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Applying the Teaching Games for Understanding Model to 4 vs 4 Soccer Games: A Strategy to Improve Shooting Skills

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ABSTRACT

Shooting proficiency is a fundamental skill in soccer that significantly influences a team's success. Traditional training methods often focus on technical aspects, potentially neglecting the tactical understanding and decision-making required in dynamic match situations. This study aims to enhance soccer players' shooting skills through the modification of 4 vs 4 games utilizing the Teaching Games for Understanding (TGfU) training model. This study employed an experimental design with pre-test and post-test measurements involving soccer players participating in a specialized training program. Data were collected through observation and assessment of shooting skills using the Loughborough Soccer Shooting Test (LSST) instrument. The results of the independent t-test indicated a significant difference between the pretest and posttest scores of the experimental group, with the t-value (9.26) being greater than the t-table value (2.04). These findings demonstrate that the implementation of the Teaching Games for Understanding (TGfU) model in 4 vs 4 football games significantly improves students' shooting skills. These findings underscore the importance of incorporating tactical-focused training methods to develop comprehensive soccer skills. Implementing such approaches in coaching practices can lead to more effective skill acquisition and performance in competitive settings. Future research should explore the long-term effects of TGfU-based training on various skill sets across different age groups and competitive levels.

Keywords: Teaching Games for Understanding; soccer training; 4 vs 4 game modification; shooting skills

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INTRODUCTION

Around the world, many people participate in, compete in, and watch various types of sports (Memmert et al., 2015). Football is among the most popular spectator sports and is classified as an invasion game, which involves two teams competing on the same field without any physical barriers separating them. Each team consists of eleven players, including a goalkeeper. Most of the game is played using skills to control the ball with all parts of the body except the arms and hands, which are not permitted to touch the ball—except for the goalkeeper, who is allowed to use all parts of the body, including the arms and hands. Football is a complex sport that goes beyond physical performance; it also requires the ability to make quick decisions during play. As stated by Mitchell (Psotta & Martin, 2011), "performance in sports games is based on perceptual-cognitive processes

that lead to decision-making regarding movement responses and on sensorimotor processes responsible for the execution of skills."

The objective of each team is to score as many goals as possible by directing the ball into the opponent's goal while simultaneously preventing the opposing team from launching successful attacks and defending their own goal (Luxbacher, 2010). Shooting is a fundamental technique used to score goals by striking the ball toward the opponent's goal with both accuracy and power. Players must understand how to adapt their shooting technique according to the game situation in order to maximize their chances of scoring.

Several factors influencing shooting skills have been widely used as variables in research. In fact, numerous recent studies have led to the development of applications and technological tools aimed at enhancing various aspects of the game, such as player performance, match prediction, injury forecasting, tactical analysis, and video highlight analysis (Sahinler et al., 2023) all of which are intended to increase the likelihood of winning. According to (Luxbacher, 2010), there are three main objectives when executing a shot: accuracy, power, and a low trajectory. If a player consistently fails to meet one or more of these objectives, scoring a goal becomes unlikely.

Furthermore, players' decisions to perform a shot are influenced by information regarding the positions and movements of both players and the ball on the field. In finishing situations, the decision to shoot or pass is not solely based on personal desire but is also shaped by the player's understanding of the overall flow of the game (Caldeira et al., 2024). Observations during matches show that most shooting opportunities last for only a short duration—approximately 1 to 2 seconds (Loutfi et al., 2023). This means that players must make decisions and execute their shots quickly, as the window of opportunity is extremely limited. Only a few shooting chances extend beyond two seconds, indicating that opponent pressure or game situations often force players to shoot immediately. Common mistakes in shooting include: a. Shots going over the crossbar, b. Weak or underpowered shots, c. Shots going wide of the goal, d. Failure to strike the ball properly with the instep, volley, or swerving techniques, e. Shots lacking curve or spin.

