



## RESEARCH ARTICLE

### HORSE TRAINING IN JAVELIN SPORTS (*JEREED*)

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#### ABSTRACT

This study was conducted to evaluate of information about the training of horses in horse javelin sport in Erzurum province of Turkey. Information about general training steps for training javelin horses was obtained from horse breeders who were trained in javelin. The basic and dressage movements of the javelin horses in the javelin sport training and the movements of the rider in the training have been examined. The results of this study suggest that the training period of javelin horses consisted of two basic stages, individual and team. In the individual training, it was determined that the exercises of harmony with the horse rider, the rewarding in education, the horse gaits, the activities of the basic and dressage movements of javelin. In the case of trainings in teams, it was determined that they were taught to recognize their own and competitor team horses and to perform the commands of the rider at the same time. It was also learned that training and recreation were important for horses to remember their training and to improve their ability to move.

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## INTRODUCTION

*Jereed* (also javelin; Turkish: Cirit) is a traditional Turkish equestrian team sport played outdoors on horseback in which the objective is to score points by throwing a blunt wooden javelin at opposing team's horsemen. Today, *Jereed* is not as widespread as it once was, but is still enjoyed as a spectator sport, primarily in Erzurum, U ak, Manisa, Sivas, Bayburt, Erzincan, Kars and Malatya. According to Yıldırım and Yıldız (2013a), javelin horse owners prefer to 3 year-old male Arabian horses that have been left out of races and being more affordable were preferred in javelin games, and training starts after this age. The javelin horses, which have last 6-12 months of training, are required by the breeder to have a high structured, broad ridged horses with a lesser body length, whose foot joints were strong, nail base was wide, nostrils were open, together with large with small ears characteristics (Yıldırım and Yıldız 2013a). Horses having higher chest depth and rump length were determined to be preferred for javelin sport in the classification made according to the running performance of the horses and the preferences of the breeders (Yıldırım and Yıldız, 2013b). The horse training literature began to be informed about the practice of learning theory in the early twenty-first century. (McGreevy, 2007; McGreevy and McLean, 2007; McGreevy and Mclean, 2010; Mclean, 2008).

In horse training, horse must be a trusting friend, willing to perform certain tasks, and respond to people's individual signals. The training process is based on exposure of the horse to various specific stimuli that alter the frequency and severity of behavioral reactions (Goodwin et al., 2009). Horse riding and training is mostly a period of negative reinforcement, but positive reinforcement can be used in association with negative reinforcement, presumably to enhance the reinforcing impacts (Mclean and Christensen, 2017). This effect is known as combined reinforcement that is gaining common idiom amongst researchers. Investigation has indicated that when combined reinforcement is used, the aversive effects of negative reinforcement may be decreased (Warren-Smith and McGreevy, 2007). When we look at horse training in general, we can separate horse training into two stages as traditional and sympathetic training. Traditional education is often described as a habit for innovation, using human domination, a single protocol including awards for all horses and penalties and the use of negative reinforcements (Fureix et al., 2009). Sympathetic training techniques based on natural horse riding emphasized the stress cooperation between horse and trainer (Visser et al., 2016). The positive effect of sympathetic training methods was found in a variety of studies which growing interest in the technique (Janczarek et al., 2013). However, in both techniques applied, the horses may have individual differences, that is, the responses to the training may be different. Variations in trainability, personality and behavior in the different breeds of today's horses are commonly known

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(Duberstein and Gilkeson, 2010; Gorecka-Bruzda and Jezierski, 2010; Lloyd *et al.*, 2008). Also, according to each horse sport, there are differences in the way horses's trained. There are many horse training studies conducted by researchers, but there are not any studies on the training of javelin horses. The objective of this experiment was to investigate how javelin horses in Erzurum province of Turkey were trained and which stages of training were formed.

