicians received an electronic questionnaire by email containing the Alcohol Use Disorders Identification Test (AUDIT), the Maslach Burnout Inventory Human-Services-Survey (MBI-HSS) and the Toronto Alexithymia Scale (TAS-20). A total of 1,841 physicians completed the questionnaire (46%). *Results*: 18.8% reached the criteria for risky alcohol consumption. The likelihood of having risky alcohol consumption was associated with high levels of alexithymia (OR = 1.93, 95%CI = 1.37–2.74, $P < 0.001$). Moreover, risky alcohol consumption was associated with burnout (OR = 1.86, 95%CI = 1.13–3.05, $P < 0.014$) and each individual burnout dimension: emotional exhaustion (OR = 1.89, 95%CI = 1.33–2.69, $P < 0.001$), depersonalisation (OR = 2.23, 95%CI = 1.53–3.25, $P < 0.001$) and low levels of personal accomplishment (OR = 1.66, 95%CI = 1.14–2.41, $P = 0.008$). Mediation analysis suggested that the association between alexithymia and risky alcohol consumption was partially mediated through depersonalisation.
Conclusions: The results emphasize a need for enhancing emotional self-awareness in physicians as psychological traits, work-pressure and alcohol dependence might be self-reinforcing aspects for the individual physician. As alcohol dependence and burnout may have consequences for patient safety separately, the aggregated influence of these factors has to be examined.

1. Introduction

The association between alcohol use disorder and mental well-being has only been examined to a limited extent in physicians. Alcohol use disorder may be elicited by psychological problems and can have detrimental consequences for the physicians' physical and mental health and for patient safety (Wallace et al., 2009). A recent survey of American physicians revealed that approximately 13% of male physicians and 21% of female physicians met diagnostic criteria for alcohol abuse or dependence (Oreskovich et al., 2014).

Burnout is a psychological state characterized by emotional exhaustion, depersonalization and a subjective experience of decreased personal accomplishment and is often seen as a prolonged response to chronic emotional and interpersonal stressors on the job (Maslach et al., 1996). Although longitudinal studies are lacking, the problem of burnout appears to be increasing among physicians (Soler et al., 2008), and general practitioners have been found to have high prevalence proportions compared to other specialties (Arigoni et al., 2010). A recent study of US physicians revealed that approximately half of the included physicians working in family medicine scored high on either emotional exhaustion or depersonalization or both (Shanafelt et al., 2012). Swiss figures revealed an increase in rates of moderate burnout from 33% in 2002 to 42% in 2007 among general practitioners (Arigoni et al., 2010). A Danish study showed that 9.5% of included general practitioners

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reported high levels of emotional exhaustion in 2004, but in 2012 the share had increased to 14.8% (Pedersen et al., 2013). High stress and burnout have been related to alcohol problems among physicians, but with unclear results as the burnout dimensions found to be associated with alcohol problems have differed. Thus, one study of medical students revealed an association between high alcohol binge scores and high scores on the burnout dimension "personal accomplishment" only (Cecil et al., 2014) whereas two studies of US surgeons and physicians revealed an association between alcohol use disorder and both emotional exhaustion and depersonalization (Oreskovich et al., 2012, 2014).

Alexithymia refers to a psychological trait encompassing difficulties identifying and describing emotions and differentiating feelings and somatic sensations of emotional arousal (Sifneos, 1973). Moreover, alexithymic individuals often display a lack of fantasy and imagination and have an externally oriented cognitive style, i.e., a tendency to focus on objective events and rather than subjective experiences and feelings (Bagby et al., 1994). In several studies, alexithymia has been associated with substance use disorder (Hamidi et al., 2010) and alcohol abuse (Coriale et al., 2012; Shishido et al., 2013; Craparo et al., 2014), but the association between alexithymia and alcohol consumption has, to our knowledge, never been examined in physicians. Proper emotional regulation will often be contingent on adequate identification and naming of subjective feelings and as alexithymic individuals fall short in these domains, they might use alcohol or other substances to alleviate their discomfort, i.e., as an emotion-focused coping strategy (Shishido et al., 2013; Merlo et al., 2013). Taken together, alexithymia is a personality trait resulting in poor emotion regulation and stress-management abilities (Hamidi et al., 2010) and a key feature of the burnout state is emotional dysregulation and exhaustion (Schaufeli and Taris, 2005). Therefore, it seems relevant to examine whether burnout mediates the anticipated relationship between alexithymia and risky alcohol use in physicians whose working environment is often characterized by high workload and intense emotions (Wallace et al., 2009).

