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Investigating Risk Factors in Equestrian Eventing: Journey from undergraduate dissertation to PhD Study; from college assessment to informing the World Governing Bodies

Background to the work:

Eventing can be described as an equestrian triathlon, in which horse and rider combinations complete a dressage test, showjumping round and cross country test. Rider fatalities within the cross country phase of eventing are a significant concern for the equestrian industry worldwide, most commonly associated with a fall of the horse. The occurrence of a rider death invariably results in heightened attention and scrutiny from the media, demanding that the eventing governing bodies take action to reverse this trend. Final year BSc (Hons) Equine Science and Management student, Heather Cameron-Whytock, had roots in eventing, having worked and competed within in this discipline. This evoked her desire to carry out her final year dissertation project into an element of eventing. During preliminary discussions, her tutors suggested the idea of risk factor analysis of eventing falls using existing data within the sport, based on similar research designs utilised in other areas of equine research. Heather embraced this suggestion and undertook an analysis of 2012 horse and rider competition records. Her findings raised some surprising conclusions. Many of the factors anticipated to be of influence, such as the month of competition and age of horse, had no significant influence on horse falls. The unexpected and rather alarming result was that riders who were placed within the top three prior to the cross country phase (following dressage and show-jumping) were twice as likely to experience a horse fall.





First exposure of the study to the scientific community:

Equine tutors at Myerscough frequently support highly achieving students to prepare and submit their research into conferences and journals. When the call for abstracts was made for the International Society for Equitation Science Conference to be held in Denmark 2014, tutor Charlotte Brigden, identified Heather's study as one with strong relevance. Heather was in full employment by this time and needed some determined convincing to submit her work. This was done through collaboration with Charlotte, usually after work hours in order to fit with Heather's schedule. The work was accepted as a full oral communication for the conference. The co-authors both attended the conference, which is the premier meeting of researchers within the field of equitation science. The presentation was an outstanding success, attracting write ups from equestrian magazines and websites worldwide, and ultimately promoting the college on an international stage.

Sharing knowledge with the International Equestrian Federations:

Several months after the conference, the National Safety Officer (Jonathon Clissold) for British Eventing (the sport's UK governing body) contacted Heather to request a meeting. At the meeting, he passed on an invitation from the Federation Equestrian Internationale (the international governing body) to present her research at the 2015 FEI Eventing Risk Management Seminar in Madrid. This important annual meeting features the safety officers from the governing bodies of all eventing countries and allows them to review safety statistics and developments. The invitation to share the research at this level illustrated the value of the study. Jonathon Clissold has since offered enthusiastic support for the development of the research, including access to all the records held by British Eventing.

Development to PhD:

The attention received by the study from governing bodies nationally and internationally, and the media, re-emphasised the value of this research field to staff at Myerscough. On the basis of this, tutors at the college developed a proposal for a PhD project to allow further development of the project. Research is a key strategic objective at Myerscough College and is supported by an excellent research framework. An annual research bidding process allows tutors to apply for funding to allow the development of research projects, under the scrutiny of an external research advisory panel. The proposal successfully secured funding from the College's research fund, enabling recruitment of a student for the studentship. Heather was the natural choice



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and commenced her MRes in January 2016. The project is co-supervised by colleagues at the University of Central Lancashire and Myerscough College, offering a wealth of expertise in differing fields, including psychology and biomechanics. Most recently, Heather had the opportunity to discuss the project with HRH The Princess Royal, whilst attending the National Equine Forum in London 2016 with tutor Charlotte Brigden. The project has a clear personal interest to the Princess, given her own career in eventing and that of her daughter Zara Phillips.

Long-term Aspirations:

The long-term aims for the project are to be able to provide an insight into horse falls in eventing, in particular to be able to suggest mechanisms to reduce risk to rider and horse life.

To find out more, please contact:

[Charlotte Brigden](#), Myerscough College, St Michael's Rd, Bilsborrow, Preston, PR3 0RY, UK.

Heather Cameron-Whytock, Myerscough College, St Michael's Rd, Bilsborrow, Preston, PR3 0RY, UK.