



ORIGINAL ARTICLE

Incidence of injuries in competition of Leonese wrestling and associated factors (2005–2015)

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KEYWORDS

Wrestling;
Incidence;
Injuries;
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Abstract

Introduction: Traditional wrestling is considered a cultural heritage of humanity and it should be protected. The study of injuries and their associated factors can be useful to protect this heritage. The present study has as its aim an analysis of the incidence of injuries and the associated factors in competition of a traditional wrestling modality, "Leonese wrestling" (LW). **Material and methods:** Observational, prospective cohort study that collected injuries during the summer seasons from 2005 through 2015. Incidence rates of injuries were calculated by 1000 athlete exposures (AEs) and as a function of age at initiation in LW, mid-season age, regularity or those who participated in the competitions of each season, winner type, and weight category. At the multivariate level, a generalized linear mixed model was used assuming the frequency of the injuries followed a Poisson distribution.

Results: A total of 308 wrestlers and 406 injuries were reported in 31,970 AEs. The incidence of injuries per 1000 AEs was 3.0 (serious), 6.7 (moderate and serious) and 12.7 (total injuries registered). Higher incidence was observed among those who: were no regulars (IRR = 1.076; CI: 0.846–1.368), were considered non-winner type and started as teenager vs child (IRR = 1.115; CI: 0.856–1.452). Non-winner type wrestlers were at much higher risk of injuries in the semi heavy and heavy weight categories.

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PALABRAS CLAVE

Lucha;
Incidencia;
Lesiones;
Estudio de cohorte

Conclusions: The incidence of injuries in LW is consistent with that incidence expected in combat sports. Showing a low regularity, having started late in their practice, showing a non-winning profile and competing in the heavy weight category are injury risk factors for LW wrestlers.

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Incidencia de lesiones en la competición de Lucha Leonesa y Factores Asociados (2005-2015)

Resumen

Introducción: La lucha tradicional es considerada un patrimonio cultural de la humanidad que debe protegerse. El estudio de las lesiones y sus factores asociados puede favorecer la protección de este patrimonio. El presente estudio pretende analizar la incidencia de las lesiones y sus factores asociados en la competición de una modalidad de lucha tradicional: la Lucha Leonesa (LL).

Material y métodos: Estudio observacional, prospectivo y de cohorte, que recolectó las lesiones ocurridas durante las competiciones de verano entre 2005 y 2015. La incidencia de lesiones fue calculada por cada 1000 atletas/expuestos (AEs), en función de la edad de iniciación a la LL, edad en el momento de la competición, regularidad de los participantes en la competición, perfil ganador y categoría de peso. Se utilizó un análisis multivariante mediante un modelo mixto lineal generalizado, asumiendo que las lesiones seguían una distribución de Poisson.

Resultados: Se registraron 308 luchadores y 406 lesiones en 31.970 AEs. La incidencia de lesiones por cada 1000 AEs fue de 3 lesiones (graves), 6,7 (moderadas y graves) y 12,7 (en el total de lesiones registradas). Se observó una mayor incidencia en aquellos luchadores: no regulares (IRR = 1,076; IC: 0,846-1,368), con perfil no ganador y los que se iniciaron en la lucha de adolescentes (IRR = 1,115; IC: 0,856-1,452). Los luchadores con perfil no ganador tuvieron un mayor riesgo de lesiones en las categorías de semipesados y pesados.

Conclusiones: La incidencia de lesiones en la LL es consistente con la incidencia esperada en otros deportes de contacto. La ausencia de regularidad a la hora de competir, haberse iniciado tarde en la lucha, mostrar un perfil no ganador y competir en la categoría de los pesos pesados, son factores que se asocian al riesgo de presentar una lesión en sus practicantes.

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Introduction

Traditional wrestling is considered an intangible cultural heritage that should be recognized and protected.¹ One of the forms of wrestling that has the longest history despite not having the status of an Olympic sport is belt wrestling.² Among the varieties of this type of sport, Leonese wrestling or *aluche* holds a prominent place, being officially recognized by United World Wrestling (UWW), the European Traditional Wrestling Association (AELT) and the International Belt Wrestling Association (IBWA).³ Leonese wrestling is a combat sport in which two participants, with a set hold on their opponent's leather belt, attempt to throw their opponent over by means of a series of Leonese wrestling skills and techniques.⁴ The winner is the wrestler who after a fixed period of combat has gained the higher score or the person who first achieves two full falls or four points. The way of scoring depends on the type of fall.⁵

As a combat sport, it is naturally not free from injuries, many of which might be preventable.⁶ A study of the

incidence of such lesions and the factors behind them in this form of fighting sport might be of considerable use for a number of reasons like develop effective preventive measures⁷ avoid premature retirement of wrestlers increasing the number of participants and encouraging the practice of a physical activity good for health, especially among the young.^{4,8} Besides the various forms of belt wrestling share an internal logic and a set of technical and tactical actions that are quite similar from one to another, hence this may serve to develop preventive strategies for other similar types of wrestling (i.e. judo). On the other hand, it has also had in mind the mandate from the International Olympic Committee (IOC) to prevent injuries so as to encourage participation in safe sport,⁹ and would make a significant contribution to protecting and perpetuating a unique cultural heritage.

With this in view, the present study has as its aim an analysis of the incidence of injuries and the associated factors in competition of a traditional wrestling modality, "Leonese Wrestling" (LW).

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