

Efficiency of Coach Training in Turkey and Its Assessment Specific to Shooting Sport

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Ethical Statement: It is declared that scientific and ethical principles have been followed while carrying out and writing this study and that all the sources used have been properly cited.

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Abstract

The primary aim of this study is to assess the efficiency of the coach training system in Turkey, with a specific focus on shooting coaches, and to gather the views of working, retired and volunteer coaches working in this field regarding this training. The research follows a correlational survey model and targets shooting coaches, encompassing both air and firearms disciplines, who possess coaching certificates and were actively engaged in coaching roles in Turkey during the year 2023, whether voluntarily or on a tenured or non-tenured basis. The research sample comprises 307 coaches, selected through simple random sampling from the larger population. Data for the study were collected through questionnaires. To this end, the researcher developed a questionnaire consisting of two parts, drawing on the existing literature and expert opinions. Statistical methods included descriptive statistics, Pearson correlation analysis, and regression analysis (using Hayes' PROCESS model) to evaluate relationships and potential moderating effects between variables, facilitated by the SPSS 25 program, were employed for data analysis. Results indicate that the overall sentiments of coaches in Turkey regarding the adequacy of coaching education in terms of content, duration, and facilities, as well as its impact on athletes' skills and performance, and the coaches' personal development through education, tended to be negative. Conversely, there were very strong ($0.90 < r < 1$) positive and statistically significant ($p < 0.05$) correlations between participants' levels of agreement in their views on the adequacy and effectiveness of coach training and its benefit to the instructor. Furthermore, it was established that coaches' views on the benefit of coach training to the instructor did not exert a moderating influence on the relationship between their views on the adequacy and effectiveness of training ($p > 0.05$).

Keywords: Sports Management, Coaching, Training, Shooting.

Özet

Türkiye'de Antrenör Eğitiminin Yeterliliği ve Atıcılık Sporuna Özgü Değerlendirilmesi

Bu araştırmanın temel amacı, atıcılık antrenörleri üzerinde odaklanarak Türkiye'deki antrenör eğitim sisteminin yeterliliğini değerlendirmek ve bu alanda görev yapan, emekli olan ve gönüllü antrenörlerin bu eğitime yönelik görüşlerini toplamaktır. Araştırma, ilişkisel tarama modeli çerçevesinde yürütülmüştür. Araştırmanın evrenini, bir antrenörlük belgesine sahip olarak gönüllü, kadrolu veya ücretli olarak 2023 yılı içerisinde Türkiye'de

antrenörlük yapan atıcılık (havalı ve ateşli silahlar branşı) antrenörleri oluşturmuştur. Araştırmanın örneklemini ise evren içerisinde basit rastgele örnekleme yoluyla ulaşılan toplam 307 antrenörden oluşmaktadır. Araştırmanın verileri, anket yöntemi ile toplanmıştır. Bunun için araştırmacı tarafından, literatüre ve uzman görüşlerine başvurularak iki bölümden oluşan bir anket hazırlanmıştır. Araştırmada veri analizi için nicel yöntemlere başvurulmuştur. Bu bağlamda, SPSS 25 programı kullanılarak verilerin ayrıntılı analizi gerçekleştirilmiştir. Araştırma sonucunda ilk olarak Türkiye'deki antrenörlerin, antrenörlük eğitiminin içerik, süre ve imkanlar bakımından yeterliği; antrenörlük eğitiminin sporunun becerileri ve performansı üzerindeki etkisi ve verilen eğitimin kendilerine sağladığı katkı hakkındaki görüşlerinin genel olarak olumsuz özellikler gösterdiği bulgusuna ulaşılmıştır. Öte yandan, katılımcıların antrenörlük eğitiminin yeterliği, etkinliği ve eğitim verene yaptığı katkı ile ilgili görüşlere katılım düzeylerinin tamamı arasında çok güçlü düzeyde ($0,90 < r$) pozitif ve anlamlı ($p < 0,05$) ilişkiler bulunmuştur. Ayrıca antrenörlük eğitiminin eğitim verene yaptığı katkının, antrenörlerin eğitimin yeterliği ve etkinliği ile ilgili düşünceleri arasındaki ilişkide moderatör (düzenleyici) etkiye sahip olmadığı sonucuna ulaşılmıştır ($p > 0,05$).

