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Agility Training For Futsal Players: A Systematic Literature Review

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ABSTRACT

Purpose: The purpose of this study was to determine the benefits of agility training in Futsal players. Materials and Methods: The PRISMA table will be used for systematic review and meta-analysis in this review investigation. Various studies were published from January 2020 to December 2025. In the search procedure, the following keywords were used: (1) Training; (2) Agility; (3) Futsal. The search in this study utilized the Scopus research journal database. Results: The theme of this study as a whole obtained 42. Consists of 23 articles which are then taken 10 relevant. Conclusion: The analysis of agility training in futsal players, based on the results of relevant research, reveals significant improvements in agility, movement reactions, and physical performance. However, further research is needed to adjust the training to the specific characteristics of athletes.

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A. Conception and design of the study;
B. Acquisition of data;
C. Analysis and interpretation of data;
D. Manuscript preparation;
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INTRODUCTION

Futsal is a team game that takes place indoors and is known for its high tempo.(Spyrou et al., 2020) As a minor variant of soccer, futsal demands fast positional movements as well as tactical decision-making in a very short time. (da Costa et al., 2021) Although the duration of the match is relatively short, the intensity of the activity is very high, involving various elements of physical fitness such as speed, endurance, muscle strength, and most prominently, agility. (Adi et al., 2021)

Agility, or agility, refers to the ability to change direction of motion quickly and precisely while maintaining balance and body control. (Falch et al., 2021) In futsal games, this aspect is crucial in various situations, such as when dribbling, defending against opponents, winning the ball, or creating scoring opportunities. All of these actions demand quick responses and explosive changes of direction within a limited playing

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space. One of the best ways to increase strength is by doing progressive weight training. (Adi, Rohidi, et al., 2023) Therefore, increasing agility is an essential component in the training program for futsal athletes.(Apriantono et al., 2023) Increased agility can be achieved through various exercises, including sprint and agility training, which have been shown to have a significant relationship with dribbling skills in futsal teams.(Purnomo & Irawan, 2021)

Although the importance of agility has been widely recognized in the context of game performance, there is still a gap between the training conducted in the field and approaches based on scientific findings.(Park et al., 2022) Most coaches still rely on traditional methods or personal intuition without support from the latest empirical data.(Taylor et al., 2023) As a result, the training programs run do not always have objectively measurable effectiveness and risk being suboptimal in the development of athlete abilities. Furthermore, scientific literature discussing agility training interventions in futsal players is still scattered and has not been documented in a systematic review (Göral et al., 2023). This makes it difficult for coaches, academics, and sports practitioners to obtain valid and applicable information to design targeted training. Therefore, efforts to collect and analyze empirical evidence in a structured manner are an urgent need. The development of training programs based on empirical evidence can increase the effectiveness of agility training and overall improve dribbling skills in futsal players.(Apriadi et al., 2023)

In response to these problems, a systematic literature review is needed that can collect, critically assess, and synthesize research results related to agility training in futsal.(Thieschäfer & Büsch, 2022) This approach aims to present the best evidence that can be used as a basis for formulating training programs that are targeted, effective, and based on reliable data.(Purnomo & Irawan, 2021) With a systematic methodology, the potential for bias can be suppressed, and the quality of the review results can be better guaranteed.(Vali et al., 2021)

This review specifically aims to evaluate the various forms of training interventions that have been implemented in an effort to improve the agility of futsal players.(Al-Azzawi et al., 2023) It was also intended to assess the effectiveness of each intervention based on the measured performance parameters, as well as identify research gaps that still need to be filled through further studies.(Przywarra & Risch, 2022) A systematic literature review (SLR) into classroom action research effectively strengthens teachers' ability to apply relevant research methodologies when teaching so that they can develop more innovative and effective data-driven teaching strategies. (Dr. Adi S et al., 2023) The results of this systematic literature review are expected to provide more in-depth insights into futsal players' agility. The results of this systematic literature review are expected to provide deeper insight into effective training methods to improve the agility of futsal players.

Academically, this review is expected to be able to make a meaningful contribution to the development of sports coaching science, especially in the application of scientific evidence-based training to improve the performance of futsal athletes.(Yunus & Raharjo,

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2022) On the other hand, the results of this review are also expected to be a practical guide for coaches and other coaching practitioners in developing training programs that are more targeted and efficient.(Root et al., 2022) Thus, this systematic review will be a strong link between the results of academic research and training practices in the field in order to improve the overall performance of futsal players.

