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Effect of An Intentionally Structured Kids' Athletics Program on Teamwork And Resilience in Elementary School Children

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ABSTRACT
This study aimed to examine the effects of an intentionally structured Kids' Athletics program on cooperation and resilience among elementary school children. An experimental study using a *pretest–posttest control group* design was conducted with 30 children aged 11 years. The program consisted of 12 sessions and was intentionally structured to promote the development of these life skills. Cooperation and resilience were measured before and after the intervention using the Life Skills Scale for Sport (LSSS), comprising seven cooperation items and five resilience items. Data were analyzed using paired-samples *t*-tests. The results showed greater improvements in the experimental group than in the control group. The experimental group demonstrated significant changes in cooperation (from 23.7 to 29, $p < 0.001$) and resilience (from 16.2 to 21.7, $p < 0.001$). In contrast, changes in the control group were not significant ($p = 0.83$ for cooperation and $p = 0.61$ for resilience). Through the program, children had opportunities to collaborate, share roles, overcome challenges, and persevere in the face of failure. In conclusion, an intentionally structured Kids' Athletics program may serve as an effective approach to supporting the development of cooperation and resilience among elementary school children.
Keywords: Kids' Athletics, teamwork, resilience, elementary school children.

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INTRODUCTION

Elementary school children need the ability to work with others, solve problems, and persist when facing difficulties. Teamwork helps children communicate, share roles, listen to their peers, and achieve common goals (Zhou & Colomer, 2024). Resilience is also an important part of children's readiness to face failure, pressure, and change, as this ability helps them adapt positively when facing difficulties (Hall et al., 2024). Therefore, the development of teamwork and

resilience needs attention in elementary education, not merely as additional skills, but as part of children's ability to learn and develop holistically (Moon et al., 2024).

The development of teamwork can be seen in how children are able to complete activities together. Children learn to communicate, share tasks, help their peers, and adjust to other members of the group (Zhou & Colomer, 2024). Group-based physical activities provide children with opportunities to practice teamwork directly (Moon et al., 2024). Participation in sport can also support the development of social skills and interaction with others (Bengtsson et al., 2025).

Physical activity can also accommodate children in facing difficulties gradually. When children experience mistakes, failure, or difficult movement tasks, they have opportunities to try again, manage their responses to failure, and continue making efforts until the task is completed (Mei et al., 2025; Xu et al., 2025). Various movement experiences can support the development of resilience because children learn that difficulties can be faced through effort, adjustment, and support from the social environment (Mei et al., 2025). In addition, regular engagement in physical activity also promotes the development of cognitive functions that support children's readiness to learn, including attention, working memory, and cognitive flexibility (Mao et al., 2024; Zang et al., 2024). Thus, physical activity serves not only to improve fitness but can also support teamwork and resilience when activities are designed with clear developmental objectives and experiences that meet children's needs (Jerebine et al., 2024; Moon et al., 2024).

One form of activity that has the potential to develop children's abilities is Kids' Athletics. This program uses modified forms of athletics to suit children's characteristics through activities such as running, jumping, throwing, and enjoyable athletic games (Witarsa, 2022). Recent research has shown that the implementation of Kids' Athletics can support the development of fundamental movement skills as well as sportsmanship among elementary school students (Fabian et al., 2025). Previous research has also shown that Kids' Athletics delivered in a structured manner can improve goal setting, problem-solving, and social skills among elementary school students (Witarsa, 2022). These findings indicate that Kids' Athletics has strong potential to be developed as a program that does not merely pursue physical abilities, but also life skills. For these benefits to be more targeted,

activities need to be arranged with clear developmental objectives, opportunities for interaction, gradually increasing challenges, and reflection experiences that help children understand the values they learn through sport (Bean & Forneris, 2017; Moon et al., 2024; Witarsa, 2022).

