

Analysis of behavioral disorders of recreational horses in the selected horse riding centres of the Pomorskie and Warmińsko-Mazurskie voivodships

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The questionnaire-based survey was conducted in three horse riding centres located in the Pomorskie and Warmińsko-Mazurskie provinces. The aim of the study was to present the problem of behavioural disorders appearing in recreational horses, including vices, which are dangerous to humans. Most of the horses showed the negative behaviors associated with the entry of humans to their stall and with grooming before their work. In the examined population 42% of horses showed a friendly attitude towards humans entering the stall, while 19% showed indifference in relation to humans. Negative reactions to someone entering the stall included pinned back ears (30% of horses), turning away (27%) and attempting to bite (13%). During grooming the dissatisfaction was demonstrated by pinning back their ears in 39% horses, 33% horses reacted by stall walking, 23% – by pawing and by attempting to bite, 22% – by trying to kick and 17% – by crowding and pressing the handler to the wall. No negative reactions during grooming were demonstrated by 37% of horses. Only 27% horses correctly reacted when being mounted by the rider, with 30% being obedient during riding. During mounting negative behaviours included walking in 49% of horses; moving after the riders put their leg into the stirrup was observed in 26% horses and moving forward after the riders sat into the saddle in 23% horses. The riders noticed many negative reactions related with the ride: 35% of horses were pulling ahead, 25% were attempting to bolt, 23% were stretching their necks and 19% were tossing their head. Injuries suffered by riders at the riding centres both during grooming and riding mainly affected arms and legs.

KEY WORDS: recreational horses / undesirable behaviors

The number of horses used in various forms of work other than agriculture has been increasing systematically. This results in a change in horse management and direct use. Frequently such a change disturbs the natural biological rhythm in horses, leading to frustration, boredom and the related adverse consequences. Undesirable behaviours are increasingly often observed in horses, resulting in the development of behavioral disorders [4, 11].

Inappropriate animal handling, the animal's frustration resulting from limited possibility to manifest natural behaviours, its inability to adequately react to stimuli from its surroundings as well as inappropriate nutrition are causes of stress underlying the incidence of various anomalies. High reactivity to certain stimuli observed in some animals, negative past experiences connected with poor handling or the rider's actions causing (consciously or unwillingly) discomfort or even pain to the horse, all lead to the development of behaviours termed as vices [4, 5, 6].

It is generally acknowledged that the older a horse, the greater its experience in contacts with humans; thus the animal has formed certain associations, both positive and negative, in relation to people. From the point of view of the horse user negative associations should not be formed, as they are most frequently the result of inappropriate horse handling. At the same time it is generally acknowledged that a lack of knowledge on behavior in a given animal species often leads to an erroneous interpretation of its behaviour. Atypical behaviour in a horse is sometimes treated by the user as a manifestation of bad temperament or tease. In such cases inadequate horse handling reinforces such behaviour, which results in the development of another vice [4, 7].

The aim of this study was to present and characterise the problem connected with the behavioural disorders found in recreational horses, including vices, which may potentially prove dangerous to humans.

Material and Methods

A survey based on a questionnaire was conducted in the years 2009 and 2010 among individuals using recreation riding services of three riding centres, one of which is located in the Warmińsko-mazurskie province and two in the Pomorskie province, Poland. All the horse riding facilities were open all year round, as a rule for 5-6 days a week, offering primarily services in pleasure or recreation riding (providing riding lessons for beginners and horsemanship practice for more advanced riders). They offered their services to children, teenagers and adults.

The questionnaire specifically prepared for the purpose of this study included questions concerning personal information on the respondents, among others their age, sex and level of riding skills. The group of questions concerning the evaluated horse concerned its age (only horses aged minimum 4 years were included in the study), sex and various forms of behaviour manifested both during operations preparing the animal to riding and during riding (negative, positive and neutral reactions to humans). A total of 150 questionnaires were submitted, of which 113 concerned horses used in riding lessons at various levels of competence and rider skills.

