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**THE EFFECTS OF PRACTICING QANUN WITH WEIGHTING MATERIALS ON THE PERFORMANCE AND THE PHYSIOLOGICAL STRUCTURES**

**ABSTRACT**

In this study, it was aimed to determine positive and negative effects of practicing qanun with weighting materials on the performance and the physiological structure of qanun performers. This study carries importance from the point of researching the positive or negative effects of this method on the performance of the qanun and physiological structure of qanun players which is a new pattern to the literature. This study which is important from the point of guiding the performers who intend to practice with this method is based on document survey and interview technique in the qualitative research model. 10 qanun performers were interviewed based on the interview form containing semi-structured questions. According to the findings obtained from those performers, the duration of the positive effects such as comfort and agility in performance was too short and imbalances were experienced in the coordination of hands and catching the metronome speed. The majority of the performers who participate the interviews were seen to encounter negative effects related to the physiological structure.

**Keywords:** Qanun, Music, Weighting Material, Performance, Physiological Structure

**AĞIRLIK MALZEMELERİYLE KANUN ÇALIŞMANIN İCRAYA VE FİZYOLOJİK YAPIYA ETKİLERİ**

**ÖZET**

Bu çalışmada, ağırlık malzemeleri kullanarak kanun çalışmanın, icraya ve insanın fizyolojik yapısına yönelik olumlu ve olumsuz etkilerinin belirlenmesi amaçlanmıştır. Literatürde henüz çok yeni olan bu yöntemin, çalgı icrasına ve insanın fizyolojik yapısına olan olumlu ya da olumsuz etkilerinin ilk kez araştırılması açısından bu çalışma önem taşımaktadır. Bu yöntemle çalışmak isteyen icracılara yol göstermesi açısından da önemli olan bu çalışma, nitel araştırma modelinde, kaynak tarama ve görüşme tekniğine dayanmaktadır. 10 kanun icracısı ile yarı yapılandırılmış sorulardan oluşan görüşme formunun uygulanmasına dayalı görüşmeler yapılmıştır. Bu icracılardan elde edilen bulgulara göre, icrada rahatlık, atiklik gibi olumlu etkilerin süresinin çok kısa olduğu, el koordinasyonunda ve metronom hızına uymada dengesizlik yaşandığı ortaya çıkmıştır. Görüşmeye katılan icracıların çoğunluğunun, fizyolojik yapıya yönelik olumsuz etkilere maruz kaldıkları da görülmüştür.

**Anahtar Kelimeler:** Kanun, Müzik, Ağırlık Malzemesi, İcra, Fizyolojik Yapı

## 1. INTRODUCTION (GİRİŞ)

When the history of music literature is analyzed, numerous virtuosos are seen to try similar methods in order to increase their ability to play an instrument during the process of learning. Majority of them regarded their abilities, their specific features, and intensive work program enough to successively play their instruments on their way to be the virtuosos. Some of them, different from those above, developed specific practicing methods in order to improve their physiological structures and ability to play instruments through using additional and external materials (weighing materials, rubber bands etc.). Thus, only using the physiological structure is regarded enough in ultimately playing their instrument and additional materials are also used. In literature, however, there are also interesting medical records indicating mutilation due to using additional materials and different practicing methods.

For example, one of the unlucky musicians who became mutilated in this way and his musical life was interrupted is Robert Schumann (1810-1856). Schumann who applied a specific method through slinging his fourth finger of right hand with a loop and strengthening the other fingers became disabled and lost his virtuosity; thus, he couldn't become a piano virtuoso although he desired so much. After this event which was a climax in his life, he continued his music life through writing on music and making compositions (Say 2005: 273-279). Such compulsions and disablements were also encountered by Haydn, Beethoven, Schubert and Ravel (Akı 1995:5-11, cited by. Yağışan 2004:563).

Physical problems depending on excessive compulsions and injuries which threaten the occupational lives of musicians, even ends them may vary in numbers. However, the most common types are the problems such as Overuse Syndrome, Muscle Tear, Nerve Compression, and Tendinitis (See. Yağışan 2004:563). Such problems may emerge according to the instruments used by the person and the method of practicing.

In Turkey, especially in recent years, some qanun performers are observed to try different practicing methods depending on the use of the materials of weighting materials in order to speed up and strengthen the use of their fingers, and increase the success levels of their performances. Some of those performers tied up some definite weighting materials used in doing physical exercises, the weighting materials or the materials such as iron or leads onto their wrists and arms while some others tying up rubber bands or some other weighting materials to their fingers.

The method of practicing with weighting materials which was known and used by only a few qanun performers started to draw after the publication of the novel *Mutluluk* by Zülfü LİVANELİ. Referring to the famous qanun virtuoso Halil Karaduman who is a member of his orchestra in a part of his novel, Livaneli mentions that there is no more skilful and successful qanun performer in İstanbul, KARADUMAN's father made him play qanun after tying iron weighting materials to his hands and didn't allow him play qanun without those iron weighting materials until his early youth years and his hands which were released from after the iron materials flew freely over the strings (Livaneli 2012:111). Ahmet BARAN, another qanun performer, played the piece of *Flight Of the Bumble Bee* by N. Rimsky KORSAKOV twice; first, with a wristband containing lead sheets and then after removing them. After the broadcast of this performance on YouTube on September 24, 2012, many qanun performers including the conservatory students aspired and showed interest to this different practicing method (see Baran 2012). This study was carried out based on the necessity to

positive or negative effects of this new method in the literature on the performance of instruments and the physiological structure of human beings.