Several previous studies have discussed the benefits of Kids' Athletics; however, none have yet examined its impact on teamwork and resilience. In this study, the development of teamwork and resilience was implemented through an intentionally structured program, so that Kids' Athletics activities were designed to provide children with opportunities to work in groups, complete challenges, face mistakes, try again, and achieve common goals. This study examines the development of teamwork and resilience through Kids' Athletics, whereas previous studies have focused more on goal setting, problem-solving, social skills, and sportsmanship (Fabian et al., 2025; Moon et al., 2024). Kids' Athletics in this study was arranged so that children worked in groups, completed challenges, faced mistakes, tried again, and achieved common goals. This study aimed to examine the effect of an intentionally structured Kids' Athletics program on teamwork and resilience in elementary school children.

RESEARCH METHODS

Research Design

This study used a pretest–posttest experimental design with a control group. Students were divided into an experimental group that received a structured Kids' Athletics program and a control group that did not receive the program. This design allowed changes in teamwork and resilience scores to be compared before and after the intervention and between the two groups.

Participants

The participants were 30 elementary school students at Pajajaran Athletics School who were 11 years old. The sample was selected purposively and divided into two groups of 15 students each. The researcher also acted as the coach during the intervention. The initial study reported that all participants were male.

Instrument

Teamwork and resilience were measured using the Life Skills Scale for Sport (LSSS) developed by Cronin and Allen (2017), which was adapted into Indonesian and subsequently tested for validity and reliability. The instrument consisted of 7

teamwork items and 5 resilience items. Instrument validity was tested using the Pearson Product-Moment correlation at a 5% significance level. The r-table value was 0.514. The analysis showed that the average r-count value of the instrument was 0.745 > 0.514. Thus, all items in both instruments were declared valid and could be used in the study. The overall instrument reliability test then showed r = 0.367 and a Cronbach's alpha coefficient of 0.931, indicating high internal consistency. Measurement used a 1–5 Likert scale.

Procedure

The intervention consisted of 12 sessions conducted three times a week. The Kids' Athletics activities were structured and progressive, beginning with easier movement tasks and progressing to more complex tasks. Each session included movement variations and opportunities to practice teamwork and resilience. The first and final sessions were the pretest and posttest using the LSSS to measure teamwork and resilience. The coach explained that the purpose of the Kids' Athletics activities was not only physical activity, but also to learn and improve teamwork and resilience. The sessions were arranged alternately: the first, third, fifth, seventh, and ninth sessions consisted of Kids' Athletics activities focused on teamwork, while the second, fourth, sixth, eighth, and tenth sessions consisted of Kids' Athletics activities designed for resilience. In activities focused on teamwork, the activity structure was organized in groups and conducted collectively to encourage children to communicate with their peers, understand one another, and work together. For resilience, the activity structure was organized individually and progressed from easy to difficult and challenging movements, encouraging children to persevere.

The activities lasted 70 minutes. The first 10 minutes were used for warm-up, followed by the next 10 minutes in which the coach explained the training objective, focusing on either teamwork or resilience, and demonstrated the movements to be performed. The main activity was conducted for 40 minutes while the training objective was reinforced. At minute 60, students performed a cool-down, and from minutes 66–70 the coach conducted an evaluation and reflection on the Kids' Athletics activities while reiterating the learning objective, whether teamwork or resilience.

Data Analysis

Descriptive statistics were used to compare the mean pretest and posttest scores. The initial study used a paired-samples t-test to examine changes within each group, with a significance criterion of $p < 0.05$. Data processing was performed using SPSS.

RESULTS AND DISCUSSION

The mean of teamwork score in the experimental group increased from 23.7 at pretest to 29 at posttest, representing an increase of 5.3 points. In the control group, the mean score increased from 22.1 to 23, representing an increase of 0.9 points. The mean resilience score in the experimental group increased from 16.2 at pretest to 21.7 at posttest, representing an increase of 5.5 points. In the control group, the mean score increased from 16.4 to 16.8, representing an increase of 0.4 points. The larger changes in the experimental group indicate greater improvement after participating in the structured Kids' Athletics program compared with the control group.