As it results from the data presented in the Table, horse riding as a form of recreation is practiced primarily by young people, aged 16-30 years (95% respondents). This may indicate popularity of horse riding as a health-promoting leisure activity in that age group. At the same time 2/3 of those people declared to have at least 7-year horse riding experience, while as many as 46% respondents declared riding horses for 10 years or more. Obviously such a long horse riding experience is reflected in the identification of their horsemanship skills, which most of the respondents classified as intermediate (58%) and

Table

Characteristic of the persons who gave the answers to the questions included in the questionnaire

Criterion	Examined persons	%	Criterion	Declared horse riding skills	%
Sex	female	70	Riding experience	under 3 years	11
	male	30		4 – 6 years	21
Age	age 10 – 15	1	Skills level	7 – 10 years	22
	age 16 – 20	21		over 10 years	46
	age 20 – 30	74		beginner	1
	age 30 – 40	3		basic	11
	age over 40	1		intermediate	58
				advanced	30

advanced (30%). However, in view of the considerable subjectivity of the evaluation of the respondents' skills it may be assumed to be burdened with a certain error margin [10].

In this population Polish Halfbred horses predominated at 39.3% followed by the Wielkopolski horses at 22.0%. The shares of other breeds were markedly lower: Trakehner horses at 5.3%, Welsh ponies at 4.7%, Polish cold-blooded horses at 4.0%, Koniks at 3.6%, Arabian and Silesian horses at 2.7% each, Malopolski horses at 2.0%, Haflinger and Anglo-Arabian horses at 1.3% each, crossbred Arabian-Konik horses, thoroughbred, Hanoverian, Hucul and Russian Trotter horses at 0.7% each and horses of unknown breed at 7.6%. Most of the horses were mares accounting for 54%, geldings at 37%, while 9% were stallions.

In all the riding centres horses aged 8-12 years predominated (35.5%), which means that they have been used for recreation for several years. A relatively numerous group consisted of young horses aged 4-7 years (30%), followed by those aged 13-16 years (21.5%). The oldest horses aged over 16 years accounted for 13%. The mean age of all horses in the analysed riding centres was approx. 11 years.

Results and Discussion

According to Mickunas [8], geldings are most suitable for recreational use, since they are emotionally stable and least excitable. Mares are much less obedient, particularly during oestrus or in the presence of unliked herd members. However, their use may be more versatile, i.e. both for riding and for reproduction. This is an additional economic argument for many riding centres.

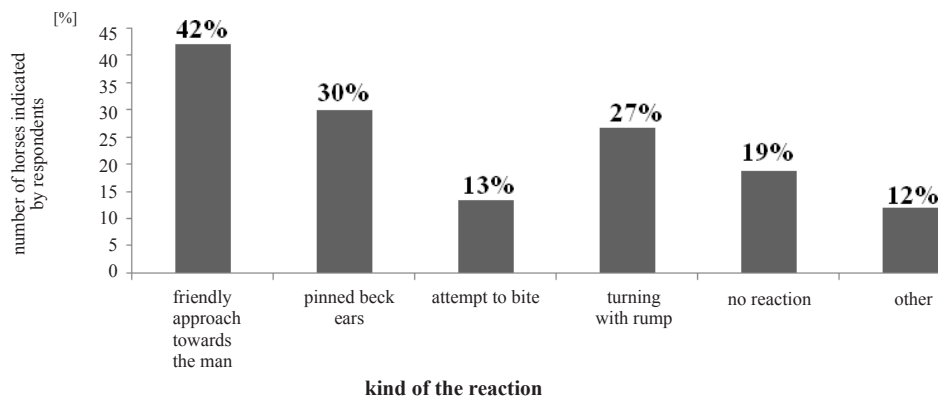


Fig. 1. Types of behaviour in horses provoked by entry of a human to the stall

It is generally known that prolonged stay in the stable and a lack of exposure to diverse environmental stimuli result in emotional discomfort in horses. Overexcitation or extreme apathy as well as other behaviours related with boredom or monotony are only some of the causes for the development of the so-called stable vices [8, 9]. In the riding centres analysed in this study all the horses were kept in individual stalls. Hausberger et al. [3] were of an opinion that continuous stay within a limited enclosed space and negative experiences related to training (horse riding) may lead to chronic disengagement, which is manifested, among other things, in apathy. In human psychology it is a condition typically defined as burnout.