The Teaching Games for Understanding (TGfU) model was first developed by Bunker and Thorpe (1982) as a response to traditional sports instruction methods that placed excessive emphasis on mastering technical skills, often neglecting the tactical aspects of gameplay. This model was designed to enhance tactical thinking, decision-making abilities, and players' situational awareness before focusing on technical skill development (Pill et al., 2023). Teaching Games for Understanding is now widely recognized as one of the most effective approaches for teaching key elements in sports education. The objectives of this study were to: (a) examine the impact of the TGfU model on decision-making in physical education, and (b) compare the effects of TGfU-based interventions across different educational levels (González-Valero et al., 2024). Research findings indicated that a tactical game approach encouraged continuous movement both with and without the ball over an eight-week period. This method led to significantly better outcomes in on-ball decision-making and increased motor engagement time (MET) compared to traditional technique-based instruction. These findings highlight the importance of tactical gameplay approaches in enhancing student performance in sports learning environments. However, further long-term studies and replications are needed to generalize these results across diverse school settings (Gouveia et al., 2019).

In applying the Teaching Games for Understanding (TGfU) approach to football shooting drills, several 4 vs 4 game-based variations can be implemented to enhance

players' tactical awareness and decision-making. One such variation is 4v4 with Mandatory Shots, where teams are required to attempt a shot within a maximum of five passes. This drill trains players to identify shooting opportunities quickly. If a team fails to shoot within five passes, possession is awarded to the opposing team, while a bonus point is given if the shot occurs within three passes or fewer. Another effective drill is 4v4 + Target Player, which focuses on the role of the striker. Each team assigns a target player who must receive the ball before a shot is taken. This encourages off-the-ball movement and timing. The striker is restricted to the penalty area, and if they score immediately after their first touch, the team earns additional points. The 4v4 with Defensive Pressure drill introduces time constraints by allowing only seven seconds for a team to shoot after gaining possession. This setup simulates real-game pressure, requiring quick decision-making. A bonus point is added for teams that manage to shoot within five seconds. To develop second-ball reactions, 4v4 with Rebound Challenge requires players to immediately contest for a rebound after the initial shot. Teams that convert the rebound into a second goal receive extra points, while the defending team transitions to attack if they secure the loose ball. In the 4v4 Transition Play drill, the focus is on counter-attacking. When the defending team wins the ball, they are given only five seconds to score, promoting fast transitions and effective finishing while the opposing defense is unsettled. Success within this time frame yields bonus points. For improving accuracy, 4v4 Small Goals Challenge reduces the playing area and replaces full-sized goals with two smaller goals for each team. Players are encouraged to use precise shots and creative ball placement. Additional points are awarded for shots made from outside the penalty area, with a requirement to complete at least one through pass before shooting. Lastly, 4v4 with Mannequins incorporates mannequins or cones placed strategically to simulate defenders. This drill trains players to find ideal shooting angles while avoiding obstacles. Any shot that touches a mannequin is invalid, while clean shots earn extra points. Each of these variations not only reinforces technical shooting skills but also fosters real-time tactical thinking, situational awareness, and game-related decision-making, all of which align with the pedagogical foundation of the TGfU model.

In the world of competitive sports, an effective training approach is key to developing the specific skills that determine an athlete's performance. The philosophy of pragmatism in sports training emphasizes that the methods used should be grounded in the actual demands of the game and their effectiveness in enhancing athletic performance. Pragmatism in high-performance sports means that training methods must be based on tangible outcomes, not merely on theory or abstract concepts. One approach that has gained increasing attention in sports education and training is Teaching Games for Understanding (TGfU) (Martínez-Santos et al., 2020). This approach emphasizes understanding the game through scenarios that closely resemble real match situations, allowing players to learn and develop skills in a more contextualized manner. In shooting practice, the application of TGfU is highly relevant, as it not only trains the basic technique of striking the ball toward the goal, but also teaches players how to make optimal decisions in complex game situations.

Given the game situation, athletes need to be encouraged to understand the game and enhance their tactical awareness through ongoing reflection and group discussions (Memmert et al., 2015). In addition, the TGfU (Teaching Games for Understanding) approach also provides a more engaging and challenging learning experience, thereby increasing players' motivation during practice. By involving players in game contexts that

resemble real matches, they gain a deeper understanding of the importance of team coordination, communication, and how to make optimal use of space and time when shooting. The TGfU concept allows children and adolescents to design and create their own games.

As explained by(Memmert et al., 2015), the discovery game approach has three educational goals: (a) to bring the "game" back into the game, (b) to help players understand the structure of the game, and (c) to encourage players to learn about "democracy in action." In efforts to enhance the effectiveness of shooting training, modifying the game is one strategy that can be applied. The 4 vs 4 format is one example of a small-sided game (SSG) that is widely used in both sports education and training contexts, including in football.