METHODS

Systematic literature review research refers to a group of studies on data collection methods or research subjects investigated by using various literature sources, including books, encyclopedias, scientific journals, magazines, and documents.(Rumini et al., 2024) Researchers use the literature research method, which means collecting data from books, journals, articles, magazines, and the internet on the issue of the relationship between flexibility training and sports performance. (Adi, Rohidi, et al., 2023)

The words "Agility", 'Training', and "Futsal" were searched for in articles published from the Scopus research journal database from 2020 to 2025. PRISMA 2020 represents a development in systematic review reporting that is more open, structured, and follows consistent standards.(Page et al., 2021) Some items in the PRISMA 2020 checklist were not applied in several systematic reviews and meta-analyses published in the Korean Journal of Radiology.(Park et al., 2022)

The variables selected for the scopus search were: (1) number of databases contained in the keyword search; (2) years of published articles selected from 2020 to 2025; (3) relevant articles; (4) field (sport, training, education, or mixed); (5) type of research (discovery, experimental, descriptive, quantitative, qualitative); (6) selection of positive articles.

The focus is on the title, abstract and keywords of the article as these are sufficient to create a reliable core of the article sufficient for further analysis and use. Only open-access articles were included in this review study. This was done because the authors wanted everyone to be able to see their research. The following inclusion and exclusion criteria were used to select only relevant people who could speak on a particular topic.

RESULTS AND DISCUSSION

Result

Identification of literature search results in the database using keywords (n = 42), from the entire database, will be filtered from 2020 to 2025 and selected article categories (n = 23), inaccessible articles that do not meet the inclusion criteria (n = 19). Then, the filtered articles will be selected using keywords that match the theme of agility, training, and futsal (n = 18). Then the electability will be included in the results (n=10) of relevant articles.

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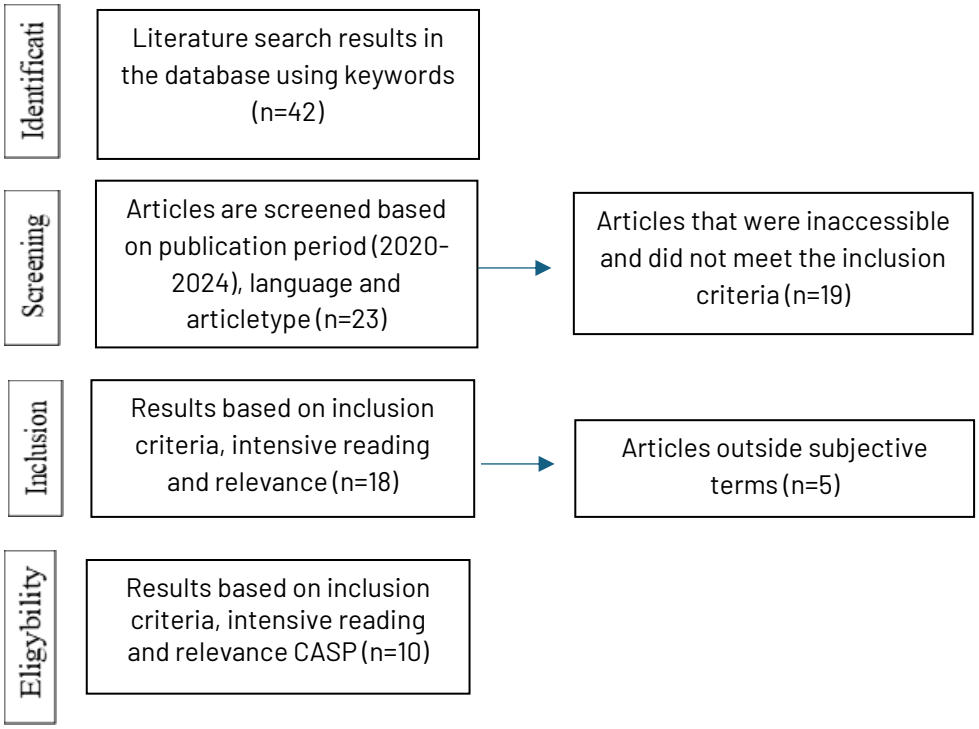

The following table shows the total number of publications published during the selected period. Year of publication.

Table 1.
Evolution of the number of publications per year

Year of publication	Number of articles	Percentage
2020	1	4%
2021	2	9%
2022	4	17%
2023	8	35%
2024	5	22%
2025	3	13%
Total	**23**	**100%**

Table 1 will show the number of various periods of article publication each year, as seen in the evolution table. The explanation of the table above includes: from 2020 to 2025, there was an increase in scientific publications (1 article), in 2021 (2 articles), in 2023 (4 articles), in 2024 (8 articles), and in 2025 (3 articles).

