

## DÜZENLİ OLARAK YAPILAN TÜRK HALK OYUNLARI ANTRENMANLARININ BACAK KAS KUVVETİNE ETKİSİ

Mustafa KAYA<sup>1</sup>  
Funda DEMİRTÜRK<sup>2</sup>

### ÖZET

Bu araştırmada; Türk halk oyunları türlerinden Sivas yöresi halk oyunlarının 16 haftalık düzenli antrenman programı sonunda oyuncuların bacak kuvvetine olan etkileri incelenmiştir. Araştırmaya 50 erkek sporcu gönüllü olarak katılmıştır. Antrenmana katılan sporcuların yaş, boy ve kilo gibi fiziksel özelliklerinin yanı sıra, belirlenen test bataryası ile bacak kuvvetleri değerlendirilmiştir. Ölçümler 16 haftalık antrenman öncesi ve sonrası olmak üzere iki kez alınmıştır. Elde edilen verilerin karşılaştırılmasında iki eş arasındaki farkın önemlilik testi uygulanmış, anlamlılık düzeyi  $p<0.05$  kabul edilmiştir.

Sonuç olarak; Türk halk oyunları türlerinden Sivas yöresi oyunlarının 16 haftalık antrenman programı sonunda oyuncularda bacak kuvvetini olumlu şekilde artırdığı bulunmuştur.

**Anahtar Kelimeler:** *Halk oyunları, Bacak Kas Kuvveti, Yöresel Halk Oyunları*

## THE EFFECT OF REGULAR TURKISH FOLK DANCE TRAININGS UPON LEG MUSCLE STRENGTH

### ABSTRACT

In this study, the effects of 16-week regular Turkish folk dance training program from Sivas locale upon leg strength of the dancers were investigated. Fifty male dancers participated into the study voluntarily. Leg strength with determined test battery as well as the physical features like age, height and weight of the dancers participated into the trainings were evaluated. The measurements were performed twice including before and after 16-week training program. Paired- t test was used for the comparison of obtained data, and the level of significance was accepted as  $p<0.05$ .

Consequently, it was determined that leg strength of the players significantly improved at the end of 16-week Sivas locale Turkish folk dance training program.

**Key Words:** *Folk Dance, Leg Muscle Strength, Locale Folk Dance*

<sup>1</sup> Gaziosmanpaşa Üniversitesi Beden Eğitimi ve Spor Yüksekokulu

<sup>2</sup> Gaziosmanpaşa Üniversitesi Tokat Sağlık Yüksekokulu

## INTRODUCTION

Folk dances that emerged as result of people's experiences for centuries previously included the activities that were performed amateurishly as a social and cultural work. Admiration of folk dancing by the society and its being followed in close attention in recent years has caused this cultural activity to have professional developments gradually. Folk dancing has been started to be considered as a sportive activity that requires high physical capacity and condition at both competition and performance level. Performing folk dances that include movements based upon skills with high difficulty level continuously at a specific level necessitates dancers to acquire condition and to keep this condition at a high level (Mis, 2001). Although several studies and researches have been carried out upon the cultural and artistic dimension of Turkish folk dancing, there have not been carried out many studies upon the physical activity, exercise quality and movement properties. In fact, various physiological adaptations such as increasing metabolic process, blood stream, muscle development and respiration increase are possible in regular folk dancing activities (Gerek, 2007).

It is known that there are various regional differences in Turkish folk dances. These regional differences in folk dances reveal the variety of movements, dancing time and speed. Although there are regional differences in folk dances, they generally have the same exercise properties. Namely, while performing Turkish folk dances, a physical activity is possible in whole organism (Ünveren, 2005). The common properties of our folk dances that have different characteristics according to their locale include dancing

from slow tempo to fast, dances' depending upon high performance and feet and legs' having important roles in dances.

Folklorists have classified the folk dances into various types and regions. This classification has significantly been made considering the properties of dances such as act, music and costume. One of the Turkish folk dances includes "halay" type dances. In Central Anatolian and Southeastern Anatolian regions, all dances performed collectively in a straight way in disciplinary are called "halay" (Baykurt, 1976; Ekmekcioğlu et al., 2001; Aydın, 1979; Keskin, 1975; Baykurt, 1996; Eroğlu, 1999; Karahasan, 2003).

