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Review

Burnout and interventions in pediatric residency: A literature review

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ABSTRACT

Despite an increase in interest in issues related to burnout in medical education and mandates from the national residency accrediting body, available literature is sparse in pediatrics, a medical discipline that requires special empathy and compassion, as well as enhanced communication skills to effectively care for children and their families. Burnout prevalence ranges from 17 to 67.8% of pediatric residents in recent studies. There is little that details the pathogenesis of burnout in these residents and little that compares them with those in other medical disciplines. This comprehensive literature review describes all that is published on burnout and burnout interventions since 2005 in pediatrics and other primary care oriented specialty residents, as well as key papers from pre-2005. This review, with its focus on the available information and evidence-based intervention strategies, identifies four areas for focus for future interventions and directions. It should serve as a useful resource to program directors, medical educators and graduate medical education leadership who are committed to preventing and/or treating burnout in their residents and molding these young physicians to be able to maintain resilience through their careers. This review should also be useful to investigators exploring burnout in other health care professionals.

Contents

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1. Introduction

Job burnout can affect any employee in any field. While not a new phenomenon, job burnout has resurfaced in practitioner literature as society becomes more complex and more demands are placed on employees. The first edition of the Maslach Burnout Inventory, the gold standard for evaluating burnout in the workplace, was published in 1981; the 3rd, and much expanded version, was released in 1996 and is still widely used today. The seminal definition provided by Maslach and Leiter (2008) states that burnout is a "psychological syndrome that involves a prolonged response to chronic interpersonal stressors on the job" (p. 498). Physical effects of burnout include aches and pains, digestive upset, and poor sleep quality. In addition, significant emotional effects, including fatigue, unusual behaviors, mental illness/depression and poor work performance, have also been noted (Dyrbye et al., 2014; Eckleberry-Hunt et al., 2009; Landrigan et al., 2008; Maslach & Leiter, 2008).

The medical field involves unique job factors and responsibilities that put practitioners at risk of significant burnout (Daskivich et al., 2015; Jennings & Slavin, 2015). While a wide range of literature exists on medical students, residents and career physicians, specific information on pediatric residents and other primary care trainees is sparse. Pediatric residents, who complete four years of medical school and pass national licensing examinations, are significantly engaged in patient care. Pediatric residents work long hours (typically 50–75 h/week in the U.S) and during three years of training transition from totally supervised work to greater autonomy and graduate able to practice independently. At the end of training a high stakes board examination must be passed to gain national certification. Arguably, effective practitioners in pediatrics must have special skill sets rich in empathy, compassion and enhanced communication to be able to relate to and care for a set of patients at a special stage of life with unique needs.

In a periodic survey of American Academy of Pediatrics (AAP) members (n = 1616; response rate 63%), 22% stated that they were currently experiencing burnout, and 45% stated they had experienced burnout at some time in the past (McClafferty & Brown, 2014; Starmer et al., 2016). Burnout is a real concern for pediatric trainees (Olson et al., 2015; Landrigan et al., 2008) with prevalence at 24–46% (typically more emotional exhaustion and depersonalization) during the first year of training with little change thereafter (Pantaleoni et al., 2014). These levels are similar to that seen in other primary care oriented specialties (family medicine, internal medicine) which range from 24 to 84% (Table 1).

While the prevalence of burnout in pediatrics mirrors rates described in other medical specialties (30%–50%) (McClafferty & Brown 2014), higher rates are seen in specific pediatric subspecialties such as hematology/oncology, neonatal and pediatric intensive care, and pediatric surgery. As McClafferty noted, a particular issue for pediatric trainees and pediatricians is that many of the character traits especially valued in pediatricians, such as compassion, altruism, and perfectionism, also predispose to burnout when clinicians are pushed to mental or physical extremes. Starmer et al. (2016) highlighted the increased stress and lower life balance seen in female compared to male pediatricians and noted the increasing proportion of females as pediatricians in the US today (from 23.7% in 1975–56.6% in 2011 – https://www.aap.org)

Four recent reviews of burnout interventions listed only three studies performed in pediatric residents (Fletcher, Reed, & Arora, 2011; IsHak et al., 2009; Prins et al., 2007; Williams, Tricomi, Gupta, & Janise, 2015). Calls for increased attention to stress and burnout in resident physicians (Jennings & Slavin, 2015; Lefebvre, 2012) have accompanied enhanced requirements by the Accreditation Council for Graduate Medical Education (ACGME) for programs to educate trainees and faculty physicians about fatigue and burnout (Committee, 2013) and the need for evidence-based methods to address burnout and build resilience in physician trainees (Council, 2015).

Pediatrics has struggled to fashion effective interventions beyond traditional educational efforts (lectures, workshops, discussions, etc). There lies a veritable chasm between ACGME recommendations, duty hour regulations, and effective practices that will be required for residency programs and residents in pediatrics to prevent and/or mitigate the effects of stress and the demands inherent in caring for and treating children. Program directors often struggle with practical strategies for implementing ACGME requirements into residency programs already stuffed with patient care, educational curricula, and other training mandates. Beyond specific "burnout" and "wellness" interventions, the workplace culture and realities of complex medical care systems often form prominent barriers to producing productive and resilient graduates. There is evidence that one single yet far-reaching cultural change – increasing psychosocial support of residents – may be the most effective method to minimize burnout (Daskivich et al., 2015).

The purpose of this literature review is to detail the present research on pediatric resident burnout and place that in context with what is being discovered in related disciplines, family and internal medicine. The following questions will be answered: (a) How is burnout measured? (b) What theories have been offered to explain the pathogenesis of burnout in this population? (c) What interventions have been used to address pediatric resident burnout? Identifying burnout characteristics and successful interventions in pediatric trainees can help inform future studies and prompt interventional trials to benefit this unique population and potentially other primary care oriented specialties.

2. Methods

A systematic search was conducted using GoogleScholar, OVID and WorldCat. Combinations of the search terms 'resident,' 'burnout,' 'pediatric,' 'internal medicine,' 'family medicine,' 'medicine pediatric,' 'wellness,' 'resilient,' 'intervention,' and