Small-Sided Games (SSG) have been proven to be an effective method for improving physical fitness while simultaneously developing technical skills (Impellizzeri et al., 2006). Compared to interval running training, SSG is often preferred because it offers a more enjoyable playing experience (Arslan et al., 2020), thereby increasing player motivation and engagement. In SSG, both external and internal loads can be manipulated by adjusting task constraints such as the number of players, pitch size, goal dimensions, game rules, duration, and more (Halouani, 2014). Therefore, it is crucial to understand how these manipulations affect both external and internal training loads (Li et al., 2022). Although some studies suggest that running-based training may be more effective in improving fitness, SSG remains a superior choice in the context of learning and skill development—particularly in the use of 4 vs 4 game modifications based on the Teaching Games for Understanding (TGfU) model to enhance shooting skills in football.

The 4 vs 4 game format, for example, provides a more interactive environment that allows players to engage with the ball more frequently and create more shooting opportunities compared to regular game formats. This setup also fosters more dynamic gameplay conditions, offering more space to move than games with larger numbers of players. As a result, players are more frequently involved in both attacking and defending situations directly. With fewer players on the pitch, ball pressure becomes more intense, forcing players to think quickly, make better decisions, and sharpen their ability to find gaps for effective shooting. Research has shown that the Teaching Games for Understanding (TGfU) model is more effective than direct instruction in increasing student engagement in light physical activity during learning sessions (Sierra-Ríos et al., 2020). However, in moderate and vigorous activity intensities, no significant differences were found between the two approaches. These findings reinforce the relevance of applying the TGfU model in 4 vs 4 game modifications to optimize shooting skills in football, as this model not only enhances active participation but also promotes deeper tactical understanding.

Several forms of 4 vs 4 training drills that can be implemented include: Small-Sided Game with Target Shooting – A 4 vs 4 game format focused on finishing, where each team must complete an attack within a limited number of passes before attempting a shot on goal. Positional and Movement Training – Players are restricted to specific zones to enhance their understanding of roles and movement in building up attacks and creating shooting opportunities. Quick Transition Training – After losing possession, the defending team must immediately apply pressure to win the ball back, while the attacking team is trained to transition quickly and take shooting opportunities before the defense can reorganize. Finishing Under Pressure – Players are given a time or touch limit to take a shot on goal, training their speed and accuracy in high-pressure game-like situations. Overload

Training (4 vs 3 or 4 vs 2 before returning to 4 vs 4) – The attacking team has a numerical advantage to develop effectiveness in creating shooting opportunities before the defending team returns to a full 4 vs 4 formation. In this context, modifying the 4 vs 4 format through the Teaching Games for Understanding (TGfU) model is considered more effective in creating realistic game situations and directly enhancing shooting performance.

This approach differs from traditional methods that rely solely on isolated technical drills. In contrast, a pragmatic approach designs training to closely resemble real match conditions, enabling athletes not only to master shooting techniques but also to apply them effectively in dynamic and competitive situations. By combining 4 vs 4 games with the Teaching Games for Understanding (TGfU) approach and various specific training formats, players are expected to develop shooting skills not only from a technical standpoint but also within more complex tactical contexts. As a result, the training becomes more effective and has a direct impact on player performance during actual matches.

METHOD

This study employed a quasi-experimental method with a pretest-posttest control group design. This approach was used to examine the effect of a 4 vs 4 game modification through the Teaching Games and Sport for Understanding (TGfU) model on shooting skills in football. The study aimed to assess the impact of the Teaching Games for Understanding (TGfU) model on the improvement of shooting skills in football among students of Universitas Bhayangkara Jakarta Raya enrolled in the Football course. The research subjects consisted of 31 students selected based on inclusion criteria: actively participating in football classes and having no injuries that could hinder physical activity. The exclusion criteria included students who were unable to participate in the full series of training sessions. Subjects were recruited using purposive sampling, considering the suitability of their characteristics with the research objectives. This research was conducted during the even semester of the 2024/2025 academic year at Universitas Bhayangkara Jakarta Raya, specifically within the Football course. The selection of time and location was based on the accessibility of research subjects and the relevance of local conditions, such as university policies on sports activities and a learning culture that supports the implementation of the TGfU method. The research instrument used in this study was the Loughborough Soccer Shooting Test (LSST), an evaluation tool for assessing shooting skills in football. This instrument was chosen because it is designed to simulate real match situations, making it relevant to the research objectives. The validity and reliability of the LSST have been tested in previous studies (Ali et al., 2007), ensuring that the instrument can provide accurate and consistent measurement results. Prior to its use, the LSST was adapted to the research conditions, such as field setup and time standards, to ensure its suitability with the characteristics of the subjects and the local context.

