

Learning Circuit Methods in Maintaining Physical Fitness : Literature Review

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ABSTRACT

Physical fitness is the goal of holding physical learning in schools. The circuit learning method is a method that can increase the physical fitness level of students. The purpose of this study was to make a literature review on learning circuit methods in maintaining physical fitness. This research uses literature review method with technical literature using a synthesis matrix. The synthesis matrix is a review technique using a table consisting of columns of reference sources, samples, methods, interventions, and findings. The literature referred to comes from previous research journals published from 2011-2021. Previous research journals were selected based on the focus of learning the circuit method in maintaining physical fitness, so that the keyword search for the journal was based on learning the circuit method or teaching circuit method. The referred journal pages come from google scholar, science direct and researchgate. The results of this study indicate that there are 7 national journals and 1 international journal that have been reviewed based on reference sources, types of samples, research methods, given interventions to the findings about learning the circuit method in maintaining physical fitness. The conclusions obtained in this study indicate that the application of the circuit learning method can maintain and even improve physical fitness.

Keywords: Learning Circuit Method, Physical Fitness, Synthesis Matrix

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BACKGROUND

Physical fitness is the goal of holding physical learning in schools by utilizing the potential for movement and knowledge through physical activity (Sinulingga, et al., 2020). This shows that the key to physical fitness when in school comes from the teaching method of PJOK teachers. Physical fitness was found to be in poor condition at some primary and secondary schools. Andriyani (2017) in her survey revealed that of the 63 female students there were 27 students who had moderate physical fitness and 32 students were in poor condition. Meanwhile, Prasetyo (2017) revealed that out of 32 students and 30 students, 68% of students had a low body mass index, 14% were obese, and 81% of students had moderate to low fitness. This data is reinforced by the physical learning conditions used by PJOK teachers who center only on conventional methods with a commando teaching style, so that learning is less attractive and reduces student motivation to follow it (Citra, Nurhasan, and Abdul, 2020).

The learning method that can be recommended to replace or add to the reference of PJOK teachers in carrying out learning is by implementing training-based learning methods. learning methods based on training methods can be done through circuit, interval, cross country, and / or fartlek methods. Each learning practice method can be carried out based on supportive environmental conditions, such as existing infrastructure. The circuit learning method is recommended by Julianto (2016) and Fikri (2017) which reveal that there is an increase in the physical fitness level of students. Review research regarding the circuit learning method has never been carried out, so it is necessary to conduct a review research on this matter, so that the learning carried out is interesting and can motivate students to be active.

METHODS

The research used literature review method with technical literature using a synthesis matrix. The synthesis matrix is a review technique by utilizing a table consisting of columns of reference sources, samples, methods, interventions, and findings. The literature referred to comes from previous research journals published from 2011-2021. Previous research journals were selected based on the focus of learning the circuit method in maintaining physical fitness, so that the keyword search for the journal was based on learning the circuit method or teaching circuit method. The referred journal pages come from google scholar, science direct and researchgate.

RESULT

There are 7 national journals and 1 international journal that have been reviewed based on reference sources, types of samples, research methods, interventions given to the findings. The following is the synthesis matrix of the review results:

Table 1. Review journals

Reference source	Sample	Research methods	Intervention	Findings
Argantos and Yusep Efendi. 2016	32 junior high school students grade 9	Quasi-experimental method with <i>one group pretest-posttest design</i>	Play and circuit learning methods	The playing and circuit learning method has a significant influence on the development of physical fitness with a more effective playing learning method

Citra, Tara Rhiskita, Nurhasan, and Abdul Rachman ST 2020	Two classes of grade 7 junior high school students	Experimental method with <i>matching design</i>	Circuit method learning	Learning the circuit method has a significant effect on physical fitness and motivation by providing an increase of 10% in motivation and 11% in physical fitness.
Fikri, Azizil. 2017	30 high school students in grade 10	Class action method with cycle model	Circuit method learning	Learning the circuit method effectively improves the physical fitness of students with 68.67% of students being able to achieve the good category
Haliq, Mahmoud Al. 2015	30 students and college students	Experimental method	Circuit method learning	Learning the circuit method can improve physical fitness
Julianto, 2016	30 elementary students	Classroom action research	<i>Kids training circuit</i>	<i>Kids training circuit</i> games provide a 20.16% increase in students' physical fitness levels
Mutaqin, Latif Uki. 2018	32 junior high school students in grade 8	Class action methods	Circuit training learning method	Circuit training improves physical fitness by creating an active, effective, efficient and enjoyable learning process
Purba, Jumesli., Atri Widowati, and Wawan Junresti Daya. 2020	26 high school students in grade 10	Experimental method with <i>pretest-posttest design</i>	Learning through a variety of circuit training and aerobic exercise	The treatment that was carried out during 16 meetings with the intervention of variations in circuit training and aerobic exercise was able to provide an increase in students' physical fitness
Windriyanto, Lilik. 2019	15 grade 4 elementary school students	Experimental method with <i>pretest-posttest design</i>	Learning using circuit exercises	4 variations of the diving circuit training 16 meetings provide a significant increase in the physical fitness of grade 4 elementary school students
Yola, Febi and Muhammad Sazeli Rifki. 2020	-	<i>Literature</i>	Learning using circuit exercises	The circuit training method increases a person's VO ₂ max ability by influencing other components, such as strength, endurance, flexibility, body composition, agility, speed,

balance, coordination and explosive power. This increase is accompanied by adding training load and training discipline.

