# Sports and Sporting Facilities in the Civilization of Pergamum

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KEYWORDS Pergamum Sporting History Education Environment Recreation

ABSTRACT The aim of this research is to examine the sports activities in the ancient city of Pergamum using documentary research method. Historical documentation method and the relics such as inscriptions and historical sports areas of the Pergamum and documents found in the city shows it is the place of robust sporting activities. It was found that the natural therapy methods taking advantage of music, theatre, sports, sun and mud were experienced in Pergamum for the first time in history. It shows that the Pergamum is the first city where therapeutic recreation had taken place. Consequently, the findings unearthed in this city show that there was a categorization for the sports competitions held here which are similar to today's sports competitions. The foundation of the first hospital for athletes in this city has made the ancient city of Pergamum a very important subject of scholarly investigation in terms of sports.

#### INTRODUCTION

History of sports has important traces of history of humanity. Considering the Hellenistic and Roman ancient cities in Anatolia, it was observed that some of them have been preserved very well but some fell into ruins and some others could only be examined in the light of inscriptions, notes of travelers, depictions of some buildings on coins, potteries and especially extant findings. In the light of the documents and sources obtained and as a result of research findings, the researcher examined the ancient city on site. Thus, the sports activities and sporting facilities of the ancient city of Pergamum were evaluated

It also benefited from the fall of the land in the south of the Upper Gymnasium in the ancient city of Pergamum and a space named as the basement stadium or *stadion* was created there. It will be more accurate to accept the reason of creation of this space named as the basement stadium as the sub-construction of the stadium as can be seen in the literature. This state has been identified and determined from 50 coins which could have been read until today (Saltuk 1995).

The heyday era of the Egypt and Mesopotamia civilizations came to an end in the seventh century B.C. The leadership in science started to be pioneered by the civilizations on the Aegean coasts of the Anatolia (Spampinato 2004).

The first free-thinking systems and dialectics purified from primitive beliefs and religious dogmas emerged. The famous Milesian School

of Philosophical Thought had revealed logical explanations about natural events. In the next centuries, some famous philosophers such as Pythagoras of Samos, Heraclitus of Ephesus, Anaxagoras of Clazomenae, Democritus of Abdera who had been taught and trained on these coasts developed new theories and hypotheses about nature and origin and evolution of the universe free from spirituality. Aristotle who had given lectures in Assos (Behramkale) honored the achievements of these scholars who all were objective thinkers. Thus, a rational and logical science purified from divination and witchcraft was used in diagnosis and treatment of diseases (Cook 1974). Hippocrates of Cos who is referred to as the father of medicine founded a school on these coasts in the fifth century B.C. Herophilos of Chalcedon and Erasistratus of Ceos had been close followers of him and began to examine dissections in Alexandria that had become a new science center at that century. Herophilos went down in history as the founder of anatomy and Erasistratus as the founder of physiology. Medicine and anatomy continued to evolve and develop on these lands where was called as the province of Asia of the Roman Empire in the first century. Galen of Pergamum who was born after Rufus of Ephesus and Soranus of Ephesus in the Asia Minor broke grounds with his works which were the most successful ones of the classical era as both a physician and an anatomist. However, the medicine entered into a period of stagnation as a result of domination of medieval thought together with the propagation of

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Christianity in the fifth century A.D. Most importantly, the ancient city of Pergamum has become the city of firsts in modern sports training and management.

The settlement called as the Middle City today was another part of the ancient city of Pergamum. Mostly the royal family, directors, administrators, intellectuals and military officers were living in the Upper Acropolis. The Middle City was a place where the public can easily visit. There were buildings and structures not related to the direct state management and sports fields for young people and temples open to the public there. A very important event that should be considered on was young people and adults doing sports there were separated into categories similar to today's sports competitions.

One of the major areas of the Middle City was the Sanctuary of Demeter. This area was on a rectangular platform. When it comes to the Upper Gymnasium, it is entered to a field where were a fountain and a pit of sacrifice. Then it is reached to the two-column monumental entrance (*propylaia*) after leading up five steps. There were a temple on the left and an altar in the middle of the area. Six hundred people could watch the religious ceremonies dedicated to Demeter and Kore from the 10-row seating area on the right side (Ureten 2003).