Sivas locale folk dances are among the "halay" type dances. These dances generally include three parts as "ağırlama, yanlama" and "hoplatma". The dance that starts with a slow tempo goes faster gradually. "Hoplatma" section is the last part of the dance which the movements and rhythm are performed as the fastest and enthusiasm peaks. "Halay" includes dances in a straight line, in semilunar shape or in circular (Aymaz, 1998; Turan, 2001). The number of dancers is at least 3, and this number can increase as the area is available (Sarisözen, 1975). The number of dancers can increase up to 20-25 especially in activities such as celebration and festival. In Sivas locale folk dances, there are figurative differences between female and male dances. Male and female dances are performed separately in the local area. In this separation, cultural and regional characteristics and movement structures of dances are efficient. Whereas female dances include more esthetic, elegant, and simple figures; male dances include harder and more difficult figures. In all

sections of male dances, “sekme” and “çökme” are heavily performed. “Sekme” and “çökme” movements are the ones that are mostly performed in “halay” in Turkish folk dances (Demirsipahi, 1975).

### **Sekme and Çökme Movements Performed in Sivas Locale Male Dances**

**Sekme:** Triplet “sekme” among the basic steps in male dances is considered in foot



**Figure 1- “Sekme” figure**

**“Çökme” as the right foot in front:** The act that is most frequently encountered in Sivas folk dances is slow “çökme”. In general, the foot that is active is the right one. While the active foot is stepped on as sole, the kneecap curves and “çökme” is started. Because one of the feet, especially the left one, will be behind, it is necessary to perform “çökme” pulling the

moved forward stepping. “Sekme” is a movement that is acted on fingertips. While sekme, fingertip is shuffled on the surface and is not moved (Kılıç, 2002). While performing this movement, the feet are put to 20-30 cm front or forward from the starting point. The knees are pulled up and front.

foot. While taking the passive foot forward, the front foot is on the sole and the backward foot on fingertips. While standing up from “çökme” position, bodyweight is put on the right foot, and so that the left one is provided to act for the next step. Furthermore, tiredness is minimized because the dancer makes less effort (Kılıç, 2002).



**Figure 2- “Çökme” as the right foot in front**

**“Çökme” as the two feet side by side:** The point to be considered in this “çökme” is active foot’s carrying the weight of body, and balance point’s focusing on different points. While the active foot is stepped on foot palm, the kneecap starts to be curved, and the other foot that periodically moves

is raised a bit from the surface and put next to the active foot. Two feet are considered to be on fingertips. During this time, the body is straight from hips to shoulders (Kılıç, 2002). While sitting, the bodyweight spreads to both legs equally.





**Figure 3- “Çökme” as the two feet side by side**

**“Yeldirme Çökme”:** In Sivas folk dancing, this kind of “çökme” is performed less rather than slow and fast “çökme” figures. “Yeldirme çökme” and “hoplatma çökme” have the same structures. The only difference between them is that these include less stepping up, moving forward, and repositioning.

**“Hoplama Çökme”:** In Sivas locale folk dancing, “hoplatma çökme” is one of the most important figures of these dances. When compared with other “çökme” figures as a “çökme” technique, two differences emerge. The first one is that because the dance has “hoplatma” part, the rhythm and enthusiasm are at high level. Therefore, position is taken faster rather than the other “çökme”. The second one is the use of “atlama” due to the characteristics of dances. “Atlama” is performed both starting to “çökme” and standing up from “çökme”. Because “atlama” starts stepping the foot on, this stepping foot should be balanced well. In continuity of “çökme” figure, first half

“çökme” position is taken as in the other figures, left foot steps on the surface pushing the right foot, and “çökme” figure is ended.

As could be noticed, Sivas locale folk dances include several figures related to active acting of the legs. Moreover, it is necessary for the dancers to have good physical conditions in order to perform the figures. In order to the figures to be performed in coherence by the dancers, heavy training and permanent recurrence are necessary. In these trainings, the pressure focuses on leg muscles.

When the literature has been reviewed, it was noticed that there were limited number of studies analyzing the effects of folk dances upon the muscle strength, and there were no studies including Sivas locale folk dances. This study was carried out in order to determine the effects of Sivas locale folk dances upon leg muscle strength.

## METHOD

The research was carried out upon Sivas locale male folk dancers dancing “halay” as one of the Turkish Folk Dances. Into the research, 50 dancers with folk dancing experience playing in Sivas Public Training Center, Sivas Municipality Conservatoire, and Cumhuriyet University folk dancing teams voluntarily participated

into the research. Folk dancing trainings were provided to the sportsmen for two hours each daily for four days a week. Before starting to trainings, general and special warm-up exercises related to the dances were provided. In trainings, locale dances including “Sivas Halay, Abdurrahman Halay, Karahisar, Temurağa, Sivas Ağırlaması, Kabak

Halayı, Maro, Horhunbico, Koçhisar, Karhın, Özenteki, Ahcik, Arnavut Halay, and Sarı Kız Halay” were trained and repeated for three times. During the training programs, sportsmen were provided not to leave the trainings and participate into the trainings regularly.

