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Exploring the Key Attributes of Former Racehorses considered to have the Potential for a Successful Second Career in Horseball

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Abstract

The British Horseracing Industry is committed to safeguarding the welfare of racehorses throughout their racing careers and beyond. Former racehorses who do not retire to a stud career and are suitable for second careers are often retrained to compete in other equestrian sports. Horseball is a growing discipline, which proactively supports Retraining of Racehorses (RoR) that could offer a suitable second career for former racehorses. This study explored the key attributes that Horseball competitors look for in a potential former racehorse to promote a successful career in the sport. Participants voluntarily completed an online, 18 question survey (SurveyMonkey®), distributed through Horseball related communication channels (Facebook™, Instagram™ and the British Horseball Association). Horseball competitors were asked a) what key physical and behavioural characteristics they considered necessary for a successful Horseball horse and b) whether they would consider competing a former racehorse. A total of 45 Horseball competitors completed the survey representing a margin of error of $\pm 13\%$ at the 95% confidence interval for the UK Horseball population (n= 200). Most respondents celebrated former racehorses' suitability for Horseball competition; 73.72% (n=32) had already owned and competed a former thoroughbred racehorse in Horseball and 97.78% (n=44) would consider purchasing and competing one in the future. Former racehorses were recognised to possess key performance attributes: agility, temperament, and speed suitable for a successful second career in competitive Horseball. However, injuries that impeded former racehorse performance; lameness and other chronic injuries, were deemed as detrimental to success in competitive Horseball. Further work in collaboration with racehorse rehoming stakeholders is required to produce guidelines to identify specific behavioural and physical characteristics which could predict the suitability of former racehorses for successful second careers across equestrian disciplines.

Keywords: athleticism, temperament, horse-human relationship

Introduction

British horseracing is a multi-billion pound industry, with approximately 20,000 thoroughbreds racing annually (British Horseracing, 2019). With a rising number of thoroughbreds entering the horseracing industry, the consequent number of former racehorses exiting the industry also increases (British Horseracing, 2019; Leadon *et al.*, 2012). Racehorses can retire at a relatively young age and therefore have the potential to lead a high-quality life within a second career outside of the horseracing industry. However, the former racehorse population has been suggested to be vulnerable, with their welfare at risk of being compromised because historically their aftercare has been unregulated (Heleski *et al.*, 2020; Horseman *et al.*, 2016). This concern regarding former racehorses' quality of life after racing has recently led to a new branch of research, which explores the rehabilitation and retraining of off the track thoroughbreds (OTTB) in the United States or former racehorses in the United Kingdom (Heleski *et al.*, 2020), and is the focus of more scrutiny across the global horseracing sector.

Public views on the use of horses for sport and leisure activities, including horse racing, are changing. As a result, the racing industry is facing increasing public scrutiny with non-equine stakeholders questioning if traditional training and management practices are ethical and necessary. The implementation of a social license to operate (SLO) provides a framework for an industry, sector, or sport to define the boundaries in which they operate (Williams and Marlin, 2020) in the context of legitimacy, trust (procedural), transparency and communication (Duncan *et al.*, 2018). Animal welfare advocates have suggested horseracing requires a SLO in the modern era to showcase how the industry discharges their duty of care to the racehorses within it, and how management of the thoroughbred throughout its racing career and beyond optimises equine welfare (Heleski *et al.*, 2020; Williams and Marlin, 2020).

In response to public social values, the British Horseracing Authority (BHA) commissioned the Horse Welfare Board (2020), an independently chaired body of equine experts, to improve the traceability and quality of life of racehorses. The result, 'A Life Well Lived,' is a five-year-plan designed to encourage a culture of accountability across the horse racing industry and associated stakeholders, this aims to ensure adequate aftercare provisions, including safeguarding the welfare and quality of life of former racehorses. A key component of the strategy is to consider life after horse racing for the 5,000 racehorses who leave the industry annually (British Horseracing, 2019). Increased transparency in the rehoming processes and the tracking of second careers in former racehorses could be considered an essential step for horse racing to achieve a SLO (Heleski *et al.*, 2020).

While rehoming racehorses is increasing in popularity, this aspect of the industry is currently unregulated. Former racehorses that partake in second careers often do so at either recreational or competitive levels (RoR, 2021b). A range of organisations, such as rehoming and retraining centres, can facilitate this process, alternatively owners or keepers can obtain a racehorse by purchasing, loaning, or being gifted the horse directly from the owner or racing yard (RoR, 2021b). In Great Britain, racehorse rehoming across key stakeholders is overseen by Retraining of Racehorses (RoR). RoR is a charity organisation who aim to rehome former racehorses in an environment where they are given a second chance at a career (RoR, 2021a). Many former racehorses are rehabilitated, retrained, and rehomed through RoR approved centres; however, a considerable number are rehomed through other unregulated channels. The second career of these former racehorses can vary considerably, ranging from them being utilised as a companion horse, being used within equine assisted activities, as a leisure or recreational riding

horse, or to being successfully competed across a range of disciplines as a second career (Stowe and Kibler, 2016).

