Chapter 10
Research-Based Applied Psychophysiology:
Yoga for Occupational Stress and Health

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ABSTRACT

Recent research indicates that yoga can be effective for reducing both musculoskeletal conditions and stress. In the workplace, musculoskeletal conditions and stress are the two most common reasons for sickness absence. The World Health Organisation has identified the workplace as a priority area for promoting good health. As a result, yoga is increasingly being offered in workplace settings to improve the physical health and mental wellbeing of employees. In September 2014, a comprehensive search of relevant electronic databases was performed to determine the effectiveness of yoga in workplace settings. Eight randomised trials met the inclusion criteria. The results showed that the effectiveness of yoga in the workplace was strong for musculoskeletal conditions, moderate for perceived stress, limited for sleep quality and conflicting for heart rate variability. Overall, this evidence is promising, yet limited due to a lack of high quality studies of yoga in workplace settings.

BACKGROUND: HEALTH CHALLENGES IN THE WORKPLACE

The health of the workforce is vital to the economy. Sickness absence from work is costly to employees, employers and the wider society. In many industrialized countries, the two most common reasons for sickness absence include musculoskeletal disorders (such as back and neck pain) and stress-related illness (such as anxiety and depression) (Office of National Statistics, 2014; Black & Frost, 2011).

The World Health Organization identifies the workplace is a priority area for promoting health and addressingthe challenges of musculoskeletal disorders and stress (WHO, 1997). The average person

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spends more than a third of their waking hours at work and up to 40 years of their life in the workplace (Jones & Barham, 2009).

Employers are thus well-placed to support workers not only by promoting health (e.g., physical activity and healthy eating), but also by helping employees integrate lifestyle changes into their daily life. Research indicates that workplace physical activity interventions can reduce absenteeism by up to 30%, and therefore deliver value for money to employers (Mackett & Brown, 2011). By investing in workplace health, employers can play a fundamental role in preventing illness, promoting good health and improving productivity.

YOGA FOR MANAGING MUSCULOSKELETAL CONDITIONS, BACK PAIN, AND STRESS

Recent research suggests that yoga is one form of physical activity that can reduce musculoskeletal disorders and stress. Developed in India nearly 3,000 years ago, yoga is considered a means for promoting physical, mental and spiritual wellbeing (Cramer, et al., 2013a). Yoga often includes four main components: physical movement, breathing exercises, relaxation methods and meditation/mindfulness techniques (Collins, 1998; Woodyard, 2011; Ward, Treharne, & Stebbings, 2011; NIH, 2013; Cramer, Krucoff, & Dobos, 2013a).

In recent years, yoga has gained popularity as a therapeutic practice for improving mental and physical health. In 2012, approximately 20 million people in the United States practiced yoga with the specific intention to improve their overall health (Yoga Journal, 2012). Today, yoga is practiced in the United States by more than 36 million people (Yoga Journal and Yoga Alliance, 2016). Yoga is now commonplace in western countries and taught in community centers, health clubs, schools, hospitals and workplaces (Cramer et al., 2013a).

Yoga for Musculoskeletal Conditions

Two recent systematic reviews of 'yoga for musculoskeletal conditions' found yoga to be a safe, acceptable and feasible intervention, superior to usual care in reducing pain and improving functional outcomes (McCaffrey & Park, 2012; Ward, Stebbings, Cherkin, & Baxter, 2013). McCaffrey and Park (2012) reviewed the evidence from 31 randomized and non-randomized studies. They found yoga to be 'moderately feasible' and likely to reduce both pain and the use of medication for pain.

Ward et al. (2013) found 17 randomized controlled trials covering yoga for low back pain, osteoarthritis, osteoporosis, rheumatoid arthritis and fibromyalgia. The authors concluded that the yoga produced clinically meaningful reductions in pain and improvements in functional outcomes across a range of musculoskeletal conditions (Ward et al., 2013).

Yoga for Back Pain

Three additional systematic reviews on 'yoga for back pain' found strong evidence of yoga's effectiveness for relieving short-term back pain and moderate evidence of yoga's effectiveness for reducing long-term back pain (Posadski & Ernst, 2011; Holzman & Beggs, 2013; Cramer, Lauche, Haller, & Dobos, 2013).