The research procedure included systematic steps followed throughout the study. The research began with data collection through a pretest using the Loughborough Soccer Shooting Test (LSST) to evaluate the subjects' initial shooting skills. The test was conducted on the football field of Universitas Bhayangkara Jakarta Raya, following the standard LSST procedure guidelines. This detailed explanation highlights the alignment of the data collection method with the research objectives and ensures the accuracy of the results obtained. Data collection was carried out by measuring the pretest and posttest

results using the LSST. Next, the experimental group received training using the Teaching Games for Understanding (TGfU) model for a period of six weeks. After the training was completed, a posttest was conducted using the same LSST to measure the development of shooting skills. The data obtained from the pretest and posttest were then analyzed using an independent t-test to compare the results between the two groups. In this study, the independent t-test was used to compare the pretest and posttest results of the experimental group. Data analysis was carried out to determine whether there were any significant differences between the groups, which would indicate the effectiveness of the TGfU model in improving students' shooting skills.

RESULTS AND DISCUSSION

Based on the test results using the t-test, the calculated t-value was 9.26, which is greater than the critical t-table value of 2.04. In this study, the independent t-test was used to compare the pretest and posttest results of the experimental group. Data analysis was conducted to identify whether there was a significant difference between the groups, indicating the effectiveness of the Teaching Games for Understanding (TGfU) model in improving students' shooting skills. These results indicate that the implementation of the TGfU model in 4 vs 4 football games has a significant effect on enhancing shooting skills.

Table 1. Data Description of Applying the Teaching Games for Understanding Model to 4 vs 4 Soccer Games: A Strategy to Improve Shooting Skills

	N	Min	Max	Mean	SD
Pretest	684	7	36	22.06	6.72
Postest	780	10	40	25.16	8.42

Table 2. Normality Test Results of Applying the Teaching Games for Understanding Model to 4 vs 4 Soccer Games: A Strategy to Improve Shooting Skills

	L_O	L_t	Information
Pretest	0,1490	0,1559	Normal
Postest	0,0766	0,1559	Normal

These findings are consistent with research such as that conducted by (Robles et al., 2020), which states: "The results of the systematic review and meta-analysis indicate that tactical approaches are more effective than technical approaches in improving decision-making and skill execution within the context of games and sports. Five out of seven analyzed studies showed significant improvements with large effect sizes." Although the tactical approach is recommended in teaching, the evidence supports that the TGfU approach is effective in enhancing both technical and tactical skills. Referring to the study by (Rahmalia & Ala, 2023), the findings show that a tactical game-based learning model significantly contributes to the improvement of football shooting skills. Game-based approaches allow players to make decisions in scenarios that closely resemble real match conditions.

The improvement in shooting skills during learning can be linked to the TGfU approach, which emphasizes decision-making and skill development within real-game contexts. This is also supported by findings that variables such as the number of touches, type of passes, and player involvement play a role in extending ball possession duration, particularly in small-sided games (Coutinho et al., 2022). In addition, the TGfU model

enables players to understand the tactical context surrounding decision-making, which not only enhances shooting performance but also other skills such as positioning and passing. This success indicates that game-based strategies can serve as more effective alternatives compared to traditional learning approaches that tend to focus on individual drills. The author also notes that these results support the consistency of game-centered physical education theories and contribute new insights to the understanding of skill development in sports through the TGfU approach.

Discussion

The results of this study indicate that the application of the Teaching Games for Understanding (TGfU) model in 4 vs. 4 soccer games has a significant impact on improving students' shooting skills. Data obtained through the independent t-test showed that the calculated t-value of 9.26 was greater than the critical t-table value of 2.04, confirming a significant difference between the pretest and posttest results of the experimental group. This improvement reflects the effectiveness of TGfU in providing a game context that supports decision-making and the mastery of technical skills. In addition, qualitative observational findings revealed that this approach enables students to integrate tactical understanding with motor skills in real game situations. Therefore, the findings of this study provide strong empirical evidence that the TGfU model can be an effective instructional strategy for enhancing shooting skills while simultaneously developing students' motor abilities.