Former racehorses are documented to be successful in various second careers from dressage to endurance (RoR, 2021b). However, to inform positive horse-human partnerships and second careers it is important to understand which performance attributes optimise successful rehoming. Despite this, limited research has evaluated factors which influence racehorse rehoming to date. In dogs, rehoming success has been positively impacted by research that informs suitable dog-human matching processes and this has been recognised to increase the quality of life of both the human and the dog involved (Lloyd *et al.*, 2016). Racehorses all have individual personalities and various levels of physical and mental health states, which could potentially influence their successful long-term rehoming (Stowe and Kibler, 2016; Suwała *et al.*, 2016). Stowe and Kibler (2016) recognised that certain attributes, such as being grey and having fewer activity limitations, were correlated to the speed that former racehorses were rehomed, however, the impact that such attributes had on former racehorse performance in specific post-racing equestrian sports and on second career longevity were not reported. The key attributes that determine a former racehorse's discipline suitability are currently unknown and warrant further investigation to enhance former racehorse welfare and horse-human relationships.

Horseball is an equestrian team sport which is based on defences and attacks, with the aim being to score goals and it is increasing in popularity (British Horseball Association, 2021). In the UK, the sport is governed by the British Horseball Association, who are sponsored by RoR. Anecdotally, the breed of choice for Horseball is the thoroughbred (British Horseball Association, 2020); RoR (2021b) has thirty former racehorses on record that are currently owned by British Horseball Association members and also organises various RoR Horseball related awards, supporting the use of former racehorses within the sport. The perceived success of former racehorses in Horseball could make this sport a suitable discipline to model which attributes support a successful transition from horseracing into racehorses' second careers. Understanding what makes a horse, and specifically a former racehorse, a good choice for Horseball could also help increase rehoming of racehorses and help inform the creation of a framework that could be applied in the future to support successful rehoming of racehorses into other equestrian disciplines. Therefore this preliminary study aimed to explore the key physical and behavioural attributes in former racehorses to facilitate a successful second career competing in Horseball.

Materials and Methods

Participants

The survey invitation was targeted to UK Horseball competitors; Horseball competitions are spread across the country, therefore an online survey tool was considered beneficial to maximise the response rate. Inclusion criteria required participants to be over 18 years of age and to currently compete in Horseball. The survey was anonymous, and no personal data were collected although respondents.

Survey Design

An exploratory research design was used to evaluate the attributes required for a racehorse to make a successful transition to a second career as to our knowledge these had not been

previously investigated (Lowe and Zemliansky, 2011). The study was designed as an online questionnaire (Survey Monkey®, San Mateo, USA) with 10 closed questions, 9 Likert scale questions and 8 open free text questions (Supplementary file 1). Participants were recruited online via the British Horseball Association sharing a link to the survey and distribution on selected UK equine-related or discipline-specific social media (Facebook®, Instagram™) groups including British Horseball Association, Hampshire Horseball and London Reds. The draft survey was tested by two experienced Horseball competitors and edited to correct any errors before being fully deployed. The survey was live from 23rd May 2020 for one month, with 80% (n=36) of responses gained within the first six days. Ethical approval was granted by the Hartpury University Ethics Committee (Ethics number: ETHICS2019-63).

The questionnaire comprised two main sections:

Physical and behavioural characteristics: respondents were asked which key physical and behavioural characteristics they considered necessary for a horse to have a successful career in Horseball.

Former racehorses use in Horseball: respondents were asked if they would consider competing a former racehorse in Horseball and to explain their answer.

Data Analysis

Data were exported from SurveyMonkey® to Microsoft Excel® (Microsoft, California, USA) and grouped according to each question theme. Thematic analysis, using a grounded theory approach, and frequency analysis analysed differences in respondents' opinions to rank attribute importance to a successful career in Horseball (Horseman *et al.*, 2016; Bryant and Charmaz, 2010).

