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Welcome to TOJRAS

Message from the Editor

The Online Journal of Recreation and Sport- TOJRAS was first published in 2012. The article publishes original, qualified and sufficient research papers in the field of physical education and sport, sport management, recreation and education of coaching to contribute to the field of sport both in Turkey and in the world. The publication language of the journal is English. The referees and editors of TOJRAS are field experts and the articles are reviewed by them according to their field expertise. The main goal of TOJRAS is to assure a fruitful and academic platform for the authors, referees, and the members of science and advisory board and the contributors to the enhancement of science in the light of the rules of ethics.

We would like to welcome and thank you for your online journal interest which helped TOJRAS to gain popularity and dignity among academic publications locally and internationally so that we can bring various and profound studies in the field of sport by valuable researchers. In addition to them, teachers, teacher trainers, parents, and students around the world have visited TOJRAS for five years continuously. It means that TOJRAS has contributed to the dissemination of new trends in sport education and research to all over the world for years. We hope that this latest issue will also follow our global educational goal.

TOJRAS provides its readers with the opportunity of meeting different aspects on sport education so that they can expand their study fields. Also, the content is freely accessible without charge to the user or to his/her institution. In addition, any views expressed in this publication are the views of the authors and are not the views of the Editor and TOJRAS.

TOJRAS thanks and appreciates the editorial board and reviewers who have contributed a lot to the submissions of this issue for their valuable contributions.

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TOJRAS invites you for article contribution. Submitted articles can be about all aspects of sport education. The articles should be original, unpublished, and not in consideration for publication elsewhere at the time of submission to TOJRAS. Manuscripts must be submitted in English.

TOJRAS is guided by its editors, guest editors and advisory boards. If you are interested in contributing to TOJRAS as an author, guest, editor or reviewer, please send your CV to infotojras@gmail.com.

April, 2018

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Table Of Contents

RESIDUAL EFFECT OF WARM-UPS INVOLVING STATIC OR SELF-MYOFASCIAL-RELEASE EXERCISES ON DYNAMIC POSTURAL CONTROL, FLEXIBILITY AND SPRINT PERFORMANCE IN ELITE MALE COMBAT ATHLETES

Doi: <http://doi.org/10.22282/ojrs.2018.30>

Ateş, B.2. Orhan, Ö.1, İmdat YARIM

1-14

EVALUATION OF COTERIE TEACHERS' COMMITTEE ACCORDING TO THE VIEWS OF PHYSICAL EDUCATION TEACHERS

Doi: <http://doi.org/10.22282/ojrs.2018.31>

Fikret ALINCAK, Ayten ACUN, Mehmet Ali ÖZTÜRK, Ahmet YIKILMAZ

15-31

A COMPARISON OF THE REACTION TIMES OF ELITE MALE TAEKWONDO AND KICKBOXING ATHLETES

Doi: <http://doi.org/10.22282/ojrs.2018.32>

Sezen ÇİMEN POLAT, Onur AKMAN, Özlem ORHAN

32-39

EXAMINING THE ATTITUDES OF HIGH SCHOOL STUDENTS REGARDING PLAYING GAMES WITH PHYSICAL ACTIVITY

Doi: <http://doi.org/10.22282/ojrs.2018.33>

Fikret ALINCAK, Uğur ABAKAY, Selçuk BUĞDAYCI

40-58

ISSN: 2146-9598
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RESIDUAL EFFECT OF WARM-UPS INVOLVING STATIC OR SELF-MYOFASCIAL-RELEASE EXERCISES ON DYNAMIC POSTURAL CONTROL, FLEXIBILITY AND SPRINT PERFORMANCE IN ELITE MALE COMBAT ATHLETES

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Background: Self-myofascial releasing (SMR) exercises using foam roller equipment are thought to improve muscle performance. SMR exercises using Foam roller equipment are a technique that can be easily applied to reduce the tension on the soft tissue, fascia, tendons and muscles without decreasing the muscle performance, and to increase the range of motion of the joint.

Objective: The purpose of this study was to investigate the residual effects of lower body self-myofascial release on flexibility, balance and sprint performance in elite combat athletes.

Method: Thirteen elite male combat athletes (mean age: 20.2 ± 1.82 years, mean body mass: 69.1 ± 7.54 kg, mean body height: 176.2 ± 5.26 cm, BMI: 22.2 ± 1.93 kg/m²), who were medalists at national and/or international competitions,

voluntarily participated in the study. The experimental design of this study was a Crossover Randomized Study. Each athlete participated in three different experimental conditions on separate visits to the sports hall with a 5 days' interval and each took place at the same time of day. During the familiarization session, anthropometric measurements were taken. One experimental day, athletes performed aerobic running and static stretching (AR+SS) followed by a series of athletic performance tests (flexibility, sprint, and dynamic postural control), and the other experimental day, participants performed aerobic running and self-myofascial-release (AR+SMR) followed by the same series of athletic performance tests. The speed (30 meter) was measured with a Newtest, Finland photocell stopwatch system. The sit-and-reach test (S&R) was applied to determine hip, back and posterior flexibility

of the muscles of the lower limbs. Star Excursion Balance Test (SEBT) was used to determine dynamic postural control that is carried out on a grid of the 3 direction as anterior (ANT), posteromedial (PM), and posterolateral (PL) of athletes. The scores were then averaged together to find a composite (COMP) score. After each experimental season, the athletes performed the S&R, 30-m sprint and SEBT tests with 30-s of rest between the test after the warm-up period (pre-test) and at the 15th minute (post-test) during recovery period. The data were analysed with IBM SPSS (Version 23) analysis program. Wilcoxon Signed-Rank Test was used to determine the performance change.

Results: In the sprint test, no statically significant differences was found in the recovery time in the 15th minute for the

both seasons ($p > 0.05$). Flexibility after AR+SMR season was significantly increase than after the athletes performed static stretching at the recovery time in the 15th minute ($p = 0.00$). There were significant increases from pre to recovery time in the 15th minute during AR+SS and AR+SMR for COMP scores, ($p = 0.03$) and ($p = 0.01$), respectively. The COMP score increase was found higher in the AR+SMR season than AR+SS season.

Conclusion: The results show that the 30-second AR+SS and AR+SMR exercises applied to each lower extremity had no effect on sprint performance, had the same effect on dynamic postural control, and that self-myofascial release exercises provided a significant increase in flexibility performance over static stretching.

Key Words: Self-Myofascial-Release, static stretching, flexibility, Star Excursion Balance Test, speed, combat athletes.

INTRODUCTION

The correct warm-up strategy is essential to optimise athletic performance (Cunniffe, Brian, et al, 2017). With an effective warm-up routine, an athlete can improve athletic performance, activate the body, reduce muscle soreness, and aid in the prevention of injuries (Galazoulas et al. 2012). Though previous researches have suggested that an active warm-up appears to be more beneficial than a passive warm-up for athletic performance (Woods et al. 2007; Behm and Chaouachi, 2011), static stretching was considered an essential component of a warm-up for decades. Static stretching involves moving a limb to its end range of motion (ROM) sustaining this stretch position for a period of time (Young and Behm, 2002). Effectiveness of static stretching on ROM have been well established in previous studies (Marek et al., 2005). However, the recent researches has shown that static stretching during warm-up have found detrimental impact on performance (Gelen 2010; Little and Williams 2006).

Pre-activity static stretching can impair strength, power, speed, balance, and vertical jump performance (Behm and Chaouachi, 2011; Galazoulas, 2017). Alizadeh Ebadi and Çetin (2017) reported that according to the analyzes, it was observed that 5 min jogging and 15 s stretching exercises increased the isokinetic strength, whereas 30 and 45 s stretching exercises caused a decrease. Behm et al. (2004) reported that it appears that an acute bout of stretching impaired the warm-up effect achieved under control conditions with balance and reaction/movement time. Costa et al. (2009) indicated that the 45-second stretching protocol did not significantly alter balance scores. Conversely, the 15-second stretching protocol significantly improved balance scores by 18.0%.

Combat sport is a competitive contact sport with one-on-one combat (Morel et al. 2017) and frequently involve striking, throwing, or immobilizing the opponent. Due to all these there is a high risk of injury and individuals with decreased strength, balance, proprioception, and neuromuscular control are also increase risk for injury (Leetun et al. 2004; Willems et al. 2005). In an effort to decrease the number of serious injuries, many measures have been taken in these branches (Pappas, 2007). Therefore, optimization of warm-up strategies seems pertinent for these sport.