The measurements were performed twice including the beginning and end of the training program that was provided to determine the changes in leg strength as one of the physical and physiologic parameters of the sportsmen. Before the trainings, all sportsmen were informed about the measurement program and the research project, and it was notified to them that the participation was volunteer and confidentiality of the information was provided. During the pre-test and post-test, the tests were performed to the sportsmen in the same sequence.

### Measurements Performed to Dancers

#### Height and Length Measurement:

**Performed tool:** Sinbo brand weighbridge, measuring tape

**Measurement method:** The bodyweight was measured stepping on the stabilized metal bar on two bare feet for the voluntary height measurement. The volunteer was provided to stand still and height of the volunteer was measured with

the measuring tape. While determining the weight measurement, the volunteers were provided to be barefoot and have only a pair of shorts.

#### Leg Strength Measurement:

**Performed tool:** T.T.K.5102 Back-D (Back Strength Dynamometer)

**Measurement method:** The sportsmen stepped on the dynamometer voluntarily, and handled the handlings mounted to the steel rope on the dynamometer. The steel rope was adjusted according to the height of the volunteer, the legs were bended, and waist was kept vertically; dynamometer handling was pulled making all effort by the help of legs without bending the arms, and the indicator was read in kg type. The measurements were repeated three times as rested after 10-minute warm-up of the volunteer. Averages of all three values taken after the measurements were evaluated (Sevim, 1995; Tamer, 2000). For the dependent variables, arithmetic means related to pre-test and post-test values were calculated, t-test was performed to the group, and whether there was a difference at  $p < 0,01$ -  $p < 0,05$  level of significance or not was analyzed.

## FINDINGS

Table 1: Physical properties of the dancers

	N	Mean ± SD
Age (year)	50	22.30± 2.19
Length (cm)	50	1.76 ± 0.06
Bodyweight (kg)	50	71.33 ± 10.04

Table 2: Leg muscle strength values of dancers

Leg Strength Before	Leg Strength After	t	p
Mean ± SD	Mean ± SD		



<b>Leg strength (kg)</b> <b>(p&lt;0.05)</b>	84.30±12.23	89.85±13.49	10.845	<b>0.000</b>
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As result of the 16-week measurements, a significant difference at  $p<0.05$  level was found between two measurements.

## DISCUSSION AND CONCLUSION

In this study, trainings were provided to 50 male dancers with at least three year Sivas locale folk dancing experience for two hours each for four days in a week during 16 weeks, and the effect of these trainings upon the changes in leg strengths was analyzed. Significant differences were determined between the pre-measurements and post-measurements of the dancers participated into the research ( $p<0.05$ ). This increase in the muscle strength was considered to be occurred as result of heavy load on muscles due to “çökme, sekme” and leaping (“sıçrama”) movements performed frequently in Sivas locale folk dancing trainings.

Ünveren determined pre-test leg strength average of the volunteer group who made regular folk dancing trainings for three months as  $124.083 \pm 24.558$  and post-test leg strength average as  $137.694 \pm 28.593$  kg (Ünveren, 1997).

In their research upon 69 female ballerinas between 8 and 11 age groups, Bennell et al. measured leg muscle strength of the dancers with Nicholas manual muscle test before and after the 12-week training program. In measurements, significant increase was noticed in strength of leg adductors and abductors (Bennell et al., 2001)

The aerobic exercises including complex movements as well as folk dances are efficient upon development of physical fitness (Baltacı, 1996). In this sense, folk dances are considered to

affect the physical dynamism and body coordination. Difficulty level of the movements is possible to change according to the characteristics of the locale in folk dances. Strength differences can be noticed according to the duration of the trainings and number of repetition. “Halay” as one of the Turkish Folk Dances is rich in terms of the figures in which combined movements especially depending upon leg strength are repeated frequently. Improvement in leg strength is possible in people who are dancing the folk dances of this locale. The reason for this is active dancing of the people acting these folk dances and their studying at a fast tempo (Ünal, 1992).

Consequently, increase was significant in leg strength of Sivas locale folk dancers at the end of six-month training program. This increase was considered to be arisen from the frequent performance of figures depending upon leg movements in folk dancing trainings. The increase in leg strength can vary according to the locale characteristics in folk dances, trainings, duration of the trainings and repetition number of the movements.

Related to the same topic, further studies including different age groups and investigating the difference between the genders are considered to be needed analyzing the effects of training programs at different duration and repetition.

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