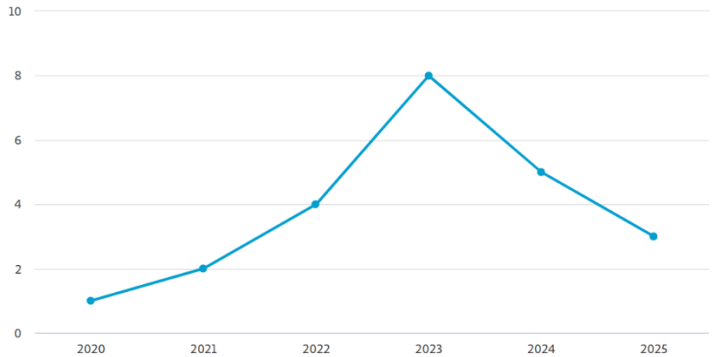

Image 1.
Evolution of the present graph

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Based on the literature, the analysis that can be applied in futsal agility training is shown in the table:

Table 2.
It is the title of the table

Topic	Sample	Result
Does 5-minute training improve VO2max and agility? A study of situational game training in futsal | El entrenamiento de 5 minutos mejora el VO2máx y la agilidad? Un estudio sobre el entrenamiento de juego situacional en el fútbol sala(Taufik, 2025)	Futsal players	Improve physical performance
Acute Effects of Combined High Intensity Interval Training and Step Aerobics Training on Agility in Male Futsal Athletes During the Pre-season(Bumrung et al., 2025)	Futsal athletes	Improve in agility
The Influence of Imagery and Agility Training on Athletes' Futsal Goalkeeper Reaction Time Metro City Senior High School (Erick & Sumantri, 2024)	Futsal goalkeeper	Increase reaction goalkeeper
The Effect of Combination of Cone Drill (Zigzag) with Core Stability, Combination of Ladder Drill (Snake Jump) with Core Stability, and Speed on Agility of Futsal Players: A Factorial Experimental Design | Efecto de la combinación del ejercicio de conos (zigzag) con la estabilidad del núcleo, la combinación del ejercicio de escalera (salto de serpiente) con la estabilidad del núcleo y la velocidad en la agilidad de los jugadores de fútbol sala: Un diseño experimental factorial(Ilham et al., 2024)	Futsal players	Increase movement effectiveness
Imagery and Agility Training: How Do They Affect The Reaction Ability Of Futsal Goalkeepers? (Rozi et al., 2023)	Futsal goalkeepers	Increase motor reaction
The Effect Of 6 Weeks Of Combination Of Three Cone Exercise Using Ball And High-Intensity Interval Training On The Agility And Dribbling Ability Of Student Futsal Athletes (Wiranata et al., 2023)	Students futsal athletes	Improve agility in dribbling the ball.
Effects of a Plyometric Training Program in Sub-Elite Futsal Players during Pre-Season Period(Branquinho et al., 2022)	Futsal players	Effective in improving agility
Impact of plyometric training on sprint and agility performance in collegelevel futsal athletes: a comparative study using hurdle jumps and box jumps | Wpływ treningu plyometrycznego na wydajność sprintu i zwinności u sportowców akademickich w futsalu: badanie porównawcze z	Futsal athletes	Significantly increase agility

wykorzystaniem skoków przez przeszkody i skoków na skrzynię (Irawan et al., 2024)		
Study of Body Composition and Motor Skills of Futsal Athletes of Different Competitive Levels (Belo et al., 2024)	Futsal athletes	Significantly increase agility
The Effect of Quick Strength Training on the Agility and Leg Power of Futsal Junior Athletes(Akhmad et al., 2023)	Futsal athletes	Improve agility and physical performance.

Discussion

Improving the agility of futsal players

Futsal, as a sport with a high intensity and dynamic character, demands an optimal level of skill and physical fitness, especially in the aspect of agility, thus presenting a considerable challenge to the players. (Ilham et al., 2024) The use of appropriate training methods has been shown to be able to provide a significant improvement in the agility of futsal players, which is one of the key elements in game performance.(Apriantono et al., 2023) Systematically designed exercises that focus on technique mastery allow players to develop the agility needed to deal with the dynamics and intensity of futsal games. (Mahmoud & Mahmoud, 2022) The higher the level of physical activity, the greater the potential to have a good body mass index.(Aliriad et al., 2024) A thorough evaluation and planning process in training also plays an important role in optimizing the effectiveness of the program, ensuring every player can reach their full potential on the field. (Shchepotina et al., 2021) The results of this study indicate that the application of these training methods can be an effective strategy in improving the aerobic capacity and motor responses of futsal players, so that they are better prepared to face the physical challenges and tactical demands during real matches. (Taufik, 2025) The implementation of twelve HIITSA sessions over four weeks was found to be effective in improving the physical fitness levels of futsal players, which in turn had a positive impact on improving their agility performance.(Bumrung et al., 2025)

