



CONSTRUCTION AND STANDARDIZATION OF SKILLS ON PREVALENCE OF SPORTS-SPECIFIC INJURIES AMONG WUSHU PLAYERS

Bhooraksha Dubey^{1*}, Dr Rakesh Bharti², Mr. Awtar Kishan Kaul³, Nandni Varma⁴, Dilip Kumar Singh⁵, Mr. Vishal Saxena⁶

Abstract

This study aimed to develop and standardize a scale to measure the prevalence of sports-specific injuries among Wushu players. A questionnaire-based survey design was used to collect data from N=30 Wushu players aged 18 to 25 years who had been participated on national level in last 2-5 years and had experienced at least one sports-specific injury in the past 12 months. Data was collected using a self-administered questionnaire that included demographic information and information on the type of sports-specific injuries experienced by the participants. The study revealed that lower limb injuries were frequently reported by Wushu players, with 33.3% indicating experiencing them always or often, and an additional 40% reporting experiencing them sometimes. The study also found that players feeling demotivated and sad when injured. The study suggests that, the injury patterns and experiences in Wushu highlights the importance of prioritizing injury prevention strategies, such as consistent warm-up routines, proper technique training, strengthening exercises, and psychological support. By implementing these measures, Wushu practitioner can significantly reduce the occurrence and severity of injuries, ensuring their long-term well-being.

Keywords: Sports-specific injuries, Wushu players, Prevalence, Cuts, bruises, wounds, Injury prevention.

^{1*}Scholar, Department of Physical Education, University, Lovely Professional University, Phagwara, Punjab, India, Email: bhoorakshadubey@gmail.com

²Assistant Professor, Department of Physical Education, University, Lovely Professional University, Phagwara, Punjab, India, Email: dr.raakeesh@gmail.com, ORC ID - 0000-0002-3831-6460

³Assistant Professor, Kalinga University, New Raipur – 492015 (CG), Email: awtar.kaul@kalingauniversity.ac.in, ORCID0009-0003-4336-7400

⁴M.P.Ed, Lovely Professional University, Jalandhar, Email: vnandni31@gmail.com

⁵M.P.Ed, LNIPE, Gwalior, Email: dilipsingh141458@gmail.com

⁶M.P.Ed Student, Jiwaji University, Gwalior, Email: vishalsaxena577@gmail.com

***Corresponding Author:** Dr.Rakesh Bharti Assistant Professor , Department of Physical Education, University, Lovely Professional University, Phagwara, Punjab, India, Email: dr.raakeesh@gmail.com

DOI: 10.48047/ecb/2023.12.si5a.0393

Introduction

Wushu is a martial art and combat sport with a long history in Chinese martial arts. It was developed in 1949 to standardize traditional martial arts practices. Wushu competitions involve both Taolu (routines) and Sanda (fighting). Taolu events consist of compulsory or individual routines with standardized rules and difficulty levels. Sanda is a modern fighting method with striking and grappling techniques. It is practiced alongside Taolu and has rules to ensure safety. Competitors can win by knockout or points earned through strikes, throws, or pushing opponents off a raised platform.

Sports injuries are frequent among all levels of players and can vary from simple sprains and strains to more catastrophic injuries like fractures and concussions. These injuries can occur in any sport and are frequently the result of overuse, poor technique, or collision with another player or item.

Wushu injuries are influenced by the physical demands, acrobatic movements, improper training techniques, lack of warm-up/stretching, and inadequate protective equipment. They can include sprains, strains, contusions, fractures, dislocations, head/facial injuries, and overuse injuries like tendonitis and stress fractures. Rapid and forceful movements can lead to joint and muscle strain, while full-contact sparring can cause contusions and bruises. High intensity jumps and flips pose risks of fractures and dislocations. Head and facial injuries can occur from kicks and falls. Overuse injuries may result from repetitive training without proper rest and recovery.