More recently, in the athletic population, self-myofascial release (SMR) has been regarded as a performance enhancing, pre-exercise technique (MacDonald et al. 2013; Okamoto et al. 2013; Renan-Ordine et al. 2011).

It is known that myofascial release has effects such as regulating imbalance in the muscles, increasing ROM, decreasing muscular aches and joint stiffness, decreasing neuromuscularly increased tone, increasing flexibility in musculotendinous compound, increasing neuromuscular activity and providing normal functional muscle length. However, this technique is costly, time consuming and require a skilled clinician (Robertson, 2008). Therefore, a SMR is a beneficial alternative for athletes. Researches claim that the SMR application before a workout can enhance athletic performance by the way of myofascial release, leading to increased mobility and neuromuscular efficiency (Castiglione, 2010). Similar to massage, foam rolling before a workout has been said to help restore muscle length–tension relationships and allow for better warm-up (Depino et al. 2000.). Some of these effects have been proven, but the relevant literature is not comprehensive enough.

With respect to the lack of scientific evidence existing in sport and therapy, Schroeder and Best (2015) showed that the effects of Foamrolling exercises as a pre-exercise or recovery strategy are neither homogeneous nor evident. Beardsley and Skarabot (2015) showed contradictory results of foam-rolling exercises on flexibility, force-production, athletic performance, and delayed onset of muscle soreness. Further studies are needed to determine optimal foam roller protocols and variable combinations for elite/well trained athletes to enhance performance. However, there is limited evidence related to foam rolling. Therefore, the purpose of this study was to investigate the effects of self-myofascial-releasing exercises on the sit and reach (S&R), sprint performance, and dynamic postural control in elite male combat athletes.

MATERIALS AND METHODS

Participants

Thirteen international level male combat athletes (mean age: 20.2 ± 1.82 years, mean body mass: 69.1 ± 7.54 kg, mean body height: 176.2 ± 5.26 cm, BMI: 22.2 ± 1.93 kg/m²), who were competing in taekwondo, kickboxing, and wushu, voluntarily participated in this study. Inclusion criteria required physically active athletes with no history of musculoskeletal injury at the lower extremities for at least six months and no health problems before the trial. At the beginning of the study, participant athletes were informed about research protocols and signed a consent form of voluntary participation. All athletes were banned from eating and drinking alcoholic beverages and strenuous physical activities at least 24 hours before the test sessions.

Procedures

The experimental design of this study was a Crossover Randomized Study. Each volunteer participated in three different experimental conditions on separate visits to the sports hall with a 5 days' interval and each took place at the same time of day (13:00–15:00) to avoid any effect of circadian rhythms.

During the familiarization session, anthropometric measurements were taken, body mass index was calculated. One experimental day consisted of a static stretching exercises (SS) followed by a series of athletic performance tests. On the other experimental day, participants performed a self-myofascial release (SMR) bout using vibrating foam rollers (VYPER) followed by the same series of athletic performance tests. The order of testing was designed in such a way that one test would not adversely affect the performance of another test, their order being as follows; flexibility, sprint measurements, and dynamic postural control.

Performance assessment procedures for dependent variables

At the beginning of each experimental session, athletes performed a standard aerobic warm-up that lasted about a 5-minute treadmill run (HP COSMOS, Germany) at 7 km/h and 1% slope. After the aerobic warm-up, the athletes performed three submaximal 30-m sprints with a 10-second rest as a special warm-up. After the 2-minute of passive rest, to obtain pre-

test values, two flexibility, two 30-m sprints tests, and two Star Excursion Balance Test (SEBT) tests were performed. The best scores were recorded for statistical analysis. After the 1-minute passive rest session, SS and SMR sessions were applied. For the residual measurement, after each SS and SMR session, the tests were completed at the 15th minute of the recovery period in the same order. 15-second passive rest was given between the same test and 30-second passive rest was given between the different tests.

Static stretch: Athletes rested passively for 1-minute after the completion of the pre-tests and performed two sets of four static stretching exercises to the point of discomfort of 30-s each with 10-s rest periods including hamstring (seated unilateral hamstring stretch), quadriceps (prone unilateral quadriceps stretch), hip (seated unilateral gluteal stretch), and gastrocnemius muscles (standing unilateral calf stretch).

Self-Myofascial rolling exercises (SMR): SMR exercises were performed using a vibrating foam roller equipment (VYPER). The protocol consisted two sets of one 30-s bout with 10-s of passive rest for each side of four muscles: hamstrings, quadriceps, hip, and gastrocnemius. During foam roller exercises the vibrating foam roller equipment was kept open as highest level.

Sit and Reach (S&R) Test

The sit-and-reach test was conducted using a S&R testing box (Tartı Med, Turkey). For the SR test, the participant sat with their feet against the testing box and with their knees fully extended. In order, to ensure the full extension of the knees in the duration of the test, the examiner pushed down with his hand both knees. Afterward, the participant placed one hand over the other and slowly reached forward as far as they could by sliding their fingers along the measuring board.

Sprint Tests

Sprint speed (20-m) was measured on an indoor synthetic track with a photocell stopwatch system. In these tests, the photocell doors were placed at the start and finish distances. Athletes started from a standing position 0.3 m ahead of the starting line. Each athlete was given three trials every 2-minute, and the best rating was used.

Dynamic Postural Balance Test

The SEBT was designed as a lower-extremity reach test on 8 designated lines on the ground [Gray, 1995]. The test later was simplified as to include only 3 directions as anterior, posteromedial, and posterolateral [Gribble et al. 2012]. Internal consistency reliability of this scale is (ICC: 0.86–0.9) [Gribble et al. 2013]. Bilateral reach distance was measured by using a tape measure fixed on the ground, and the reached point was marked on the tape measure for each direction of SEBT. The tape measures were positioned in connection with each other with 135° angle opposite to the anterior points of posterior medial and posterior lateral areas. Anterior reach was measured from the toe tip at the center, posteromedial, and posterolateral were measured as the distance between the heel and the remotest point reached. The test requires the participants to be unshod in order to reach maximum distance with their free leg when their other leg is on the point of intersection of the star pattern on the floor. Before balance test, each participant was requested to kick the ball and the foot used to kick the ball was recorded as dominant leg. During the test process, the participants were required to keep their hands on iliac and keep their heels on the ground and to touch the remotest point with their toe tip. An experienced researcher made brief demonstration about the test before the measurement process, and the participants were asked to try to reach each direction at least 4 times [Robinson and Gribble 2008]. When the participants put their body weights on their reaching legs during measurements, when they disconnected their stance heels from the ground, or ceased to touch their hips, the process was repeated after the participant was verbally warned. All reach distances were recorded in centimeters. The average of reach-out scores for each direction was taken and normalized in accordance with the leg length values [Gribble and Hertel 2004]. Normalized scores are shown as a percentage of stance leg length (LL%). Normalized anterior, posteromedial, and posterolateral scores were averaged and combined score was found. Composite reach distance (COMP) was calculated by the sum of the three reaching direction by averaging the normalized anterior, posteromedial, and posterolateral scores. The average values of normalized anterior, posteromedial, posterolateral, and composite scores from the right limb and left limb were used for statistical analysis.

Statistical Analysis

Statistical analysis of the values obtained from the study was performed using the IBM SPSS (version 23) analysis program. Skewness and kurtosis were checked to determine whether the data were appropriate for normal distribution. First, the arithmetic mean, standard deviation values of the data were calculated. Wilcoxon was performed the effects of pre-post and intervention. The alpha value were accepted as significant ($p < 0,05$).

RESULTS

Flexibility was increased significantly from pre-to post-test in the AR+SMR session ($p = 0.00$) while no significant differences was found in the AR+SS session ($p = 0.42$). Both the AR+SS and AR+SMR treatment increased the dynamic postural control, respectively ($p = 0.03$; $p = 0.01$). No statically significant differences was found in the sprint performance both the AR+SS and AR+SMR treatment, respectively ($p = 0.64$; $p = 0.92$).

Table 1. Descriptive statistics of participants (n = 13).