Anahtar Kelimeler: Spor Yönetimi, Antrenörlük, Eğitim, Atıcılık.

INTRODUCTION

Sport is a discipline that contributes to individuals' mental, physical, social and emotional development. This occurs through the improvement of knowledge, skills and leadership abilities, and also allows individuals to make use of their free time and relieve stress by getting away from everyday problems (10). Athletes represent a specific demographic segment and symbolize a remarkable community in terms of their daily routines and social status. However, activities such as challenging training programs and long camp periods can negatively affect their socio-cultural lives, families, and friendships outside the team, and even their work or school lives. Moreover, athletes are individuals who have to compete against thousands of people they do not know and who are either admired or harshly criticized by these people (8). Considering all these factors, athletes must possess certain characteristics such as adaptation, motivation, communication, and leadership (11).

A critical factor in achieving success is that in team sports, different individuals coordinate and work in harmony, create a team spirit and focus on a common goal. This process takes place through the dedicated efforts of the coach, whose ability to manage the team, maintain the team's performance with interventions at the right time and place, and act by considering future and expected events with his/her own skills and unique working philosophy, reveals his/her command of the team. Individual sports, on the other hand, require more agility and athleticism, and in these sports, personal responsibility is more evident. This situation tends to create more stress and anxiety for athletes. In this context, unlike team sports, the coach has to prepare and plan individual training programs by understanding all the characteristics of athletes (13).

Individuals' ability to acquire certain characteristics is largely influenced by sports instructors, and the first group that comes to mind among sports instructors is usually coaches. Coaches are regarded as practitioners of continuous and collective activities that aim in the initial stage to bring out and develop the individual's characteristic features and to strengthen their natural dynamism. In the second stage, they are defined as people who facilitate group members to jointly accomplish tasks that they cannot achieve individually, and who assume management responsibility. As can be understood from these definitions, coaches can be considered as the cornerstone of sports. Therefore, increasing the opportunities offered to coaches and giving them a good education will directly affect the performance of the individuals they are to train. This will be made possible with a well-prepared and implemented coach training program (10).

Furthermore, a coach is a person who can effectively and efficiently use the technical and tactical knowledge required for the athlete to be successful in his/her discipline, and who can develop different strategies and solutions for the problems he/she encounters and implement them successfully on the field. In this regard, the coach focuses on the skills of influencing, effective communication and correct guidance in coaching practice, which guides athletes correctly and is considered a leadership art (6).

The term “coach” originally referred to a superior type of carriage first built in the 15th century in the small town of Kocs in Hungary and is still used to describe a type of transport today. The term was first used in the sense of “trainer” in the field of education in 18th century England, when it referred to a tutor who “carried” students through their exams. The word was first used for athletic coaches in the 1880s. A coach is a person who uses all their capacity for a single purpose, whether it be in team or individual sports. This involves aiming for the athlete to maximize their performance and to reach peak levels both mentally and physically. The coach’s probability of success depends on how much motivation, empathy and sports knowledge he or she has. As well as knowledge of the techniques and tactics related to the sports discipline, the coach’s knowledge of psychological and physiological needs and his/her efforts focusing on deficient areas increase the success rate. Similarly, the coach’s understanding of athletes’ individual needs, feelings, thoughts and wishes, and acting by considering their psychological states enable the coach to play a critical role in individual and team sports by increasing athletes’ self-confidence and motivation (7).

It has been observed that countries that have achieved sporting success around the world are rich in terms of the courses they offer and the materials and methods they use in their sports departments, and that they especially attach great importance to coach training (9). However, it is known that the current coaching and coach training in Turkey has been criticized due to the disjointedness it contains, and that serious concerns have arisen in this regard. Lack of standardization, lack of appropriate examination mechanisms, and exemptions in licensing regulations constitute the main concerns in the field of coach training (14). These problems lead to a weaker coach training and to a decrease in the quality of sporting activities across the country, since coaches play a critical role in the planning, presentation and quality of these activities (5). Considering Turkey’s high overall participation in sports and its high targets for international success, it is very important that the coaching system operates correctly and effectively in the country (4).