Not all horses show a positive reaction to a human appearing in what they perceive as their safe living space, i.e. their stall [12]. This was confirmed by the responses submitted by the respondents in this study. It was found that 30% analysed horses pinned back their ears, in this way manifesting their dislike, 27% turned away, while 13% attempted to bite the individual entering their stall (Fig. 1). While pinning back the ears may be a sign indicating a lack of acceptance, the horse turning their back towards the human may be a sign of attempting to kick with their hind legs. A rider attacked by a horse, which manifests its aggression by attempts at biting or kicking may suffer serious injury and permanent emotional trauma [2, 4]. However, it results from our study that most horses showed no negative reactions towards a human entering their stall – as many as 42% approached the experimenter, while 19% showed neutral reactions (they neither approached the human nor showed unfriendly reactions). This may indicate that a considerable proportion of observed horses has no negative associations concerning contacts with humans.

In relation to grooming, e.g. brushing before riding, considerable diversity of undesirable behaviours was recorded (Fig. 2). As it is commonly known, pinned back ears are the first signs of a lack of acceptance in a horse. This behaviour is also shown by horses living in the wild. In this way animals inform the others on their intentions, e.g. attempts

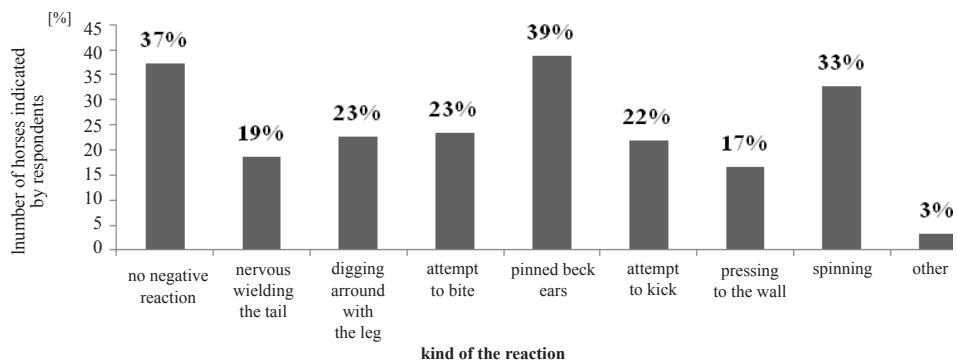


Fig. 2. Types of behaviour of horses during grooming before riding

at kicking or biting, etc. [1, 12]. Among the horses included in this study as many as 39% showed such reactions in the course of grooming before riding. It results from the responses submitted to the questions in the questionnaire that riders in the analysed riding centres dealt with horses, which during grooming pinned back their ears (39%), were stall walking (33%), pawing and attempting to bite (23%), were trying to kick (22%) and were pressing their handler to the wall (17%). In contrast, approximately every third horse (37%) showed no negative reactions during grooming.

The above-mentioned negative behaviours pose a direct hazard to the health of horse handlers, particularly since several types of negative behaviour were observed simultaneously in some horses. The intensity of these vices may indicate considerable emotional discomfort resulting from the situation, in which the horse shows defence behaviour. This may pose a threat to the rider's health and life [2, 4].