## MATERIALS AND METHODS

In this study, the general education level of the javelin breeders is low, and the fact that any training research in javelin training is not done before, forced us to make face to face interviews with breeders. For this purpose, five breeders were selected among the approximately fifty javelin horse breeders in Turkey's Erzurum region. The reason for their selection criterion in the small working pool, they are the best trainers in this area. In addition, the champion team trainers are getting out of this area almost every year. We were taken general opinion of five people who enjoy the training of javelin horse and like of the breeders on how to train horses and the information obtained from them was compiled. Then, in order to calculate the values of the information received from these breeder, a questionnaire was conducted to find out how the horses were training of the 100 javelin horse breeders in the region. According to the information given by people who are said to be good javelin trainer, the questionnaire was created. The purpose of such a method is to make sure that the questions are both in the way they understand, and how many breeder do what the trainers do. That is, we did not want to be directed to breeders without asking them, with our own surveys. We wanted to learn the facts. Because there are not any documents on how to train these horses before. The ages of the breeders participating in the survey ranged from 14 to 61 years (Mean $\pm$ SD = 34.67 $\pm$ 12.19). In the questionnaire, both general information was obtained and the breeders were asked to determine the preference orders about the predetermined data. In the evaluation of the training of horses, we made the right choice from the most preferred to the least preferred (High, Middle, Poor, Least, respectively). The data are presented as percentage values.

## RESULTS

According to the results of research, the training of javelin horses consist of two stages, individual and team, each stage made up for particular tasks to be achieved. The preference rates of rewarding, walking types and basic movements, which are considered important by breeders, is shown in the Table 1. Besides, the informations on the auxiliary, team training variables and stimulation equipments of the horse is demonstrated in the Table 2.

### Individual training

In the individual training, it was determined that the exercises of harmony with the horse rider, the rewarding in education, the horse gaits, the activities of the basic and dressage movements of javelin. The most effective way of shaping the temperament balance between horse and rider is that each rider must personally feed and groom his own horse. It was observed that it took a while to get used to the new objects (the appropriate horse reins, bit and saddles for the javelin sport) for the horses rely on the breeder. When the horses make the desired movement as a reward, they are given feed (29%),

parsley (13%), and carrots (58%) for their food. The walk (23%), trot (5%) and gallop (72%) gait types were found to be more important than the others in javelin horses. The first horse riding times should not be longer and the horse should be expected to get used to rider weight. Furthermore, the longtime gallop studies are not performed, because the equilibrium harmony between horse and rider does not develop in the first training time. Horses obtained from horse races are usually trained in flat racing and speed. However, in the basic training of the javelin horse, the sudden stop (7%), turn (2%) and exit (91%) movements are more important than the race horses. For the reasons of the sudden stop movement are the trainer harshly apply reintension to horse or/and moves right and left with thigh on the horse and destroys the balance. In another specific movement, the turn, is the rider tries to pull the reins of the horse in the direction of turning, and the foot in the same direction must hang down the horse's paunch by hanging down. At the same time, the thigh of the rider on the other side is press on the horse ribs, and the horse turns instantly. Ultimately, as to the sudden exit motion, the trainer is warned by pulling the horse's reins at first, then the reins are released by stimulation with the stirrups, and the moves are made at the same time. During this movement, the horses are kept from the mane and pulled a little to provide the horse exit. Communication between horse and rider is very important during this movement. The horse must be ready for the command of the rider and it must wait for the next movement. In the auxiliary training movements of the javelin horse were carried out four different training. These; To stand flat of the horse (23%): The trainer speak to horse, and calm by patting via neck slapping. To ride a horse in the 8-figure (1%): Slow and medium speed of the horse in the javelin area ride in the 8-figure. Cutting (catching) (58%): The horses trained by trainers cut the speed when they see a horse in front of them and they do not want to get too close to the horse in front. To prevent this status, as long as the opponent movements, rider should exit the other side of the horses. When a rival horse is caught, the rider must reduce the speed of his horse and the rider must go a few meters together rival. The horse must be accustomed in this position and fear of the competitor horse should be hindered. To throw javelin (wood stick) on the horse (18%): It is training that the trainer must use thigh (64%), sound (4%), stirrups (8%) and reins (24%) all together. The horse are trained informations on how to position the thigh, sound, stirrups and rein movements taught by riders during javelin throwing. It must be warned by the horse's reins or stirrups before throwing the javelin. During the javelin throwing and immediately after the head of the horse should be held tight with the help of the reins. Otherwise, it is inevitable to have an accident with the horse.

