

Workplace Physical Activity and Health Risks: A Need for Effective Screening and Intervention Strategies

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Editorial

The World Health Organisation (WHO) has adopted a global strategy on physical activity and health since 2005, with an aim to reduce and reverse the constant rise in these health risks globally. However, most recent statistics about mortality rates caused by cardiovascular disease (CVD) are on the rise, with an estimated 17.5 million in 2012, representing 31% of all global deaths, and with an estimated 15.1 million are of these deaths due to coronary heart disease and stroke (WHO 2014) [1]. Therefore, engaging individuals, especially those who are at high CVD risk such as sedentary and obese and older populations, in a variety of exercise and physical activity patterns in order to specifically target the reduction of these risks, provides a major challenge for health professionals of this century [2,3]. Perhaps, identifying appropriate settings using a multifaceted approach could help in ensuring effective health and risk reduction outcomes and long-term compliance [3].

The workplace serves as an ideal setting to administer lifestyle interventions, particularly diet and physical activity interventions. Workplace interventions have been recommended because of the accessibility to a large number of employees, encouraging healthy and active lifestyle and achieving better adherence to healthy behaviours [4]. In particular, white-collar employees who spend significant amount of their weekly hours at their workplace, have been shown to benefit from a variety healthy interventions resulting in favorable reduction of several disease risk factors and consequently improved rates of health-related absenteeism, reduced health-care costs and improved productivity [5,6].

Establishing an effective workplace intervention strategy requires a multidisciplinary approach that relies on effective screening and evaluation tools for assessing the prevalence and intervention outcomes. Workplace interventions have commonly relied on indirect methods to assess physical activity and healthy behaviour patterns, with tools such as the International Physical Activity Questionnaire (IPAQ), step count pedometers and accelerometers, dietary questionnaires (such as Food Frequency Questionnaire). These tools have shown various degrees of effectiveness in understanding the prevalence of certain health risk factors such as sedentaryness, physical inactivity and poor diet in white-collar workers [7,8]. However, technological advances can now provide occupational health specialists with more direct measurements that provide a more valid and reliable approach in designing an effective intervention, which enables targeting individual workers who may be at risk. For example, reliable assessments of blood glucose, cholesterol, body fat percentage, blood pressure, lung function, muscle strength, trunk and back flexibility, and cardiorespiratory capacity, all could provide a comprehensive diagnostic tool for determining the risks of type-II diabetes, hypercholesterolemia, obesity, hypertension, and cardiorespiratory and physical capacity [9]. Results of these assessments can be measured against healthy recommended thresholds or tracked periodically throughout the intervention. Those assessments could be administered individually [10], or collectively, especially when combined with other qualitative lifestyle tools within the workplace, in order to provide a tailored reduction in the identified CVD risks, as recently been shown in within a university campus workplace [3,9].

Therefore, current research evidence suggests promising risk reduction effectiveness of on-site workplace interventions, particularly when targeted at reducing specific CVD risks amongst employees at high CVD risks, and interventions that are based on a multifaceted approach such as diet and physical activity and exercise.

Understanding the barriers when conducting a workplace intervention remains a matter for ongoing research but must be considered when designing a workplace intervention, whether of physical activity and exercise alone or when exercise is combined with dietary interventions [3,11]. For example, often-reported barriers to workplace physical activity interventions, particularly the ones conducted on-site, include organisational policies such as managerial consent and flexible working hours, job demands, lack of time and energy, self-efficacy for exercise [3,12]. Similar barriers have been reported to workplace interventions aimed at adopting a healthy dietary pattern, which included work stress, lack of time for food preparation and availability of healthy food items [11]. Other reported barriers to workplace health interventions also include low participation and marketing for the intervention, shift work and overtime; those have been reported to be more apparent barriers in blue-collar workers [4].

Most workplace intervention strategies have been targeted at white-collar workers, perhaps due to an increased reliance on technological advances in workplaces, which meant an increased number of white-collar employees, and hence increased risk of sedentary behaviour, physical inactivity and poor nutritional habits in those employees. Future research may address the workplace intervention barriers, particularly those related to participation and adherence, in both white-collar and blue-collar workers, especially the dietary patterns when physical activity levels appear adequate. For example, investigating the prevalence of workplace health risks and intervention barriers in low-income blue-collar workers, and migrant workers in high-income countries.

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