As a reflection of the research findings, this study demonstrates that the application of the Teaching Games for Understanding (TGfU) model can significantly enhance shooting skills through a game-based learning approach. This learning pattern has a positive impact because it simultaneously develops both tactical and technical elements within real game situations. The improvement in shooting skills can be attributed to better decision-making and tactical understanding acquired during TGfU-based training. These findings can be explained from both empirical and theoretical perspectives. Empirically, the results arise from the implementation of the TGfU model, which integrates real-game elements with context-based learning. This approach allows students to experience situations that resemble actual matches, enabling their shooting skills to develop naturally through repetition, decision-making, and adaptation to game pressure. The 4 vs. 4 game context also offers more opportunities for students to engage in shooting actions compared to traditional training formats. This confirms that TGfU is a relevant and appropriate approach for developing sports skills.

The findings of this study are consistent with previous research that highlights the effectiveness of the Teaching Games for Understanding (TGfU) approach in enhancing sports skills. TGfU and game-based approaches are considered capable of utilizing the framework of motor praxeology, as concepts such as game sense, game structure, and teaching styles support the playing process in an operational and systematic manner. Moreover, they allow for the integration of various types of games regardless of their institutional level (Martínez-Santos et al., 2020).

Based on the results of this study, the next step is to integrate the Teaching Games for Understanding (TGfU) model into the sports education curriculum, particularly in the sport of football. Implementing TGfU in small-sided game formats such as 4 vs. 4 can serve as a primary instructional strategy to enhance students' technical, tactical, and motor skills. As part of an action plan, policies can focus on training physical education teachers to

ensure they fully understand the concepts and practices of TGfU. Practice-based workshops and training programs can be designed to help teachers adopt this approach in their teaching. Furthermore, educational institutions may consider allocating more flexible time for game-based learning to optimize students' skill development. On a broader scale, this research can also serve as a foundation for policymakers to develop national guidelines on the use of the TGfU method in sports education. Thus, the findings of this study contribute not only theoretically but also offer concrete steps to improve the quality of sports education at both institutional and policy levels.

CONCLUSION

The conclusion of this study indicates that the application of the Teaching Games for Understanding (TGfU) model in 4 vs. 4 soccer games significantly improves students' shooting skills. This model is effective in integrating tactical, technical, and motor elements, thereby providing a contextual and holistic learning experience. The improvement in skills not only supports game-based learning theories but also reinforces the relevance of TGfU as an innovative approach to sports education. This research also opens opportunities for further exploration, particularly in adapting the TGfU model to other sports or different learning scenarios, with the aim of enhancing the overall quality of physical education.

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CONFLICT OF INTEREST

The author declares that there is no conflict of interest in this study. Role of Funders: The funders had no role in the design of the study, data collection, analysis, or interpretation, manuscript writing, or the decision to publish the results.

REFERENCES

Ali, A., Williams, C., Hulse, M., Strudwick, A., Reddin, J., Howarth, L., Eldred, J., Hirst, M., & McGregor, S. (2007). Reliability and validity of two tests of soccer skill. *Journal of Sports Sciences*, *25*(13), 1461–1470. https://doi.org/10.1080/02640410601150470

Arslan, E., Orer, G. E., & Clemente, F. M. (2020). Running-based high-intensity interval training vs. small-sided game training programs: Effects on the physical performance, psychophysiological responses and technical skills in young soccer players. *Biology of Sport*, *37*(2), 165–173. https://doi.org/10.5114/BIOLSPORT.2020.94237

Caldeira, N., Lopes, R. J., Araujo, D., & Fernandes, D. (2024). The Finishing Space Value for Shooting Decision-Making in High-Performance Football. *Sports*, *12*(8), 1–29. https://doi.org/10.3390/sports12080208

Coutinho, D., Gonçalves, B., Laakso, T., & Travassos, B. (2022). Clustering ball possession duration according to players' role in football small-sided games. *PLoS ONE*, *17*(8 August), 1–15. https://doi.org/10.1371/journal.pone.0273460