## **2. RESEARCH SIGNIFICANCE (ÇALIŞMANIN ÖNEMİ)**

In this study, it will be determined that whether practicing qanun using weighting materials is beneficial for the performance of this instrument and whether it has positive or negative effects on the physiological structure of human beings.

Based on the interviews with previously determined 10 qanun performers, it is aimed to determine whether practicing qanun with weighting materials has positive or negative effects on the performance and physiological structure and what were those positive or negative effects if they exist. When the findings of this study which deals with the topic for the first time emerge, it will be a pathfinder to the performers who desire to practice through this method.

## **3. THE METHOD (YÖNTEM)**

This study relies on the document survey and interview methods intended for the determination of the situation in the qualitative research and in a descriptive order (see, Karasar 2010, Özer 1997). The basic characteristics of qualitative research are as following; sensitivity to the natural environment, the participant role of the researchers, integrated approach, the expression of perceptions, flexibility in the designing of research, inductive analysis and observation of qualitative data (Yıldırım and Şimşek 2008).

Since the matter of practicing with weighting materials has been handled in the literature for the first time, the information available on the topic was insufficient. However, it was aimed to use the most convenient sources, even if they are scarce in quantity. The most crucial data in this study were collected through interview technique which relies on the oral expressions of people rather than document survey. 10 qanun performers who are known to have practiced qanun through weighting materials and available to get in touch (all of them are males; nine of them are professionals and one of them is amateur) were interviewed through the application of interview form including 16 open ended and semi-structured questions.

Employing the direct citations obtained from the interviewees and interpreting the results in accordance with them is important for the validity (Wolcott 1994). For that reason, some of the answers obtained from the interviewees were presented as they were in the section of Findings. Majority of the qualitative data were evaluated through content analysis. The basic process in the content analysis is to organize and interpret the similar data within the frames of definite conceptions and themes in an understandable manner. With this purpose, the collected data is conceptualized and they are organized in a logical sense according to the existing conceptions and the themes which explain data are determined (Yıldırım and Şimşek 2008). Accordingly, every interviewee was given interview codes such as letters (A, B, C ...) and numbers (1) and their opinions were codified.

#### **4. FINDINGS AND INTERPRETATIONS (BULGULAR VE YORUMLAR)**

##### **4.1. The Findings Related to the Interviews with the Performers of Qanun who Practice with Weighting Materials (Ağırlık Malzemeleriyle Kanun Çalışan İcracılarla Yapılan Görüşmelere İlişkin Bulgular)**

10 qanun performers who participated the research as the interviewer were given various codes. They are A1, B1, C1, D1, E1, F1, G1, H1, I1, and J1.

##### **4.1.1. Total Experience of Playing Qanun Up to Present (Toplam Süre Olarak Bugüne Kadar Kanun Çalma Deneyimi)**

How long have you been playing qanun?

When the answers to those questions were analyzed; 10 categories of concepts related to time such as 30 years, 27 years, 25 years, 21 years, 20 years, 14 years, 10 years, 12 years, 29 years and 35 years were formed. All of the musicians who attended the interviews had been playing qanun for at least 10 years or more and they were master musicians at an advanced level in the performance. Nine of them were the musicians who have been earning their lives on playing qanun (professionals) and one of them has been earning his live working in other jobs (amateur). Related to this, A1 have answered as "I have been playing for about 30 days", G1 as "I have been playing for 10 years", F1 as "I have been playing for 14 years".

##### **4.1.2. The Purpose of Practicing Qanun with Weighting Materials (Ağırlık Malzemeleriyle Kanun Çalışmanın Amacı)**

When did you decide to practice qanun with weighting materials and for what purposes did you need such a practice?

When the answers to this question were analyzed, 4 categories of concepts related to time such as first year, 1 year later, 2 years later, and 3 years later were formed.

The number of performers who reply as the first year is 4. Related to this topic, C1 has answered the question as "I have decided to practice with weighting materials in the first year", and I1 has replied as "I decided a few months after I started playing qanun .

The number of performers who declare they started 1 year later is 1. Related to this, J1 has presented his opinion saying "I started practicing qanun at the age of 11 and decided to practice with this method one year later".

The number of performers who declare they started 2 years later is 3. Related to this, F1 has said "I tried it two years after I had started practicing qanun".

The number of performers who declare they started 3 years later is 2. Related to this, B1 has said "I decided to practice this way after three years".

Related to their purpose in practicing with weighting materials, four categories of concept such as playing snappily; gaining sleight and speed; strengthening muscles, wrists and hands; increasing condition; beating the instrument were formed.

The number of individuals saying that they had been practicing for playing snappily, gaining sleight and speed of hands is seven. Related to this, B1 has said "I decided for sleight and speed [playing snappily]". The number of individuals saying that they started practicing in this way in order to strengthen their muscles, wrists or hands is 5. Related to this, I1 has said that "I practiced with rubber band to strengthen my hand muscles". The number of individuals saying that they had been practicing for strengthening condition is 1. Related to this, A1 has said "We practiced in this manner to level up

our condition". The number of individuals saying that that they had been practicing for beating the instrument is 1. Related to this, E1 stated "I did all to beat my instrument and will be able to do what I couldn't".

#### **4.1.3. The Experience of Practicing Qanun with Weighting Materials from the Point of Total Time (Toplam Süre Olarak Ağırlık Malzemeleriyle Kanun Çalışma Deneyimi)**

How long have you continued practicing qanun with weighting materials?