In the human contacts with horses a significant role is played not only by grooming operations, but also the animal's behaviour during bridling or saddling. If a horse associates them only with riding, it may manifest its dislike in various ways and then we deal with vices under saddle [8]. The analyses showed that the first signals of unwillingness to cooperate with the rider may be observed already at mounting (Fig. 3). It was found that among the evaluated horses 49% did not want to stand still (they were walking), while for another 14% assistance of another person was needed. Causes for disobedience during the above-mentioned operations may be associated with mistakes made when breaking the horse. Riders mounting a young horse frequently do not enforce obedience from the horse. This lack of consistency leads to a situation when an older horse does not understand the need to stand still when it is mounted by the rider. At all the riding centres a considerable number of horses was reported, which moved forward at the time the rider put their leg into the stirrup (26%) or when the rider sat into the saddle (23%). Mickunas [8] was of an opinion that in the former case such a behaviour may have been caused by an improper manner, in which the rider placed their leg into the stirrup. When

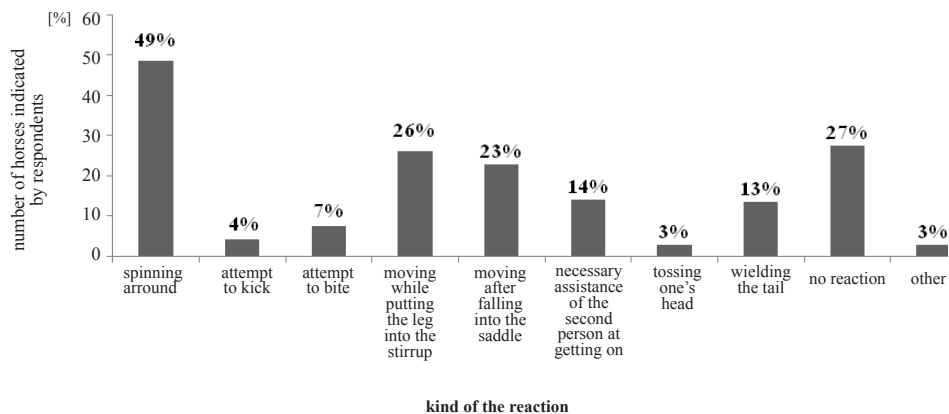


Fig. 3. Types of behaviour in horses while getting on into the saddle

mounting a horse in an inappropriate manner the rider pushes the tip of their boot into the horse's flank.

It turns out that this seemingly easy action either proves painful to the horse, as a result of which the animal adopts defensive behaviour, or it constitutes a signal for the animal to move forward. Frequently beginners when finding themselves above the saddle fall onto it with force. This falling force is considerable and the pain the horse feels may even increase. The animal tries to defend itself by escaping, following its natural instinct [1, 8]. In this case riders, frequently mistakenly, interpret this escape as a sign of disobedience from the horse or an acquired vice. The small percentage of horses (27%), which showed no negative behaviour when being mounted by the rider is a disturbing observation.

Many people consider horse riding to be one of the most pleasant experiences during human contact with horses. However, this activity is sometimes related with unpleasant memories of accidents which they have experienced when riding [2, 4]. As it results from the analysed questionnaire, riders have greatest problems with horses pulling at the reins (35%), bolting (25%), stretching their neck (23%) and bucking (21%). As little as 30% horses were defined by the respondents as obedient, i.e. causing no problems when being ridden (Fig. 4). A disturbingly high percentage of horses was reported to show aggression towards their herd mates (attempts at biting - 15% and attempts at kicking other horses - 13%).

Physiologically horses require at least 4 hours of unrestrained activity on a pasture. Such a period of time spent outdoors satisfies to a minimal degree their need to be physically active and makes it possible for them to manifest their basic social needs, including establishment of hierarchy within the herd [1, 9]. Failure to provide horses with an adequate amount of time spent on a pasture may lead to a situation when frustrated animals are unable to cope with excess energy and may to cope with their inability to follow their

