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The demands and resources arising from shared office spaces

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ABSTRACT

The prevalence of flexible and shared office spaces is increasing significantly, yet the socioemotional outcomes associated with these environments are under researched. Utilising the job demands-resources (JD-R) model we investigate both the demands and the resources that can accrue to workers as a result of shared work environments and hot-desking. Data were collected from work experienced respondents (n = 1000) assessing the extent to which they shared their office space with others, along with *demands* comprising distractions, uncooperative behaviours, distrust, and negative relationships, and *resources* from co-worker friendships and supervisor support. We found that, as work environments became more shared (with hot-desking being at the extreme end of the continuum), not only were there increases in demands, but co-worker friendships were not improved and perceptions of supervisory support decreased. Findings are discussed in relation to employee well-being and recommendations are made regarding how best to ameliorate negative consequences of shared work environments.

1. Introduction

Research on the impact of the physical working environment on the social systems within organisations has a long pedigree, from the socio-technical approach of the 1950s and 60s and the 'quality of working life' movement of the 1970s and 80s (e.g., Davis and Cherns, 1975), through to a more contemporary interest in the impact the built environment has on employee well-being (e.g., Cooper and Boyko, 2009). Much of this historical research has been focused within manufacturing and the factory environment; with a concentration on a limited range of environmental variables such as temperature, air quality, ambient noise levels, lighting, and the design of physical production systems and labour process technologies, including lean manufacturing (Cullinane et al., 2013) and team working (Appelbaum et al., 2000).

However, as we move into a new century the dominance of manufacturing has waned in developed economies. Services typically now account for three-quarters of employment in those economies (Boxall and Purcell, 2011), with the majority of these being white-collar workers in office settings. In America for example, more than 70 percent of workers are located in offices (Elsbach and Pratt, 2007). Yet the impact that physical work environments have on office workers is a surprisingly under researched area in mainstream organisational psychology and Human Resource Management (Ashkanasy et al., 2014). And while some research does exist in the ergonomics literature (Kaarlela-Tuomaala et al., 2009) and in publications with a focus on facilities management (Warren, 2003), education (Rytivaara, 2011), and real estate (Voordt, 2004), the topic remains relatively under explored.

The last decade has also brought about significant changes in the physical spaces many office workers now find themselves in. Until the turn of the century, most white collar workers remained securely bound to their office and their desk, simply because the tools to do their job were fixed in one place (Felstead et al., 2003). Portable computers, tablets, and smart phones have enabled a significant change in the physical spaces and places that work is now carried out. This, together with the high cost of office space (only human resources are more expensive; McCoy, 2005), has brought about a desire to encourage tele-work (working remotely) (Bentley et al., 2016) and to use physical office space more flexibly. One example of this has been the use of "non-territorial workspaces" or "hot-desks" (also termed "hoteling") (Elsbach, 2003; p 622), which are found in workplaces where "…staff have no fixed personal workspace and use any available desk as needed" (Felstead et al., 2003, p. 16). These arrangements rely on flexible ICT systems and are characterised by interchangeable workstations or

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the use of portable devices with internet connectivity.

The move towards shared work environments and hot-desks is certainly not new, and the limited research to date has been generally positive. For example, flexible and/or shared work environments have been associated with greater employee satisfaction (Cole et al., 2012; Sundstrom et al., 1980), projecting an image of being modern and forward thinking (McElroy and Morrow, 2010), improving flexibility in the use of the physical space (Elsbach, 2003), enabling closer working relationships (Chigot, 2003; McElroy and Morrow, 2010), higher productivity (Cole et al., 2012; Meijer et al., 2009), more easily exchanged knowledge and skills (Ashkanasy et al., 2014; Chigot, 2003; Irving and Ayoko, 2014), increased networking opportunities (Elsbach and Bechky, 2007) and cost-savings (Duffy, 1997; Fawcett and Chadwick, 2007; McElroy and Morrow, 2010; Voordt, 2004; Warren, 2003). These cost savings are generally made by using the available space more intensively and, in addition, the amount of physical space needed does not have to increase in proportion to the number of employees, so organisations can delay acquiring new space as they grow (Elsbach, 2003; Elsbach and Bechky, 2007).

On the other hand, there can also be negative consequences of not allowing employees to have their own work space; be it an office, a cubicle, or even a regular spot in an otherwise open-plan room. Sundstrom et al. (1994) for example, report that while employees may tolerate ambient noise from office equipment, overhearing the *conversations* of others (inevitable in open plan workplaces) is a significant task distraction and source of irritation. It is the potential for negative outcomes that form the focus of this study. Using the job demands-resources (JD-R) model (Bakker and Demerouti, 2007; Demerouti et al., 2001) we investigate both the demands and resources that can accrue to workers as a result of shared work environments and hot-desking. We begin by framing the prior research related to working with others in shared environments (including hot-desking) within JD-R model; following this, the remainder of the paper is conventionally structured with an outline of our methods, participants and findings followed by discussion and conclusions.

