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Verbal and physical client aggression – A longitudinal analysis of professional caregivers' psychophysiological stress response and burnout

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ABSTRACT

Objective: We investigated the impact of verbal and physical client aggression on risk of developing high hair cortisol concentration (HCC) as an indicator of chronic stress exposure and burnout in a Swiss population of professional caregivers working in youth residential care.

Method: Participants (n = 121; 62.0% women) reported on client aggression and burnout symptoms and provided hair samples at four annual sampling points. HCC was determined in the first 1.5 cm hair segment. Sociodemographic variables, private stressors, burnout symptoms, and HCC were compared between participants reporting either 'no aggression', 'verbal' aggression, or 'verbal + physical' aggression. Cox proportional hazards regressions were calculated to compute hazard ratios (HR) and 95% confidence intervals (CI) for the association between client aggression and risk of high HCC or burnout over the course of three years.

Results: Professional caregivers reporting 'verbal + physical' aggression had higher HCC, more cognitive burnout symptoms, and greater burden in interpersonal domains. Both 'verbal' and 'verbal + physical' aggression were positively associated with burnout risk (verbal: HR = 1.83; 95% CI = 1.27–2.65; verbal + physical: HR = 2.44, 95% CI = 1.56–3.84). 'Verbal + physical' aggression was positively associated with risk of high HCC (HR = 1.58; 95% CI = 1.07–2.36).

Conclusions: This longitudinal analysis suggested that psychophysiological stress response is primarily associated with combined verbal and physical aggression. The emotional wearing-down associated with verbal aggression should however not be disregarded. Our exploratory findings could have implications for youth welfare policy, clinical child psychiatry, and future research.

1. Introduction

Employees in youth welfare institutions and inpatient child and adolescent psychiatric units are at high risk of being confronted with verbal and physical client aggression (Steinlin et al., 2015a). Such experiences range from verbal abuse, threats, and physical attacks to property damage and sexual harassment (NIOSH, 1996), and may contribute to burnout symptoms and negative somatic and mental health outcomes. Disadvantageous coping with client aggression is associated with work dissatisfaction and employee turnover (Schmid et al., 2015). Feeling inadequate, ineffective, and overextended after such aggressive encounters is a crucial reason why care mandates are terminated and clients are referred to child and adolescent psychiatric care. With some 80% of clients in youth residential care suffering from traumatic life experiences and neglect, along with clinically relevant developmental, behavioral, or emotional concerns, exposure to client aggression will remain an occupational hazard (Burns et al., 2004; Collin-Vézina et al., 2011; Kisiel et al., 2014; Schmid et al., 2013; Teicher and Samson, 2016).

Researchers surveying populations of social service and psychiatric care providers (e.g. nurses, psychologists, or social workers) report especially high prevalence of verbal and physical aggression, with as many as 50–92% suffering verbal abuse, 39–68% being threatened, and 23–70% experiencing physical attacks (Alink et al., 2014; Enosh and Tzafrir, 2015; Franz et al., 2010; Gerberich et al., 2004; Hanson et al., 2015; Jayaratne et al., 2004; Koritsas et al., 2008; Ringstad, 2005). According to Alink et al. (2014), 81% of youth residential care staff experience client aggression, and about half of employees report the

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experience of physical aggression within a year. In a similar population, Steinlin et al. (2015b) found that among 319 employees, 91% experienced at least one, and 45% experienced three or more types of verbal or physical aggression in the three months prior to questioning.

Individuals are increasingly vulnerable to negative health outcomes when exposed to the cumulative effects of multiple stressors (Huxley et al., 2005; Littlechild, 2005; Richter and Whittington, 2006). Higher frequencies of aggressive encounters at work coincide with increased emotional exhaustion (Hogh et al., 2005; Winstanley and Hales, 2014). In a sample of UK social care staff, Harris and Leather (2011) found that increased exposure to service user violence lead to anxiety and vulnerability. Symptoms of burnout, characterized by feelings of disempowerment, emotional exhaustion, cynicism, depersonalization, anxiety, and loss of confidence, are also common (Berger et al., 2012; Franz et al., 2010; Hanson et al., 2015; Steinlin et al., 2015a).

Individual factors such as sex, younger age, shift work and being single have also been linked to increased burnout risk (Dall'Ora et al., 2015; Lizano and Barak, 2012; Maslach et al., 2001; Wisetborisut et al., 2014). Johnson et al. (2016) found that mental health professionals reporting more of a perceived impact of boundary violations, reported higher emotional exhaustion and depersonalization. This was especially the case for younger professionals. Only a few studies address the relation between private stress and burnout, with inconsistent findings (Hakanen and Arnold, 2017). A study by Burisch (2002) did not support the association, while others found that negative life events and work-nonwork conflicts were positively associated with burnout (Dyrbye et al., 2006; Plieger et al., 2015; Reichl et al., 2014).