Results

A total of 45 Horseball competitors completed the survey, representing a margin of error of $\pm 13\%$ at the 95% confidence interval for the UK Horseball population (informed by the British Horseball Association membership database) (n= 200); 73.72% (n=32) of respondents had already owned and competed a former racehorse in Horseball and 97.78% (n=44) stated they would consider purchasing and competing a former racehorse in the sport. Approximately two third of respondents (68.89%; n=31) currently competed with thoroughbreds and 73.33% (n=33) recognised the thoroughbred (racing and non-racing) as the optimum breed for Horseball competition. Most respondents felt that the minimum age to purchase a horse to compete in Horseball was four or five years (31.11%; n = 14; 37.78%; n = 17, respectively). Optimum height varied with 31.11% (n=14) selecting 15.2hh and 31.11% (n=14) selecting 16.3hh.

Soundness accompanied by a balanced and symmetrical conformation, with muscular development and speed were consistently identified as key performance attributes required in successful Horseball horses (Figure 1). Respondents identified these traits should be combined with a positive and responsive ridden temperament, and quick reactivity to aids, to enhance horses' agility performance and to promote successful performance in the sport. Injuries which could affect a horse's ability to engage in galloping, stop-start accelerations and decelerations, and the tight turns required in the sport were considered by respondents to be detrimental to a successful Horseball career (Figure 2).

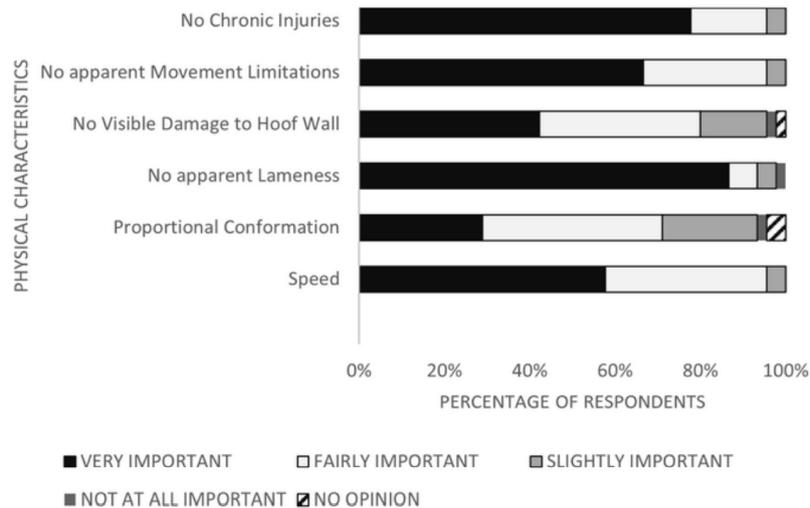


Figure 1: Participants' (n = 45) responses when asked to describe the importance of highlighted physical characteristics in a potential Horseball competition horse.

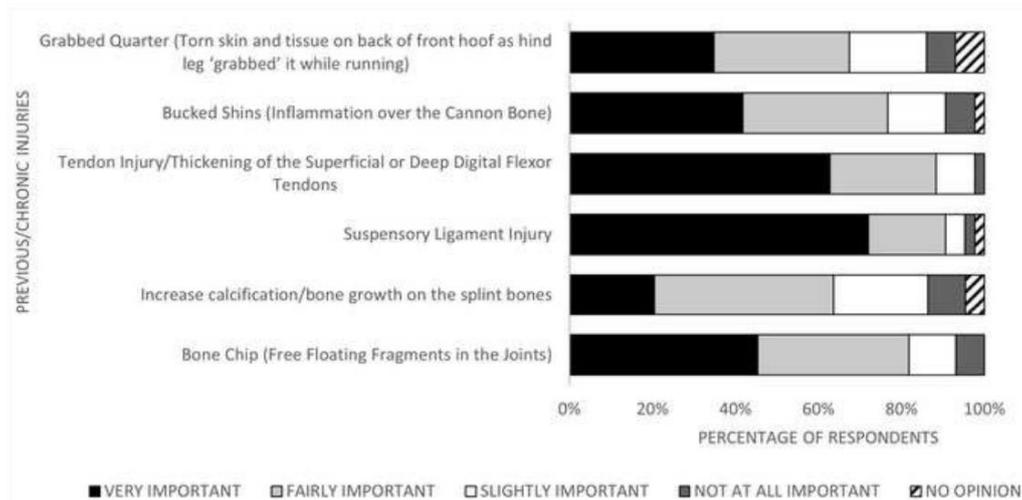


Figure 2: Participants' (n = 45) response when asked how important it is for a potential Horseball competition horse, to not have the following previous/chronic injuries.