Gymnasium was the largest building complex of the Middle City. Around 10,000 people were estimated to live in the ancient city (Violatti 2013). Trainings and competitions in various sports branches were held here. Gymnasium was built on three terraces expanding upwards and it can be said that three separate gymnasiums were built here. The upper terrace of these three separate gymnasiums was allocated to adults, and the middle terrace to young people and the lower terrace to children. Sporting activities such as wrestling, discus throwing, and long jumping were done in the area surrounded by galleries in the middle part. Courses in various topics were given in halls at the rear part of the gallery in the north. One of these halls was large enough to cover 1000 people at once. The roofed track located under the south gallery was 212 meters long. This track is very similar to today's 200meter track and the name of this length is 'stadion' (Conzea and Schazmann 1911).

There were some buildings on the west of the Middle Gymnasium where young people were training. The long track was extending and opening to the temple dedicated to Heracles and Hermes in the east. The names of young people who are successful in competitions were written on the walls of the temple. The Lower Gymnasium allocated to the education of small children consisted of structures built on a terrace with length of 80 meters. One of the first places where the running distance had been planned for children by the scientists in the modern age was the ancient city of Pergamum (Conzea and Schazmann 1911).

Only the foundations of the Temple of Asclepius located in the west of the Upper Gymnasium could be unearthed today. The temple built in the name of Asclepius, the God of Medicine, was a school in which researches and experiments had been carried out as well as being a religious structure with religious properties. Patients were treated by use of pharmaceuticals derived from plants as well as surgical operations, water and mud baths and also sports, music, entertainment and suggestions. When the sports education and management of this ancient city were examined and investigated, the most important fact to be considered is the justification and grounding of sporting and recreation activities for healthy living. Asclepeion is a residential area and there are stadium, hospital, library and amphitheatre there (Ureten 2003).

Considering the samples of the understanding of physical education and sports culture of that era in the Acropolis and Asclepeion sites of the Pergamum civilization, we can see how sports and arts meet us as a social value. Especially, many samples such as stadiums, gymnasiums, amphitheatres, rehabilitation centers, festival areas, temples, libraries etc. shows us that there were many activities and implementations in order to improve physical and mental health and sports had been used for the purposes of education, rehabilitation and entertainment.

The historical importance and volumes of the Pergamum are countless. The Library of Pergamum, the first library of Asia housing up to 200,000 volumes was an important center in the past. The "Paper of Pergamum" (*Charta Pergamena*) or with the other name "Parchment" that was developed against "Papyrus" of Egypt is a major gift of this region to the humanity.

The Sanctuary of Asclepius (Health Center) in the ancient city of Pergamum is the first major hospital in the history and dates back to fourth century B.C. The phrase on the official entrance

to the Asclepeion that said 'Death cannot enter here' indicates how much ambitious they are about their treatment methods. The suggestion therapy was provided there for the first time in the history of medicine. The Asclepeion of Pergamum was the first place where the first natural therapies and treatments using music, theatre, sports, sun and mud and natural pharmaceuticals and pharmacological treatment were applied to patients. The Asclepeion of Pergamum is also the first place where "snake," the symbol of medicine and pharmacy was used.

This fascinating city where also arts had not been forgotten hosted ancient theatres with many works of art. The ancient theatre in the Pergamum has a capacity of 10,000 people with 80-row seating area. The theatre made of andesite stones is also the steepest theatre of the Western Anatolia. The Archeological Museum and Serapis Temple (known today as the "Red Basilica" or *Kizil Avlu* in Turkish) are among the first places which should be visited. Then, you can see the Acropolis and Heroon, the Library, the Sanctuary of Athena, the Sanctuary of Trajan (also known as the *Trajaneum*) and Agoras by going up to the area where the ancient city had been built on. You can have a rest a while and take a breath at the Altar of Zeus, the Sanctuary of Demeter, the Theatre and the Temple of Dionysus and leave yourself to the howling wind and prick up your ear to the whispers of people who had live there. Then, in the second part of our tour, the Gymnasium and the Sanctuary of Hera are must-see places to their features similar to today's sports centers in where young people do sports in order to maintain and protect their physical and mental health. Sports were accepted as an indispensable event of life and philosophy of life in the society for the first age civilizations (Koryurek 1996). The Olympic Games which had been held in the nature of competition during the Greek era were transformed into a lifestyle in the Roman era (Alpman 1972). The first Olympic Games were being held in a sports field called 'stade'. The objective of athletes participating in the games was only to achieve victory. In this period, only the Greek citizens were entitled to participate in the Olympic Games and foreigners were not allowed. Also, women were not allowed to participate in, or to watch, the ancient Olympic Games. The competitors were competing nude. The athletes were putting olive oil on their bodies in order to protect their skins and

bodies from the sun. Various festivities and ceremonies were being held during the Olympic Games (Koryurek 1996). Competitors would begin the trainings four months before the Olympic Games. They were coming to Elius one month before the festivities and training together with their opponents. The Pergamum civilization during the Roman period was also affected by the Olympic Games. Many sports facilities such as gymnasiums, stadiums etc. can be seen in this civilization that hosted many firsts of the history. Also, the highest and the steepest theatre of the world and the first sports hospital of the history as well as the first library of the world were established there and the first physiotherapy and rehabilitation activities were held in the Pergamum civilization (Radt 2005).