Variables	Mean	SD
Age (year)	20.2	1.82
Height (cm)	176.2	5.26
Mass (kg)	69.1	7.54
BMI (kg/m ²)	22.2	1.93
Sport specific training age (year)	11	3.61
General training age (year)	12.8	4.21
Leg length (cm)	94.7	5.66

SD: standard deviation.

Table 1. Pretest, Posttest, and Gain Scores (in cm) of S&R for Each Group (n= 13)

	Pre-test	Recovery moment (15 th min.)	Gain (difference between pretest & posttest (CI 95%, Lower- Upper)	<i>p</i>
Aerobic running+static stretching	29.7±8.71	30.8±8.13	1.23 (-0.84 - 3.3)	0.42
Aerobic running+self-myofascial rolling	28.4±8.62	30.2±8.57	1.77 (1.02 – 2.52)	0.00*

Table 2. Pretest, Posttest, and Gain Scores (in second) of sprint for Each Group (n= 13)

	Pre-test	Recovery moment (15 th min.)	Gain (difference between pretest & posttest (CI 95%, Lower- Upper)	<i>p</i>
Aerobic running+static stretching	3.02±0.09	3±0.09	-0.02 (-0.03 - 0.00)	0.64
Aerobic running+self-myofascial rolling	3.01±0.06	2.81±0.84	-0.2 (-0.07 – 0.3)	0.92

Table 3. Pretest, Posttest, and Gain Scores (in %) of SEBT-COMP for Each Group (n= 13)

	Pre-test	Recovery moment (15 th min.)	Gain (difference between pretest & posttest (CI 95%, Lower- Upper)	<i>p</i>
Aerobic running+static stretching	96.2±3.52	98±5.04	1.55 (-0.04 - 3.14)	0.03*
Aerobic running+self-myofascial rolling	86.7±4.52	88.8±4.34	2.17 (0.4 – 3.93)	0.01*

DISCUSSION

The purpose of this study was to investigate the residual effects of lower body foam rolling on flexibility, dynamic postural control and sprint performance in elite combat athletes. To our knowledge, this is the first study investigating the residual effects of SMR on dynamic postural control. The main findings showed that the addition of self-myofascial rolling with foam roller after an aerobic running had a significant performance-enhancing effect on S&R in recovery moment at the 15th minute, while having no statistically significant effect on sprint performance. Furthermore, both the AR+SMR and AR+SS appeared to have an enhancing effects on COMP scores in elite combat athletes in recovery moment at the 15th minute.

There are studies with the findings that static stretching increases the flexibility (Nelson and Kokkonen, 2001; Fowles et al. 2000). Similarly, previous research has shown that SMR can increase flexibility acutely in untrained, adult subjects with no SMR experience (Jay et al. 2014; Sullivan et al. 213). There are few studies compared the residual effect of SMR and

SS on S&R performance. In the present study, from pre-test to 15 minutes post-test, AR+SMR treatment significantly increased flexibility than AR+SS ($p= 0.00$). Parallel the present study, MaCDonald et al. (2013), which compared the residual effects of SMR and SS on S&R performance showed that after foam rolling, subjects' ROM significantly ($p = 0.001$) increased by 10° and 8° at 2 and 10 minutes, respectively. Skarabot et al. (2015) reported that post hoc testing revealed that foam rolling with static stretching was superior to foam rolling. All changes from the interventions lasted less than 10 minutes.

There are also other studies investigated the effects of SMR on S&R and ROM performance (Sullivan et al.2013; Grieve et al.2015). Mohr et al (2014), found that foam rolling combined with static stretching produced statistically significant increases ($p=0.001$, $r=7.06$) in hip flexion ROM. Also greater change in ROM was demonstrated when compared to static stretching ($p=0.04$, $r=2.63$) and foam rolling ($p=0.006$, $r=1.81$) alone. Sullivan et al measured the effects of a roller massager intervention on lower extremity ROM and neuromuscular activity. The use of a roller massager produced a 4.3% ($p<0.0001$) increase in sit and reach scores after the intervention periods of one and two sets of 5 seconds.

The research regarding effects of SMR on sprint performance and dynamic postural control is limited. The other finding of the present study was there was a decrease in sprint performance time both the AR+SMR and AR+SS treatments at the 15th minute, respectively ($p = 0.64$; $p = 0.92$). also, both the AR+SMR and AR+SS appeared to have an enhancing effects on COMP scores in elite combat athletes in recovery moment at the 15th minute. A number of studies have reported that SS is not suitable during warming up because of the limitation performance capacity (Shrier, 2004; Taylor et al. 2009). Linderoth (2015) showed no statistical significant difference between dynamic and foam Rolling warm-up routines on 20-m sprint time ($p=0.54$).

In conclusion, SMR is effectiveness method for improving flexibility and dynamic postural control in elite combat athletes. Further investigation is needed to better understand about the residual effects of SMR on these performance.

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EVALUATION OF COTERIE TEACHERS' COMMITTEE ACCORDING TO THE VIEWS OF PHYSICAL EDUCATION TEACHERS

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ABSTRACT

Teachers are responsible for implementation of education- teaching activities in the first degree. In the success of implemented activities in a school, the major responsibility, undoubtedly, belongs to teachers. Therefore, it is quite important that teachers work in a coordinated manner and move in together in the school. On account of this, coterie teachers' committee meetings are very important for the effectiveness of education and teaching process. This study was conducted to determine the opinions of physical education teachers about coterie teachers' committee. In the research, it is tried to determine that opinions of physical education teacher about coterie teachers' committee, whether they received or not received any in-service training and how much time it is, whether they have sufficient knowledge about the establishment of coterie teachers' committee, operation and purpose, whether coterie teachers' committee has contribution to realization of the purpose of teaching physical education, decisions of coterie teachers' committee how and with whom is created, benefits of coterie teachers' committee, opinions on the necessity of coterie teachers' committee,

what proposals are on the activities of coterie teachers' committee. In the research, by using the case study that is one of the qualitative research methods, the data analyzed with content analysis method that obtained from 20 physical education teachers who work in the schools that connected to the Ministry of education in the province of Kahramanmaraş and Gaziantep.

As a result of the research, the majority of the physical education teachers' idea is that coterie teachers' committee is a useful application and effective because the committee provides taking joint decisions. Also, it can be said that the committee has contribution to realization of the objectives of the course, provides to hear different opinions, is effective in providing area and planning. Beside this, it is recommended that the decisions that are taken in coterie teachers' committee need to be supported in the later process, the branches need to be addressed in more detail in the meetings, the taken decisions need to be applied and the meetings need to be done in a more regular way.

Key Words: Life quality, obesity, body mass index, physical activity

INTRODUCTION

One of the most important characteristics of people is that they can constantly renew themselves and pass on their knowledge and experience to new generations. One of the most important tools of this is education. Education involves activities for a specific purpose and has a specific purpose. Because of this feature, the education is continued in institutions called schools (Bilen, 2006). The school is called a school for the educational institution in which various knowledge, skills, habits and behaviors are gained in a regular manner according to certain purposes. At the same time, the school is a collection of students, teachers and managers. The educational environment in the school is a system of personnel, tools, equipment, facilities and organizational items in which the process of information transmission takes place in the teaching learning process and where the student interacts with the subject (Dönmez, 2004). Education is planned and programmed in schools. When children start teaching in school, they come to learn some behaviors, rules and values. When children start education in school, they have learned before to some behaviors, rules and values. The school tries to make students forget about those that are not suitable for their educational purposes, to reinforce their attitudes, and to make students new behaviors (Başaran, 1999).

Teachers are the basic elements of quality education. Because teachers are both very important in education in terms of their relation to human beings, as well as they have to apply programs, organize and conduct programs in the classroom environment (Karabağ, 2002).

The teacher, who is expert and knowledgeable in his occupation, should good get to know and savvy the student and the education programs which are the target mass of the education. Teachers should take care to ensure that the methods and techniques they use during the education and training process are in accordance with the qualifications of the curricula (Baytekin, 2004).

Meetings are held with all teachers and other interested persons in order to receive teachers' views on school activities, to participate in decisions to be taken, and to determine the principles of implementation of the decisions together. These meetings, called the teacher boards, are a ready and suitable environment for the solution of the problems of the functioning

of the school where the school administrator can create a group spirit in the teachers, the participation brings together more than one individual (Taymaz, 2003).

