

A Narrative Review: How Does ABC Running Affect Speed Improvement in Young Athletes?

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Abstract

The purpose of this study is to analyze the effect of ABC Running on increasing speed in young athletes. This type of research uses a narrative review method. Literature search through databases such as PubMed, Scopus, WOS, Semantic Scholar and Google Scholar. Keywords such as ABC running OR speed enhancement OR athletic performance OR athletic basic coordination OR youth or young athletes. The criteria for articles are open access, scientific journals, in English or Indonesian, and published from 2019 to 2024. From the literature search, 6 articles were found that met the criteria for analysis. The results of this study are that ABC running is effective in increasing running speed in young athletes. In addition, a combination of exercises such as Running Mechanics and Ladder Drills, as well as visualization exercises were found to help improve athletes' technical skills. In conclusion, ABC running exercises are very useful in building a strong physical foundation, preventing injuries, and improving technical understanding for young athletes. This shows the importance of integrating ABC running training into young athletes' training programs to support success at higher levels. Therefore, it is recommended to continue and develop research and practice of ABC running training with various training models. Then a deeper analysis of the methodology such as developing training models, adding control variables, details on training programs and a large number of samples.

Keywords: ABC running, Athletic Basic Coordination, Speed, Young Athlete, Young Athlete, Sport Performance.

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INTRODUCTION

In competitive sports, speed is one of the most crucial aspects of an athlete's performance. Speed is essential for young athletes who are in the process of developing and improving their physical abilities (Smbatyan & Simonyan, 2023). Speed is not only important in sports that rely on speed such as sprinting, but also in various other sports that require a combination of speed, endurance, strength and other physical components such as coordination (Almas *et al.*, 2023). Effective and innovative training methods are needed to improve this speed ability.

One training method that is starting to gain scientific attention is ABC Running, which involves a series of specific exercises designed to improve the efficiency and effectiveness of an athlete's leg movements during running (Sobarna *et al.*, 2020 & Jaya NH, *et al.*, 2022). This method focuses on aspects such as agility, balance, and coordination, all of which are essential for developing optimal speed. Agility drills

typically involve exercises that require quick changes of direction, such as cone drills or ladder drills (Hikmah *et al.*, 2023 & Susiono *et al.*, 2024). Balance is improved through activities that require the athlete to maintain a stable body position under unstable conditions, such as standing on one leg or using a balance ball (Salam *et al.*, 2024 & Wedi *et al.*, 2024). Meanwhile, coordination is improved with exercises that require coordination between the hands and feet, such as skipping or high knees (Horbenko & Lysenko, 2020).

However, despite the increasing popularity and application of ABC Running among coaches and athletes, there is still a lack of scientific literature that systematically examines and analyzes the real effects of ABC Running on speed improvement in young athletes. Most previous studies have focused more on the effects of this training on athletes undergoing long-term training (Prasetya, 2022 & Setyagraha *et al.*, 2022). Then, studies were found that suggested that young athletes needed a slightly different training model approach considering

the unique growth and physical development phases of young athletes (Aristiyanto *et al.*, 2021).

By examining this issue in the research literature, this study aims to conduct an in-depth narrative review of how ABC Running affects speed improvement in young athletes. This review is expected to provide valuable insights for coaches and policy makers in sports on how best to implement this training technique to maximize the speed potential of young athletes as well as provide a strong scientific basis for future training recommendations.

RESEARCH METHODS

This type of research is a review of scientific publications using the narrative review method. This narrative method allows researchers to collect and analyze in depth various previous studies that have

published results related to this topic. The research process begins with a literature search conducted through various academic databases such as PubMed, Scopus, WOS, Semantic Scholar and Google Scholar. Researchers use keywords such as ABC running OR speed enhancement OR athletic performance OR athletic basic coordination OR youth or young athletes to ensure that all relevant literature is collected. The criteria for articles that can be analyzed are articles that have open access, scientific journals, in English or Indonesian, and published from 2019 to 2024.

RESULT

Based on the search for scientific articles according to the research objectives and article criteria, 6 articles were found published from 2019-2024. The following are the results of the articles that have been analyzed (Table 1).