#### **METHODS**

This study was conducted by using documentary research method. For this purpose, relics such as coins, artifacts, potteries in the Pergamum Museum were examined by the researcher. Also, the publications with the content of antiques unearthed as a result of excavations made in the ancient city of Pergamum were reached. The state has been tried to put forward by visiting and exploring the ancient city on site.

## The Firsts of the Ancient City of Pergamum

The firsts of the ancient city of Pergamum are the first parchment (paper-making from leather), the first Asian library (consisting of 20,000 volumes), the first major sports hospital (Asclepeion), the first suggestion therapy (psychotherapy), the first natural treatment and therapy, therapeutic recreation (by use of music, theatre, sports, sun and mud), the first pharmacology (natural pharmaceuticals), the first opium-model pharmaceutical, the first urban hygiene model (health infrastructure), the first use of figure of 'snake' as the symbol of medicine and pharmacy (Emekli 2003). In addition, the categorization in sporting activities by age groups for the first time in the history is a result of this civilization when it is examined in terms of sports education history. When the excavation in the ancient city of Pergamum and the other excavations throughout the Anatolia are completed, it will be necessary to look at the sports history from a different perspective. It is impossible to examine the his718 FEHMI CALIK

tory of ancient sports completely without examining the ancient structures in Anatolia (Calik 2001).

Pergamum civilization was composed of two settlements. The first settlement was the Acropolis consisting of gymnasium and stadium. In addition, the Altar of Zeus, the Upper Agora, the steepest theatre of the world with the seating capacity of 10,000 people, the Temple of Dionysus, the Sanctuary of Athena, the king's palace and the Traian Temple were situated here (Bengu 1992). There was a terrace over the big theatre. The public could see almost entire of the stadium from this terrace of which length was 210 meters and width was 15 meters (Guttmann 1981). The second settlement was the Asclepeion where the first hospital of the world, small gymnasium and stadium and also the amphitheatre located where dance and recreation activities were held (Radt 2005). A regular city plan stands out in the Pergamum civilization. The urban management buildings and structures and squares that are important for social life were established on the slopes of the hills neighboring the city (Arolat 1999). Under Eumenes, the king of Pergamum civilization, a free and realistic understanding of management was dominating the civilization and he raised Pergamum to the levels of cities which were important in the fields of science, arts and sports. He supported Atlos who was one of the successful athletes to do sports and had him participated to the Olympic Games. At the same time, he supported the studies of famous philosophers such as Arkesilas and artists such as Mikeredes (Alpman 1972).

## **Pergamum Civilization and Sports**

Sports and arts used to have an important place in life in the Acropolis and the Asclepeion settlements of the Pergamum civilization. In this period, the people who were providing education to people in the Gymnasium were called the *Gymnasts* (Alpman 1972). Young people of the Pergamum turned sports into a philosophy of life by combining sports and courses such as mathematics, philosophy etc. as well as physical activities (Bayatli 1990). Some buildings similar to Olimpia also stand out in the settlement area in the Pergamum civilization. Sports trainings had been provided in the Acropolis and the Asclepeion sites for the purpose of preparation to the Olympic Games and sports had also been

used as an efficient application tool in trainings with recreational purposes (Swaddlin 2002). Especially, sports had been applied and implemented as an efficient rehabilitation tool in health centers. Patients in these centers were completely supported in cultural aspects and they were provided to return to their old days. Some therapy and treatment methods including walks and short runs etc. were also used in hospitals. There was a gallery in a form of feast center for the patients to do sports and entertain in there. Under Eumenes II, music activities and the first gymnastics moves had taken place in the city. The religious festivals were shaped and organized along with these activities (Radt 2005). Young people were elegizing and dancing accompanied by music in these religious festivals (Mansel 1996). Sports competitions were held during these festivals and these organizations were accepted to be equal to the Olympic Games in Delphoi and Olimpia. Sports and light shows in the night were made for the visitors who came there for touristic purposes and visitors would have been satisfied (Radt 2005). Not only the training was provided to the athletes for competitions, but also some courses which will be lifelong required by them in the Gymnasium were given to them and they were prepared for life. In ancient times, sports had an important place in general education (Erdemli 1996). It is seen that an educational content with the purpose of developing sports and the culture of life was applied also in the Pergamum civilization. And despite of the intensity of this education in the Pergamum civilization, also music education was provided for physical and mental health such as seen in other civilization (Sonmez 2004; Radt 2005). Sporting activities had been made in amphitheatres during this period (Iscan 1998). The stadiums had an important place in social life at that time. At least 5 of about 126 stadiums in Greek cities were within the borders of the Pergamum civilization. Public attended festivals, sporting and artistic activities were held in these centers.