The main aim of this study is to assess the efficiency of the coach training system in Turkey by focusing on shooting coaches and to gather the views of working, retired and volunteer coaches in this field regarding this training. By identifying the deficiencies in the field of coach training in Turkey and benefiting from the coaches’ knowledge and experience, recommendations are made for providing a better-quality training.

The importance of this study lies in its potential to address critical gaps in the existing coaching system and to enhance the quality of training programs for coaches. By identifying deficiencies and offering practical recommendations, this study aims to contribute to the development of a more standardized, effective, and high-quality coaching framework that aligns with Turkey’s aspirations for international sporting success.

METHOD

Research model

This study was conducted according to a correlational survey model. Our study is based on this conceptual framework, and the general structure of the model is presented in Figure 1.

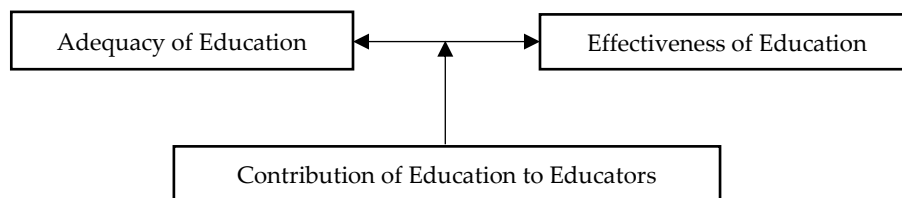


Figure 1. Research Model

Population and sample

The population of the study consists of shooting (air guns and firearms disciplines) coaches who have a coaching certificate and worked as volunteer, tenured or non-tenured staff in Turkey in 2023. According to the official information obtained from the Turkish Shooting and Hunting Federation, as of June 12, 2023, there were a total of 892 shooting coaches in Turkey, 634 at level 1, 180 at level 2, 75 at level 3 and 3 at level 5. The sample of the study consists of a total of 307 coaches selected from the population through simple random sampling. The researcher chose the participants randomly using online and face-to-face methods. For

determining the sample size, the formula $n = \frac{Nt^2pq}{d^2(N-1)+t^2pq}$, which is one of the frequently used calculations (12), was used. When this calculation was performed for our study with a 95% confidence interval and 5% sampling error, the result was 269 people. In our study, this number was exceeded, and a total of 307 people were enrolled.

The participants were predominantly male (59.9%), with a significant proportion under the age of 40 (61.9%). Regarding educational levels, the majority held a bachelor’s degree (61.9%), followed by high school graduates (16.6%), master’s degree holders (17.6%), and a smaller number with a doctorate (3.9%).

In terms of marital status, 54.4% of the participants were single, 38.4% were married, and 7.2% were divorced. Professionally, most participants (75.2%) were volunteer coaches, while the remaining 24.8% were either tenured or non-tenured staff. Coaching certificates were predominantly obtained through federation courses (77.2%), with a smaller percentage acquired via university programs (22.8%).

The majority of participants had more than five years of coaching experience (65.5%), and 18.6% had served as national team coaches. Additionally, 65.5% of participants were shooting athletes themselves, while 34.5% were not.

Data collection tools

The study data were collected by the researcher himself, via online and face-to-face survey methods, in June, July and August 2023. For this purpose, a questionnaire consisting of two parts was prepared by the researcher, by making assessments based on the literature and expert opinions. The first part of the questionnaire included a total of 9 multiple-choice questions aimed at identifying the participants’ demographic and professional characteristics. In the second part of the questionnaire, there were a total of 35 items of the 5-point Likert type, aimed at determining the participants’ assessments of the adequacy of coach training in Turkey and specific to shooting sports. Participants were asked to respond to these items on a scale ranging from “strongly disagree” to “strongly agree”. The items in the second part of the questionnaire were also grouped into four groups (subscales) based on expert opinions. These were named adequacy of training (12 items: items 1, 2, 3, 4, 8, 12, 19, 21, 22, 23, 27 and 35), effectiveness of training (11 items: items 5, 6, 7, 9, 11, 14, 15, 16, 25, 28 and 31), benefit to the instructor (9 items: items 10, 17, 18, 26, 29, 30, 32, 33 and 34), and importance and success of training (3 items: 13, 20 and 24). In the study, the mean scores of the first three of these subscales were also calculated, and these scores were used in different analyses. An increase in the mean score obtained from these subscales indicates that the participants’ positive views about the adequacy and effectiveness of coach training and its benefit to the instructor have increased. However, during the scoring phase, reverse scoring is required for a total of 6 negatively worded items (items 4, 19, 25, 27, 28 and 31).