The first and perhaps the most important step in raising productivity in education can be established among teachers working in the same school, and participation increases the number of relationships and cooperative activities that encourage collaboration (Çepni and Küçük). For this reason, a number of meetings are held at regular intervals in schools where branch school teachers in their schools will share their experiences with the implementation and training activities of the curriculum together with the implementation process. These meetings, known as the Coterie Teacher's Committee (CTC), are an important activity that is expected to strengthen the mutual relations among the branch teachers working in the schools in our country, to encourage joint decisions and systematic implementation for the success in education (Küçük, Ayvacı, Altıntaş, 2004).

In the CTC meetings it is examining the educational programs and a common understanding is established. The difficulties encountered in applications are emphasized and their solutions are sought. The characteristics of the students' study and education and properties of environment are examined and the measures to be taken are decided. Unity is ensured in the implementation of the plans to be prepared in relation to educational activities. Professional works and new developments in education are examined. Common measurement and evaluation tools are prepared to implement and evaluate. At the end of the academic year, the CTC prepares a report assessing the curriculum, related legislation, classroom tools and techniques, teaching methods and techniques, school and classroom physical status, and student achievement and presents it to the school directorate. The procedures and principles of the examinations to be held in each semester, question types, topic titles and examination dates are determined at the beginning of the semester. The results of the common exam are assessed in the CTC and the report is presented to the school administration (Arge, 2013).

It seems that the CTC meetings are aimed at enhancing unity and coordination and coordination in education and training. Therefore, the topics to be addressed at the meetings should be discussed in detail in terms of why, what, when, where, and where to answer their questions and be discussed in a discussion (MEB, 1992). The most important step in increasing student success in a school is to maximize the relationship among teachers working in the school (Avalos, 1998; Utley et al., 2003). Although the decisions taken at CTC meetings are

theoretically such an objective, in practice, a lot of interviews with the teachers in the school where the author has both the personal experience and the inspecting process in the inspection process, both of which are far and superficially in purpose and not applied, have resulted in documentation reviews.

This study was designed to determine the views of physical education teachers about the CTC. Answering the following questions in response to this purpose.

Physical Education Teachers

1. What are your mutual views on CTC?
2. Have you received any in-service training so far, how long is it?
3. They have enough knowledge about its establishment, functioning and purpose of CTC?
4. Is there any contribution to the achievement of the purposes of the physical education teaching of the CTC?
5. How and by whom do they make CTC decisions?
6. What are the thoughts about the benefits of CTC?
7. What are the thoughts about the necessity of the CTC?
8. What are the suggestions for the activities of the CTC?

METHOD

The case study of qualitative research methods was used in the research. Qualitative research is a method that provides a flexible approach to the researcher according to quantitative research, offering different approaches to data collection, analysis and research design (Gay et al., 2006). The participants' responses were read several times and similar expressions were brought together and the themes were created (Wolcott, 1994). A case study is a research design which is used in cases where there is more than one evidence or data source, the boundaries between the case and the environment in which the investigated entity is resolved, the case and its environment are not clear (Yin, 1984; Yıldırım and Şimşek, 2006).

Research Group

The open-ended questionnaire prepared to determine the views about of CTC was applied to 20 physical education teachers who were teaching in schools affiliated to the Ministry of National Education in Gaziantep and Kahramanmaraş provinces. The data related to the research group are given in Table 1.

Table 1: Personal characteristics of the research group

Variables	Groups	n	%
Gender	Men	12	60
	Women	8	40
Working Year	1	9	45
	2	5	25
	3	3	15
	4	1	5
	5	2	10
Education Status	Degree	19	95
	Master	1	5

N:20

Some personal characteristics of the research group are represented in Table 1. It is seen that 12 (60%) teachers participating in the research are male and 8 (40%) teachers are female. When we look at the term of office of the research group; It seems that 9 (45%) teachers worked for 1, 5 (25%) teachers 2, 3 (15%) teachers 3, 1 (5%) teachers 4 and 2 teachers (10%) worked for 5 years. When the educational status is examined, it is seen that 19 (95%) teachers have bachelor's degree and 1 teacher (5%) has master degree.

Preparation and Application of Open-ended Questionnaire

In order to create the interview form to be used in the research, first asked from 20 physical education teachers write a composition what the views of about CTC. The interview form was drafted as a result of the information collected from the collected compositions and the related literature. One of the logical ways to test the validity of the scope of the measurement tool prepared for the research is to consult an expert (Büyüköztürk, 2006). The interview form was presented to the experts and the necessary arrangements were made in line with the opinions received and the final form was given to the interview form consisting of 3 personal characteristics and 8 open ended questions. These are the following questions:

1. What are your mutual views on CTC?
2. Have you received any in-service training so far, how long is it?
3. They have enough knowledge about its establishment, functioning and purpose of CTC?
4. Is there any contribution to the achievement of the purposes of the physical education teaching of the CTC?
5. How and by whom do they make CTC decisions?
6. What are the thoughts about the benefits of CTC?
7. What are the thoughts about the necessity of the CTC?
8. What are the suggestions for the activities of the CTC?

The final form of the prepared interview form was applied to 20 physical education teachers working in schools affiliated to the Ministry of National Education in Gaziantep and Kahramanmaraş provinces and data were obtained. During the application, the aim of the research was explained to participants and informed about the importance of answers. According to the participants' responses to the measurement tool, multiple expressions were collected under common themes.

Analysis of Data

The data obtained from the interview form used in the research were analyzed by the content analysis method used in the qualitative researches. In qualitative research, content analysis is used in theoretical sense with no significant themes and if they are analyzed by

creating sub-themes (Yıldırım and Şimşek, 2006). These groupings and encodings have been presented to the experts in the field and they are prepared to analysis according to the experts' evaluations. With the content analysis made, the themes were determined for each question and the frequency and the percentages of the given themes were calculated and the tables were created. In the evaluation of the data, descriptive analysis was used. Finally, reporting was made and findings were presented.

FINDINGS AND COMMENT

This section includes the findings of the interviews conducted to determine the views of about the CTC of 20 physical education teachers working in schools affiliated to the Ministry of National Education in Gaziantep and Kahramanmaras.

Table 2: The distribution of views of the research group on CTC in general.

Themes	N	%
A useful application	12	52.2
Make joint decisions	9	39,1
Ineffective application on paper	2	8.7
Total	23	100

Table 2 gives the distribution of views of the research group on CTC in general. Three themes have emerged in the distribution of participants' views on CTC in general. According to this; Twelve teachers (52.2%) stated that CTC was a useful application, 9 teachers (39.1%) were an effective application for joint decisions, and 2 teachers (8.7%) stated that this application was an ineffective application on paper.

Table 3: Distribution of opinions about whether the research group has in-service training

Themes	N	%
Yes, I have in-service training	17	85
No, I did not get in-service	3	15
Total	20	100

Table 3 gives the distribution of opinions about the opinions of the research group on whether they have in-service training. Two themes emerged from the views of participants on whether they had in-service training. 17 (85%), who constitute a large proportion of the research group, said they had in-service training. 3 teachers (15%) stated that they did not take in service.

Table 4: The distribution of views of the research group has sufficient knowledge about on the establishment, functioning and the of the aim of CTC.

Themes	N	%
Yes, I have the information	13	65
Partly, I have information	6	30
No, I do not have the information	1	5
Total	20	100

Table 4 gives the distribution of opinions about the opinion of the research group regarding the establishment, the functioning and the adequate knowledge about the purpose of the CTC. Three themes emerged from the views of the participants about the founding of the CTC, the functioning and the adequate knowledge about the purpose. According to this; It was observed that 13 (65%) teachers had knowledge, 6 (30%) teachers had partial knowledge, and 1 (5%) teachers had no knowledge about the CTC.

Table 5: Distribution of views of the research group on the contribution of the CTC in the realization of the purposes of physical education education.

Themes	N	%
Yes, there is contribution	12	65
Partly, there is contribution	5	25
No, no contribution	3	15
Total	20	100

Table 5 gives the distribution of views on whether the research group contributes to the achievement of the purposes of the physical education teacher of the CTC. Three themes emerged from the views of the participants on whether the CTC contributed to the realization of the purposes of physical education. The physical education teachers who participated in the research were; 12 (65%) contributed, 5 teachers (25%) partly contributed, and 3 (15%) teachers were not contributing.

Table 6: Distribution of opinions of the research group on how and by whom the decisions of the CTC are made.

