

The Potential Hand to Hand Combat Focus on Attractiveness, Health, Education for Peace, and Personal Security

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ABSTRACT

The term ‘hand-to-hand combat’ is commonly used as a broad term encompassing the various forms of martial arts that have evolved over the centuries in different cultures. In general terms, martial arts derive from fundamental life skills, which can be divided into three main categories: healing arts, self-discovery arts and spiritual and meditative practices. The concept of physical activity inspired by the Greek cult of health of body and spirit became the foundation of the modern Olympic movement. In the context of contemporary forms of physical activity, hand-to-hand combat encompasses both combat sports, typical of Western culture, and martial arts, derived from Far Eastern traditions. The two categories often intermingle and contain common elements such as defensive techniques, physical training and psychological aspects. Hand-to-hand combat, as a form of physical activity, plays an important role in shaping a healthy lifestyle, influencing overall physical fitness as well as longevity and mental wellbeing. Hand-to-hand combat is an integral part of both traditional and modern physical activity systems. Its historical, cultural and health significance means that it remains an important area of interdisciplinary research, encompassing history, anthropology, sports medicine and the social sciences.

Conclusion: Incorporating elements of hand-to-hand combat into medical and psychosocial interventions can provide a range of benefits, from improving mobility and reducing the risk of falls to strengthening mental resilience and reducing aggressive behaviour. A growing body of scientific evidence shows the positive impact of such interventions on physical and mental health, making them a promising tool in preventive medicine and health education. A response to these challenges has emerged from the newly established science – innovative agonology (INNOAGON), which aims to realise health prevention through the support and promotion of all activities leading to human psycho-physical well-being.

Keywords: Hand-to-hand fight, Safe fall, Neogladiatorism, Aggression, INNOAGON

INTRODUCTION

The term ‘hand-to-hand combat’ is commonly used as a broad term encompassing the various forms of martial arts that have been shaped over the centuries in various cultures, particularly Eastern cultures. In general terms, hand-to-hand combat derives from fundamental life skills, which

can be divided into three main categories: healing arts (e.g. acupuncture), self-discovery arts (e.g. yoga) and spiritual and meditative practices. The development of hand-to-hand combat systems has taken place throughout the world, as evidenced in numerous historical sources, including ancient Greek writings (Kruszewski, 2023a, b).

Historical Contexts of Hand-to-Hand Combat

In ancient Greece, mythology was a key resource for scientific knowledge and a normative conception of man, while also forming the basis of social education. Myths not only described reality, but also shaped ethical and cultural values by pointing out role models. Classical Greek culture lacked a formal legal system and an ethical code, so morality and the ideal of humanity were shaped through the lives of mythological heroes and orally transmitted folk wisdom. Homer and Hesiod acted as teachers of society, and the 'Iliad' became a reference point for all areas of life (Kruszewski, 2023b).

One of the key elements of Greek thought was the pursuit of both physical and spiritual perfection. This idea was deeply rooted in education and culture, where harmony of body and mind was considered the foundation of the ideal citizen. These values were reflected in the ancient Olympic Games, which had their origins in myths, including the legend of Heracles, considered the initiator of these competitions. The Games not only cultivated physical fitness, but also served four basic functions: cosmological, historical, sociological and psychological (Frias, 2015).

The Modern Idea of Physical Activity and Its Relationship to Hand-to-Hand Combat

The concept of physical activity inspired by the Greek cult of health of body and spirit became the foundation of the Olympic movement. A key moment in its development was the creation of the first Olympic Charter in 1914, which set out the basic principles and philosophy of the Olympic movement. In this document, Pierre de Coubertin defined Olympism as 'a philosophy of life, exalting and combining in a balanced whole the qualities of body, will and mind' (Chatziefstathiou, 2007). Contemporary Olympic philosophy is largely based on classical humanist anthropology, developed by the ancient Greek philosophers. Olympic values underpin this philosophy, focusing on the idea of physical, ethical and spiritual excellence (Leiper, 1976; Gutmann, 1992). In the Western world, the Olympic ideal is one of the strongest expressions of cultural identity, uniting people regardless of their background and beliefs. The modern Olympic Games have become a global phenomenon, representing not only a sporting spectacle, but also a vehicle for values shared by all humanity.