#### **Pergamum Civilization and Sporting Facilities**

#### The Acropolis

It can be divided into three groups including Acropolis, the Lower and the Middle City. We can accept the Acropolis of Pergamum as a structure of the Hellenistic period where social, cultural and sport-related public meetings were held and a part of social life when compared to the Acropolis in Athens and these features make there a little bit more important. The architectural layout of the Acropolis was fairly well fitted to the topographical structure and pattern of the area. The overlapping terraces which had been placed nested shaped of half circles and structures built on them were arranged from south to north. That all structures of the Acropolis were placed in shape of fan increased the magnificence and attractiveness of this place. Gymnasiums, fountains, temples and baths were located in the Middle City (Arolat 1999). Gymnasium in the Acropolis was composed of two parts: the Upper Gymnasium and the Middle and the Lower Gymnasium. There was a Hellenistic building complex in the Sanctuary of Hera located in the Upper Gymnasium. There was a small temple in the western part of the courtyard of the Gymnasium. The main philosophy of the Gymnasium was the understanding of Olympism and sports to be made a philosophy of life. Gymnasium that was built in order to support the physical and mental health of young people who come there consists of units in the four corners of the large colonnaded courtyard (Cutuk 2005). Gymnasium was a training and education center used to provide physical education for young people and support their mental health and also create their philosophies of life (Mansel 1996). The reasons for them to train in Gymnasium were assessed as to become a strong citizen, to have beautiful bodies and to be ready for wars (Iscan 1998). The young people in the Gymnasium were practicing and fulfilling their religious duties in a small temple before beginning to sporting activities because it was important to be mentally relax during the activities. After the completion of these activities, they were having bath. And there were showers behind the western gallery next to the baths. The noticeable factor here is the adoption of sports as a philosophy of life and the integration of people of that period with sports (Gonener 2005). A theater, a meeting room and a concert hall stood out in the northwest. The seating capacity of this mini theater was 1,000 people. Athletes were trying to relax in this meeting room and concert hall with various entertainments. There was a Gymnasium hall made of marble belonging to the king in the middle of the north part of the Gymnasium. Based on this, we can see how sports had become a philosophy of

life for all people from the king to people who were included in the lowest level of society by spreading to the base (Colin 2012). "Supportive structures arranged radially and bearing the seats of spectators were built on the area between two elevations on the North and the South. The small spring flowing between these elevations, probably could be shaded by terracing enabling to small-scale water battles and water ballet shows on the arena of the amphitheatre. However, this was the place where gladiator competitions and animal hunting shows which were especially the new and typical Roman-type form of entertainment were performed..." (Radt 2005). "...This place which could be turned into a small sea was not wide enough to perform horse and spear fighting shows. Only some animals including crocodiles and hippos which can act and fight both on the land and in the water were appropriate for this area. And sometimes, the fairy groups were changing the image by staging some sea games..." (Texier 2002).

A track similar to racecourses in the Olympic Games was created on the vertical land in the south of the Gymnasium and this track was shaped as an indoor stadium. The Middle and Lower Gymnasium was the one of the largest buildings of the ancient city. It was shaped as three terraces fitting the land. This structure has revealed the importance given to sports. The 21 meter-long rectangular city fountain under a column stands out in the east entrance of the Middle Gymnasium. The Acropolis site is on a high mountain and water provided up to the Gymnasium shows the importance given to sports. Those who will do sports in the Gymnasium were divided by age groups. The lower terrace was allocated to children, the middle terrace to young people and the upper terrace to adults. An inscription can be seen immediately next to the small temple at the east end (Bayatli 1990).