Data analysis

Quantitative methods were used for data analysis in the study. In this context, detailed analysis of the data was carried out using the SPSS 25 program. The correlations between the adequacy and effectiveness of coach training and its benefit to the instructor were found using Pearson correlation analysis. To determine the moderating role of the benefit to the instructor in the relationship between the adequacy and effectiveness of coach training, regression analysis was conducted using Hayes’ (3) PROCESS approach and in accordance with the Baron and Kenny (1) model. All analyses were evaluated within a 95% confidence interval and were concluded according to a p<0.05 significance level.

It was decided whether normal distribution, which is a prerequisite for using parametric analyses, was present or not by evaluating the skewness and kurtosis coefficients of the subscale scores used in parametric analyses (Table 1).

Table 1. Skewness and kurtosis coefficients of subscale scores

| Score | n | Skewness | | Kurtosis | |
|----------------------------------|-----|-----------|------------|-----------|------------|
| | | Statistic | Std. Error | Statistic | Std. Error |
| Adequacy of Training | 307 | 0.902 | 0.139 | -0.167 | 0.277 |
| Effectiveness of Training | 307 | 0.332 | 0.139 | -0.539 | 0.277 |
| Benefit to the Instructor | 307 | 0.451 | 0.139 | -0.811 | 0.277 |

As can be seen in Table 1, the skewness and kurtosis values of all examined scores are within the range of ± 1.00 . According to Büyüköztürk (2), the fact that these values are within the range of ± 1.00 shows that normal distribution is achieved. Therefore, it was decided that normal distribution was achieved.

FINDINGS

Descriptive information about the participants

The study was conducted with the participation of a total of 307 shooting coaches (Table 2).

Table 2. Distribution of athletes based on demographic and professional characteristics

| Variable | n | % | Variable | n | % |
|-----------------|-----|------|------------------------------------|------------|------------|
| Gender | | | Coaching Status | | |
| Male | 184 | 59.9 | Voluntary | 231 | 75.2 |
| Female | 123 | 40.1 | Tenured/non-tenured | 76 | 24.8 |
| Age | | | Source of Coaching Certificate | | |
| Under 40 | 190 | 61.9 | Federation course | 237 | 77.2 |
| 40 or over | 117 | 38.1 | University | 70 | 22.8 |
| Education Level | | | Length of Coaching Experience | | |
| High school | 51 | 16.6 | Less than 5 years | 106 | 34.5 |
| Bachelor’s | 190 | 61.9 | 5 years or more | 201 | 65.5 |
| Master’s | 54 | 17.6 | Serving as a National Team Coach | | |
| Doctorate | 12 | 3.9 | Yes | 57 | 18.6 |
| Marital Status | | | No | 250 | 81.4 |
| Single | 167 | 54.4 | Is Participant a Shooting Athlete? | | |
| Married | 118 | 38.4 | Yes | 201 | 65.5 |
| Divorced | 22 | 7.2 | No | 106 | 34.5 |
| | | | Total | 307 | 100 |

When the distribution of the participants according to their demographic characteristics is examined, it can be said that coaches with different characteristics were enrolled in the study, but that the participants were mostly single men under the age of 40 with bachelor’s degrees. Moreover, when the distribution of the participants according to their professional characteristics is evaluated, there is still a lot of diversity, as in the demographic characteristics, but it can be said that most of the participants were volunteer individuals who had been coaching for 5 years or more, with a document obtained through the federation course. In addition, the majority of the participants were shooting athletes and were not national team coaches.

Participants’ views on coach training

Within the scope of the findings regarding the participants’ views on coach training, the descriptive statistics determined in the subscale scores for adequacy of training, effectiveness of training and benefit to the instructor were evaluated (Table 3).