2. Theoretical framework: demands and resources within shared workspaces

Within the JD-R model, *job demands* are the aspects of a job that require prolonged cognitive and/or emotional effort, thereby incurring physiological and/or psychological "costs" (Bakker and Demerouti, 2007). Bakker and Demerouti (2007) give examples of demands as including "…high work pressure, an unfavourable physical environment, and emotionally demanding interactions…" (p. 312). For the purposes of the current study, rather than workload per se, we focus specifically on those demands outlined by Bakker and Demerouti (2007) which have been found to be associated with shared work environments. More specifically, we propose that shared office spaces, and particularly hot-desking, place additional demands and increased load on workers by creating an unfavourable physical working environment. Also termed indoor environment quality (IEQ) (Kim and de Dear, 2013), this becomes detrimental to the individual located within it through reduced privacy, increased social distraction, and negative or emotionally demanding interactions with others.

Job resources are the aspects of a job that: a) help in achieving work goals, b) reduce the costs associated with job demands, or c) stimulate growth and development (Bakker and Demerouti, 2007). As Bakker and Demerouti (2007) note, research has identified a veritable laundry list of variables under the job resources rubric, including "social support from colleagues, supervisory support, and performance feedback" (p. 311). Our focus here is on the specific resources which have been posited to come from working in shared spaces; that is: more collegial friendships and increased support from managers and others (Chigot, 2003; Elsbach and Bechky, 2007; Irving and Ayoko, 2014; McElroy and Morrow, 2010). More specifically, we investigate whether an increase in the resources, that flexible and/or shared environments are supposed to provide, are evident.

Also relevant here is Bakker and Demerouti's (2007) notion of "dual processes". On the one hand, demands will incur costs, draining an individual's energy and resulting in strain and health impairment. Resources, on the other hand have "motivational potential" and lead to increased engagement and performance, either through the satisfaction of basic needs (e.g., social support satisfying the "need to belong") or through the achievement of desired work goals (e.g., supportive colleagues assisting with tasks) (Bakker and Demerouti, 2007). According to the JD-R model, in addition to the direct impact of demands and resources, there will also be an interaction whereby resources will potentially *buffer* the impact of demands (Bakker et al., 2005; Bakker et al., 2003; Haines et al., 1991). In the current study we examine the social support available in shared workspaces, which is the most well-known variable found to buffer against job strain (see for example; Bakker and Demerouti, 2007; Bakker et al., 2003, 2005; Haines et al., 1991), in relation to increased demands that might also arise from those same workspaces.

Through the operation of these dual processes, we see the JD-R model as potentially useful in explaining what might appear to be contradictory findings regarding the impact of shared work environments. Where such environments provide resources to employees, then it would be reasonable to expect positive outcomes from such working arrangements. However, if demands also arise from shared working spaces, and these outweigh or counter those resources, then negative outcomes might also be anticipated. In some circumstances, the research shows positive outcomes (e.g., Chigot, 2003; McElroy and Morrow, 2010), while other researchers describe negative outcomes (e.g., Ashkanasy et al., 2014; Maher and von Hippel, 2005; Sundstrom et al., 1994). This study therefore aims to empirically ascertain if a relationship exists between such work environments and the potential job demands and resources accrued by workers. Below we first discuss the demands associated with open plan workspaces and then outline the possible resources that these spaces might afford; providing hypotheses derived from the literature.

2.1. Demands

2.1.1. Distractions

Distractions resulting from a lack of privacy and increased noise are a key source of demand, and have been found to be a significant issue in open plan environments (Ashkanasy et al., 2014; Maher and von Hippel, 2005). Privacy includes both the ability to reduce or control incoming stimuli, and also to limit outgoing information (Altman, 1975; cited in Ashkanasy et al., 2014). In a study of indoor environment quality (IEQ) Kim and de Dear (2013) found that, in open plan offices, noise level and visual privacy were consistently negatively evaluated, but that "sound privacy" was by far the most unsatisfactory IEQ factor. In an open plan office employees have little control over their levels of privacy and this, in itself, becomes a source of job demand. There are consistent findings that distraction caused by overhearing irrelevant conversations is a major issue in open plan office environments and, further, that distraction is negatively linked with employee performance, negative perceptions of the workplace, and/or stress (see for example; Loewen and Suedfeld, 1992; Maher and von Hippel, 2005; Nemecek and Grandjean, 1973; Smith-Jackson and Klein, 2009; Sundstrom