Themes	N	%
With physical education teachers	14	70
With school administration	6	30
Total	20	100

Table 6 gives the distribution of opinions about how the research group has made and decisions about the decisions of the CTC. Two themes have emerged regarding this view. The teachers who participated in the research made the decisions of the group teachers' board; 14 (70%), physical education teachers and 6 (30%) teachers were the foreground of the themes they did with the school administration.

Table 7. The distribution of views of the research group on the beneficial aspects of the CTC.

Themes	N	%
A useful application	17	85
Not a useful application	3	15
Total	20	100

When Table 7 is examined, two themes have emerged about the benefits of the CTC. A large majority of the teachers participating in the survey reported that 17 (85%) of the CTC, while 3 (15%) teachers were not helpful.

Table 8. The distribution of the views of the research group on the necessity of the CTC.

Themes	N	%
A required application	12	48
An application that allows joint decisions to be made	8	32
An application that is not required	4	16
A non-compliant application	1	4
Total	25	100

When Table 8 is examined, 4 themes emerged from the views of the participants on the necessity of the group teachers' establishment. It was found that the teachers of physical education stated that it was an application that required 48% of the necessity of the CTC, that it was an application which required 32% of the joint decisions, 16% that it was not necessary application and 4% is an application that is not suitable for the purpose.

Table 9. Distribution of the suggestions of the research group on the activities of the CTC

Themes	N	%
Decisions should be supported in the next process	12	22.2
Branches should be dealt with in more detail	11	20.4
Current issues should be addressed in the Assembly	11	20.4
Decisions should be taken for implementation	10	18.5
Board meetings should be more regular	10	18.5
Total	54	100

Table 9 gives the distribution of the suggestions of the research group regarding the activities of the CTC. Five themes emerged from the proposals of the participants about the activities of the CTC. (20.4%), the current issues should be addressed in the committee (20.4%), the decisions should be taken for implementation (18.5%), and the board meetings should be discussed in more detail (18.5%), it was seen that the themes became the foreground.

DISCUSSION AND CONCLUSION

In this part of the research, the Ministry of National Education is affiliated to the CTC; Gaziantep and Kahramanmaraş in the context of interviews with physical education teachers who work in official schools.

When we look at the views of the research group on general views of the CTC, physical education teachers; They say CTC is a useful application. Again, the research group stated that it was an effective application for joint decisions, but that the application was not made for the purpose because it was on paper. From these views, we can say that CTC is a useful application and that it benefits teachers when it is handled appropriately for its purpose. When we look at some studies evaluating the effectiveness of school coterie meetings (Küçük et. al., 2004; Şahin et. al., 2011); Many studies state that coterie meetings involving common practices and decisions are carried out effectively, but that decisions are not being taken and that they are not considered enough by teachers. In addition, Eyüpoğlu (2015) stated that he did not transfer the

majority of the decisions taken by the coterie committee to the minutes of the meeting and therefore the minutes of the meetings did not really reflect the board meetings.

While a part of the research group stated that knowledge about the functioning and purpose of the TC, a few teachers stated that they have some knowledge. From here, we can say that teachers should be given in-service training related to their field at certain periods of the year. Acarbaş (2011) reported that teachers want to participate in in-service training courses in order to improve themselves. Boydak (1999) and Yalın (2001) stated that in-service training should be provided in the required areas. Furthermore, in the survey conducted by EARGED (2006); In the field of in-service training, the result that teachers should be educated on important issues has been reached. The studies carried out reveal similar results with our research.

The research group has definitely contributed to the contribution of the CTC to the realization of the purposes of physical education education, it has been determined that there is no contribution, partly there is contribution. Moving from these considerations, we can say that in general the contribution of the CTC to the achievement of the purposes of the group. Acarbaş (2011) states in his research that it is important for the education of the geography to reach its goals, that the Association of Teachers is an important place, that the meeting should be convened and that the meetings be held twice in a year.

When the opinions of the research group on how and by whom the decisions of the CTC are made are examined; the majority of those who participated in the study stated that they made decisions with other physical education teachers in the school. Some teachers stated that they made decisions together with the school administration. On the basis of these themes, we can say that the teachers mostly decide with the teachers who are in their own field and the school administration at the time. Acarbaş (2011) stated that he made the decisions about the CTC with the geography teachers who are from his own field in his study with the geography teachers.

When we examined at the views of the research group on the benefits of the CTC, it was observed that a large majority had a favorable application. In general, it can be said that this practice is a useful application for the professional development of teachers.

When we look at the opinions of the research group on the necessity of the group teachers' board; it is stated that it is a necessary application (32%), it is an application that enables taking joint decisions (16%), it is not necessary application (4%) and it is not suitable for its purpose. According to this conclusion, we can say that TC is a necessary practice, that teachers are useful in making decisions together and should be done in an appropriate way for their purpose. Demirtaş et al. (2008) stated that as the number of teachers in the school increases, the effectiveness of board meetings decreases. In many researches it is seen that the coterie committees are emphasized to be in the direction to provide professional development in the academic sense (Barth, 1990; Knapp et al., 2003; McCaleb, 2013).

When the proposal for the activities of the group of teachers of the research group is examined; decisions should be supported in the next period, branches should be dealt with in more detail, current issues should be addressed, decisions should be taken for implementation, and board meetings should be more regular. (Demirtaş and Güneş, 2002) reported that the teachers' committee meetings held in the high school were not made sufficiently effective and oriented towards the goals. However, in the study of Demirtaş and Cömert (2006) about the effectiveness of the group teachers' organizations, the teachers expressed that they were carried out appropriately and effectively for the purpose of these meetings. The results of Forte and Flores (2014) showed that the problems of teachers' cooperative work can be solved by their ability to work together and in cooperation. Somech and Drach-Zahavy (2002) pointed out that such boards should be made up of different members and that especially senior and younger members should be brought together.

As a result, there are views that the vast majority of physical education teachers are effective because the group teachers' board is a useful practice and it allows the board to make joint decisions. In addition, it can be said that the establishment contributes to the achievement of the objectives of the course, enables different opinions to be spoken, effective in providing space and planning. It is also suggested that the decisions taken by the group teachers should be supported in the future, the branches should be dealt with in more detail, the decisions taken should be put into practice and the meetings should be organized more regularly.

SUGGESTIONS

- School administrators and teachers can receive in-service training to make the boards more efficient.
- This research can also be done to other field teachers.
- Decisions about the effectiveness of the CTC meetings can be compared over the years.
- Courses related to physical education and sports education and the Board of Teachers of the Zuma should be opened.

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A COMPARISON OF THE REACTION TIMES OF ELITE MALE TAEKWONDO AND KICKBOXING ATHLETES

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ABSTRACT

This study was conducted to compare the reaction times of elite male taekwondo and kickboxing athletes. A total of 44 athletes, 23 male taekwondo practitioners (age: 17.1±0.4, body weight: 59.9±1.89 kg, height: 171.9±1.96 cm) and 21 male kickboxers (age:16.9±0.34, body weight: 67.2±2.06 kg, height: 175.6±2.16 cm), participated in the study. Two reaction time tests -visual and auditory (dominant hand) reaction tests- were administered to the subjects. Each test was performed three times and the best result was recorded. The data was analyzed using SPSS 23.0 package program. In the study, Shapiro-Wilk test was performed to determine if the numerical variables were normally distributed, and Mann Whitney U test was performed to see if there is any difference

between the groups. $p<0.05$ value was considered statistically significant

When the right hand visual reaction, left hand visual reaction and auditory reaction time of the dominant hand in the kickboxing and taekwondo groups were examined at the end of the study, it was found that there was no statistically significant difference between right hand visual reaction and left hand visual reaction parameters between the groups while there was a statistically significant difference in auditory reaction time of dominant hand, when the confidence interval was 95% ($p<0.05$). In conclusion, we can say that the auditory reaction time of the taekwondo athletes was faster compared to the kickboxing athlete.