Table 3. Descriptive findings for evaluation scores

| Score | n | Min | Max | \bar{x} | SD |
|----------------------------------|-----|------|------|-----------|------|
| Adequacy of Training | 307 | 1.33 | 4.00 | 2.42 | 0.73 |
| Effectiveness of Training | 307 | 1.00 | 3.91 | 2.30 | 0.79 |
| Benefit to the Instructor | 307 | 1.00 | 4.22 | 2.26 | 0.89 |

Accordingly, the participants’ scores indicating the adequacy of training ranged between 1.33 and 4.00 and the mean score was found to be 2.42 ± 0.73 . When evaluated according to the minimum and maximum scores (1 and 5 points) that can be obtained from this subscale, the mean score of the participants corresponds to 35.5%. Therefore, it can be said that the participants’ views on the adequacy of coach training were at a low level. The participants’ scores indicating the effectiveness of training ranged between 1.00 and 3.91, and the mean score was determined as 2.30 ± 0.79 . When compared to the lowest (1 point) and highest (5 points) scores that can be obtained from this subscale, the participants’ mean score was determined as 32.5%. Therefore, it can be said that the participants’ views on the effectiveness of coach training were again at a low level. Finally, the participants’ scores indicating the benefit of training to the instructor ranged between 1.00 and 4.22 and the mean score was found to be 2.26 ± 0.89 . When evaluated according to the minimum and maximum scores

(1 and 5 points) that can be obtained from this subscale, the participants' mean score was calculated as 31.5%. Therefore, it can be said that the participants' opinions about the benefit of coach training to the instructor were again at a low level.

Correlations between the adequacy and effectiveness of coach training and its benefit to the instructor

Pearson correlation analysis was performed to determine whether there was a significant relationship between the levels of agreement in the views of coaches in Turkey regarding the adequacy and effectiveness of coach training and its benefit to the instructor, and the findings are presented in Table 4.

Table 4. Correlations between the adequacy and effectiveness of coach training and its benefit to the instructor

| | | (1) | (2) | (3) |
|-------------------------------|-----------|-----|---------------|---------------|
| (1) Adequacy of Training | Pearson r | 1 | 0.909 | 0.904 |
| | p | | 0.000* | 0.000* |
| (2) Effectiveness of Training | Pearson r | | 1 | 0.952 |
| | p | | | 0.000* |
| (3) Benefit to the Instructor | Pearson r | | | 1 |
| | p | | | |

* p<0.05.

Accordingly, very strong ($0.90 < r$) positive and significant ($p < 0.05$) correlations were found between the participants' levels of agreement in their views regarding the adequacy and effectiveness of coach training and its benefit to the instructor. The strength of the correlation between the adequacy and effectiveness of coach training is $r = 0.909$. As the belief that the training is adequate increases, the belief that it is effective also increases with a very strong correlation. The variance explained by the variables on each other was found to be 82.6% ($r^2 = 0.826$). The strength of the correlation between the adequacy of coach training and its benefit to the instructor is $r = 0.904$. As the belief that the training is adequate increases, the belief that it benefits the instructor also increases with a very strong correlation. The variance explained by the variables on each other was found to be 81.7% ($r^2 = 0.817$). The strength of the correlation between the effectiveness of coach training and its benefit to the instructor is $r = 0.952$. As the belief that the training is effective increases, the belief that it benefits the educator also increases with a very strong correlation. The variance explained by the variables on each other was found to be 90.6% ($r^2 = 0.906$).

The moderating role of the benefit to the instructor in the relationship between the adequacy and effectiveness of coach training

To answer the question, "Does the benefit of coach training to the instructor have a moderating effect on the relationship between coaches' views about the adequacy and effectiveness of the training?" regression analysis was performed using Hayes' (2) PROCESS approach, and the findings are presented in Table 5.

Table 5. The moderating role of the benefit to the instructor in the relationship between the adequacy and effectiveness of coach training

| Dependent Variable | Independent Variables | b | Std. Error | t | p | 95% CA | |
|---------------------------|---------------------------|--------|------------|--------|--------------|-------------|-------------|
| | | | | | | Lower Limit | Upper Limit |
| Effectiveness of Training | (Constant) | 0.010 | 0.154 | 0.063 | 0.950 | -0.293 | 0.312 |
| | Adequacy of Training | 0.374 | 0.084 | 4.474 | 0.000 | 0.210 | 0.539 |
| | Benefit to the Instructor | 0.689 | 0.058 | 11.870 | 0.000 | 0.574 | 0.803 |
| | Interaction Term | -0.028 | 0.023 | -1.251 | 0.212 | -0.073 | 0.016 |

*F value for the model (3-303)=1151.936; p=0.000; R²=0.919.