Three major themes emerged that Horseball competitors considered to optimise former-racehorse success in Horseball: 1) athleticism: speed, agility, and injury status, 2) temperament: trainability and interaction with environment, and 3) horse-human relationship: love/ adoration and it being a rewarding process (Figure 3). Most participants celebrated former racehorses' suitability for sport, commenting '*ex-racehorses have very desirable characteristics [speed and agility] for Horseball and that they are easy to retrain for other equestrian disciplines, especially Horseball*'. Injury which impeded performance was recognised as detrimental to Horseball competition success, with respondents feeling former racehorses required a strong back and hindlimbs, with no previous injuries as necessary in a successful Horseball horse (Figure 3).

The horse-human relationship between Horseball competitors who owned former racehorses was very strong, with Horseball competitors adoring their horse and commonly describing their former racehorse as *fantastic*, *great*, *easy*, and *the best*. Generally, respondents felt: '*ex racehorses were very desirable [to own / compete]*.'

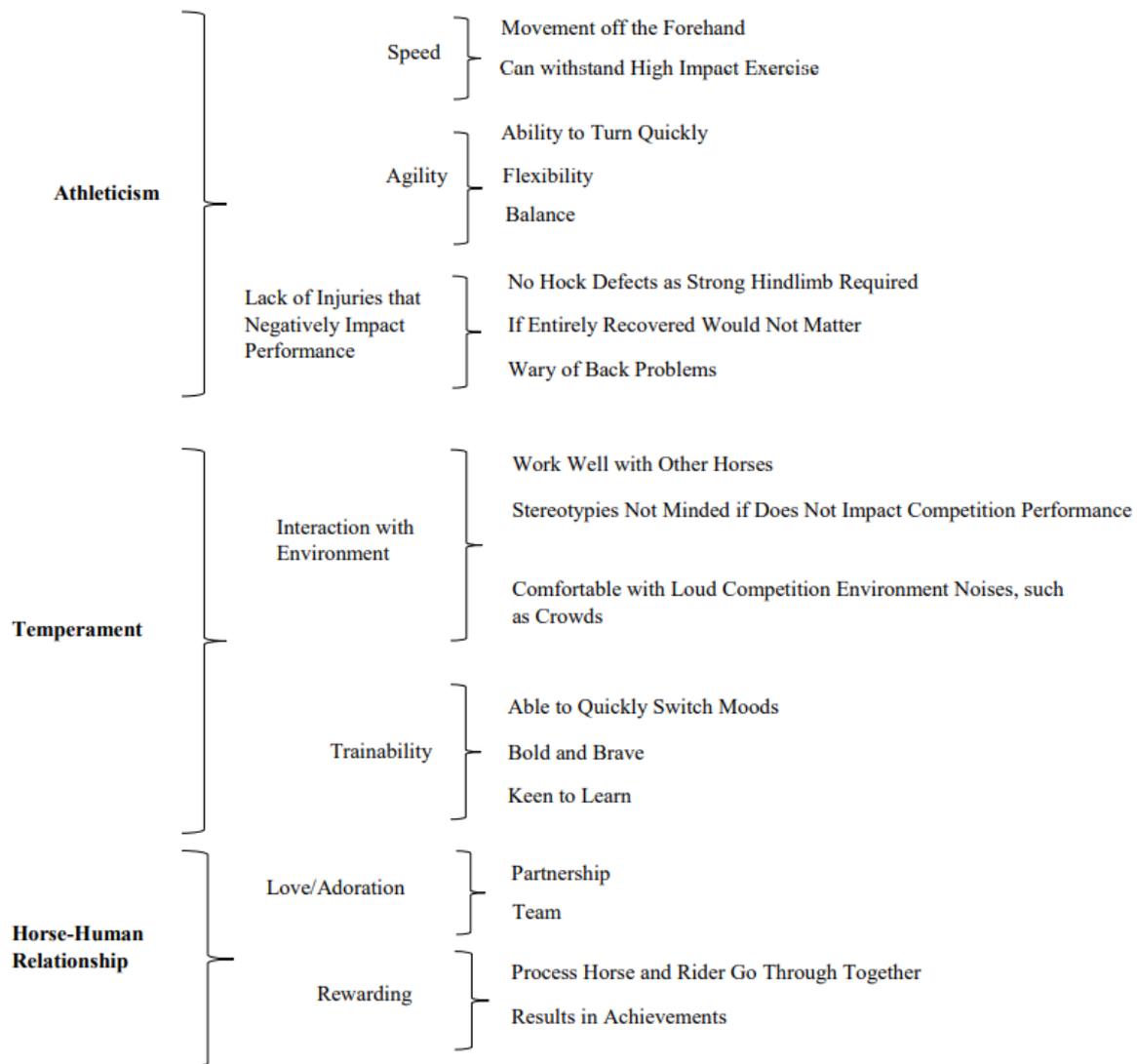


Figure 3: Thematic analysis of Horseball competitors' perceptions of which key attributes make a former racehorse successful in Horseball competition.