Key Words: Kickbox, Taekwondo, Reaction time

INTRODUCTION

Performance in combat sports depends on strength, speed, tactics and skill level in the high level. Sudden and rapid displacement in such sports, combination of hands and feet with the same skill, or defense and attack at the same moment in a very fast and powerful attack towards him are factors related to reaction time (10, 14). For this reason, visual reaction time is seen as one of the important elements in fight sports (13). The reaction time is defined as the time between an unexpected and sudden emergence and this stimulus response (9). The Reaction time can vary depending on age, training status, and the level of central and peripheral fatigue (3). Kickboks ve Taekwondo dövüş sporları içindedir. Kick Boxing is a fighting action that is a combination of punch, kick, knee and clinch movements. It has seven different fighting styles (Semi Contact, Light Contact, Full Contact, Low Kick, K-1 Contact, Musical Form, Aero Kick Boks). In order to win in kick-boxing matches, the athlete must make quick attacks and at the same time he must react quickly to counter attack. Therefore, the athlete must have quick or short time to move. Taekwondo is a defense art that has been independently developed in Korea and gained international contemporary qualities. The main feature of Taekwondo is that it is a competition sport involving defense techniques against the opponent (12). Studies have shown that Taekwondo is effective in reducing body fat, increasing flexibility (7) and improving reaction time (14). The getting to score in an offensive or defensive enforcement in combat sports, substantially depends on the speed of movement, joint mobility and reaction time (14). When the researches on the combat sports are examined, it is seen that they are mostly concentrated in branches such as taekwondo, karate, boxing and judo. However, there seems to be a limited number of studies on the Kick Boxing branch. In addition, there are few studies the number of comparisons in combat sports (16). The aim of this study, which was carried out by considering reaction time as an important parameter in combat sports is to compare the reaction times of kickboxing and taekwondo athletes at the elite level.

METHOD

This study was conducted on a total of 44 male athletes in elite level taekwondo (n = 23) and kick boxing (n = 21) branches in Ankara. Measurements were taken at İsmet İraz and Şefik Tetik Sports Hall. The subjects were informed before the measurements and were informed about the measurements to be made. A "voluntary consent form" has been signed for their participation in voluntary work.

Reaction Time Measurement

Two separate reaction times, visual and auditory (dominant hand), were performed with the New Test 2000 reaction meter. Each test was performed three times and the best time was recorded.

Statistical Analysis

Analysis of the data was done in SPSS 23.0 package program. The Shapiro-Wilk test was used to determine whether the distribution of numerical variables was normally distributed, and the Mann Whitney U test was used to determine whether there was any difference between the groups. Statistically significant level of was accepted as $p < 0.05$.

RESULTS

Table 1. Comparison of Age Values

	Branchs	Mean ±SS
Age (year)	Kickboxing (n=21)	16.9±0.34
	Taekwondo (n=23)	17.1±0.4

Table 2. Comparison of Body Length and Body Weight Values

Parameters	Group	Mean±SS	<i>p</i>
Height (cm)	Kickboxing (n=21)	175.6±2.16	0.32
	Taekwondo (n=23)	171.9±1.96	
Body Weight(kg)	Kickboxing (n=21)	67.2±2.06	0.02*
	Tekvando (n=23)	59.9±1.89	

p<0.05*

As a result of comparing the height and body weight of kick boxing and taekwondo group, a statistically significant difference was found in the body weight (kg) parameter ($p < 0.05$), while no statistically significant difference was found in the height length (cm) parameter (Table 2).

Table 3. The Comparison of Values of Visual Reaction Right Hand, Visual Reaction Left Hand, Auditory Reaction Dominant Hand

Parameters	Group	Mean ±SS	<i>p</i>
Visual Reaction Right Hand (mls)	Kickboxing (n=21)	222±6.96	0.41
	Tekvando (n=23)	217.1±6.35	
Visual Reaction Left Hand (mls)	Kickboxing (n=21)	208.2±5.27	0.29
	Tekvando (n=23)	201.3±4.39	
Auditory Reaction Dominant Hand (mls)	Kickboxing (n=21)	200.1±4.65	0.04*
	Tekvando (n=23)	185.7±5.06	

p<0.05*

When Table 3 is examined, it is seen that Kickboxing and taekwondo group compare visual reaction right hand, visual reaction left hand and auditory reaction dominant hand values. There was no statistically significant difference between left hand and right hand and visual left hand parameters. However, statistically significant difference was found in auditory reaction dominant hand parameters ($p < 0.05$).

DISCUSSION AND CONCLUSION

The visual and auditory reactions of Kickboxing and Taekwondo national athletes were compared in the study. As a result of the study, there was no significant difference between the height of the kick boxing and taekwondo group and the visual reaction parameters of right and left hand, but statistically significant difference was found in the dominant hand auditory reaction parameters ($p < 0.05$). Success in combat sports includes technique, tactics, speed, strength, coordination and reaction. Reaction time can be effective in gaining points as an attack or defense. Especially in the branches where sudden movements like kick boxing and taekwondo are made and it is necessary to make a quick decision (15,18) Heller et al., 1998 found the reaction time values of 19 male elite taekwondo (age = 20.9 ± 2.2 years) against SESE as 196 ± 16.4 ms. Bilgin et al., found elite kickboxing reaction times in their study in 2014; right hand visual $197,26 \pm 28,80$ ms, left hand visual $185,61 \pm 28,52$ ms, right hand auditory $174,39 \pm 28,02$ ms and left hand auditory $173,04 \pm 37,99$ ms. When the auditory reaction values of taekwondo and kick boxers are examined, it is seen that auditory reaction values are better than visual reaction values. O'Donovan et al., indicate that it is possible to improve the reaction time by stimulating studies and that visual and auditory reaction times are important in the fight sports. Dundar stated that the reaction time could be improved by 0,12 ms with training. Again, Çolakoğlu et al., 1993 report that the time of reaction can be shortened by long-term physical training (6). It is stated that the combat athletes have a good level of neurotransmission rates and neuromuscular coordination. These athletes are constantly, quickly and suddenly displaced, and quick decision-making affects reaction times positively (1). In a study on 58 active athletes dealing with combat sports such as boxing, karate, judo and aikido, the right hand visual reaction times ($1/100$ s) $19,85 \pm 2,00$, left hand visual reaction times $19,38 \pm$

2,50, the auditory right hand (dominant hand) reaction was found to be $15,68 \pm 2,12$, and the auditory left hand reaction times to be $15,48 \pm 2,05$. In the combat sports, athletes use various defense and offensive techniques using the upper and lower limbs in a fast and effective manner. Çakıroğlu and Sökmen observed that in a study they conducted in 2012, the 12-week judo technical training had positive effects of reaction time on boys 8-10 years of age. In another study, it was found that there was a significant difference in the comparison between left and right hand reaction time measurement values of taekwondo gyorugi, mean age of 22.2 ± 3.82 years, and taekwondo poomsae, 22.4 ± 2.59 years, respectively ($p < 0,01$). At the same time, the gyorugi athletes' reaction times were shorter than those of the poomsae athletes in both hands. It is thought that this difference is caused by the attack in taekwondo sport, defense and counter-attacks being answered by eye-muscle coordination (8). In the study of 91 male athletes who are engaged in combat sports and whose right hand is dominant and their age is $22,89 \pm 5,37$, the right hand visual reaction times of the kick boks are $188,20 \pm 28,58$ and the left hand visual reaction times are $188,66 \pm 27,25$ and dominant hand auditory reaction times were found to be 158.20 ± 26.65 . In the same study, the mean age of the right hand visual reaction was 187.40 ± 16.23 , the mean visual acuity of the left hand was 186.00 ± 15.63 , 25 and the dominant hand auditory reaction time was $145.20 \pm 17,41$ (5). These values were found to be shorter than the reaction times obtained in the research. It can be saying that this difference may be due to differences in duration and scope of training. When the investigations are examined, it can be said that the reaction time is an important parameter for both taekwondo and Kickboxing. In a research pointed out that taekwondo and kick boxing athletes have similar coordination in their work (16,17). When taekwondo and Kickboxing athletes are compared, it is considered that auditory reaction times are better because of the structure and characteristic features of the taekwondo branch and the use of more auditory stimuli. Asia et al., 2013, found that Taekwondo responded more quickly to visual auditory stimuli in their study of visual and auditory reaction times on taekwondo. For this reason, they emphasized that the auditory reaction may be better because they use external stimuli when driving or defending against opponents. As a result, it can be said that the reaction in fight sports is important for performance. However, it can be seen that the answer to the question of whether visual or auditory

reaction is more prominent in the fight sports is not clear. The reaction times of Kickboxing and taekwondo were compared in this study, considering that the work being done is low and the work to be done in different branches may be beneficial to coaches and athletes.