González-Valero, G., Ubago-Jiménez, J. L., Melguizo-Ibáñez, E., & Fernández-García, R. (2024). Application of the teaching games for understanding model to improve decision-making in sport learning: a systematic review and meta-analysis. *BMC Psychology*, *12*(1). https://doi.org/10.1186/s40359-024-02307-2

Gouveia, É. R., Gouveia, B. R., Marques, A., Kliegel, M., Rodrigues, A. J., Prudente, J., Lopes, H., & Ihle, A. (2019). The effectiveness of a tactical games approach in the teaching of invasion games. *Journal of Physical Education and Sport*, *19*(June), 962–970. https://doi.org/10.7752/jpes.2019.s3139

Halouani. (2014). *S -s g a b r*.

Impellizzeri, F. M., Marcora, S. M., Castagna, C., Reilly, T., Sassi, A., Iaia, F. M., & Rampinini, E. (2006). Physiological and performance effects of generic versus specific aerobic training in soccer players. *International Journal of Sports Medicine*, *27*(6), 483–492. https://doi.org/10.1055/s-2005-865839

Li, Z., Mao, L., Krustrup, P., & Randers, M. B. (2022). Internal and external load during 8 v 8, 5 v 5 and 3 v 3 in Chinese elite youth male football players. *Biology of Sport*, *39*(4), 1065–1071. https://doi.org/10.5114/biolsport.2022.113292

Loutfi, I., Gómez-Jordana, L. I., Ric, A., Milho, J., & Passos, P. (2023). Highlighting Shooting Opportunities in Football. *Sensors*, *23*(9), 1–13. https://doi.org/10.3390/s23094244

Luxbacher, J. A. (2010). Soccer Practice Games. In *Soccer Practice Games*. https://doi.org/10.5040/9781718219182

Martínez-Santos, R., Founaud, M. P., Aracama, A., & Oiarbide, A. (2020). Sports Teaching, Traditional Games, and Understanding in Physical Education: A Tale of Two Stories. *Frontiers in Psychology*, *11*(September). https://doi.org/10.3389/fpsyg.2020.581721

Memmert, D., Hillmann, W., Huttermann, S., Klein-Soetebier, T., Konig, S., Nopp, S., Rathschlag, M., Schul, K., Schwab, S., Thorpe, R., Furley, P., Almond, L., Bunker, D., Butler, J., Fasold, F., & Griffin, L. (2015). Top 10 research questions related to teaching games for understanding. *Research Quarterly for Exercise and Sport*, *86*(4), 347–359. https://doi.org/10.1080/02701367.2015.1087294

Pill, S., Griffin, L., & Gambles, E.-A. (2023). Teaching Games and Sport for Understanding. In *Teaching Games and Sport for Understanding*. https://doi.org/10.4324/9781003298298

Psotta, R., & Martin, A. (2011). Changes in decision making skill and skill execution in soccer performance: The intervention study. *Acta Universitatis Palackianae Olomucensis, Gymnica*, *41*(2), 7–15. https://doi.org/10.5507/ag.2011.008

Rahmalia, A., & Ala, F. (2023). The Advantages of Tactical Games and Cooperative Learning Models in Football Shooting Technique Skills. *Indonesian Journal of Sport Management*, *3*(2), 299–304. https://doi.org/10.31949/ijsm.v3i2.7747

Robles, M. T. A., Collado-Mateo, D., Fernández-Espínola, C., Viera, E. C., & Fuentes-Guerra, F. J. G. (2020). Effects of teaching games on decision making and skill execution: A systematic review and meta-analysis. *International Journal of Environmental Research and Public Health*, *17*(2). https://doi.org/10.3390/ijerph17020505

Sahinler, R., Goktas, O. B., Mumcu, B., Sen, D., Kocaturk, F., & Uvet, H. (2023). *Impact of velocity and impact angle on football shot accuracy during fundamental trainings*. *MI*, 1–

7.

Sierra-Ríos, J. V., Clemente, F. M., Rey, E., & González-Víllora, S. (2020). Effects of 6 weeks direct instruction and teaching games for understanding programs on physical activity and tactical behaviour in u-12 soccer players. *International Journal of Environmental Research and Public Health*, *17*(14), 1–14. https://doi.org/10.3390/ijerph17145008