When the answers to this question were analyzed, 6 categories of concepts such as a few times, rarely, for a few months, 1.5-2 years, continuously for the first 1.5-2 years, from time to time later on and 10 years were formed.

The number of the performers who have tried practicing with weighting materials and quitted doing it is 1. Related to this, J1 has said "I tried a few times but I quitted when I saw it unbalance my hands" the number of performers who seldom performs this activity is 1. Related to this, C1 has stated "I rarely used the weighting materials; it was not in my usual program". The number of the performers who has tried this activity for a few months (1-6 months) is 3. Related to this, B1 has stated "I have only practiced for 5-6 months". The number of the performers who has tried this activity for 1,5-2 years is 2. Related to this, D1 has stated "I have practiced for 1,5 year". The number of performers who had practiced this activity continuously for the first 1-2 years and then performed from time to time was 2. Related to this, I1 has stated "At the beginning, I continuously practiced it for one year and then I practiced from time to time". The number of the performers who has tried this activity for 10 years is 1. Related to this matter, H1 has stated "I have been practicing with weighting materials for 10 years and I still practice from time to time".

#### **4.1.4. Being Affected at the Beginning of Playing Qanun with Weighting Materials (Ağırlık Malzemeleriyle Kanun Çalışmaya Başlamada Etkilenme Durumu)**

Was there anyone who directed you or inspired you in practicing qanun with weighting materials?

When the answers to this question were analyzed, 3 categories of conceptions such as colleague, knight and specific inventions were formed.

The number of the performers who state that they had been inspired by their colleagues is 6. Related to this, C1 stated "I started playing in this manner as I had seen from my friends". The number of the performers claiming to have inspired by the knights is only 1. Related to this, H1 stated "I had heard that knights had been practicing after tying their hands and feet with weighting materials. It was a source of inspiration for me". The number of performers saying they were inspired by nobody and it was their invention to practice in this manner is 3. Related to this D1 stated "It didn't happen".

#### **4.1.5. The Activities to be performed while Playing Qanun with Weighting Materials (Ağırlık Malzemeleriyle Kanun Çalarken Yapılan Çalışmalar)**

While you were practicing qanun with weighting materials, what type of activities (only exercises, only pieces, both exercises and pieces)?

When the answers to this question were analyzed, 2 categories of conceptions such as only exercises and both exercises and the pieces were formed.

The number of performers saying they practiced only exercises through this method is 3. Related to it, J1 stated "I practiced only exercises through this method". The number of performers saying they practiced both exercises and pieces through this method is 7. Related to it, C1 has said "I was practicing both exercises and pieces in this manner".

#### **4.1.6. Having Difficulty while Practicing Qanun with Weighting Materials (Ağırlık Malzemeleriyle Kanun Çalışırken Karşılaşılan Zorlanma Durumu)**

Did you encounter any difficulties during the early stages you started playing qanun with weighting materials? How do you describe those difficulties?

When the answers to this question were analyzed, a single category of conception such as having difficulty was formed.

The number of performers saying they encountered difficulty while playing qanun with weighting materials is 10. Related to this topic, C1 has stated "I have spent excessive power, I was exhausted after 15 minutes although I intended to play for half an hour; this shortened the practicing period".

When the replies related to the description of the sensed difficulty are analyzed, 3 categories of conceptions such as agony, pain with sting, ache; physical fatigue and losing power immediately; imbalance of coordination were formed.

The number of performers who describe the difficulties they encounter as agony, ache and pain with sting is 8. Related to this matter, E1 stated that "Burning occurs on a region between the wrist and elbow due to heating. Even, there is a pain with sting between the wrist and the elbow". The number of performers who describe the difficulties they sense as physical fatigue and losing power immediately is 3. Related to this matter, A1 has stated "Practicing with weights causes physical fatigue and compulsion. The arms and muscles strain". The number of performers who define the compulsion as impairment of balance and coordination of hands is 1. Related to this J1 has stated "I had difficulty since the coordination and balance of my hands were imbalanced".

#### **4.1.7. The Benefits of Practicing Qanun with Weighting Materials (Ağırlık Malzemeleriyle Kanun Çalışmanın Faydaları)**

Do you think practicing qanun with weighting materials is useful? What are they, if exist? Please explain them.

When the answers to this question were analyzed, 2 categories of conceptions such as it is useful and it is not useful were formed.

The number of performers determining that such working is useful is 7. The number of performers determining that such working isn't useful is 3.

Related to the benefits of practicing in such a manner, 5 categories of conceptions such as increasing the performance; comforting in hurry and performance; keeping the condition; strengthening muscle groups and wrists; and psychological relief were formed.

The number of performers who determine that such working increase the performance is 2. Related to it, A1 has stated "Its benefit increases the performance". The number of performers who determine that it provides hurry and comfort in the performance is 5.

Related to this matter, B1 has stated "It provides hurry. It has some other benefits besides the hurry. You can play the piece you have to play more easily. The number of the performers who determine that it enables the protection of condition is 1. Related to it, G1 has stated "It is beneficial from the point of protecting the condition". The number of performers who determine that it strengthens the muscle groups and wrists is 2. Related to this, D1 has stated "It helped me to strengthen my wrists and finger muscles". The number of performers who determine that it provides psychological comfort is 1. Related to this, H1 stated that "I think it is beneficial from the point of psychological comforting".