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EXAMINING THE ATTITUDES OF HIGH SCHOOL STUDENTS REGARDING PLAYING GAMES WITH PHYSICAL ACTIVITY

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ABSTRACT

This is a descriptive research study conducted to examine the attitudes of the high school students towards games. The universe of the study is composed of the high school students in the public schools under the Gaziantep Provincial Directorate for National Education. In total, 493 high school students (295 male, 198 female) participated in the sample group. In order to obtain the data for the research, Gaming Scale was used, which was developed by Hazar (2015). In the analysis of the data, Independent Sample Test, and One Way Anova Analysis were used.

As the conclusion, it was determined that the male students have higher attitudes towards playing games with physical activities; *risk taking* attitude increases and *social adaptation* attitude decreases as the age and the class levels increase; first grade high school students have higher *passion for game* regarding the grade level; *passion for game* is generally high in all of the students; however, the ones with a sportive background have higher *risk taking*, *social adaptation*, *desire for game*, and *pleasure* attitudes; and Anatolian and Science high school students have higher *social adaptation* points compared to Vocational high school students.

Key Words: High School, Game, Physical Activity

1.Introduction

Since the ancient times of the history, game concept has been of importance, and numerous scientific research were conducted in this field, revealing that it has many benefits on the development of child. In this context, the parents should create a playing setting for their children, supporting them to grow up in a play atmosphere with necessary equipment and materials. Accordingly, by providing a well-designed play setting particularly in the pre-school ages, the children can be supported to develop talents and abilities and to healthily develop in physical and mental aspects.

Playing game is considered to be all of the activities that children express emotional thoughts and dreams, help them to recognize and experience their surroundings, support all kinds of development of the child, create a source of happiness for them and often appear as a reflection of social life (Yalçinkaya 1996, Alıncak and Tuzcuoğulları 2016; Kandır 2000; Tezel 2003; Öztürk and Abakay 2014; Aral et al. 2001). According to Baykoç (1988), play is an effective tool that allows the child to adopt various roles that prepare the child to the real life. Alıncak (2017) reported that through the play, the child observes his/her abilities while becoming an adult, making them practical and perfect.

The game is expressed as the activities with infinite flexibility, which create an opportunity for the mind and spirit to adapt to each other. Children play their own personalities in the game, and each game is a new opportunity to revive past experiences. This can be regarded as an excellent indicator of the child's individual development (Newson and Newson 1979).

According to the definition in the grand dictionary of the Turkish Language Association (TDK) (2017) the play is expressed as all kinds of agility-based contests designed to develop talents, intelligence, physical and mental skills, based on certain rules, and an entertainment for good times.

When the developmental importance of the game is considered, it can be mentioned that it helps many faculties of the child work smoothly, accelerates the muscle development, and

brings in many developments such as running, jumping, walking, climbing, sliding, together with physical and motor skills such as tearing off, cutting, holding, and painting (Ayan et. all,;Mangır and Aktaş 19936).

The game includes the energy that is disposed after using the excess energy required for the organism to function. When the child is able to dispose of this energy that creates tension, it gains a healthier balance. A child playing too much game is a healthy child (Öncü and Özbay 2010). Another view defended that while it was possible to discharge the excess of the energy via hunting, fighting, etc. during the primitive ages, with the industrialization, which narrowed the space to move, activities were needed and thus games were found to be discharging the energy excess (Evans and Pellegrini 1997).

Play activities should be prioritized during the pre-school and the primary school ages, when the child needs to do physical moves most. However, irregular and uniform sports facilities and playgrounds constrict children's dreams about playing at an early age as well as the physical and spiritual characteristics of them (Hollingsworth and Hoover 1999).

Based on the studies conducted on this field, it can be mentioned that play significantly contributes not only to the physical and mental but also social development of the children. In this study, it was aimed to determine the attitudes of the high school students, who had just completed their development period, towards playing games with physical activities. In this purpose, it was examined whether there were differences in their attitudes towards games involving physical activities with regards to gender, age, grade, sports background, and their school types.

2.Method

This is a descriptive study aimed to determine the attitudes of the high school students towards playing games including physical activities.

2.1.Universe and Sample

The study was conducted on the high school students in the public schools under the Gaziantep Provincial Directorate for National Education. In total, 493 high school students (295 male, 198 female) participated in the sample group. The features of the students handled in the studies on the experimental group are presented on Table 1.

Table 1. Personal Features of the Experimental Group

Variables	Groups	n	%	Variables	Groups	n	%
Gender	Male	295	59.8	Sports Background	Yes	255	51.7
	Female	198	40.2		No	238	48.3
Age	14 years old	29	5.9	School Type	Health Vocational	96	19.5
	15 years old	124	25.2		Anatolian	98	19.9
	16 years old	155	31.4		Girls' Vocational	100	20.3
	17 years old	138	28.0		Science	100	20.3
	18 years old	47	9.5		Trade Vocational	99	20.1
Grade	9. grade	376	42.0	Income Level	Good	30	6.1
	10. grade	136	15.2		Medium	372	75.5
	11. grade	156	17.4		Bad	91	18.5
	12. grade	227	25.4				

2.2.Data Collection Tool

In order to obtain the data for the research, personal information form and Gaming Scale was used, which was developed by Hazar (2015). This scale was prepared in order to determine the passion and desire to play games including physical activities. It is a 25-item, 5-factor, and 5 point likert scale. Cronbach Alfa value was calculated as 0.86 for the reliability of the Gaming Scale.

2.3.Data Analysis

The data obtained from the scales used in the research were coded into the computer environment and statistical analyses were conducted via SPSS 22.0 package program. Kolmogorov-Smirnov normality tests were performed to determine whether the data of the study has normal distribution. For the data sets without normal distribution, Kurtosis-Skewness values were examined, and it was observed that the values were in between $+2/-2$, and it was determined that the data had normal distribution. Therefore, Independent Samples t test was used for dual groups, while OneWay ANOVA test was applied for the multi-groups.

3.Findings

In this part, the findings procured from the analyses of the data obtained through the research study are manifested as table and sub-table explanations.

Table 2. Comparison of the gaming points based-on gender variable

	Gender	N	Ave.	sd	t	p
Passion for Game	Male	295	3.53	0.80	5.402	.000
	Female	198	3.10	0.97		
Taking Risk	Male	295	2.94	0.92	5.376	.000
	Female	198	2.48	0.94		
Social Adaptation	Male	295	1.84	0.71	-.722	.471
	Female	198	1.89	0.65		
Desire for Game	Male	295	2.27	0.77	2.615	.009
	Female	198	2.09	0.72		
Pleasure	Male	295	2.41	0.81	2.791	.005
	Female	198	2.21	0.73		

Comparison of points that the experimental group obtained from the sub-dimensions of the scale concerning gender variable are presented on Table 2. Statistically significant differences were observed in favor of males in passion for game, taking risk, desire for game, and pleasure sub-dimensions ($p < 0.05$).

Table 3. Comparison of the gaming points based-on age variable of the students

		KT	sd	KO	F	p	Significant Difference
Passion for Game	Inter-groups	7.203	4	1.801	2.255	.062	
	In-group	389.654	488	.798			
	Total	396.857	492				
Taking Risk	Inter-groups	9.539	4	2.385	2.664	.032	4-1
	In-group	436.876	488	.895			4-2
	Total	446.414	492				4-3
Social Adaptation	Inter-groups	9.037	4	2.259	5.013	.001	1-2
	In-group	219.940	488	.451			1-3
	Total	228.977	492				1-4
Desire for Game	Inter-groups	2.346	4	.586	1.029	.392	
	In-group	278.111	488	.570			
	Total	280.457	492				
Pleasure	Inter-groups	1.268	4	.317	.513	.726	
	In-group	301.404	488	.618			
	Total	302.672	492				

Groups; 1.group 14 year-old, 2.group 15 year-old, 3.group 16 year-old, 4.group 17 year-old, 5.group 18 year-old

Comparison of points that the students obtained from the sub-dimensions of the scale concerning age variable are presented on Table 3. Statistically significant differences were observed in taking risk and social adaptation sub-dimensions. According to the results of the Tukey LSD test, which was conducted to detect the differences;

It was determined that the points that the 17-year-olds obtained in taking risk sub-dimension were higher compared to 14,15, and 16 year-olds.