#### Asclepeion

Built in the fourth century B.C., the Asclepeion was a healing center which had its heyday era in the second century B.C. It was 820 meters from the Acropolis and there was a sacred road from the Acropolis to the Asclepeion (Arolat 1999). There was a stadium, a hospital, a library and an amphitheatre situated there. Also some similar structures stand out there similar to Olimpia. These are baths and showers. Patients

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in these centers were completely supported in cultural aspects and they were provided to return to their old days (Cutuk 2006).

Some therapy and treatment methods including walks and short runs etc. were also used in hospitals. There were some galleries in the form of feast centers for patients to do sports and entertain (Radt 2005). Young people were elegizing and dancing accompanied by music in the religious festivals organized in the Asclepeion (Mansel 1996). Some sports competitions were held during these festivals and these organizations were accepted to be equal to the Ancient Olympic Games. A field was created to where public masses can flock to the games in amphitheatres and theatre in the stadiums which was the major entertainment of society in the second century B.C. (Mansel 1996).

#### RESULTS AND DISCUSSION

The ancient city of Pergamum is a place where the firsts had taken place in the history in terms of social life. The firsts of the ancient city of Pergamum are the first parchment (paper-making from leather), the first Asian library (consisting of 20,000 volumes), the first major sports hospital (Asclepeion), the first suggestion therapy (psychotherapy), the first natural treatment and therapy, therapeutic recreation (by use of music, theatre, sports, sun and mud), the first pharmacology (natural pharmaceuticals), the first opium-model pharmaceutical, the first urban hygiene model (health infrastructure), the first use of figure of 'snake' as the symbol of medicine and pharmacy. Considering the samples of the understanding of physical education and sports culture of that era in the Acropolis and Asclepeion sites of the Pergamum civilization, we can see how sports and arts meet us as a social value. Especially, many samples such as stadiums, gymnasiums, amphitheatres, rehabilitation centers, festival areas, temples, libraries etc. show us that there were many activities and implementations in order to improve physical and mental health and that sports had been used for the purposes of education, rehabilitation and entertainment. Also elite athletes were trained there to represent the Pergamum civilization in the ancient Olympic Games (Felix 2006). The analysis and processing of sources shows that olympic games were organized in 32 different cities (Albanidis 2011) People got categorized by age groups in this civilization for the first time in history. This categorization is quite similar to today's understanding of sports. At the same time, facilities which can respond to sport-related, cultural and social needs were built in the Pergamum civilization as a result of a planned understanding of urbanization. The high point in understanding of foundation and establishment of this civilization is the sacred roads and paths that connect many facilities to each other. Pergamum civilization implemented therapeutic recreation in that era. Examining the importance of Gymnasium in ancient period, the ancient city of Pergamon which has the greatest gymnasium in Anatolia in the Hellenistic period was chosen as a studying area. Ruled by a kingdom, Pergamon is a settled and mountain city in a sloping area. By the help of its close relations with Rome, it has become one of the most powerful kingdoms of the Hellenistic period (Bingul 2013). These applications show that sports culture was perceived as a philosophy of life and understandings of arts and culture were assessed as a whole in this civilization. The examination of this ancient city by scientists in terms of multidisciplinary understanding seems to be necessary for remodeling and rewriting of sports history.

### CONCLUSION

The purpose of this study was to investigate the sport and sport education in Pergamum Antique City. With respect to sport education, The Pergamum antique city is an antique city which had similar competition categories to those of today's. This city is the place of the first-built library of Asia. The first big sport hospital, first psychotherapy, first natural treatment and therapy, first pharmacology (natural medicine), first opium model medicine, first urban hygiene model (health infrastructure), first used (used by music, theatre, sport, sun and mud)therapeutic recreation, snake figure as a symbol of pharmacy is the heritage of this antique city. In our researches and investigations it was seen that The Pergamum Antique City was not introduced enough with these characteristics. It was suggested the notion that this antique city which has ready to use the most important sport and sport education locations of Hellenistic period should be examined in a multidisciplinary consideration and with different aspects.

#### RECOMMENDATIONS

Examining the ancient city of Pergamum in a multidisciplinary understanding is seen as a necessity for the sports history. That archaeologist to examine ancient cities along with the sports historians may provide different tips in terms of sports history. Sport training venues in the ancient city may set an example to the construction of modern sports facilities. Bringing sport and sports training in the civilization of Pergamum up into the agenda by that article may make the sports historians being attracted to that ancient city. This paper may ensure other sports branches and sports training venues in other ancient cities in Anatolia to be reexamined and to enter into the World cultural heritage list.