Table 1

Name and Year	Title	Research Objectives	Research Methods	Research Results
Setyantoko <i>et al.</i> , (2019)	The Game-Based ABC Running Exercise Model for Children Ages 6-12 Years	Developing a training method to improve the physical abilities of athletes that is interesting and fun for children aged 6 - 12 years.	Research and Development adapted from Borg and Gall. The training models are Game Model of ABC Running Basics, Game Model of ABC Running Intermediate, Game Model of ABC Running Advanced, Game Model of ABC Running Combo.	Based on the t-test with t-count = 45.64, degrees of freedom = 19 and p-value = 0.00 < 0.05, and an average N-gain of 56.30, it shows that there is a significant difference in the athlete's 30-meter running speed before and after being given the training model.
Sobarna <i>et al.</i> , (2020)	The Influence Learning Used Running ABC On the Sprint Capabilities	Analyzing the effect of ABC running training on sprint ability in high school students.	Quasi-experimental method with pretest-posttest control group design.	There was no significant change in the control group, while the experimental group experienced a significant change in test results. The data showed an increase in the average score from pretest to posttest in the experimental group.
Triansyah, (2021)	Pengaruh athletic basic coordination terhadap kemampuan lari 60 meter	Improve 60 meter running ability by providing ABC running drills combined with visualization exercises.	The method used is experimental with One Group Pretest-Posttest design. The sample is 20 students. The form of abc running drill is angkling, skipping, high-knee, shape of high-knees skips, straight-leg shuffle, butt-kickers, cross step-over running. Visualization exercises	There is a significant effect of athletic basic coordination training on improving 60-meter running ability. Then the increase in speed is around 22%.

			are given as a supplement to the exercises given at the beginning of the training session, by showing a video of the correct running technique in this study, a sprint video was used.	
Haetami & Triansyah, (2021)	Effect Of Abc Running Drill on the 50 Meter Sprint Of Students	The effect of ABC Running Drill training on improving 50-meter sprint ability in students aged 12-14 years.	This study uses an experimental method with a One Group Pretest-Posttest design.	There was a significant increase from pretest to posttest of 15%.
Jaya NH, <i>et al.</i> , (2022)	Penerapan Latihan Athletic Basic Coordination Terhadap Peningkatan Kemampuan Lari Jarak Pendek Peserta Ekstrakurikuler SMP Negeri 11 Kota Lubuklinggau	Analyzing the effect of Athletic Basic Coordination training on improving short-distance running ability in extracurricular participants at SMP Negeri 11, Lubuklinggau City.	This research method is quasi-experimental, with a one group pretest-posttest design.	There was a significant increase in the participants' short-distance running ability after being given Athletic Basic Coordination training. This is proven by the t-count value (5.606) which is greater than the t-table (2.26).
Setyagraha <i>et al.</i> , (2022)	Pengaruh Latihan ABC, Running mechanic dan Ladder drill terhadap Speed-Agility Atlet Perbasi Kabupaten Pinrang	Evaluating the effect of Athletic Basic Coordination (ABC), Running Mechanic, and Ladder Drill training on increasing the speed and agility (Speed-Agility) of basketball athletes in Pinrang Regency.	The method is quasi-experimental. The sample consists of 10 basketball athletes and speed measurements are carried out through a 20-meter running test.	There was a significant increase in both measured variables. The average pre-test speed was 3.26 seconds, post-test became 3.19 seconds, with a difference in increase of 0.07 seconds. For agility, the average pre-test was 10.7 seconds, post-test became 10.52 seconds, with a difference in increase of 0.18 seconds.

DISCUSSION

Based on the research collected in the file, we can understand the effectiveness of Athletic Basic Coordination (ABC) training in improving sprinting and agility abilities of athletes and students of various ages and abilities. Different studies reveal consistent results regarding the benefits of various ABC training techniques on improving athletic performance.

The first analysis, analysis of research by Setyantoko *et al.*, (2019) and Haetami & Triansyah (2021) showed a significant increase in running speed, achieving statistically relevant changes in pre-test and post-test results. This suggests that ABC training, when

combined with specific games and drills, is effective in improving running ability in children and adolescents.

The second analysis, research by Triansyah (2021) and Jaya NH, *et al.*, (2022) added additional evidence to the effectiveness of ABC training, with an increase in 60-meter and short-distance running abilities. In particular, the results of Triansyah's research, (2021) highlighted the importance of combining physical training with visualization methods to improve understanding and execution of correct running techniques, which contributed to increasing athlete speed.

The third analysis, a study by Setyagraha *et al.*, (2022) provided insight into the broader application of ABC training that included Running Mechanics and Ladder Drills, indicating improvements in speed and agility for basketball athletes. This suggests that ABC training can be customized to sport-specific needs and provide holistic benefits that are not limited to increasing speed but also agility.