As shown in Table 5, it can be seen that the benefit of coach training to the instructor does not have a moderating effect on the relationship between the coaches' views about the adequacy and effectiveness of training ($p > 0.05$). For a variable (M) to be a moderating variable, the interaction term (XM) generated by multiplying it with the independent variable (X) must significantly predict the dependent variable and alter

its strength or direction (1). Therefore, it was decided that there was no moderating effect here. This finding can also be clearly seen in Figure 2.

Figure 2 shows the regression lines of the relationship between the coaches' views on the adequacy and effectiveness of coach training in cases where the scores for the benefit of coach training to the instructor are mean, one standard deviation above the mean, and one standard deviation below the mean. It can be seen that the regression lines have very similar slopes to each other. This shows that the benefit of coach training to the instructor does not affect the strength of the relationship, and that therefore, it does not have a moderating role.

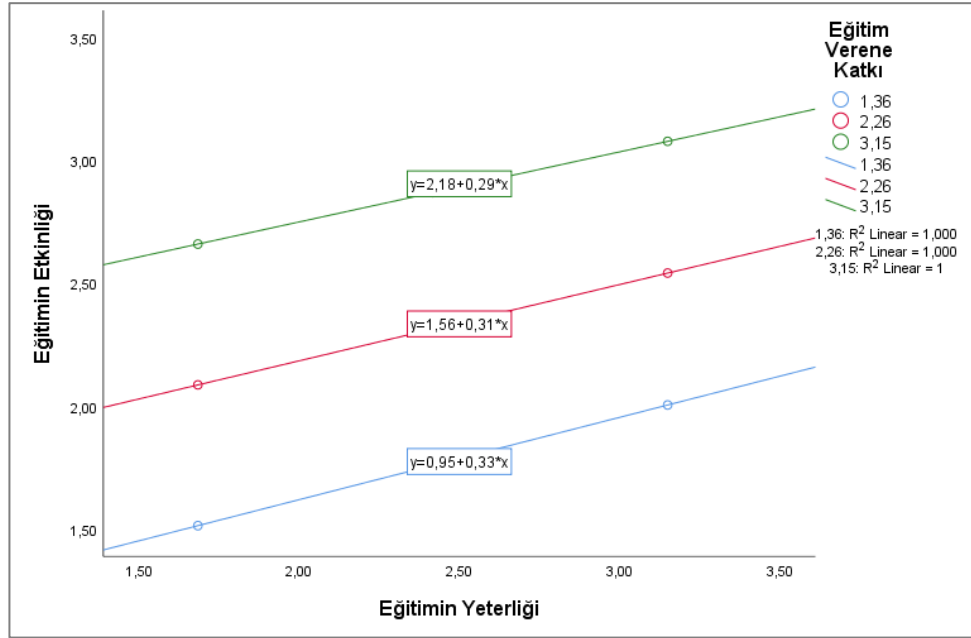


Figure 2. The Moderating Role of The Benefit to The Instructor in The Relationship Between The Adequacy And Effectiveness of Coach Training

DISCUSSION AND CONCLUSION

This study, which was conducted to assess the adequacy of coach training specific to shooting sports in Turkey, provides a very strong example of research. The research has a number of strong features in terms of participant characteristics, data collection methods, and analysis strategies. First, the characteristics of the study participants vary widely. The participants belong to different age groups and have different education levels and marital statuses. The study was conducted with the participation of a total of 307 male and female, married and single shooting coaches of different age groups, with different levels of education ranging from high school to doctoral level. This wide range increased the generalizability of the research results and allowed for the representation of different experiences and perspectives on shooting coaching. Furthermore, the study includes the participation of volunteer, tenured or non-tenured coaches who have a coaching certificate obtained from either federation courses or universities. This both increased the representativeness of the study population and enabled more comprehensive results to be obtained by considering the views of professionals with different coach training backgrounds.

As a result of the study, it was first found that coaches in Turkey generally held negative views about the adequacy of coach training in terms of content, duration and opportunities, the effect of coach training on the athlete's skills and performance, and the benefit provided by the training to themselves. The obtained mean scores showed that positive views on the above issues were at a low level.

