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'Counting your steps': The use of wearable technology to promote employees' health and wellbeing

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The intersection between workplace productivity and health is complex, often leaving the worker to balance the seesaw of simultaneously trying to improve performance and health. Digital platforms, email, smartphones and laptops, and increased connectivity have made it increasingly easy to work from anywhere, especially in white-collar industries. Yet it seems many still work from the same analog spot: their desk chair. The clocking hours in the chair seems to be doing workers' health no favors. Sedentary behaviors are an important risk factor for poor health and mortality and office work significantly contributes to the overall sedentary exposure of office workers (Parry & Straker, 2013). All the technologies that make working easier and more productive also seem to contribute to increasingly sedentary lifestyles (Borodulin et al., 2007; Matthews et al, 2008). Paradoxically, technology may also be a solution to improve the health and wellbeing of employees.

Given that workers tend to spend a significant amount of time at their workplace, and that healthy workers are likely to be more productive workers, it makes sense that employers would seek to support healthy lifestyles through wellness programs that incentivize exercise. These programs are often designed to incorporate physical activity and other wellness activities into the workers daily routine. Well-designed wellness programs can benefit both worker and employer as improving fitness has positive impacts on health, helping to foster productivity and reduce days missed from work due to preventable illness (Degroot & Kiker, 2003; Goetzel & Ozminkowski, 2008). Wearable workplace technologies are a popular strategy incorporated by many organizations to increase organizational wellbeing. According to the research company Garnter around 2000 companies worldwide offered their staff fitness trackers, such as a Fitbit bracelet, in 2013 and this figure rose to 10,000 in 2014 (Harley, 2016). Wearable technologies offer an easy way to set movement goals, such as the popular steps per day, and to track movements. Linking these counts to reward systems can also help to motivate and remind the user to be active towards their daily goal.

Can wearable technology boost productivity and promote employees' health and wellbeing?

The benefits of workplace programs using wearable technologies focused on steps per day are many (Giddens, Leidner & Gonzalez, 2017). Steps are easily quantified using any type of pedometer and make for easily understood activity targets. Steps are also intuitive, as walking is already part of many workers' days. Wearable technologies build on fitness advice that recommends building activity into one's day, but provides a clear result—the daily step total—for the effort. By being a passive device that only requires a charged battery and consistent wearing, these technologies also take much of the

mental effort out of exercise tracking. And many wearables offer additional features for improving health, such as sleep trackers or a "push" when the wearer is still for too long. Wearable technologies also provide accountability and connectivity. Wearers are accountable to themselves by avoiding overestimating active time and can be held accountable to other users, possibly fostering an environment of positive peer pressure to encourage more activity or even setting up healthy competition. These devices may also connect one's work life with their personal life (Dailey & Zhu, 2017) and enable accountability to the employer. By automatically uploading the user data to an employer accessible database, employers can reward or encourage activity possibly through incentive-based step targets or team competitions among groups of coworkers (Patel, Asch & Volpp, 2015).

The dark side of employee wellness tracking

Yet, there is also a dark side to wearable fitness trackers and other digital technologies to promote health. In a study involving 200 women who wore a Fitbit activity tracker it was shown that while it can have a positive impact, many felt under pressure to reach their daily targets (79%) and that their daily routines were controlled by Fitbit (59%) (Duus & Cooray, 2015). This obsession with tracking can lead to people overdoing it and sustaining injuries, leading to stress and frustration. Quantifying steps or other forms of activity can also result in people enjoying the activity less and to do less often once they stop tracking their output (Etkin, 2016). As Etkin (2016) explains 'by drawing attention to output, measurement can make enjoyable activities feel more like work, which reduces their enjoyment'. This can then result in a decrease of continued engagement in the activity and subjective well-being. Other issues raised by employees are the amount of time spent on tracking, the potential blurring of lines between work and private life, and privacy concerns (Gorm & Shklovski, 2016). It can therefore be questioned if wearable technologies truly support employees' pursuit of better health and wellbeing.
The relentless work of the wearable, though, is part of the point. Routinizing physical activity so that taking the extra daily steps is almost automatic without looking at or needing the wearable is a behavioral outcome that would positively impact workers physical and mental wellbeing (Karapanos et al, 2016). It also reinforces many public health messages that physical activity does not need to be formal, intrusive, or time bound. Such technologies and programs are popular and successful because they work from the perspective that everything counts. Pacing while on a conference call counts, as does a walking across the office to ask a colleague a question. These activities are often mindless and easily overlooked, despite how painless for the user and how effective they can be for wellbeing. Wearables and other workplace fitness technologies remind us that small decisions matter in the big health picture: walking to and from the car counts, parking further away counts even more. As such, while wearable devices can be a potential tool to promote health behavior changes, for some employees it might be a step too far.

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