The primary aim of this study is to construct and standardize a scale on the prevalence of sport specific injuries among Wushu players. It is a retrospective study that explores and measures the injuries prevalence in Wushu players. The significance of the study is to help coaches and instructors with various types of injuries, take preventive measures to minimize injuries, draw a specific training plan, predict the player's performance after injury. Limitations of the study include injuries caused by accident or other than sports activities. The study aims to identify the types of sports-specific injuries that are most common among Wushu players, investigate risk factors associated with them, provide insights into prevention and management, establish a benchmark for the prevalence of injuries, develop a comprehensive and reliable tool for measuring the prevalence and severity of injuries, facilitate

communication and collaboration among health care professionals, coaches, and athletes, and contribute to the development of evidence-based guidelines for injury prevention and management in Wushu practice.

The study collected data on the prevalence of sports-specific injuries among competitive Wushu players using a questionnaire-based survey approach. The questionnaire was created with the help of specialists and was based on a review of the literature on sports-specific injuries in Wushu players.

Sampling Methodology

The convenience sampling approach was employed to recruit participants for the study. The study's inclusion criteria were (a) competitive Wushu players aged 18-25 years, (b) who had been participated at national level competitively in last 2-5 years, and (c) who had suffered at least one sports-specific injury in the previous 12 months.

Data Gathering

A self-administered questionnaire was used to collect data. The questionnaire included demographic information such as age, gender, and level of competition, as well as information on the types of sports-specific injuries encountered by participants.

The questionnaire was delivered to people involved using Google Forms in several languages for their convenience by the researchers or coaches. Participants were requested to complete and submit the questionnaire as previously stated.

Data Examination

Each question was allocated a percentage, and statistical techniques were employed to examine data shown in a pie graph.

Discussion

The survey results on Wushu players' experiences with Wushu-related injuries and health difficulties are similar to earlier studies.

The findings reveal that Wushu athletes experience various physical conditions such as muscle pulls, leg sprains, stiffness, and ankle injuries. These conditions can significantly impact the well-being and performance of the athletes. To address these issues, it is important to investigate the contributing factors and develop targeted strategies for injury prevention and management. This may involve analysing factors such as inadequate warm-up,

overexertion, improper technique execution, training intensity, and environmental factors. Developing targeted training programs that focus on muscle conditioning, flexibility, proper technique execution, and implementing preventive measures such as proper warm-up, strengthening exercises, and awareness of proper landing techniques can help reduce the occurrence of these physical conditions.

Furthermore, the psychological impact of injuries on Wushu athletes is also highlighted. Players

reported feeling demotivated and sad when injured, indicating the emotional toll that injuries can have. Therefore, it is crucial to address the psychological well-being of Wushu athletes through support systems, mental skills training, and rehabilitation programs that consider the psychological aspect of recovery. Providing athletes with the necessary psychological support and resources can help them cope with injuries more effectively and facilitate their overall well-being and performance.