Hand-to-Hand Combat as Part of Physical Activity and Lifestyle

In the context of contemporary forms of physical activity, hand-to-hand combat encompasses both combat sports, typical of Western culture, and martial arts, derived from Far Eastern traditions. The two categories often intermingle and contain common elements such as defensive techniques,

physical training and psychological aspects. Hand-to-hand combat, as a form of physical activity (when meeting societal expectations of sustainable enhancement of all dimensions of health), can play an important role in shaping a healthy lifestyle, affecting overall physical fitness as well as life expectancy and psychological well-being.

Scientific analysis indicates that the practice of martial arts (meeting these criteria) develops a number of psycho-physical traits such as strength, endurance, reaction speed and the ability to concentrate and cope with stress (Kruszewski, 2023a). The impact of a certain proportion of clearly defined martial arts (and remaining consistent with multidimensional health criteria) on character formation and personality development is particularly evident in the context of sports pedagogy and educational psychology (Leiper, 1976). Furthermore, contemporary research on combat sports and martial arts (without succumbing to manipulation of this attractive term to promote neogladiatorism – Piepiora, Witkowski, 2020; Kalina, Kruszewski, 2023) focuses on their multidimensional effects on the body and mind, which emphasises their important place in physical culture and sport philosophy (Gutmann, 1992).

Hand-to-hand combat is an integral part of both traditional and modern physical activity systems. Its historical, cultural and health significance means that it remains an important area of interdisciplinary research, encompassing history, anthropology, sports medicine and the social sciences.

SUPPORT FOR PREVENTIVE MEDICINE

Interventions Based on Hand-to-Hand Combat Forms in the Prevention of Falls

Exercise forms modelled on parts of hand-to-hand combat systems are an effective tool in counteracting the negative consequences of unintentional falls, especially among older people and patients with Parkinson's disease and other neurological dysfunctions. Research findings show that the inability to simultaneously perform a cognitive task and a balance or walking task is a significant predictor of falls (Klimczak et al., 2024). Individuals with Parkinson's disease have particular difficulty performing multiple tasks simultaneously, due to the role of the nucleus accumbens in the automatic control of balance, gait and the switching of attention between tasks. Posture in patients with Parkinson's disease who have experienced falls in the past is most impaired in situations requiring simultaneous performance of cognitive and motor tasks. These findings suggest that the ability to perform secondary tasks while walking or maintaining balance is crucial for maintaining mobility (Shearin et al., 2021).

Specially developed exercise programmes, based on multi-segmental movements involving the whole body, include tasks that require rapid selection and sequencing of motor programmes. Examples include postural transition exercises such as moving from lying to standing, rolling and standing up from the floor. In addition, boxing elements woven into memorised movement sequences help to hone the ability to quickly select and organise complex motor programmes. In order to promote adaptation

to dynamic movement conditions, training sessions also incorporate lunges and agility exercises to improve the ability to change movement strategies, stopping, starting a movement, changing direction or adjusting step length and placement (Domingos et al., 2019).

However, these exercises should be properly applied and take into account somatic-intellectual development. The higher the intellectual development level of the recipient of these stimuli, the greater his ability to accumulate and process them with increasing awareness. If, in addition, one masters the appropriate motor techniques, they will be able to control this effectively even in situations of loss of balance. This way of thinking, supported by scientific and popular science research on the epidemiology of the effects of falls and the benefits of learning safe fall techniques – niezależnie od wieku, płci, poziomu sprawności czy niepełnosprawności – prowadzi do wniosku, że kluczową rolę w profilaktyce upadków i ich negatywnych konsekwencji odgrywa jakość bodźców poznawczo-behawioralnych dostarczanych przez otoczenie społeczne (Kalina et al., 2022).

