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Self-management of health-behaviors among older and younger workers with chronic illness

Fehmidah Munir [a,*], Hafiz T.A. Khan [b], Joanna Yarker [c], Cheryl Haslam [a], Helen Long [d], Manpreet Bains [a], Katryna Kalawsky [a]

[a] Department of Human Sciences, Brockington Building, Loughborough University, Leicestershire, UK
[b] Oxford Institute of Ageing, University of Oxford, UK
[c] Goldsmiths College, University of London, UK
[d] Department of Work and Pensions, Sheffield, UK

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ABSTRACT

Objective: To examine the self-management of health behaviors carried out by older (aged 50–69 years) and younger workers (aged 20–49 years) with a chronic illness.
Methods: Questionnaire data was collected from 759 employees with a diagnosed chronic illness. Four categories of self-managing health behaviors were examined: using prescribed medication, monitoring and responding to symptoms, managing an appropriate diet and exercising.
Results: The majority of participants (56–97%) reported being advised to carry out health behaviors at home and at work. Controlling for confounding factors, medication use was associated with younger and older workers. Managing an appropriate diet was associated with younger workers with asthma, musculoskeletal pain or diabetes. Exercising was associated with younger workers with asthma and with older workers with heart disease, arthritis and rheumatism or diabetes.
Conclusions: The findings indicate that there are differences in diet and exercise activities among younger and older workers.
Practice implications: To increase self-management in health behaviors at work, improved communication and understanding between the different health professions and the patient/employee is required so that different tailored approaches can be effectively targeted both by age and within the context of the working environment, to those managing asthma, heart disease, diabetes and arthritis and rheumatism.

1. Introduction

As the proportion of workers aged 50 and above is growing steadily and the number of younger workers entering the workforce is slowing in comparison, keeping people at work for longer is a key Government strategy for a number of industrialised countries (e.g. [1]). Since increasing age is a risk factor for many illnesses, particularly chronic illnesses, the health and well-being of the working population is therefore of fundamental importance. Not surprisingly then, from a public health perspective, efforts are being made to help individuals remain active and healthy by engaging in health-sustaining activities so that they can continue working for longer, retire later and remain active after retirement.

Taking into account the health demographics of older workers and the Government strategy to promote longer healthy working lives, the problem becomes how to increase health-sustaining activities in the workplace for those workers already burdened by a chronic illness. Chronic illnesses such as coronary heart disease, hypertension, arthritis, diabetes, and musculoskeletal pain are reported to be more prevalent in those aged 55–64 years old [2,3]. In contrast, asthma is more prevalent in those aged below 45 years and stress, depression and anxiety is reported as more prevalent in young-to-middle aged groups (aged 35–54 years) [2,3]. These chronic illnesses are prevalent in the working population and associated with high sickness absence [4], early retirement and poor health outcomes [4,5]. To meet government targets for improving the health and well-being of people and the demands of an ageing workforce, it is essential to better understand the needs of employees with chronic illness: i.e. how they manage their illness at work and importantly whether these needs change as the employee grows older.

Encouraging and supporting patients with a chronic illness to carry out self-management of health behaviors such as prescribed medication adherence, following an appropriate diet plan and exercising have proven to be beneficial in reducing illness

* Corresponding author at: Department of Human Sciences, Brockington Building, Loughborough University, Loughborough, Leicestershire LE11 3TU, UK. Tel.: +44 1509 228228.
E-mail address: f.munir@lboro.ac.uk (F. Munir).

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symptoms and improving health and well-being [6]. However, studies on self-management of health behaviors have reported mixed findings for younger and older adults with chronic illness. Some studies report lower adherence to medication and other self-management behaviors in older adults compared with younger adults with type 2 diabetes, hypertension, arthritis or mental health problems [7–10], while other studies report younger adults experience more difficulty in managing medication and illnesses such as asthma and diabetes compared with older adults [11–13]. Exercise has been associated with both younger age [14,15], and with older adults, both healthy or with a chronic illness [12,16,17]. In terms of self-management of health behaviors among workers, most studies have examined correlates of physical activity and dietary patterns [18–20] or outcomes of these behaviors in worksite health promotion programs [21,22]. There are only few comparable studies on younger and older workers. A study on dietary behaviors in the workplace found that older male workers were more likely to consume poultry, fish and low fat milk than younger male workers and interest in dietary change was evident in male workers aged in their thirties [23]. Studies on physical activity show that older workers are more likely to engage in leisure-time physical activity [24,25]. There is relatively little research comparing the self-management of health behaviors by older and younger workers across different chronic illnesses.