A relatively new and efficient method to determine long-term stress reactions is the assessment of cortisol secretion in hair (Stalder et al., 2014). As a part of the hypothalamus-pituitary-adrenal (HPA) axis, cortisol affects and enables effective coping with stressors by regulating basal processes such as fat and glucose metabolism, blood pressure, and inflammatory and immune responses (De Kloet et al., 2005; Miller et al., 2007; Stalder et al., 2014; Staufenbiel et al., 2013). However, cumulative, severe or chronic exposure can lead to dysregulation of the HPA axis, and over- as well as underproduction of cortisol are associated with a range of maladaptive effects (review: Guilliams and Edwards, 2010; Stalder et al., 2017; Staufenbiel et al., 2013). Initial studies found changes in hair cortisol concentrations (HCC) in adults with high levels of chronic stress, trauma, shift work, burnout, unemployment, and somatic illnesses (Penz et al., 2018; Staufenbiel et al., 2013; Wester and van Rossum, 2015; Vives et al., 2015).

Understanding the association between client aggression and an employee's psychophysiological and emotional stress response is relevant for youth welfare organizations, clinical inpatient facilities in child and adolescent psychiatry, as well as the children and adolescents in their care. Exposure to client aggression may interfere with interpersonal interactions between caregiver and client, directly reducing quality of care (Schmid et al., 2015; de Schipper et al., 2009; Holmqvist and Jeanneau, 2006; Maslach et al., 2001; Poghosyan et al., 2010). Implications for job performance, organizational commitment and job dissatisfaction, healthcare costs, and staff turnover could be considerable (Schmid et al., 2015; Hanson et al., 2015; Aarons et al., 2010; Kim and Stoner, 2008; Richter and Berger, 2009). Despite the potential consequences for this highly vulnerable subgroup of children and adolescents and their caregivers, the long-term impact of client aggression on the chronic psychophysiological and emotional stress response has remained neglected in the domain of youth residential and/or inpatient care.

In this exploratory study, we aimed to investigate the association between exposure to verbal and physical client aggression and the risk of developing high HCC as an indicator of chronic stress exposure and burnout in a Swiss population of professional caregivers working in youth residential care.

2. Method

We conducted this study as part of a larger government-funded model project examining the efficacy of trauma-informed care in residential youth welfare institutions in the German speaking part of Switzerland. These institutions accommodate children, adolescents, and young adults between 7 and 25 years of age, over a third of whom have a criminal record or exhibit severely disruptive social behavior. About 80% of the patients report traumatic experiences, and the majority of them show clinically relevant internalizing and/or externalizing behavior (Schmid et al., 2017).

2.1. Study population

A total of 164 employees were enrolled in the study, but 43 of them were excluded due to missing data (response rate = 79.2%). Reasons for missing data included not filling out questionnaires correctly, not returning questionnaires/getting lost in the mail, refusing to provide hair samples or the hair being too short (under 3 cm). While a proportion of missing data is missing at random (21.9%), 79.1% were dependent on hair length and refusal to participate in the hair analyses (64.7% men). Excluded participants were more often men ($X^2 = 3.84$, df = 1, p = .05) and older (mean = 34.3 vs. 38.8 years old; t = −2.10; df = 162; p = .038), but showed no differences in other sociodemographic variables.

121 caregivers (46 men, 75 women) aged between 23 and 61 years who worked in 14 residential youth welfare institutions approved by the Swiss Federal Office of Justice participated in the study. Overall, 83.5% of participants were qualified or in-training social education workers. On average, they had 8.3 years (range = 1–37) of professional experience in residential youth welfare institutions and had worked in the present institution for a mean of 3.7 years (range = 0–18). Two years of professional experience and a working history in the present institution of one year were most frequently reported.

All participants were thoroughly informed about the study, and they gave written informed consent. The leading ethics committee of Basel, as well as the ethics committees of the cantons Bern, St. Gallen, Aarau, and Zürich approved this model project.

2.2. Procedures

We used a longitudinal design to estimate changes in HCC and reported burnout of youth residential care staff over time. Since some professional caregivers in our study reporting verbal aggression were additionally victims of physical aggression, participants were categorized into one of three groups at each sampling point, i.e., those reporting no aggression ('no aggression' group), verbal threats ('verbal' group), or verbal threats and physical aggression ('verbal + physical' group). Data were collected from each institution at four annual sampling points. The initial measure included all participants in partaking institutions and then three more annual measures at regular intervals. Participants were continuously included in the study, with an average of 10.5 months between individual measurements. Thus, not all participants have data for all four measures, since some started working in the institutions during the course of the study or missed a data collection due to absences (e.g. vacation, illness). Data were collected from surveys on sociodemographic variables and experiences of aggression at the workplace, a well-established burnout questionnaire, and cortisol analysis of hair samples.

2.3. Measures

2.3.1. Survey about private stressors (Fischer et al., 2012)

This survey documented the presence of typical private stressors for adults. The participants answered "yes" or "no" from a list of specific private stressors experienced in the last three months prior to