



Exhibiting the Association between Low Handgrip Strength in Chinese Middle-aged and Older Adults

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DESCRIPTION

Incontinence, a common and often distressing condition, poses significant challenges to the health and well-being of middle-aged and older adults worldwide. Handgrip strength, a simple and reliable measure of overall muscle function, has emerged as a potential indicator of physical frailty and functional decline in aging populations. Recent research suggests a possible association between low handgrip strength and incontinence among Chinese middle-aged and older adults. Understanding this relationship is important for identifying at-risk individuals, implementing targeted interventions, and improving quality of life for those affected. This article search into the association between low handgrip strength and incontinence in the Chinese middle-aged and older population.

Incontinence in middle-aged and older adults

Incontinence, characterized by the involuntary loss of urine or faeces, is a prevalent condition that can significantly impact quality of life, social participation, and psychological well-being. Types of incontinence include stress incontinence (leakage during physical exertion), urge incontinence (sudden, strong urges to urinate), overflow incontinence (incomplete emptying of the bladder), and functional incontinence (due to physical or cognitive impairments). Risk factors for incontinence include aging, female gender, obesity, chronic medical conditions, and functional limitations.

Handgrip strength as a marker of physical function

Handgrip strength, measured using a hand dynamometer, reflects overall muscle strength and function, serving as a proxy for physical performance and functional status. Low handgrip strength has been associated with various adverse health outcomes, including disability, frailty, falls, and mortality, making it a valuable tool for assessing functional capacity and identifying individuals at risk of adverse health outcomes. Handgrip strength declines with age due to age-related changes

in muscle mass, neuromuscular function, and hormonal status, making it particularly relevant for aging populations.

Recent studies conducted in China have investigated the association between low handgrip strength and incontinence among middle-aged and older adults. One cross-sectional study involving Chinese adults aged 50 years and older found a significant association between low handgrip strength and both urinary and faecal incontinence, independent of age, gender, body mass index, and co-occurring conditions. Similarly, a longitudinal study examining middle-aged and older adults in China reported that individuals with low handgrip strength had a higher risk of incident urinary incontinence over a follow-up period of several years, suggesting a potential causal relationship between handgrip strength and incontinence.

Mechanisms and pathophysiology

The mechanisms underlying the association between low handgrip strength and incontinence are multifactorial and complex. Reduced muscle strength and impaired neuromuscular function may contribute to pelvic floor dysfunction, urethral sphincter weakness, and bladder instability, leading to urinary incontinence. Additionally, age-related changes in muscle mass, collagen density, and connective tissue integrity may compromise the structural support of pelvic organs, predisposing individuals to pelvic organ prolapse and stress urinary incontinence.

Moreover, the bidirectional relationship between physical frailty and incontinence suggests a potential vicious cycle wherein incontinence-related functional limitations and social embarrassment further increases muscle weakness and physical decline, perpetuating the cycle of disability and impaired quality of life.

Implications for clinical practice

The association between low handgrip strength and incontinence has important implications for clinical practice and public health interventions targeting middle-aged and older

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Received: 13-Feb-2024; Manuscript No. JASC-24-25743; **Editor assigned:** 16-Feb-2024; PreQC. No. JASC-24-25743 (PQ); **Reviewed:** 01-Mar-2024; QC. No. JASC-24-25743; **Revised:** 08-Mar-2024; Manuscript No. JASC-24-25743 (R); **Published:** 17-Mar-2024, DOI: 10.35248/2329-8847.24.12.355

Citation: Osawa S (2024) Exhibiting the Association between Low Handgrip Strength in Chinese Middle-aged and Older Adults. J Aging Sci. 12:355.

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adults in China. Routine assessment of handgrip strength, in conjunction with comprehensive geriatric assessment, may help identify individuals at risk of incontinence and enable targeted interventions to mitigate functional decline and improve quality of life.

Furthermore, interventions aimed at improving muscle strength and physical function, such as resistance training, balance exercises, and pelvic floor muscle training, may hold the potential for preventing or managing incontinence in middle-aged and older adults with low handgrip strength. Additionally, addressing modifiable risk factors such as obesity, sedentary lifestyle, and chronic medical conditions can help reduce the burden of incontinence and promote healthy aging in the Chinese population.

The association between low handgrip strength and incontinence among Chinese middle-aged and older adults verifies the importance of assessing physical function as a predictor of urinary and faecal continence. By recognizing handgrip strength as a marker of overall muscle function and physical frailty, healthcare providers can identify at-risk individuals early and implement targeted interventions to prevent or manage incontinence and improve quality of life in aging populations. Through a comprehensive approach that addresses both the physiological and psychosocial aspects of incontinence, we can enhance the health and well-being of middle-aged and older adults in China and promote healthy aging across the lifespan.