Figure 1: shows the frequency of injuries in Wushu

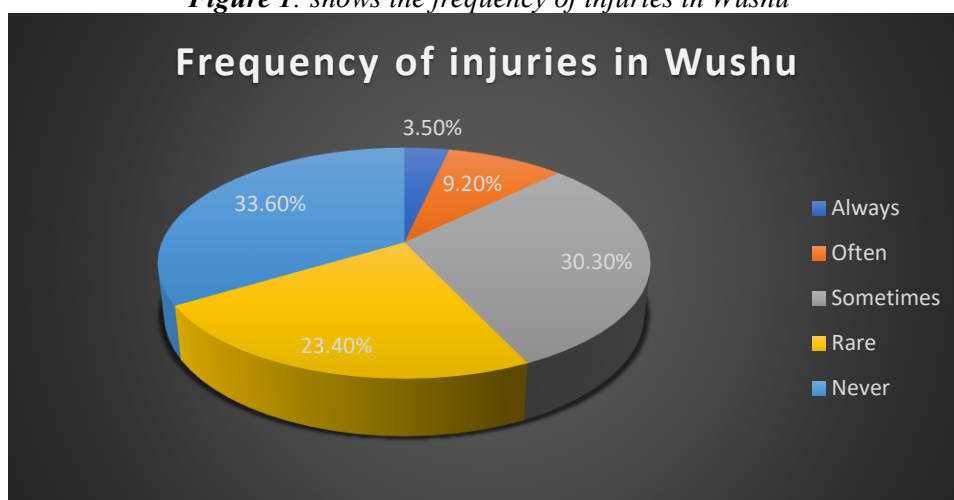
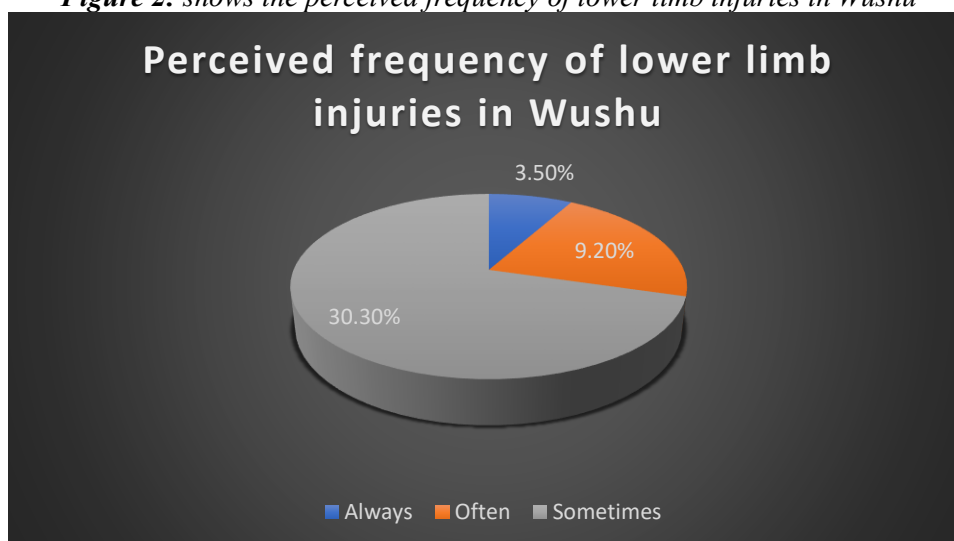


Figure 2: shows the perceived frequency of lower limb injuries in Wushu



Conclusion

The present study aimed to construct and standardize a scale to measure the prevalence of sports-specific injuries among Wushu players.

The results of the study showed that the constructed scale was reliable and valid for measuring sports-specific injuries among Wushu players.

The survey results can be used to inform injury prevention strategies and improve the overall health and well-being of Wushu players.

Overall, the survey highlights the importance of proper training, conditioning, and injury prevention strategies in the sport of Wushu.

The survey results suggest that Wushu players should be aware of the potential risks associated with Wushu, particularly when it comes to muscle pulls, leg sprains, stiffness, and ankle injuries.

Wushu players should take precautions to prevent injuries, such as warming up properly, using protective gear, and include strengthening exercises to prevent injuries.

The findings from this survey are consistent with previous research on combat sports injuries and discomfort, and can be used to inform injury prevention strategies and improve the overall health and well-being of Wushu players.

While Wushu is a highly beneficial activity for physical fitness and overall health, Wushu players should be aware of the potential risks and take steps to prevent injuries and discomfort.

The constructed scale should be used by Wushu players, coaches, and sports medicine professionals to measure sports-specific injuries among Wushu players. Coaches and sports medicine professionals should focus on injury prevention strategies that address the most common types of injuries among Wushu players, muscle pulls, leg sprains, stiffness, ankle injuries, Cuts, bruises, and wounds.

1. Emphasize thorough warm-up routines to prepare the body adequately.
2. Implement specialized injury prevention programs targeting vulnerable areas.
3. Focus on proper technique execution to minimize the risk of injuries.
4. Provide psychological support to enhance athletes' mental well-being.
5. Educate athletes on effective strategies for injury prevention and management.
6. Foster a culture that prioritizes safety and injury prevention.