From the results of this study, Athletic Basic Coordination (ABC running) training is an essential part of young athlete training, considering the various significant benefits it offers. This training focuses on developing coordination and agility, two critical components that support athletes' abilities in various types of sports (Aristiyanto *et al.*, 2021). Through movements such as high knees, butt kicks, and leg shuffles, young athletes are taught to coordinate their body movements more efficiently, which not only improves performance but also speeds up their responses in competitive situations. Young athletes who master these techniques can develop a strong physical foundation from an early age, preparing them for the more complex techniques and physical demands of advanced sports (Dwi *et al.*, 2021). Strengthening in terms of technique will also affect other physical skills such as strength, endurance and flexibility, which play an important role in achieving higher sporting achievements.

From an injury prevention perspective, ABC exercises are invaluable because they strengthen muscles and increase flexibility and range of motion (Utomo & Wahyudi, 2021). This is especially important for young athletes whose bodies are still developing and tend to be more susceptible to injury (Liza *et al.*, 2024). As athletes practice controlling and optimizing their body movements through these exercises, they also build self-confidence and body awareness (Latief *et al.*, 2024 & Mandan *et al.*, 2024). These two elements aid in overall athletic performance and provide a strong foundation for further growth and development in their chosen sport. Therefore, the integration of ABC running training into the training program of young athletes is highly recommended. The benefits that include improved performance, injury prevention, and advancement in body and mental awareness are important investments for their future in the sport.

Limitations in this study, there is only one article found using control variables, in addition to the different time increases from several other research results. So it is prone to biased results. Overall, the findings from these studies support the implementation of ABC training in athletic training programs in schools and sports clubs to improve athletes' physical abilities. Therefore, it is recommended to conduct further studies with a stronger experimental design, in addition it is also important to develop a variety of ABC running training models to feel more challenged and motivated to train

harder, which in turn can increase running speed in young athletes. Then a deeper analysis in the methodology such as involving control variables, details of the training program and a large number of samples.

CONCLUSION

Training such as Athletic Basic Coordination (ABC) running has been shown to be effective in improving sprint and agility in young athletes, as evidenced by a series of studies. Analysis showed that ABC training techniques, when combined with games and visualization, significantly improved running speed and technique. Then a study also emphasized the importance of adding visualization exercises to ABC running training for technical understanding. Furthermore, research was also found that explored the application of ABC training further with Running Mechanics and Ladder Drills, this confirmed the effectiveness of ABC in improving speed and agility specifically for basketball athletes. In conclusion, ABC training is very useful in building a strong physical foundation, preventing injuries, and improving technical understanding in young athletes. This shows the importance of integrating ABC training into young athlete training programs to support their success at a higher level. Therefore, it is recommended to continue and develop research and practice of ABC running training with various training models.

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REFERENSI

- Ahmad Avin Prasetya, I. S. (2022). Pengaruh Latihan Abc Running Terhadap Peningkatan Kecepatan Lari Pemain Akademi Sepakbola Triple'S Ku-14 Tahun. *Jurnal Prestasi Olahraga*, 5(6), 72–78.
- Almas, K. Z., Lismadiana, L., Tomoliyus, T., Hariono, A., Danardono, D., Prabowo, T. A., & Hikmah, N. (2023). Contribution Of Coordination, Balance, Flexibility, Arm Muscle Strenght To The “Kizami-Gyaku Zuki” Punch: Analysis Of Female Karate Athletes. *European Journal of Physical Education and Sport Science*, 10(4), 23–35. <https://doi.org/10.46827/ejpe.v10i4.5097>
- Aristiyanto, A., Herdinata, G. R. P., & Prasojo, S. (2021). Pengaruh Latihan Athletic Basic Coordination (ABC) Running Terhadap Keterampilan Lari Pelajar. *Jurnal Sporta Sainitika*, 6, 96–108.
- Dwi, D. R. A. S., Budi, & Agustan, B. (2021). VO2MAX ANALYSIS ABC RUNNING DRILL WITH TRAINING MASK METHOD USING