#### **4.1.8. The Harms of Practicing Qanun with Weighting Materials (Ağırlık Malzemeleriyle Kanun Çalışmanın Zararları)**

Do you think practicing qanun with weighting materials has some harms? What are they, if exist? Please explain them.

When the answers to this question were analyzed, 2 categories of conceptions such as it is harmful and it may be harmful were formed.

The number of performers who determine that it is harmful to practice in this manner is 7. Related to this matter, C1 stated "It is definitely harmful". The number of performers who determine that it might be harmful unless some points are regarded while performing such activities is 3. Related to it, H1 has stated "I saw that it may cause in case the practice is performed unconsciously".

About the contents of those harms, 5 categories of concepts such as the imbalance of hands and in following the metronome speed; tendency of speeding up and stiffening during the performance; fatigue and compulsion; health problem; functional losses in the muscles used during the performance were formed.

The number of performers who determine that practicing in this manner causes imbalances in hands and following the metronome speed is 5. Related to it, A1 has stated "Practicing with weighting materials impairs the balance of hands. It inconveniences the performance of the piece to be played at lower metronome speed. In order to avoid the imbalances caused by the practice with weighting materials, it is necessary to practice at lower metronome speed after the general practice is over."

The number of the performers who determine that it causes gradual speeding up and stiffening during the performance is 4. Related to it, F1 has stated "I saw many musicians who play vigorously and show tendencies of gradually speeding up". The number of the performers who determine that it causes fatigue and over compulsion is 5. Related to this, A1 has stated "Practicing in this way makes people fatigue and overstrains them".

The number of the performers who determine that it might cause severe health problems and injuries is 9. Related to this matter, B1 has stated "It may harm wrists, they shouldn't be excessively compelled".

The number of the performers who determine that it causes the loss of functionality in the muscles used during the performance is 1. Related to it, C1 has stated "When you practice with weighting materials, you feel that your forearms start to sting and swell. The muscles around the region gradually get stronger, swell and loses its functionality. However, we need to keep the muscles in the region functioning".

#### **4.1.9. Current Status of Practicing with Weighting Materials and its Reason (Halen Ağırlık Malzemeleriyle Kanun Çalışma Durumu ve Nedeni)**

Do you still play qanun with weighting materials? If so, what are the reasons?

When the answers to this question were analyzed, 2 categories of conceptions such as I practice and I don't practice were formed.

The number of the performers who currently doesn't practice qanun with weighting materials is 8. Related to this matter, C1 has stated "I don't definitely practice". The number of performers who play the qanun with weighting materials is 2. Both of those performers stated that they practiced from time to time. Related to this matter, G1 has stated "Although it is not as frequent as in the past, I practice qanun with weighting materials from time to time".

With respect to the reasons for maintaining practice, a category of condition and performance was formed.

The number of the performers who state that they practiced this way in order to maintain the condition and performance is 2. Related to it, G1 stated "I am practicing in order to keep my condition and performance alive".

#### **4.1.10. The Amount of Weighting Materials while Practicing Qanun and the Increase in the Amount (Kanun Çalışırken Kullanılan Ağırlık Malzemelerinin Miktarı ve Miktar Artırımı)**

In what types and amounts (gr/kg) of weighting materials did you start practicing qanun with and did you try to increase the amount of the weights in certain periods if you kept on practicing that way? If you tried, on what purposes did you do it and how and what extents did you increase the weight materials?

When the answers to the question related to the type and amount of weighting materials are analyzed, 7 categories of conceptions such as pincers, pliers and rubber; bicycle chain; iron plate; sports wristbands; sand bag; metal weighing materials; sackful nails were formed.

The number of the performers who state that they practice through tying their arms with weighting materials such as pincers, pliers etc. is 4. Related to it, A1 stated "We practiced after tying up the pincer and the plier of my father in order to provide weight. We didn't calculate the amount". Related to it, E1 stated "I had no chance to measure the amount since I practiced with rubber". The number of the performers who state that they practice through tying their arms with iron plates having ambiguous weight is 2. Related to it, F1 stated "I had the ironmenger cut iron plates and tied to my arms".

When the answers to the question related to the type and amount of weighting materials are analyzed, 7 categories of conceptions such as 150 gr.; 200 gr.; 250 gr.; 300 gr.; 750 gr; 1 kg; and 2 kg were formed.

The number of the performers who start practicing with the metal scale materials with the weights of 150 gram is 1. Related to it, G1 stated "I practiced through sellotaping the weights of 150 gram used by the greengrocers in scaling the fruit on my fingers". The number of the performers who start practicing with sacksful nails with the weight of 200 grams is 1. Related it, F1 stated "I filled the sacks with nails and tied up to my arm. They were about 200 grams". The number of the performers who start practicing with sports wristband with the weight of 250 gram is 1. Related to it, H1 stated "I started

practicing with sports wristbands of 250 grams containing lead plates". The number of the performers who start practicing with bicycle chains with the weight of 300 gram is 2. Related to it, C1 stated "We practiced with bicycle chains with the weight of 300 gram on each arms". The number of the performers who start practicing with sandbags with the weight of 750 gram is 1. Related to it, J1 stated "I filled sand into the bags of 750 grams which were sewn by my mother and started practicing with them". The number of the performers who start practicing with sandbags with the weight of 1 kg is 1. Related to it, D1 stated "They were bags with sand in them. They were 1 kg each". The number of the performers who start practicing with sports wristbands with the weight of 1 kg is 1. Related to it, B1 stated "I wore the taped wristbands of the sports with the weight of 1 kg and practiced". The number of the performers who start practicing with sports wristbands with the weight of 2 kg is 1. Related to it, G1 stated "I also practiced the sports wristbands of 2 kg".