One approach that can be used is experiential learning, which has been shown to be effective in improving athletes' skills in various sports.(Bumrung et al., 2025) The integration of this training method with specific skill development techniques, such as passing, can positively contribute to the overall performance of futsal players. (Susanto et al., 2022)(Susanto et al., (Neves, 2023) Based on research findings from (Rozi et al., 2023) that imagery training and agility training have a significant effect on improving goalkeeper reaction time in futsal. This study concluded that the combination of TCDB and HIIT training proved effective in improving the agility and dribbling ability of futsal players. (Wiranata et al., 2023)

The implementation of this method, as has been done at SMA Negeri 3 Lamongan, shows significant results in developing player agility through targeted basic technique training.(Ardiansyah & Kartiko, 2021) The implementation of similar strategies in other

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educational institutions has the potential to produce comparable achievements, both in mastering basic techniques and improving overall agility.(Annas et al., 2024) Therefore, it is very important to further explore various effective training methods to support the development of futsal players' skills and performance holistically, Therefore, it is very important to further explore various training methods that are effective in supporting the development of skills and performance of futsal players holistically. The results of the study (Akhmad et al., 2023) revealed that QST was able to improve agility and leg strength in futsal athletes. This study showed significant mean changes after the application of the training program at three assessment times, with improvements seen in agility (with a small to moderate effect), countermovement jump height (CMJ) (with a very small to small effect), and sprint performance (with a very small to moderate effect.(Branquinho et al., 2022)

Furthermore, further research is also needed to deepen understanding of the relationship between agility and other basic technical skills, such as dribbling and shooting.(Effendi et al., 2022) Since both aspects also affect agility, a comprehensive training approach needs to be designed to address the needs of optimal player performance development.(Gadient & Deutsch, 2020) As the training process progresses, sometimes athletes will experience anxiety and stress, which requires coaches to understand and comprehend the situation.(Adi, Aliriad, et al., 2023) By understanding the interrelationship between technical abilities, psychological, and agility aspects, coaches can formulate more effective and focused training strategies.(Spyrou et al., 2020)

In addition, it is important to identify the main factors that influence agility and technical skills in the context of futsal games.(Sekulic et al., 2022) The results of such research will greatly assist in the development of training strategies that not only improve the mastery of basic techniques such as passing and dribbling but also support the improvement of agility directly. (Hal et al., 2022) Periodic evaluation of the effect of basic technique training also needs to be carried out to ensure that players are not only proficient in technical skills but also experience significant development in aspects of agility. (Hafez et al., 2023)

Improving the performance of futsal players

Improving the performance of futsal players can be achieved through the application of training methods that are based on objective assessments, as outlined in various studies related to decision-making systems in the player selection process.(Pizarro et al., 2020) This approach allows coaches to more accurately identify individuals with superior tactical skills and understanding, thereby improving the overall quality of the team.(Vidigal et al., 2022) Training that is systematically designed and supported by appropriate data analysis can assist in the development of more effective training strategies and have a positive impact on match results. (Garcia et al., 2023) Through periodic evaluation and strategy adjustments based on actual performance, coaches can encourage each player to reach his or her optimal potential.(Rangel et al., 2023) In the context of sports education, similar approaches have also been shown to

improve students' abilities through structured methods, as reflected in the results of classroom action research.(Casado-Robles et al., 2022) In addition, the use of playing methods in futsal training sessions, as implemented at MIN 2 Metro, has been shown to increase players' motivation and active participation during training, which directly contributes to improving their performance on the field. (Journal & Hastuti, 2023) Therefore, it is important for coaches to continuously monitor the effectiveness of the methods used and adapt them to individual needs and the latest sports development trends. The implementation of innovative and data-driven training strategies not only has an impact on improving players' technical skills, but also increases engagement, motivation and passion in the training process, which overall promotes a significant improvement in the performance of the futsal team. (Mohammed et al., 2023)

Thus, research in this area has the potential to make a valuable contribution to the development of a more effective, targeted, and evidence-based futsal training program (Sucipto et al., 2023)

CONCLUSION

Agility in futsal is a major component of performance that includes changes in direction, reaction to stimulus, and speed of thinking and acting in game situations. Based on the results of relevant research by conducting a literature review on futsal player agility training, there is an effect on increasing the agility of futsal players, increasing the speed of motion reactions, and also improving physical performance. However, agility training itself requires progressive training time, so that agility can increase optimally. Therefore, further research is needed that understand the characteristics of an athlete so that the training program provided can be precise and measurable.

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