

Aging and MSD: Strategies for Older Workers

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The global population is aging with a projection that one in five people will be over the age of 60 by 2050¹. The Canadian population aged 65 and over is expected to double over the next 25 years². The Canadian workforce is also aging with a large proportion of workers (42.4%) in the 45 to 64 age group in 2011³ and the average age of labor market participant predicted to continue to rise until 2031⁴. However, it appears that very few Canadian companies have addressed the impact of an aging workforce on occupational health.

Musculoskeletal disorders (MSD) are a burden to all industrial sectors. They present with pain and symptoms such as numbness and tingling. These symptoms may be warning signs of current or impending MSD, such as peripheral nerve entrapments, peripheral enthesopathies, and many other non-specific musculoskeletal pain disorders such as low back pain⁵. There are concerns that MSD maybe more prevalent and costly among older workers, although the evidence supporting these concerns is not consistent. However, it would seem prudent for workplaces to consider strategies for healthy aging to address an aging workforce regardless.

The World Health Organization (WHO) recently released their *World Report on Ageing and Health* which defines healthy aging as “the process of developing and maintaining the functional ability that enables well-being in older age”⁶. The WHO report provides a framework for healthy aging⁶. As part of the framework there are proposed strategies for creating age friendly environments that we propose can be adapted and applied to workplaces. The strategies include: i) *combating ageism*; ii) *enabling autonomy*, and iii) *supporting healthy aging in policy*. We suggest that these strategies are valuable for workplaces and by extension MSD and show some supporting research for each of them below.

As part of a scoping review of the literature we present some recent research addressing the WHO strategies and how they may apply to workplaces. We also drew on recent searches for larger ongoing systematic reviews carried out by a team of Institute for Work & Health researchers as part of the prevention review program⁷, including: aging and return to work⁸, return to work⁹ and upper extremity MSD prevention¹⁰. Overall, we note that there is a lack of literature evaluating interventions or strategies related to older workers and MSD.

Combating Ageism

There is much discussion by the Canadian government, the media and the scientific community about ageism in the workplace^{1,13,14,15,16,17}. One important aspect of ageism is the suggestion of decline in productivity of older workers^{11,18,19}. While there is a biological plausibility along with support from studies showing reduced physical and cognitive⁶ capabilities among older persons, the problem lies in whether these reductions in capabilities translate to decreased productivity (or a decreased ability to do one’s work tasks²⁰). Burtless¹⁸ contends that, in fact, older workers may be more productive than their younger counterparts. The link between work ability and aging has been explored since the late 1990s and is complex, encompassing: health/function, education/competence, values/attitudes/motivation, work demands, work community/management/work environment^{20,21,22}). Although, there are few studies that have explored the link between

Key Messages

- The population is aging globally with a concomitant aging in the available workforce
- A WHO *Ageing and Health* framework released in 2015 provides strategies for creating environments that support healthy aging that can be adapted for workplaces:
 - i. Combatting ageism: there is inconclusive evidence that MSD are more prevalent in older workers or that older workers are less productive yet these attitudes prevail
 - ii. Enabling autonomy: it is clear that increased autonomy can support older workers work longer
 - iii. Supporting healthy aging in policies: workplace policies that support accommodation and development are needed
- More research on fatigue and recovery in older workers should be a priority

MSD and aging such as those by Whalin^{23,24} and Monteiro²⁵; it seems there is a growing body of evidence calling this link between aging and MSD into question. Pransky²⁶ suggests older workers recover from injury more quickly than younger workers. Smith²⁷ found older workers did not have a higher rate of MSD but they had longer duration of disability, likely due to co-morbid conditions. Smith²⁸ also found no association between age and the probability of a lost time claim. Guest²⁹ showed older workers did not sustain more injuries than younger workers in construction jobs. Research on physical demands reveals older workers are not impacted as much as 25-45 year olds³⁰, nor do older workers consider physical demands as a reason for earlier exit from their jobs¹⁹. More research regarding MSD and aging is required so workplaces/employers can better develop retaining, recruiting and hiring policies regarding older workers. Specific research on fatigue and recovery^{31,32,33} should be a priority.

Implications for the Prevention of MSD

It is of the authors' opinions that the strategies related to creating age friendly environments described by the WHO extend to workplaces. There is little scientific research on solutions for older workers with MSD. However the literature on older workers provides some practical support and direction for workplace solutions that reflect the WHO strategies. Specific research evaluating the implementation of strategies for aging workers is required.

Enabling autonomy

There are studies addressing the impact of autonomy on MSD in older workers. Some studies show benefits when older workers are involved in creating solutions for MSD hazards (among other hazards)^{34,35}. In addition there are many studies that support increased autonomy for older workers to maintain productivity and assist them in working longer^{36,37,38,39}. Key approaches related to autonomy include flexible work arrangements and idiosyncratic deals (I-deals)^{40,41}. Studies have shown that older workers with more control over their jobs stay at work longer^{36,37,38,42}. Leijten⁴³ noted a lack of autonomy resulted in job change that might have been avoided. While not specific to MSD, Bal and colleagues⁴⁴ report I-deals are most useful in retaining older workers. The main challenge for enabling autonomy at work is likely related to workplace policies which are usually designed to cover all workers; the I-deal approach could be potentially useful for older workers with MSD.

Supporting policies for healthy aging

The perception that older workers can do less, get injured more and require more resources is unfounded but impacts on workplace policies and practices^{11,13}. Workplace policies can provide support for healthy aging and older workers. Research examining workplace policies on aging workers show inconsistency regarding support for healthy aging^{44,45,46,47}. Policies that address ageism^{45,47,48,49,50} and those that support autonomy^{33,35,38,39,41,44} are important as noted above. Workplace policies supporting accommodation and development^{20,46,51} may be the most useful to address MSD in older workers as they can lead to innovative interventions and programs such as participatory and problem solving approaches^{34,35,52}, ergonomics^{20,53,54} and health promotion approaches^{20,55,56}. Perhaps the greatest challenge to workplace policy is the heterogeneity among older workers^{1,6}. Bal⁴⁴ suggests that the heterogeneity of older workers is greater than that of younger workers and considers I-deals a key aspect of workplace policy to support healthy aging.

Conclusion

An aging population and workforce is a reality. The link between aging and MSD is not clear and specific research related to strategies to reduce MSD suggests that age is but one of many factors to address. However, current research suggests that supporting healthy aging will be beneficial for productivity as well as society. The results of our scoping review of the literature suggest there are feasible approaches to maintain older workers in the workforce which can be applied to MSD and potentially other health conditions. We suggest that adopting (or adapting) strategies such as those of the WHO are important for workplaces to consider.

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