It was determined that the points that the 14-year-olds obtained in social adaptation sub-dimension were higher compared to 15, 16, and 17 year-olds.

Table 4. Comparison of the gaming points based-on grade variable of the students

		KT	sd	KO	F	p	Significant t Difference
Passion for Game	Inter-groups	7.008	3	2.336			1-2
	In-group	389.849	489	.797	2.930	.033	1-3
	Total	396.857	492				1-4
Taking Risk	Inter-groups	8.971	3	2.990			4-1
	In-group	437.443	489	.895	3.343	.019	4-2
	Total	446.414	492				4-3
Social Adaptation	Inter-groups	3.921	3	1.307			1-2
	In-group	225.055	489	.460	2.840	.037	1-3
	Total	228.977	492				1-4
Desire for Game	Inter-groups	3.411	3	1.137			
	In-group	277.045	489	.567	2.007	.112	
	Total	280.457	492				
Pleasure	Inter-groups	2.957	3	.986			
	In-group	299.715	489	.613	1.608	.187	
	Total	302.672	492				

Groups; 1.grade, 2.grade, 3.grade, 4.grade

Comparison of points that the students obtained from the sub-dimensions of the scale concerning grade variable are presented on Table 4. Statistically significant differences were

observed in passion for game, taking risk, and social adaptation sub-dimensions. According to the results of the Tukey LSD test, which was conducted to detect the differences;

It was determined that the points that the 1st graders obtained in passion for game sub-dimension were higher compared to higher graders.

It was determined that the points that the 3rd graders obtained in taking risk sub-dimension were higher compared to the 1st and 2nd graders.

It was determined that the points that the 1st graders obtained in social adaptation sub-dimension were higher compared to the 2nd and 3rd graders.

Table 5. Comparison of the gaming points based-on sports background variable of the students

	Sports Background	N	Ave.	sd	t	p
Passion for Game	No	238	3.28	0.91	-1.875	.062
	Yes	255	3.43	0.88		
Taking Risk	No	238	2.53	0.94	-5.189	.000
	Yes	255	2.97	0.91		
Social Adaptation	No	238	1.61	0.67	-2.678	.002
	Yes	255	2.11	0.69		
Desire for Game	No	238	2.06	0.71	-4.113	.000
	Yes	255	2.33	0.77		
Pleasure	No	238	2.20	0.76	-3.513	.000
	Yes	255	2.45	0.79		

Comparison of points that the experimental group obtained from the sub-dimensions of the scale concerning sports background variable are presented on Table 5. Statistically significant differences were observed between the two groups in favor of the ones with a sports background in taking risk, social adaptation, desire for game, and pleasure sub-dimensions ($p < 0.05$).

Table 6. Comparison of the gaming points based-on school type variable of the students

		KT	sd	KO	F	p	Significant Difference
Passion for Game	Inter-groups	4.697	4	1.174	1.461	.213	
	In-group	392.160	488	.804			
	Total	396.857	492				
Taking Risk	Inter-groups	2.469	4	.617	.679	.607	
	In-group	443.945	488	.910			
	Total	446.414	492				
Social Adaptation	Inter-groups	7.956	4	1.989	4.392	.002	2-1, 2-3
	In-group	221.020	488	.453			2-5,4-1
	Total	228.977	492				4-3,4-5
Desire for Game	Inter-groups	4.177	4	1.044	1.845	.119	
	In-group	276.279	488	.566			
	Total	280.457	492				
Pleasure	Inter-groups	3.839	4	.960	1.567	.182	
	In-group	298.833	488	.612			
	Total	302.672	492				

Groups; 1.group Health Vocational, 2.group Anatolian, 3.group Girls' Vocational, 4.group Science, 5.group Trade Vocational.

Comparison of points that the experimental group obtained from the sub-dimensions of the scale concerning school type variable are presented on Table 6. Statistically significant differences were observed in favor of the Anatolian and Science High Schools in social adaptation sub-dimension ($p < 0.05$).

4. Discussion

In this part is the discussion about the data obtained through the research study.

Concerning the gender variable, comparing the points obtained in the sub-dimensions, it was determined that the male participants obtained statistically significant high points in *passion for game*, *taking risks*, *desire for game*, and *pleasure* sub-dimensions, except *social adaptation* sub-dimension. Thus, it can be stated that the male students have a higher attitude to play games including physical activities.

Concerning the general averages, it was determined that both the male and female high school students obtained high points in *passion for the game* sub-dimension, while they obtained mediocre points in *taking risks*, *desire for game*, and *pleasure* sub-dimensions. However, it was determined that there was no difference in *social adaptation* sub-dimension with regards to gender variable, and that the average points obtained were quite low.

There are findings in various research studies conducted in this field, stating that there is no difference in gender variable concerning *social adaptation* sub-dimension (Balabanlı 1990, Gültekin 1991, Vasta, Haithm & Miller 1992, Çırak 1994).

It is stated in numerous research studies (Arnett & Jensen 1993, Paetsch & Bernard 1997, Parsons et al. 1997, Jelalia, et al. 1997, Byrnes et al. 1999, Bayar 1999, Marcus 1999, Kıran 2002, Özkan, 2002, Rolison & Scherman, 2003, Gündoğdu et al. 2005, Uludağlı & Sayıl 2009, Morsünbül 2009, Morsünbül 2013, Gülgez & Kısaç 2014) that males tend to take more risks compared to the females in *taking risk* sub-dimension. Since the adaptation processes of the male and female children differ in the society, it is mentioned that males are more decisive in taking risks (Chen et al.1998). Moreover, it can be stated that the males displaying risk taking attitudes is due to their desire to seek excitement (Arnet 1992). Gündoğdu et al. (2005), reported that the features such as societal role, family expectations, education, peer pressure, and seeking excitement caused the males to display more risk-taking and exceptional attitudes compared to the females.

A difference was observed for the age variable in *risk taking* and *social adaptation* sub-dimensions. It was concluded that in *risk taking* sub-dimension 17 year-old students are more prone to display risk-taking attitudes compared to 14, 15, and 16 year-olds, and in *social adaptation* sub-dimension 14 year-old students have higher attitudes compared to 15,16, and 17 year-olds. The results in the both sub-dimensions were also observed in the

class-based analyses. Moreover, it was seen that the attitudes of the first grade students were higher compared to the other grade students concerning the *desire for game*.

Risk taking attitude is generally accepted as a behavior observed in the puberty period. Therefore, the research studies on this field (Kıran 2002, Yılmaz 2000, Kaner 2002, Delikara 2002) generally focus on the risk taking behavior in the puberty period. Accordingly, it is mentioned that risk taking attitudes in puberty periods provide advantages to the teenagers such as controlling their own lives, resisting against the adult authority and traditional society, coping with anxiety, tension, inadequacy, and failure, being accepted more by their peer groups, embracing the youth culture, and shaping their personal identities (Gonzales et al.1994).

There are findings in previous researches stating that risk taking attitude increases as the age and the grade increase (Bayar 1999, Gullone & Moore 2000, Beyaz 2004, Gülgez & Kısaç 2014).

Concerning the participation in sports activities, statistically significant differences were observed in favor of the ones with a sportive background in *risk taking*, *social adaptation*, *desire for game*, and *pleasure* sub-dimensions.

According to the findings of previous researches, sports increased the social adaptation level of the individual (Kızıltan 1984, Akandere 1998, Marsh & Kleitman 2002, Smith, Darling & Cardwell 2005, McHale et al. 2005). Yıldırım et al. (2006), reported that the most effective motives behind participation of the students in sport activities are pleasure and enjoying in sports. In a study conducted by Alıncak (2016) on secondary school students, positive significant relations were determined, as well. It was determined that the basic factors influencing the participation of the students in sport activities were friend and social media.

Concerning the school-type variable, it was determined that Anatolian and Science High School students had higher social adaptation attitudes compared to the Health, Business, and Girls' Vocational School students in *social adaptation* sub-dimension.

As the conclusion, it was determined that the male students have higher attitudes towards playing games with physical activities; that *risk taking* attitude increases and *social adaptation* attitude decreases as the age and the class level increase; that the first grade high

school students have higher *passion for game*; that *passion for game* is generally high in all of the students; however, the ones with a sportive background have higher *risk taking*, *social adaptation*, *desire for game*, and *pleasure* attitudes; and that Anatolian and Science high school students have higher *social adaptation* points compared to Vocational high school students.

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