When the answers to the question related to the increase in the amount of weighting materials are analyzed, 2 categories of conceptions such as increasing the amount or not increasing the amount were formed.

The number of the performers who tried increasing the amount of weight is 5. The number of the performers who didn't try doing so is also 5.

When the answers to the question related to the increase in the amount of weighting materials are analyzed, 4 categories of conceptions such as strengthening the hands; playing fast; condition; and balance were formed.

The number of the performers who determined that they used the weighting materials in order to strengthen their hands is 2. Related to it, B1 stated "I tried increasing in order to strengthen my hands". The number of the performers who determined that they tried in order to play faster is 2. Related to it, G1 stated "I tried increasing in order to play quicker and faster than I am now". The number of the performers who determined that they tried in order to improve their condition is 1. Related to it, H1 stated "I increased in order to carry my condition onward". One of the performers who had tried increasing the amount of the weighting materials determined that he returned back to the original amount when he realized that it impaired the balance of his hands. Related to it, F1 stated "I tried increasing. However, it was too heavy and I kept on practicing after I turned back to the beginning level".

When the answers to the question related to the increase in the amount of weighting materials are analyzed, 4 categories of conceptions such as adding rubber band to the sports wristbands of 1 kg each; quitting practicing with metal scaling materials of 150 grams and begin with the sports wristband of 2 kg; gradually adding lead plates to the sports wristbands of 250 gr until they are 6 kg each; whipping the rubber band around the finger a few turns and practice were formed.

The number of performers who added rubber band to the wristband is 1. Related to it, B1 stated "When the weight of the wristband increased, the material started to hit qanun and there was no place in my arm; then I needed to add rubber band while practicing. The number of performers who quitted practicing with metal scaling materials and start with sports wristbands of 2 kg is 1. Related to it, G1 stated "After a while I had practiced with taped scaling materials on my rings, I tried the sports wristbands of 2 kg on the arms". The number of performers who periodically added plates to the sports wristband

containing 250 gram of lead plates until they are 6 kg each is 1. Related to it, H1 stated "I started with sports wristbands containing lead plates of 250 grams and increased them up to 6 kg". The number of the performers who whipping the rubber band around his finger once at the beginning and then practice after whipping it a few times more and making it stretcher is 2. Related to it I1 stated "In order to increase the tension and the load, I whipped the rubber band a few times around my finger.

None of the performers who tried practicing after increasing the amount of weighting materials mentioned about the periodical intervals they carried out the increase.

#### **4.1.11. The Definition and Period of the Effect Sensed after Practicing Qanun with Weighting Materials (Ağırlık Malzemeleriyle Kanun Çalıştıktan Sonra Hissedilen Etkinin Tanımı ve Süresi)**

Do/Did you feel any different effects (positive or negative) when you kept practicing qanun without weighting materials after you have (had) practiced with weighting materials? How do you define this positive or negative effect? How long this effect (minute-hour-continuously) goes on?

When the answers to the question were analyzed, 2 categories of conceptions such as positive effect and negative effect were formed.

The number of the performers who felt positive effects when they kept on practicing after they removed the weighting materials is 8. Related to it, A1 stated "The hands almost fly". The number of the performers who felt negative effects is 2. Related to it, J1 stated "Its effect is negative since it impaires the balance of my hands.

When the answers to the question related to the definition of positive or negative were analyzed, 4 categories of conceptions such as almost flying of hands; getting faster; impairment of balance; a short-term, temporary and psychological relief were formed.

The number of the performers who determined that their hands almost flew after they had removed the weighting materials and they played faster is 4. Related to it, I1 stated "The muscles relieve and you play faster". The number of the performers who feel the relief in the performance is 4. Related to it, D1 stated "Even for a short while, there is some relief in the performance". The number of the performers who determine that the balance between 2 hands was impaired is 1. Related to it, J1 stated "I quitted practicing when I learned that the balance of my hands was impaired after I removed the materials. The number of the performers who determine that they felt short-termed, temporary and psychological relief is 7. Related to it, H1 stated "It provides a psychological relief".

When the answers to the question related to the period of the effect are analyzed, 3 categories of conceptions such as 1-day effect; the increase of period with the time and very short termed effect (5-15 mins) were formed.

The number of performers who determined that positive effect continued on the day which practice took place is 1. Related to it, A1 stated "Its effect continues on day day which the lesson takes place". The number of performers who determined that the period of effect increased so long as the practice goes on is 2. Related to it, D1 stated "The period of effect continues so long as the practice goes on". The number of performers who determined that the positive effect took only 5-15 minutes and then old metronome speed was accessed and the compulsion restarted is 7. Related to it, C1 stated "It has a temporary and psychological effect of maximum 15 minutes speeding

effect. Although this seems a positive effect, it is a deceptive one. The old speed is regained after 15 minutes”.

**4.1.12. Protracting the Duration of Positive Effect (if Sensed) after Practicing Qanun with Weighting Materials (Ağırlık Malzemeleriyle Kanun Çalıştıktan Sonra Hissedilen Olumlu Etkinin [Eğer Hissediliyorsa] Süresinin Uzatılabilmesi)**

If you feel positive after practicing with weighting materials and then removing them, how can those effects be prolonged through such applications?

When the answers to the question are analyzed, 2 categories of conceptions such as practicing more frequently and never extending the duration were formed.