Application of Hand-to-Hand Combat-Based Interventions in Different Patient Groups

Movement interventions using exercises and the more complex elements of hand-to-hand combat systems are not limited to the treatment of motor, inflammatory or musculoskeletal diseases. There is empirical evidence that their effectiveness is also being evaluated in other patient groups, such as children with cancer. Studies have shown that martial arts-based programmes, as long as criteria for pedagogical appropriateness are respected (Harasymowicz, 2021; 2024), can significantly reduce pain perception and improve coping skills, with the greatest effects observed in older children and in patients with higher initial pain scores. Furthermore, the inclusion of such interventions can increase adherence to treatment recommendations, thereby improving the effectiveness of medical and surgical treatment and reducing the risk of complications (Bluth et al., 2016).

From Reducing Violent Behaviour to Improving Mental Health

Aggressive behaviour can take many forms, from anger and verbal aggression to physical violence and rivalry. The cognitive-neoassociation model of aggression (Berkowitz, 1990) indicates that exposure to specific situational stimuli activates a network of semantically related ideas that may increase the propensity to aggression. Individual differences in personality influence the formation of these cognitive networks, with individuals who are more prone to anger showing a higher likelihood of aggressive behaviour (Bushman, 1996; Hernandez, 2015; Anderson & Bushman, 2018). Hand-to-hand combat training, provided that it is competently conducted, can contribute to the reduction of aggressive behaviour by developing the intellectual, ethical and motor skills of participants (Kalina, 1997; Syska, 2005). The chivalrous nature of training and tournaments, in which certain ethical norms are observed, is a key element in the formation of responsible attitudes (Kruszewski et al., 2024). Research has shown that higher levels

of aggressiveness are found in less experienced and younger athletes, but these differences may be due to the inclusion of different sports in the analyses (Rui & Cruz, 2017; Korobeynikov et al., 2017). The reduction of externalising behaviour through hand-to-hand combat training is linked to the development of repetitive movement patterns, self-control and respect for others. These exercises increase self-awareness and self-esteem, which translates into better emotion regulation and more positive social interactions. In addition, these workouts can improve cognitive functions such as information processing speed and impulse inhibition abilities, which is particularly important for young people at risk of social exclusion (Harwood-Gross et al., 2021).

Impact of Interventions on Psychological Well-Being and Violence Prevention in Schools

Combat-based training programmes (including in physical education) are used in mental health prevention – unfortunately, still to an insufficient extent (Przybycień et al., 2005; Przybycień-Sterkowicz et al., 2015). Research has shown that they can strengthen mental resilience and increase the self-efficacy of students, especially those exposed to environmental and internal stressors such as peer pressure, emotional difficulties or self-esteem issues (Moore et al., 2019; Moore et al., 2021).

In addition, these interventions are effectively used in programmes to counter bullying, harassment and other forms of violence in schools. Psychosocial interventions modelled on the positive elements of martial arts show a consistent pattern of improving students' wellbeing, increasing their mental resilience and sense of efficacy. It is therefore recommended that such programmes should be used as a method of enhancing personal and social competence, which can contribute to reducing school violence and improving the mental health of young people (Moore et al., 2018).

CONCLUSION

Incorporating elements of hand-to-hand combat into medical and psychosocial interventions can have a range of benefits, from improving mobility and reducing the risk of falls to strengthening mental resilience and reducing aggressive behaviour. There is compelling scientific evidence of the positive impact of such interventions on physical and mental health. However, the potential of these 'tools' is still underutilised in preventive medicine and health education. The answer to these challenges is innovative agonology (INNOAGON), which is a new applied science dedicated to strengthening the effectiveness of health prevention and personal safety up to the global dimension of survival (Kalina, Kruszewski, 2023).

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