The findings of this study align with previous research highlighting significant challenges in coach training systems, particularly in Turkey. Studies have consistently pointed to issues such as lack of standardization, inadequate duration, and insufficient technical and tactical content in coach education

programs. For example, Işık and Moustakas (2022) emphasized the fragmented structure of Turkey's coach education and the need for reforms to meet international standards

Similarly, Sunay (1997) noted deficiencies in the resources and infrastructure supporting coach training, which mirror the concerns raised by participants in this study regarding equipment and facilities for shooting coaches. These parallels underscore the systemic nature of the problem and suggest that addressing these issues requires a nationwide, strategic overhaul of coach training curricula and delivery.

Globally, research on coach education frameworks in successful sporting nations offers valuable insights for improving Turkey's system. Studies have shown that countries like Germany, the USA, and Australia prioritize standardized training, strong collaboration with national federations, and a focus on the psychological and physiological needs of athletes. For instance, comprehensive training programs that integrate theoretical knowledge with practical application have been highlighted as critical for producing high-performing coaches (Koçak, 2019). By adopting similar approaches, Turkey can enhance its coach education system to align with international best practices. This study contributes to the existing literature by focusing specifically on shooting sports and providing actionable recommendations for addressing gaps in coach training within this unique context.

The examinations regarding the adequacy of the training revealed that the majority of coaches in Turkey believed that the technical and tactical information provided in coach training was insufficient, that coach training was better implemented in other countries, that the equipment and shooting ranges used in coach training were insufficient, that coaches working in the field were not adequately utilized, and that the duration of the courses given in coach training was insufficient. These findings highlight the general dissatisfaction of coaches in Turkey with the adequacy of coach training and indicate the need to review and improve coach education programs.

Furthermore, very strong ($0.90 < r$) positive and significant ($p < 0.05$) correlations were found between the participants' levels of agreement in their views on the adequacy and effectiveness of coach training and its benefit to the instructor. When participants had more positive views about the adequacy of coach training, their positive thoughts about the quality and impact of the training and its benefit to the instructor also increased.

However, it was observed that coaches' views on the benefit of coach training to the instructor did not have a moderating effect on the relationship between their views on the adequacy and effectiveness of the training ($p > 0.05$). In other words, coaches' views on the benefit of coach training to the instructor did not affect the strength of the relationship between their views on the adequacy and effectiveness of the training.

Based on these results, the following recommendations can be offered to improve and develop coach training programs in Turkey:

1. The content and quality of training should be improved: The majority of participants thought that the content and quality of the courses were inadequate. Therefore, the content of coach training programs should be reviewed and updated. More technical and tactical information should be provided, and greater emphasis should be placed on issues such as communication skills, athlete development and psychological preparation.

2. The duration of training should be extended: Participants believed that the duration of coach training was insufficient. Training programs should be extended for longer periods and more in-depth training opportunities should be provided.

3. Customized training approaches should be developed for different groups: Research shows that different demographic groups may require different approaches to coach training. Therefore, training programs should be customized according to factors such as gender, age, and education level.

4. Collaborations with federations should be strengthened: Federations can contribute more to coach training programs. These collaborations can increase access to educational materials and resources and improve the quality of training.

5. The quality of training providers should be improved: The qualifications and experience of instructors are important. Instructors should be made more competent and should be provided with access to up-to-date information.

6. International collaborations should be encouraged: Participants thought that coach training did not comply with international standards. Therefore, international coach training programs and collaborations should be encouraged.

7. In conclusion, this study emphasizes the need to improve coach education programs in Turkey. These recommendations may be an important step in making coach training more effective and enabling Turkish athletes to achieve greater success.

While this study offers valuable insights into the adequacy and effectiveness of coach training in Turkey, it is not without limitations. First, the sample focuses specifically on shooting coaches, which may limit the generalizability of the findings to coaches in other sports disciplines. Second, the study relies on self-reported data through questionnaires, which may introduce biases such as social desirability or subjective interpretations. Lastly, the cross-sectional design of the study does not allow for examining changes over time, which could be addressed in future longitudinal research.

The obtained findings can be an important starting point for better understanding and improvement of the coach training system and the development of shooting sports in Turkey. It may be important for future studies to examine issues such as the reasons for the negative views, how coach training programs can be improved, and how more effective training strategies can be created to increase athletes' performance.

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