The number of performers who determined that the process of positive effect was temporary and the effect could be obtained only through practicing with weighting materials is 1. Related to it, I1 stated “The duration may be prolonged through practicing more often”. The number of performers who determined that the duration of positive effect was temporary and it was impossible to prolong this period is 9. Related to it, C1 stated “It provides a short term relief and the duration of it can’t be prolonged”.

**4.1.13. Points to Consider in Practicing with Weighting Materials (Ağırlık Malzemeleriyle Çalışırken Dikkat Edilecek Noktalar)**

What are the points to be considered in practicing with qanun? Are there things (warm-up exercises etc.) before and after practicing with those materials? What are they if exist?

When the answers to the question are analyzed, 9 categories of conceptions such as health problems; regarding them as the means; quitting after the practice for a while; the technique of playing; not practicing hard; maintaining working although the pain increases, using rubber bands instead of wristbands; practicing with heavier materials on the left hand and the quality of timbre were formed.

The number of performers who draw attention to the health problems and permanent disabilities when they describe the points to be considered while practicing with weighting materials is 7. Related to it, A1 stated “It is a necessity to practice without harming the muscles and tendons”. The number of performers who determine that such a practice was only a tool is 2 related to it, D1 stated “Practicing in this manner is just a means to obtain a more comfortable performance, it is not an objective. It is wrong to regard as an objective”. The number of performers who determined that performing such a practice for a while and quitting was a good action is 1. Related to it, B1 stated “Practice should be carried out for a short term like 3 months and it should be quitted when the arms gain strength”. The number of performers who determined that continuously performing such a practice would inhibit finding a perfect method of playing is 1. Related to it, B1 stated “Especially at the phase of finding own technique, such a practice hardens the performance and obstructs the performers in finding their own techniques”. The number of performers who determined that excessive practicing was useless is 2. Related to it, H1 stated “Excessive practicing should be avoided”. The number of performers who determined that practicing in this manner should be continued although the pain is felt while practicing is 2. Related to it, D1 stated “You should keep on practicing although there may be pain while practicing and the amount of pain increases. The number of performers who determined that it was necessary to practice

with rubber bands instead of sports wristbands is 2. Related to it, F1 stated "Wearing a wristband has no benefit for performance. Because, it can hit the qanun and harm it. It may lead to different sounds. The rubber bands compel both the fingers (since they are attached to the rings) and the wrists". The number of performers who drew attention to the necessity of practicing with heavier weights on the left hand is 1. Related to it, F1 stated "left hand should be practicing with heavier weights than the right hand. People with a dominant right hand should practice with heavier weights on the left hand. The number of performers who drew attention to the necessity of protecting the timbre quality is 2. Related to it, I1 stated "The quality of timbre coming from the instrument shouldn't get lower levels while practicing in this manner". The number of performers who didn't suggest practicing with weighting materials is 2.

When the answers to the question related to the things to be done before and after practicing with such materials are analyzed, 3 categories of conceptions such as practicing at lower metronome speeds; (according to the order of practicing) without weighting materials-with weighting materials; without weighting materials-with weighting materials-without weighting materials were formed.

The number of performers who determined that it was necessary to practice at slower metronome speeds is 1. Related to it, A1 stated "The problems are encountered during the performance of the pieces at metronome speed after the practice with weighting materials is over due to the increase in the tendency of fast and quick performance. This problem will be sorted out through working at slower metronome speeds after the practice is over." The number of the performers determined that it was necessary to practice without weighting materials and with weighting materials, respectively is 3. Related to it, A1 stated "In order to warm-up, practice should be carried without weighting materials then the weighting materials should be added". The number of performers, who determined that it was necessary to practice without weighting materials-with weighting materials-without weighting materials, respectively is 1. Related to it, G1 stated "Warm-up practice should be carried out without any weighting materials at the beginning, then weighting materials should be added and finally practice should be completed without weighting materials". 6 people didn't present their opinion about the matter.

#### **4.1.14. Health Problems Occurred while Practicing Qanun with Weighting Materials (Ağırlık Malzemeleriyle Kanun Çalışırken Karşılaşılan Sağlık Problemleri)**

Have you experienced any temporary or permanent health problems or injuries while practicing qanun with weighting materials up to now? If so, what is the problem? Have you continued practicing with weighting materials despite this problem?

When the answers to the question were analyzed, 2 categories of conceptions such as encountering health problems and not encountering health problems were formed. The number of performers who experienced permanent or temporary health problems resulting from practicing with weighting materials is 6. When the answers related to the encountered problem were analyzed, 6 categories of conceptions such as muscle tear; adenotomy; nerve compression; muscular pain; blistering of fingers and finger dislocations were formed. The number of performers who experienced nerve compression while practicing with weighting materials is 1. Related to it, F1 stated "I have experienced the problem of nerve compression". The number of performers who experienced muscle tearing as a result of strain while practicing with

weighting materials is 1. Related to it, C1 stated "While I was practicing with weighting materials, I felt burning in the region of muscles. It was something like muscle tearing". The number of performers with adenotomy in their arms is 1. Related to it, E1 stated "Adenotomies occurred on my arm". The number of performers who experienced muscle pains in their arms and hands is 1. Related to it, G1 stated "I felt tingling on my arms at the evening of the day I practiced or the following day due to heavy burdens on my arm". The number of performers who experienced blistering on their fingers is 1. Related to it, H1 stated "My fingers continuously blistered". The number of performers who experienced finger dislocations is 1. Related to it, I1 stated "My finger was dislocated while I was practicing arpeggio with weighting materials".