- ANDROID BASED. *Gladi : Jurnal Ilmu Keolahragaan*, 12(05), 396–402. <https://doi.org/10.21009/gjik.125.06>
- Hikmah, N. T. S. W., Wijayanti, N. P. N., Prayoga, H. D., & Prabowo, T. A. (2023). Is ladder drill training effective for increasing agility for karate athletes in the “Kumite” category (14-16 years)? *International Journal of Physical Education, Sports and Health*, 10(6), 15–20. <https://doi.org/10.22271/kheljournal.2023.v10.i6a.3127>
 - Horbenko, O., & Lysenko, A. (2020). Improving the coordination abilities of young athletes in the initial phase of training in dancesport. *Slobozhanskyi Herald of Science and Sport*, 2020(2(76)), 104–118. <https://doi.org/10.15391/sns.v.2020-2.007>
 - Jaya, N. H. H. P., Fikri, A., & Salman, E. (2022). Penerapan Latihan Athletic Basic Coordination Terhadap Peningkatan Kemampuan Lari Jarak Pendek Peserta Ekstrakurikuler SMP Negeri 11 Kota Lubuklinggau. *E-SPORT: Jurnal Pendidikan Jasmani, Kesehatan Dan Rekreasi*, 3(1), 28–36. <https://doi.org/10.31539/e-sport.v3i1.5122>
 - Latief, H., Suherman, W. S., Rismayanthi, C., Alim, A., Huda, M. S., Yulianto, W. D., & Prabowo, T. A. (2024). The influence of performance in training on self-confidence of wheelchair athletes with coach-athlete intimacy as a moderating variable. *Retos*, 58, 760–768. <https://doi.org/https://doi.org/10.47197/retos.v58.103726>
 - Liza, L., Bafirman, B., Masrun, M., Alimuddin, A., Perdana, R. P., Wahyudi, A., Suganda, M. A., Suryadi, D., Prabowo, T. A., & Sacko, M. (2024). Modified Warm-Up Model: A Development Study For Football Players Post Ankle Injury. *Retos*, 55, 710–717. <https://doi.org/10.47197/retos.v55.104289>
 - Mandan, A., Tomoliyus, T., Alim, A., & Prabowo, T. A. (2024). The Impact of Service Quality on Self-Confidence of Wheelchair Athletes : An Analysis of Family Support as Moderator. *Sport Mont*, 22(2), 3–9. <https://doi.org/10.26773/smj.240717>
 - Salam, A., Wicaksono, D., Sukamti, E. R., Prayoga, H. D., Maulana, A., Sriwahyuniati, C. F., Kasanrawali, A., Habibie, M., Tomoliyus, T., Amalia, B., Saniah, S., Fitrianto, A. T., & Prabowo, T. A. (2024). A Mini Review: How Does the Bosu Ball Training Method Affect an Athlete’s Balance? *Journal of Advances in Sports and Physical Education*, 7(05), 99–104. <https://doi.org/10.36348/jaspe.2024.v07i05.003>
 - Setyagraha, E., Mahyuddin, R., Hasyim, H., Sulaeman, S., & Makassar, N. F. (2022). PENGARUH LATIHAN ABC, RUNNING MECHANIC DAN LADDER DRILL TERHADAP SPEED-AGILITY ATLET PERBASI KABUPATEN PINRANG. *Jurnal Marathon*, 1(1), 54. <https://doi.org/10.26418/jmrthn.v1i1.59993>
 - Smbatyan, V. A., & Simonyan, T. G. (2023). DEVELOPMENT OF QUICKNESS AND SPEED POWER IN YOUNG, 11-12 YEARS OLD, ATHLETES SPECIALIZING IN SHORT DISTANCE RUNNING. *Գիտությունը Մարտանուն. Արդի Հիմնախնդիրներ*, 109–118. <https://doi.org/10.53068/25792997-2023.2.9-109>
 - Sobarna, A., Hambali, S., Sutiswo, S., & Sunarsi, D. (2020). The influence learning used ABC run exercise on the sprint capabilities. *Jurnal Konseling Dan Pendidikan*, 8(2), 67–71. <https://doi.org/10.29210/142100>
 - Susiono, R., Sugiyanto, F., Lumintuarso, R., Tomoliyus, T., Sukamti, E. R., Fauzi, F., Hariono, A., & Prabowo, T. A. (2024). Y Agility Test Innovation on Special Badminton Athletes for the Junior Category (U17): Validity and Reliability. *Retos*, 53, 547–553. <https://doi.org/https://doi.org/10.47197/retos.v53.103282>
 - Utomo, H. P., & Wahyudi, A. N. (2021). PENGARUH METODE LATIHAN ABC RUNNING TERHADAP POWER OTOT TUNGKAI PADA NOMOR LARI 200 METER DI KLUB ATLETIK PARON. *Dharmas Journal of Sport*, 1(2), 43–50. <https://doi.org/10.56667/djs.v1i2.350>
 - Wedi, S., Tomoliyus, T., Fauzi, F., Gemaini, A., & Prabowo, T. A. (2024). Innovation, Validity, and Reliability of Modified Dynamic Balance Test for Karate Kata Category. *Sport Mont*, 22(3), 3–8. <https://doi.org/10.26773/smj.241004>