DISCUSSION

Based on research by the table 2 (Argantos and Yusep Efendi, 2016) that method learning to play and circuitry provide influence on the development of physical fitness with teaching methods more effective play. Learning the circuit method has a significant effect on physical fitness and motivation on physical fitness (Citra, Tara Rhiskita, Nurhasan, and Abdul Rachman ST 2020). Learning the circuit method effectively improves physical fitness (Fikri, Azizil, 2017; Haliq, Mahmoud Al. 2015). *Kids training* circuit games provide increased levels of physical fitness (Julianto, 2016). Circuit training improves physical fitness by creating an active, effective, efficient, and fun learning process (Mutaqin, Latif Uki. 2018). Variations circuit training and aerobic exercise is able to provide an increase in physical fitness of students (Purba, Jumesli., Atri Wid owati and Junresti Henry Power, 2020). 4 variations of the diving circuit training 16 meetings provide a significant increase in physical fitness (Windriyanto, Lilik. 2019). The circuit training method increases a person's VO_{2max} ability by influencing other components, such as strength, endurance, flexibility, body composition, agility, speed, balance, coordination and explosive power (Yola, Febi and Muhammad Sazeli Rifki. 2020).

The explanation above shows that the application of the circuit learning method can maintain and even improve physical fitness. Besides that, it can also create learning that is more active, effective, efficient, and fun. And also can increase strength, endurance, flexibility, body composition, agility, speed, balance, coordination and explosive power. Therefore, learning method sirkuit very precise when applied to maintain the physical fitness of students, on the other hand also many other benefits derived from the method of learning the circuit.

CONCLUSION

Implementation learning methods circuit can maintain and even improve physical fitness. It is necessary to do a further literature review on learning circuit method at the elementary, junior high and junior high school levels. In addition, it is also necessary to carry out further studies on the effect of learning the circuit method on the fitness of elementary, middle and high school students.

REFERENCES

- Argantos dan Yusep Efendi. 2016. *Perbedaan Pengaruh Latihan Metode Bermain dan Sirkuit terhadap Peningkatan Kebugaran Jasmani*. Menaru Ilmu. Vol 10 (2) 140-150
- Andriyani, F. D. (2017). *Status Kebugaran Jasmani Siswa Putri Kelas VIII SMPN 3 Depok*. Jurnal Olahraga, 1-7
- Citra, Tara Rhiskita, Nurhasan, dan Abdul Rachman S.T. 2020. *Pengaruh Model Pembelajaran Sirkuit terhadap Kebugaran Jasmani dan Motivasi Belajar Siswa dalam Pembelajaran PJOK*. Jurnal Ilmiah Mandala Education. Vol. 6(2) 499-507
- Fikri, Azizil. 2017. *Meningkatkan Kebugaran Jasmani melalui Metode Latihan Sirkuit dalam Pembelajaran Pendidikan Jasmani Olahraga dan Kesehatan di SMAN 1 Lubuklinggau*. Sportif. Vol. 3(1) 89-102

- Haliq, Mahmoud Al. 2015. *Using the Circuit Training Method to Promote the Physical Fitness Components of the Hashemite University Students*. Advances in Physical Education. Vol. 5, 170-175
- Julianto, I., 2016. *Upaya Meningkatkan Kebugaran Jasmani Melalui Sirkuit Training Kids pada Siswa*. Jurnal Juara, 1(1), 7–14
- Mutaqin, Latif Uki. 2018. *Upaya Meningkatkan Kebugaran Jasmani Melalui Circuit Training*. Jurnal Pendidikan Jasmani Indonesia. Vol. 14 (1) 1-10
- Prasetio, E. 2017. *Tingkat Kebugaran Jasmani Berdasarkan Indeks Massa Tubuh Pada Siswa SMPN 29 Bengkulu Utara*. Jurnal Ilmiah Pendidikan Jasmani, 1 (2) 2017., 1(2), 86–91
- Purba, Jumesli., Atri Widowati, dan Wawan Junresti Daya. 2020. *Peningkatan Kebugaran Jasmani Melalui Variasi Latihan Sirkuit dan Olahraga Aerobik*. Jurnal Ilmu Keolahragaan. Vol. 3 (1) 10-16
- Sinulingga, A., Nugraha, T., Karo-Karo, A. A. P., & Pasaribu, A. M. N. 2020. *Application and Impact of Scientific Approaches Physical Education and Sports in School*. Journal of Talent Development and Excellence, 12(3s), 857-863
- Windriyanto, Lilik. 2019. *Pengaruh Latihan Sirkuit terhadap Peningkatan Kesegaran Jasmani Siswa*. Skripsi: UNY
- Yola, Febi dan Muhammad Sazeli Rifki. 2020. *Pengaruh Latihan Sirkuit terhadap Volume Oksigen Maksimal (VO₂Max) Pemain SSB*. Vol. 3 (6) 509-526