#### REFERENCES

- Albanidis E 2011. Olympic Games Outside Olympia in the Ancient Greek World: The Example of Macedonia. 9th International Session for Educators and Officials of Higher Institutes of Physical Education, International Olympic Academy, 2-9 June, Greece.
- Alpman C 1972. Egitimin Bütünlüğü İçinde Beden Egitimi ve Çaglar Boyunca Gelisimi. Ankara: T.C. Basbakanlık Gençlik ve Spor.
- Arolat OS 1999. Tarihin Tanigi Anadolu'da Kurulan Cumhuriyet. Istanbul: Creative Yayincilik.
- Bayatli O 1990. Bergama Tarihinde Akropol ve Sanat Eserleri-AnItlar. Izmir: Bergama Belediyesi.
- Bengu s 1992. Üç İzmir. İstanbul: Yapi Kredi Yayınları. Bingul Ahmet 2013. The Importance of Gymnasium in Ancient Times and Pergamon Gymnasium. PhD Thesis, Unpublished. Konya: Selçuk University.
- Calik F, Ceylan S 2001. Olimpiyatlara aday Türkiye için bir öneri Çirali-Ianartas, Burdur Egitim Fakültesi Dergisi, 2(2): 56-65.
- tesi Dergisi, 2(2): 56-65. Colin Mc E 2012. Cities of the Classical World: An Atlas and Gazetteer of 120 Centuries of Ancient Civilization. North Carolina: Penguin Books.
- Conze AP Schazmann. 1911. Mamurt-Kaleh: Ein Tempel der Göttermutterunweit Pergamon. Berlin: Reimer.
- Cook RM 1974. Old Smyrna: The Clazomenian Sarcophagi. The Annual of the British School at Athens, 69: 55-60.

- Cutuk S, Sertbas K, Gönener A, Teke S 2005. The Study of Recreational Activities in the Civilization of Pergamon (Bergama). 13th International Congress on Physical Education and Sport, 20-22 May, Komotini/Greece.
- Cutuk S, Sertbas K, Zengin E, Gönener A 2006. Investigation of Sport Management Strategies in the Antique Period, Pergamon (Bergama). 9th International Sport Science Congress, 3-5 November, Mugla/Turkey.
- Erdemli A 1996. *Insan, Spor ve Olimpizim*. Istanbul: Melisa Matbaacilik.
- Felix P 2006. Pergamon, Yeni Araptirma Programi ve 2005 Yili Çalismalari. *Kazi Sonuçlari Toplantisi*, 28(2): 22-24.
- Gonener A, Çutuk S, Sertbas K 2005. The Understanding of Olympic Sports in the Civilization of Pergamon (Bergama). 13<sup>th</sup> International Congress on Physical Education and Sport, 20-22 May, Komotini/Greece.
- Guttmann A 1981. Sport spectators Antiquity to Renaissance. *Journal of Sport History*, 8(2): 10.
- Koryurek C 1996. *Eski Olimpiyatar, Modern Olimpiyatlar, Olimpiyatlarda Türkler.* Istanbul: Milli Olimpiyat Komitesi Yayinlari.
- Mansel MA 1996. *Ege ve Yunan Tarihi*. Ankara: Türk Tarih Kurumu Yayinlari.
- Miller S G 1982. The Macedonians at the Panhellenic Sanctuaries. *American Journal of Archaeology*, 86(2): 276-277.
- Radt W 2005. Pergamon: Geschichte und Bauten einer antiken Metropole.Berlin/Germany: Archaeological Institute of America, Metropole.
- Saltuk S 1995. Antik Stadyumlar. Istanbul: Inkilap Yayinevi.
- Sonmez V 2004. *Egitim Tarihi Ders Notlari*. Istanbul: Istanbul University.
- Swaddlin J 2000. Antik Olimpiyat Oyunlari. (Çeviren: Burçak Gürün). İstanbul: Homer Kitabevi.
- Texier C 2002. Küçük Asya Cografyasi, Tarihi ve Arkeolojisi. (Trans: Ali Suat). Ankara: Enformasyon ve Dokümantasyon Hizmetleri Vakfi.
- Ureten H 2003. Nesredilmis Yazitlar Isiginda Hellenistik Dönem'de Pergamon Kenti Tanri ve Kültleri. PhD Thesis, Unpublished. Ankara: Ankara University.
- Violatti C 2013. Ancient History Encyclopedia. From <a href="http://www.ancient.eu/pergamon/">http://www.ancient.eu/pergamon/</a>> (Retrieved on 3 February 2014).