### Team training

Training in teams begins with repetition of movements taught in individual training with other horses. In this training, a horse with a new participating and a horse with previous training experience start to train side by side, and then the training together with other horses are repeated. The lines of the javelin area are drawn, and the horse learns and adapts to the area lines (18%). The horses are taught to recognize their own and competitor team horses and to perform the commands of the rider at the same time (67%). The horses are standing side by side, their own sudden movement while the horse is still standing, avoiding collision with other horses during the move, preparing themselves before the command by the rider, and getting used to the voice of the rider (15%).

**Table 1. Preference status of the education and training levels of participant breeders, the individual training variables in the horse training (n = 100)**

Level of education %	Primary 18	Secondary 33	High 37	Collage 9	Post graduate 1	Illiterate 2
Level of trainer %	Excellent 22	High 41	Middle 27	Poor 5	Least 5	
Individual training variables	Preferability (%)					
Variables	High		Middle		Poor	
Rewarding						
Feed		29		24		47
Parsley		13		51		36
Carrot		58		25		17
Gait types						
Walk		23		43		34
Trot		5		47		48
Gallop		72		10		18
Basic movement						
Sudden stop		7		28		65
Turn		2		65		33
Exit		91		7		2

**Table 2. Preference status of the auxiliary and team training variables, stimulation equipments of the horse in the horse training (n = 100)**

Variables	Preferability (%)			
	High	Middle	Poor	Least
<b>Auxiliary training movements</b>				
To stand flat of the horse	23	11	38	28
To ride a horse in the 8-figure	1	11	33	55
Cutting (catching)	58	35	7	-
To throw javelin (wood stick) on the horse	18	43	22	17
<b>The horse stimulation equipment of trainer</b>				
Sound	4	24	36	36
Stirrup	8	18	36	38
Rein	24	43	19	14
Thigh	64	15	9	12
<b>Team trainings variables</b>				
Adapting to the area lines	18	33	34	15
Recognizing to own and competitor team horses	-	8	26	66
Performing to commands of the trainer	67	22	7	4
Accommodating to voice of the trainer	15	37	33	15

The voice of the trainer should be quietly when he sees his team's horses, but loudly when he sees his opponent's team horses. These trainings are taught to the horse by repeatedly working in their own team and in other teams. Javelin horses should be trained at least a few days in a week. It has been determined that it is difficult to play in the next period when the horse is not trained for a length of time. It is of utmost importance to repeat the training so that the horse does not forget the javelin rules of the javelin sports and not lose the rhythm that it has caught with the rider. At the same time, the exercises and competitions held bring out the deficiencies and mistakes in both the javelin and the horse rider. Therefore, this condition gives us opportunity to compensate these mistakes. Training and recreation are also important for horses to remember their training and to improve their ability to move. Regular exercise of the javelin horse will ensure that we get a horse which is ready, smooth, strong, and conditioned.

## DISCUSSION

In commonplace horse training models, the behavioral training model admits the well-developed recall of horses (DeArango *et al.*, 2014). The horse may not necessarily "confidence" the rider, but, reacts to trained cues that are modulated by arousal, affective states, and attachment levels. The horses are not culpable participants in training, and they learn through the right timing practice of positive and negative reinforcement programmes (McGreevy and McLean, 2010). Hence, it may be

important to give individual training to the horses, usually trained in flat racing and speed, coming out of races with a certain training. That is to say that the riders themselves deal with the horses in terms of behavioral training. In generally, the habituation refers to the process of response decrease, while desensitisation techniques refer to the methods applied to achieve habituation. In combination approach conditioning with the systematic desensitisation, which a gradual habituation to arousing stimulus, exploits the natural tendency of horse to explore and approach unknown objects (McLean and Christensen, 2017). The combination applies is used to conquer fear of javelin horse that are afraid of new objects. In the present study, when the horses make the desired response, giving the carrot as a reward, it is described as the positive reinforcement by some researcher (McLean and Christensen, 2017). According to this researcher, the positive reinforcement has usually been inadequately managed in horse training due to anthropomorphic opinion systems and overestimation of equine cognitive talents. However, the use of positive reinforcement has seen a noticeable increase in popularity in horse training in the last decades. In the javelin sport, horses tire very quickly, because they have to run a lot and have to maneuver. When they are tire during the game, they can reduce their tiredness via walk, type of slow gait, and so this type of walk can be permitted for taking a long distance. The horse, tired of other gait patterns, can be rested by passing to walk (Arpacık, 1996; Emiro lu and Yüksel, 2009; Yarkin, 1962). Therefore, this gait is very important for resting the horses. The