1.1. Hypotheses

1. High levels of alexithymia are associated with risky alcohol use in physicians.
2. High levels of burnout are associated with risky alcohol use in physicians.
3. The hypothesized influence of alexithymia (trait) on risky alcohol use (coping strategy) is mediated by one or more of the three burnout dimensions (states), see Fig. 1.

Against this background, the aims of this study were to examine whether alexithymia and burnout are associated with risky alcohol use in a sample of Danish physicians and whether a mediating role of burnout in the hypothesized association between alexithymia and risky alcohol use can be supported.

2. Methods

A cross-sectional survey was performed among 4,000 non-pensioned physicians. They were randomly selected among the Danish Medical Associatio's (DMA) active 26,669 members. The sample was drawn with 1,333 respondents from each of the three subgroups: DAGP (The Danish Association of General Practitioners), DAMS (The Danish Association of Medical Specialists) and DAJD (The Danish Association of Junior Doctors). The physician's identities are only known by the DMA, who has no access to the data.

2.1. Data collection

The physicians received an electronic questionnaire by email. The questionnaire was setup in Survey Xact software and distributed as a link by the DMA (April–June, 2014). To encourage participation a personalised paper letter signed by the head of the DMA was distributed to the whole sample. Additionally, the study was mentioned in the Journal of the DMA before the survey initiation and between the second and the third reminders. Reminders were sent out three times within eight weeks. There was no remuneration for participating.

2.2. The questionnaire

This study is part of a mixed-method study surveying alcohol and drug use disorders among Danish physicians (Sorensen et al., 2015). The results presented in this paper are based on questionnaires assessing sociodemographic information (sex, age and marital status), use of alcohol, burnout and alexithymia.

Alcohol consumption was assessed by the standardised and internationally used self-assessment scale "Alcohol Use Disorders Identification Test" (AUDIT; Saunders et al., 1993). The scale is based on the ICD-10 definition and developed for the WHO (World Health Organisation). The 10 questions in AUDIT are scored on a 5-point Likert scale from 0 "never" to 4 "daily or almost daily". The maximum score in AUDIT is 40 points. A cut-off score on eight has been recommended as a reasonable threshold for classifying respondents into two groups: no risky alcohol use (<8) and risky or hazardous alcohol use (≥8) (Conigrave et al., 1995).

Burnout was assessed by the Maslach Burnout Inventory Human-Services-Survey (MBI-HSS), which is considered to be a valid instrument for assessment of burnout symptoms (Maslach et al., 1996). The scale has been translated into Danish following standardised procedures. The MBI-HSS consists of 22 items and each item is scored on a 7-point Likert scale. The 22 items are divided on three subscales: 1) emotional exhaustion (9 items), 2) depersonalization (5 items), and 3) personal accomplishment (8 items). Each subscale receives a score which is categorised as low or high based on normative population score (Maslach et al., 1996). A high level of emotional exhaustion is defined as a score >26, and a high level of depersonalization is defined as a score>9. Low personal accomplishment is defined as a score <34. A moderate degree of burnout was defined as a high score on the emotional exhaustion subscale and/or a high score on the depersonalization subscale. A high score on the emotional exhaustion and depersonalization subscales and a low score on the personal accomplishment subscale is defined as a high degree of burnout (Maslach et al., 1996). Additional to the categorical approach, we divided each MBI-HSS subscale into quartiles to explore dose-response effects of the three burnout dimensions.

Alexithymia was assessed by the Toronto Alexithymia Scale consisting of 20 items (TAS-20; Bagby et al., 1994). The items are rated on a five-point Likert scale (1 is "strongly disagree" and 5 is "strongly agree") and the total score ranges from 20 to 100. The items in the TAS-20 can also be scored in three subscale scores: difficulty describing feelings (5 items; score range: 5–25), difficulty identifying feelings (7 items; score range: 7–35) and externally-oriented thinking (8 items; score range: 8–40). We divided the sum score of the TAS-20 and the subscales into quartiles to allow for non-linear relationships.

4.3. Statistical analyses

The associations between risky alcohol consumption and burnout and alexithymia were examined by separate logistic regression analyses. The associations were calculated as odds ratio