5 of 6 performers who experienced permanent and temporary health problems due to practicing with weighting materials quitted practicing upon they encounter this health problems. Related to it, G1 stated "I quitted practicing upon the compulsions". A performer with blisters in his fingers continued practicing with weighting materials from time to time. Related to it, H1 stated "I am going on practicing this way, even occasionally".

The number of performers who didn't experience permanent and temporary health problems is 4. Related to it, D1 stated "I have never had problems".

#### **4.1.15. The Status of Suggesting the Practice Qanun with Weighting Materials to the Other Musicians (Ağırlık Malzemeleriyle Kanun Çalışmayı Diğer Müzisyenlere Önerme Durumu)**

When you evaluate the results of practices you have practiced with weighting materials so far, do you think such practices are useful or harmful? Do you suggest such practices to other musicians? If so, at which level should musicians practice this way? (beginning-intermediate-advanced)

When the answers to the question were analyzed, 3 categories of conceptions such as harmful; useful; useful if attention is given to the matters related to health and harmful if they are ignored were formed.

The number of performers who regarded practicing with weighting materials as harmful and never suggested is 3. Related to it, C1 stated "It is definitely harmful and I don't suggest it". The number of performers who regarded useful is 3. Related to it, D1 stated "It is useful". The number of performers who determined that practicing with materials is useful so long as the matters related to health is taken into consideration and harmful if opposite is done is 4. Related to it, F1 stated "It may be useful; however, it is extremely harmful for health if it is compelled".

When the answers to the question related to suggesting other musicians practicing with materials were analyzed, 3 categories of conceptions such as I suggest, I don't suggest; I suggest so long as some points are considered were formed.

The number of performers who suggested practicing with materials is 4. Related to it, H1 stated "I suggest". The number of performers who didn't suggest practicing with materials is 3. Related to it, C1 stated "I don't suggest to anybody". The number of performers who suggested practicing so long as some points are considered is 3. Related to it, F1 stated "I suggest but a supervisor should be consulted. H1 stated "I suggest. Nevertheless, a supervisor should be consulted in order to avoid possible permanent injuries".

When the answers to the question related to the levels of the musicians to practice this way are analyzed, 3 categories of conceptions such as intermediate level; advanced level; all levels were formed.

The number of performers who determined that only intermediate level musicians should start practicing with materials after they began to master their instruments is 5. Related to it, E1 stated "This method shouldn't be applied at the beginning. It should be practiced after the intermediate level". The number of performers who determined that advanced level musicians could practice with materials is 2. Related to it, G1 stated "Perhaps, this activity will carry a meaning for the musicians at advanced level". The number of performers who determined that the practices with materials could be carried out at any levels (beginning-intermediate-advanced) is 1. Related to it, I1 stated that "It is useful at every levels if attention is paid.

#### **4.1.16. The Separated Time for Practicing with Weighting Material in the Program (Çalışma Programında Ağırlık Malzemesiyle Çalışmaya Ayrılacak Süre)**

According to your experiences, what type of a program a performer who desires to practice with weighting material should follow and how much time of his daily activities should be separated for practicing?

None of the performers gave their opinion related to the type of the program a musician who wants to practice this way.

When the answers to the question related to the amount of time that the performers to practice this way during their daily activities are analyzed, 5 categories of conceptions such as  $\frac{1}{2}$  of the daily activities;  $\frac{1}{4}$  of the daily activities; maximum 15 minutes; practicing in accordance with the abilities; practicing by turns were formed.

The number of performers who determined that a musician who desires to practice with weighting materials should carry out the half of their daily activities practicing with weighting materials is 2. Related to it, D1 stated "It is necessary to divide practices into two halves. Half of it may be separated for the practice with materials". The number of performers who determined that a musician should practice for the one quarter of his daily activities is 1. Related to it, A1 stated "A person who practices for 4 hours a day should separate one quarter of this period for such an activity." The number of performers who determined that a musician should practice with materials for maximum 15 minutes is 1. Related to it, G1 stated "In my opinion, maximum 15 minutes of daily activities should be separated for such practices". The number of performers who determined that a musician should practice in accordance with his skills is 1. Related to it, I1 stated "I don't think such a practice can be expressed with time. It may be better to act in accordance with his skills". The number of performers who determined that a musician should practice by turns (with materials-without materials) within the daily activities is 1. Related to it, E1 stated "A musician who practices for 8-9 hours should practice by turns". Two of the performers determined that it was unnecessary to practice this way. Related to it, C1 stated "A musician definitely shouldn't practice this way. It is unnecessary". Two of the performers didn't present their opinion related to it.

#### **5. CONCLUSION AND RECOMMENDATIONS (SONUÇ VE ÖNERİLER)**

In this study related to whether practicing qanun with weighting materials has positive or negative effects on the performance of the instrument and physiological structure of human beings, this

conclusion is reached through interviews carried out in accordance with the problem and objectives.

It was found that majority of the qanun performers who participated the interview used the weighting materials such as pincers, pliers and rubber; bicycle chain; iron plate; sports wristbands; rubber bands; sand bags; metal weighing materials; sackful nails etc. with the purpose of agility, gaining sleight and speed, strengthening muscles, wrists and hands and increase the condition. According to the results of the interviews, the majority of the performers who practiced both exercises and pieces with weighting materials for 6 months-10 years obtained positive results and were successful in reaching their objectives. In addition, the majority of the performers gained benefits such as comfort in performance, keeping the condition and psychological relief through the practices with weighting materials. According to the findings of results of interviews, however, it was found that the positive effects such as agility, gaining sleight and speed, and comfort in the performance weren't permanent, they provided a temporary, psychological relief and had short period of time.