duration of the javelin game (about 80 minutes) and the long distance (about 250 meters in a single round go and return throughout the area) require constant movement of the horse, which causes fatigue. In the trot, another type of gait, the horse can walk longer hours. In other words, the longest distance of a horse in a trot is the type of walking that can go in a short time (Arpacık, 1996; Batu, 1962; Yarkin, 1962). So, this gait type helps to prevent the quick tiredness of the horse. The gallop is the fastest gait type (Yılmaz and Ertu rul, 2013). So, it is preferred that the opponent horse in the javelin sport is used to catch or escape from it. The sudden stop, turn and exit movements, which is basic training of the javelin horse, is applied negative reinforcement rules. Negative reinforcement in outstanding exercise of horse training requires the training of responses and variations in response that are congruent with differences in pressure signals of reins, seat, legs and rider posture so as to facilitate speed, direction, stride length, gait control and posture. It is likely that when signal strengths of particular signals (e.g. the bit and the spur) exceed a certain pressure threshold that are wellbeing implications for horses (McLean and Christensen, 2017). Therefore, the javelin horse trainers are trained in the optimal use of negative reinforcement.

In the auxiliary training movements of the javelin horse were typically carried out together positive and negative reinforcement procedures. In the positive reinforcement, it was observed that the riders talked to the horses and slapping them. According to a widespread belief that patting horses via neck slapping is rewarding for the horse (McLean and Christensen, 2017), but some researcher has shown that wither scratching is more rewarding than patting (Thorbergson *et al.*, 2016). In the rules of negative reinforcement, it was observed that the applications we mentioned in the basic trainings were repeated. Javelin horses come across with many dangers due to position in the races. The calmness has long been emphasised as a significant element in horse training, both the welfare of horse (De la Guérinière *et al.*, 2014; German National Equestrian Federation, 1997; Grison, 2014), and the safety of riders. Indeed, one of the most common cause of human accidents associated with horses is due to their fear reactions (Keeling *et al.*, 1999; Thomas *et al.*, 2006). For this reason, javelin horses should continue to train by a trainer until the fear of rival horse is eliminated. Otherwise, many unwanted situations are encountered (e.g. collision of horses). It was observed that classical conditioning was usually applied in the training of horses as a team. The classical conditioning is elementarily the formation of an association between the neutral stimulus (e.g. visual signal) and a biologically stimulus (e.g. aversive stimulus such as food or freedom). Body postural cues, voice cues, and sometimes visual cues are also installed via classical conditioning when horses have learned to respond (McGreevy and McLean, 2010). As a result, in the team training, this classical conditioning is provided to recognize both their own team horses as well as competitor team horses, and to learn how to respond.

Past research (Yıldırım and Yıldız, 2013a) has suggested that the javelin horses should be trained for three days in a week, and they are difficult to play in the next period when the horse is not trained for a month time. Training frustration can lead to excessive and inappropriate use of chastisement to horses, the repeated use of which decreases its effectualness and may also hinder learning (Mills and Nankervis, 2013). Therefore, the repetition training must be done consciously by trainers. This

results of this study suggested that effective communication and harmony between horse and rider are among the goals of proper javelin horse training. Besides, this research has determined that most of commonplace training models are applied in the training of javelin horses within commonplace training models. However, further investigations are required to elucidate the development of the training processes. Because, horse javelin is an ancestor sport. It is important for us to prevent forgotten valuable sports from our ancestor until today.

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#### Conflict of interest statement

None.

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