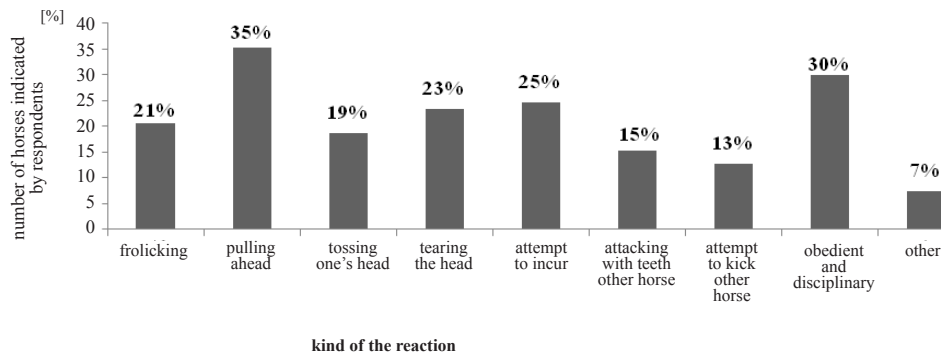


Fig. 4. Forms and the percentage of vices reported for analysed horses during horse riding

instincts. As a consequence this will have a negative impact on the horse's cooperation with humans [1, 13].

In his paper Dudek [2] presented an opinion that accidents in horse riding are among the most frequent, in terms of their frequency ranking immediately after football, basketball and cycling. They typically affect individuals practicing pleasure riding. Over 80% respondents gave a "Yes" answer to the question if they have ever suffered an injury related to horse riding [2]. As indicated by this study, the riders' feet were most prone to injury (21.3%). Being stepped on this part of the body by the horse was most common during hoof cleaning and barrel grooming (Fig. 5), as then the rider is found in the immediate vicinity of the animal's hooves. Injury to the upper parts of the legs is equally frequent both

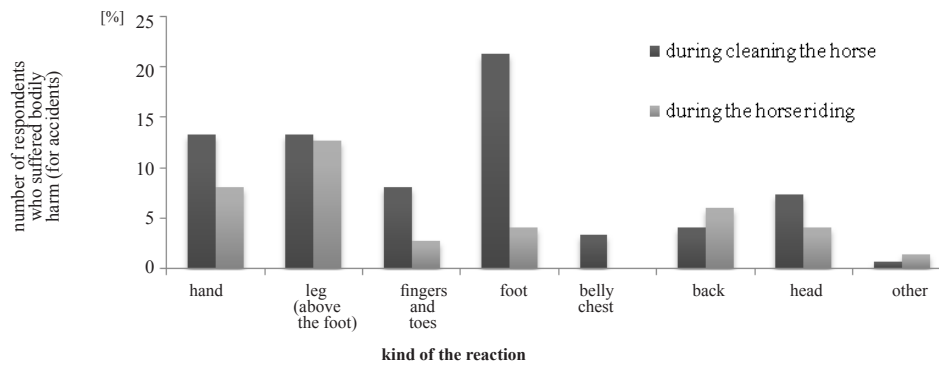


Fig. 5. Frequency of injury to selected body parts while cleaning the horse and during horse riding

during grooming (13.3%) and horse riding (12.7%). In the former case this is frequently connected with kicks, while in the latter – most commonly with falling from the horse [4, 8]. Arm injury was reported equally often (13.3%). The relatively high incidence of injury shows that horse riding is a sport related with a frequency of bodily harm, which is often related with vices observed in horses. For this reason any such undesirable behaviour needs to be eliminated in those animals [4].

Summing up it may be stated that a considerable number of negative behaviours reported in the case of the analysed horses poses a human health hazard, while in some cases it was also life-threatening in relation to the riders. Injuries suffered both during grooming operations and when riding affected first of all upper and lower limbs of the riders. Feet proved to be most prone to injury, as horses frequently stepped on them (as reported by every fifth respondent). The high percentage of horses recorded in this study as those showing various behavioural disorders poses a real problem to all individuals involved in horse riding, i.e. both instructors and riders. Mistakes made when raising the animals, breaking them and during their subsequent use result in negative behaviours targeting customers of riding centres.

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