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Chronic musculoskeletal pain and its impact on older people

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A B S T R A C T

Musculoskeletal conditions are the leading cause of disability worldwide and also have a large impact on many other aspects of older people's health such as low physical activity level, poor mobility, frailty, depression, cognitive impairment, falls and poor sleep quality. Clustering of musculoskeletal pain with other pain conditions is also common, and the number of pain sites is an important prognostic factor. While musculoskeletal pain is usually nociceptive in origin, older people with musculoskeletal conditions may also experience neuropathic pain and central pain syndromes. Musculoskeletal burden of disease is increasing because of rapid ageing of populations, especially in developing countries. Interaction of musculoskeletal pain with co-existing conditions, including other types of pain, needs to be studied in longitudinal studies to identify modifiable targets for intervention. Additionally, potential impacts of musculoskeletal pain and prognostic factors need to be investigated in developing countries where evidence is scarce.

Introduction and background

In this chapter, we explore the burden of chronic musculoskeletal pain in older populations. Chronic musculoskeletal pain is defined using the proposed ICD-11 classification system as 'persistent or

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recurrent pain that arises as part of a disease process directly affecting bone(s), joint(s),muscle(s), or related soft tissue(s)' [1]. This chapter focuses on chronic musculoskeletal pain in community-dwelling older people as a distinct entity. While chronic musculoskeletal pain as described here is nociceptive in type, older people may also experience neuropathic pain, functional pain conditions where pain is perceived in the musculoskeletal system or other types of chronic pain. Population studies have also shown that some people experience chronic pain that has mixed features of both nociceptive and neuropathic pain conditions [2].

Overview of the global burden of musculoskeletal pain

Global burden of disease (GBD) studies have been conducted since 1990, with the aim of assessing the relative contributions of individual diseases, injuries and risk factors to the population, and societal burden of death and disability [3]. GBD 2010 was notable for having the most detailed assessment of the contribution of musculoskeletal conditions to the GBD [4]. Within the broader grouping of musculoskeletal conditions, low back pain emerged as the leading cause of disability globally, in both developed and developing countries. Neck pain, osteoarthritis, rheumatoid arthritis and gout were also important global causes of disability. There is consensus that the major drivers of this burden relate to the increasing size and ageing of populations around the world [5].

Global trends in population ageing

The prevalence of common musculoskeletal conditions is strongly age related. In both developed and developing countries, there are consistent trends of population ageing over time. The rate at which ageing is occurring is faster in developing countries than in developed countries. It has been predicted that by 2050, there will be five times more people aged 40 and over in developing countries than in developed countries [6]. Given the importance of musculoskeletal pain with regard to functional status in older age groups (see section 'Impact of musculoskeletal pain in older people'), this may have profound implications for future disability burden.

Changes in life expectancy and healthy years of life

GBD 2013 examined changes in life expectancy at birth and healthy life expectancy at birth from 1990 to 2013 [7]. The principal finding was that gains in overall life expectancy were not matched by gains in healthy life expectancy, driven by a global reduction in years of life lost to disease and an increase in disability (and to a much lesser extent mortality) with major contributions from musculoskeletal disorders, neurological disorders, and mental and substance use disorders.

Ageing

Overview of the epidemiology of normal ageing and its variability

A number of epidemiological studies have explored determinants of successful ageing. A systematic review that investigated operational definitions of successful ageing found that most definitions of successful ageing included physiological constructs (e.g. physical and cognitive function) [8]. In addition, most definitions also considered engagement constructs (e.g. involvement in voluntary work) and/or well-being constructs (e.g. life satisfaction). Personal resources (e.g. resilience) and extrinsic factors (e.g. finances) were included in some definitions.

Physical functioning is frequently used as an outcome measure because it is a key determinant of the ability to live independently. Physical functioning may be measured subjectively using self-report measures of limitations or disability in daily activities, which are influenced by each person's living environment and his or her physical ability. Compared to limitations in daily activities, physical performance tests are sometimes considered a more objective and robust indicator of physical functioning under standardised conditions and have been widely used in epidemiological studies on ageing. Both

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