In conclusion, the construction and standardization of a scale to measure sports-specific injuries among Wushu players is an important step toward identifying and addressing the types and prevalence of injuries in this population. The findings of this study can be useful in developing injury prevention and management strategies for Wushu players and can contribute to the overall health and well-being of this population.

Reference

1. Theeboom, M., & De Knop, P. (1997). An analysis of the development of wushu.

- International Review for the Sociology of Sport, 32(3), 267-282.
2. Del Vecchio, F. B., Franchini, E., Matsushigue, K. A., Artioli, G. G., & Gentil, P. (2018). Injuries in martial arts and combat sports: Prevalence, characteristics and mechanisms. *Science & Sports*, 33(5), 291-298. doi:10.1016/j.scispo.2018.02.003.
3. Lystad, R. P., Pollard, H., & Graham, P. L. (2009). Epidemiology of injuries in competition taekwondo: A meta-analysis of observational studies. *Journal of Science and Medicine in Sport*, 12(6), 614-621.
4. Zetaruk, M. N., Violan, M. A., Zurakowski, D., & Micheli, L. J. (2005). Injuries in martial arts: A comparison of five styles. *British Journal of Sports Medicine*, 39(1), 29-33.
5. Jarrett, G. J., Orwin, J. F., & Dick, R. W. (1998). Injuries in collegiate wrestling. *The American Journal of Sports Medicine*, 26(5), 674-680.
6. Junge, A., Dvorak, J., & Graf-Baumann, T. (2004). Injuries in youth amateur soccer and rugby players—Comparison of incidence and characteristics. *British Journal of Sports Medicine*, 38(2), 168-172.
7. Scoggin 3rd, J. F., Brusovanik, G., Izuka, B. H., George Jr, T. A., & Albright, J. P. (2010). Assessment of injuries sustained in mixed martial arts competition. *The American Journal of Orthopedics*, 39(5), 247-251.
8. Lockwood, J., Leddy, J. J., & Willer, B. (2018). Traumatic brain injuries in mixed martial arts: A systematic review. *Trauma*, 20(4), 245-254.
9. Fares, M. Y., Salti, N. S., Mourad, F., & Nasr, R. (2021). Craniofacial and traumatic brain injuries in mixed martial arts. *The Physician and Sportsmedicine*, 49(4), 420-428.
10. Yalfani, A., Taghizadeh, M., & Ahmadi, A. H. (2019). Prevalence and mechanism of sports injuries in Poomsae Premier League Players. *Function and Disability Journal*, 2(1), 165-169.
11. Green, C. M., Petrou, M. J., Fogarty-Hover, M. L., & Rolf, C. G. (2007). Injuries among judokas during competition. *Scandinavian Journal of Medicine & Science in Sports*, 17(3), 205-210.
12. Peeri, M., Boostani, M. H., Boostani, M. A., Kohanpur, M. A., & Mirsepari, M. (2011). The rate of prevalence and causes of sport injuries in male karate kumite players. *World Applied Sciences Journal*, 15(5), 660-666.
13. Adkitte, R. G., Bardgujar, S., Yeole, U., Gawali, P., & Gharote, G. (2016). Prevalence of injuries in competitive boxers: A retrospective study. *Saudi Journal of Sports Medicine*, 16, 106-110.

14. Pingale, N., & Ghagare, J. (2017). Prevalence of musculoskeletal injuries in young taekwondo athletes. *International Journal of Physical Education, Sports and Health*, 4(2), 332-335.
15. Balamrugaan, K. V., & Bhat, N. (2017). Injuries among varsity men volleyball players. *International Journal of Physical Education, Sports and Health*, 4(3), 68-71.
16. Sandeep, U., & Kuloor, H. (2017). A comparative study on common injuries among the Greco roman and free style wrestlers among university wrestlers. *Foot*, 5(6.45).