It was also found that the majority of the performers experienced some negative effects on physiological structure such as pain, ache, muscular pain, loss of functionings, blisters in fingers, physical fatigue and immediate loss of strength. The possible negative effects related to health are the muscle tearings, formation of glands, nerve compression and finger dislocations. The advanced negative effects which threaten health are imbalances in the coordination of hands and obeying the metronome speed, the tendency of continuous speeding up and hardening, undesired sounds caused by the hit of wrist bands to the qanun. Majority of the qanun performers who experience the abovementioned health problems quitted practicing with materials.

Although they emphasized the temporary positive effects of practicing with weighting materials, most of the performers were seen to quit using those weighting materials in their practices due to their negative effects on the performance and physiological structure.

Suggestions of the performers who participate the interview are as following:

While practicing with weighting materials, no harm should be brought to wrists, fingers, muscles and tendons; one shouldn't exceed, compel and should be careful against permanent disorders and injuries. Such materials shouldn't be used before warming up hands. The practice with materials should be carried out after the warming exercise without weighting materials, they should be removed at the end of the practice and continue practicing. In order to balance the tendency for speeding up, the practice at lower metronome speed also should be carried out at the end of practice.

Metronome should be benefited in the practices both with weighting materials and without materials. While practicing with weighting materials, the quality of technique and tone should be protected. The materials used in the practice shouldn't touch to the instrument and undesired sounds during the practice should be avoided. One should remember that practicing with weighting materials is just a means not an objective.

Since it is improper for the beginning level, only middle and advanced level performers at a definite level should practice with weighting materials.

New researches may be carried out related to this matter and other instruments based upon this essay. This study will be a

reference for the instrument performers who desire to practice with weighting materials. When its negative aspects are considered, continuous advanced level exercises at various metronome speeds should be carried out rather than practicing with weighting materials.

#### **ACKNOWLEDGEMENT (TEŞEKKÜR)**

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## APPENDIX 1 (EK 1)

### INTERVIEW FORM

#### PERSONAL INFORMATION:

NAME-SURNAME:

GENDER:

DATE OF BIRTH, AGE:

OCCUPATION:

#### QUESTIONS RELATED TO PRACTICING QANUN WITH WEIGHTING MATERIALS

1. How long have you been playing Qanun (years)?
2. When did you decide to practice with weighting materials and why did you choose it?
3. How long have you continued practicing with weighting materials?
4. Was there anybody who directed you or inspired you for practicing qanun with weighting materials?
5. What type of activities (only exercises, only pieces, both exercises and pieces) while you were practicing qanun with weighting materials?
6. Did you have any difficulties during the early stages which you started practicing qanun with weighting materials? How do you describe those compulsions?
7. Do you think it is useful to practice qanun with weighting materials? If so, what are they? Please, give explanations.
8. Do you think it is harmful to practice qanun with weighting materials? If so, what are they? Please, give explanations.
9. Are you practicing with weighting materials currently? If so, what are the reasons for it?
10. What type and what size of weighting materials (gr-kg) did you start practicing qanun with; did you increase the amount if you continued practicing that way? What was your purpose for increasing the amount and how and how much did you increase the weights?
11. When you continued practicing after you practiced qanun with weighting materials for a while and then remove them, did/do you feel any negative effects? How do you describe this positive or negative effect? How long has this different effect continued (minutes-hour-continuously)?
12. If you feel a different and positive effect after you have practiced qanun with weighting materials and removed the materials?
13. What are the main points to be considered while practicing with weighting materials? Are there things to be done (warm up exercises etc.,)? If so, what are they?
14. Have you experienced any temporary or permanent health problem or any injuries due to practicing qanun with weighting materials? If so, what are those problems? Did you continue practicing despite this problem?
15. When you evaluate the results of practices you have carried out with weighting materials in accordance with your experiences, do you think those activities are useful or harmful? Do you suggest such practices to the other musicians? if so, at which level (beginning-intermediate-advanced) should the musicians practice that way?
16. According to your experiences, what program a performer who desires to practice with weighting materials should follow and how much time of his daily life he should separate for it?

I consent all the information and interpretations I have presented in this form to be used in scientific activities.

Name-Surname:

Signature

Date

**APPENDIX 2 (EK 2)**

**INTERVIEWED QANUN PERFORMERS (GÖRÜŞME YAPILAN KANUN İCRACILARI)**

1. Ateş KARADUMAN (Date of Interview: 20.11.2012, İstanbul)
2. Federal KEMERLİOĞLU (Date of Interview: 20.11.2012, İstanbul)
3. Müslüm KARADUMAN (Date of Interview: 21.11.2012, İstanbul)
4. Mehmet ÇELİKSU (Date of Interview: 21.11.2012, İstanbul)
5. Suat AKÇAYLI (Date of Interview: 22.11.2012, İstanbul)
6. Muhammed BAŞDAĞ (Date of Interview: 22.11.2012, İstanbul)
7. Emin ESEN (Date of Interview: 22.11.2012, İstanbul)
8. Ahmet BARAN (Date of Interview: 24.11.2012, Mersin)
9. Mehmet DÖNMEZ (Date of Interview: 24.11.2012, İzmir)
10. Yaşar SAĞLAM (Date of Interview: 13.12.2012, İzmir)