In the present study, we examined whether age and type of illness were associated with compliance in carrying out four types of self-management of health behaviors as advised by a physician: using prescribed medication; monitoring and responding to symptoms; managing an appropriate diet; and exercising [6]. These behaviors were examined among older workers (aged 50–69 years) and younger workers (aged 20–49 years) managing one of the following chronic illnesses: heart disease, musculoskeletal pain, asthma, depression and anxiety, diabetes, arthritis and rheumatism.

2. Methods

2.1. Sample

The survey, carried out between April and September 2004, was cross-sectional and based on participants recruited from four organisations across three sectors: local government, transport and manufacturing (two companies; referred to as organisations A and B). To ensure anonymity, workers were sent a questionnaire through their occupational health departments. The number of questionnaires sent varied according to organisational size. All workers in the two manufacturing companies were sent a questionnaire (employing 3600 and 5600 workers), and a random sample of 1:3 workers in the local government (employing 14,000 workers) and 1:2 workers in the transport organisation (employing 12,000 workers) were sent questionnaires (26,200 questionnaires were sent in total across the four organisations). Completed questionnaires were mailed directly to the research team. To monitor overall response rates, the questionnaire asked all workers, independent of their health status for demographic and job-related details. Workers managing a chronic illness were asked additional questions about their health and work. A 28% response rate (response rates ranged from 26% to 30%) was achieved for returned questionnaires ($N = 7336$), of which 21% ($N = 5264$) were completed questionnaires. While this is a below average response rate for mailed surveys [26,27], this is not unusual for organisational-based questionnaires outside of annual employee surveys which are typically in the region of 27–31% due to survey fatigue [28]. The low response rate in this study may also be expected given the study's focus on chronic illness, which may have seemed irrelevant to many workers.

Respondents were asked in the questionnaire to self-report on any medically diagnosed chronic illness they currently experienced (and had received medical treatment for), and to indicate which primary condition (if more than one was listed) *most* affected their work. This measure was developed to be consistent with other self-report measures of chronic illness [29–32]. Twenty-seven per cent (1474 respondents) reported at least one chronic illness. A total of 17 different groups of chronic diseases were classified from the sample using the International Classification of Diseases [33] and are reported elsewhere [34]. For the purpose of this study, six of these groups were chosen for analysis: musculoskeletal pain ($N = 226$; those reporting pain anywhere along the musculoskeletal system: back, shoulders, neck, arms, elbows, wrist and lower limbs), arthritis and rheumatism ($N = 130$), asthma ($N = 126$), depression and anxiety ($N = 118$; those reporting either depression, anxiety or a combination of both), heart disease ($N = 79$; those reporting myocardial infarction, angina, heart failure, stroke and hypertension [39% of heart disease sample]) and diabetes ($N = 80$; 74% reporting diabetes II) resulting in total of 759 participants. Participants age ranged from 20 to 69 years (mean = 46.82 years, SD 9.10).

These chronic illness groups were chosen for several reasons. First, these illnesses are the most prevalent reported at work in this sample and in national Government surveys (e.g. [35]) which are also based on self-report data. They are also to a great extent self-managed diseases in that such individuals need to perform various health-sustaining activities by themselves (e.g. [36,37]). These activities include self-monitoring of symptoms; proper use of medication; appropriate eating plan and regular exercise. Respondents in each of the six chronic illness groups were only selected if they had been medically diagnosed by their physician (for which they had received or are receiving treatment for); had a minimum disease duration of 1 year (3 months for participants with musculoskeletal pain or heart disease); if they did not present co-morbidity relating to one of the other diseases in the present study; if they were required to carry out self-management of health behaviors at work by their physician; and if they reported their age.

2.2. Measures

Self-management of health behaviors carried out in the workplace were measured using a modified version of the illness symptoms Self-Management Behaviors Scale [38,39]. Based on the scale developed by Lorig et al. [38] and Clark and Dodge [39], respondents were asked to rate how closely they were following the advice of their physician in carrying out various self-management activities specific to their chronic disease while at work. This was measured by seven items which asked participants to rate how closely they were following the advice in taking prescribed medication (1 item), managing the symptoms of their illness as advised by their physician (4 items; monitor and respond to fatigue, pain and other symptoms, carry out other activities beside medication to reduce symptoms), exercising while at work (e.g. during breaks and lunch hour;1 item) and following an appropriate diet plan (1 item). All responses were measured on a 10 point Likert scale (1 = following advice not closely at all; to 10 = very closely). As participants carry out health behaviors outside the workplace too (i.e. at home), they were asked to rate the same questions again for behaviors carried out at home. For both home and work behaviors, if a participant was not advised on a particular behavior, a 'not applicable' response was available for each health behavior question.

Demographic data was collected from all respondents, on age (in years), gender (0 = male, 1 = female) and tenure (length of employment in years) and occupational group was recorded