Discussion

Globally horseracing federations are placing more emphasis on racehorse welfare and consideration to the development of the industry's social license to operate (Heleski *et al.*, 2020). The Horse Welfare Board (2020) aims for all racehorses to have 'A Life Well Lived' and recognises that the racing industry has a collective lifetime responsibility to ensure racehorse welfare, both on and off the track. This preliminary study has identified that former racehorses possess key performance attributes suitable for a successful second career in competitive Horseball. Most Horseball competitors recognised the thoroughbred as the optimum breed for Horseball competitions due to their *agility*, *temperament*, and *speed*. Respondents considered horses between four and five years of age, coincidentally the age that racehorses commonly retire from racing (British Horseracing, 2019), as the optimum age for a former racehorse to retrain for another discipline including starting a career in Horseball.

Personality and physical characteristics were also identified as key determinants of equine performance in Horseball. These factors have been recognised as important components in horse-rider relationships; equine behaviour influences a horse's potential as a riding partner (Graf *et al.*, 2013) and physical capabilities impact a horse's success in specific equestrian disciplines (Morscher, 2010, unpublished data). When racing, being reactive (agile) and having the ability to reach high speeds provides racehorses with a performance advantage, that may infer a competitive advantage in other disciplines, in addition to not suffering from injuries that could negatively impact their performance (McLean and McGreevy, 2010; Stover, 2003). Anecdotally thoroughbred racehorses are often considered to be highly reactive. Lloyd *et al.* (2008) reported thoroughbreds to score highly for anxiousness and excitability in their equine personality assessment, that could positively influence their reactivity and therefore, competitive performance in Horseball. Additionally, thoroughbreds also scored the highest of the breeds assessed for sociability and inquisitiveness (Lloyd *et al.*, 2008). Such equine personalities can be used to enhance understanding of how horses learn and consequently how they should be most suitably trained (McGreevy, 2007); a process which could assist in training an optimal Horseball competition horse. Higher levels of sociability and inquisitiveness could also promote positive human-horse bonds that could translate to the adoration reported by former racehorse owners towards their horses in this study.

Horseball competitors' felt that former racehorses were versatile and displayed behavioural and physical characteristics which they recognised as beneficial for Horseball success; these traits may also be beneficial and promote success within other equestrian disciplines. RoR celebrates the adaptability of former racehorses and their capacity for success in a range of disciplines, including dressage, showing, and eventing (RoR, 2021b). Former racehorses gain many positives from their time in training and a career on the track, including but not limited to, becoming familiar with crowds and busy environments, and familiarisation with general management practices and veterinary procedures, such as loading and travelling (RoR, 2021a). This could provide a solid foundation for a successful transition to a competitive second career, as well as providing a loving and loyal companion. In racing, racehorses establish long standing relationships with the racing staff that look after them (Davies *et al.*, 2020). Racing staff acknowledge this bond and often go above and beyond in caring for the racehorses, underpinning the positive horse-human relationships reported in this survey.

The current study did have some limitations. Participation was voluntary and as a result the results may be subject to inherent subject and response bias, and this could lead to over representation of the views of horse owners who have been impacted more by the positive relationship with their former racehorse and who engage with online survey platforms. The setup of the survey tool could allow individuals to complete the survey more than once, which has the potential to introduce sampling bias. Distribution and advertising of the survey via social media sites and third parties could have resulted in some degree of cultural or conformation bias if respondents were affiliated to specific sites or organisations utilised. Further work in collaboration with racehorse rehoming stakeholders is required to produce guidelines to identify specific behavioural and physical characteristics, which could predict the suitability of former racehorses for successful second careers across equestrian disciplines. Alongside this, further exploration of the horse-human relationship and how both human and equine personality inform this is warranted to ensure successful matches and rehoming success.

Conclusions

This preliminary study identified that Horseball competitors felt former racehorses were suitable for a successful second career in Horseball competition. Three specific attributes were identified that enhanced former racehorses' suitability for a second career in Horseball: athleticism: *agility, temperament, and speed*; temperament: *interaction with environment and trainability* and the horse-human relationship: *love/adoration and rewarding*. Soundness, balance, and a symmetrical physical conformation were also considered advantageous for a second career while tendon and ligament injuries were deemed detrimental to a successful competitive career. This study successfully identified key attributes that could inform selection of suitable former racehorses for a second career in Horseball. Further consultation with owners and keepers of former racehorses across equestrian disciplines is warranted to inform the successful transition from racing for racehorses entering second careers.

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