Table 1. Mean teamwork scores at pretest and posttest.

Group	Mean Pretest	Mean Posttest	Gain Score
Experimental	23.7	29	5.3
Control	22.1	23	0.9

Table 2. Mean resilience scores at pretest and posttest.

Group	Mean Pretest	Mean Posttest	Gain Score
Experimental	16.2	21.7	5.5
Control	16.4	16.8	0.4

The paired-samples t-test showed a statistically significant change in teamwork scores in the experimental group ($p < 0.001$), whereas the control group did not show a statistically significant change ($p = 0.83$). For resilience scores, the paired-samples t-test also showed a statistically significant change in the experimental group ($p < 0.001$), whereas the control group did not show a statistically significant change ($p = 0.61$). Using a significance level of $\alpha = 0.05$, these results indicate that the changes in teamwork and resilience scores in the experimental group were statistically significant, whereas the changes in the control group were not significant. These findings support the conclusion that participation

in the structured Kids' Athletics program was associated with increases in teamwork and resilience.

Table 3. Paired-samples t-test results for teamwork.

Group	p-value	Decision (α = 0.05)
Experimental	0.00	Significant
Control	0.83	Not significant

Table 4. Paired-samples t-test results for resilience.

Group	p-value	Decision (α = 0.05)
Experimental	0.00	Significant
Control	0.61	Not significant

Discussion

The results showed that Kids' Athletics designed as an intentionally structured program can help develop children's teamwork and resilience. Variations in physical activities mean that children do not merely perform the same movements, but are encouraged to understand tasks, choose approaches, communicate, cooperate, adjust their movements, and try again when experiencing difficulties, thereby developing teamwork and resilience among elementary school children. Kids' Athletics also has the advantage that its activities can be made simple, varied, and appropriate to children's characteristics. Previous research has shown benefits of Kids' Athletics for goal setting, problem-solving, and social skills (Witarsa, 2022), as well as motor skills and sportsmanship (Fabian et al., 2025). This means that, in addition to developing movement skills, Kids' Athletics provides opportunities for children to develop broader psychological aspects when it is structured appropriately.

The development of teamwork can be seen in children's experiences of completing activities together. This development occurred because the Kids' Athletics program was deliberately designed with activities that required cooperation, such as modified relay running, giving children opportunities to learn to communicate, move as a team, and understand one another's positions. This finding is consistent with Fitriani et al. (2026), who found that team-based sport activities can provide experiences that enable students to develop teamwork through interaction, coordination, task sharing, and the achievement of common

goals. Children learn to communicate, share tasks, help their peers, and adjust to group members (Zhou & Colomer, 2024). Physical activities designed so that tasks can be completed in groups provide opportunities to practice teamwork directly, rather than merely understanding it conceptually (Moon et al., 2024). This finding is also consistent with Witarsa (2022), but the present study gives more specific attention to teamwork and resilience as skills developed through Kids' Athletics.

The development of resilience can be seen in children's ability to face difficult tasks, make mistakes, and try again. In this study, Kids' Athletics, which contains a variety of physical activities, provided experiences that could build resilience, particularly when children encountered various movement challenges while receiving support from coaches and peers (Mei et al., 2025; Qiu et al., 2025). Resilience development occurred when the Kids' Athletics program was structured specifically for resilience, such as by providing basic athletic movements from easy tasks and gradually increasing them toward more difficult movements, allowing children to push themselves to complete increasingly difficult movement tasks. This finding is consistent with Jiang et al. (2025), who found that the relationship between physical activity and resilience is not only related to bodily activity, but can also operate through increased confidence in one's abilities and the ability to manage emotions. In addition to the program itself, support from coaches and peers is also important in encouraging children to face pressure and continue making efforts (Sheng et al., 2024; Wei et al., 2025).

In this study, children were not only asked to engage in physical activities, but were also informed that the entire program was intended to train teamwork and resilience. The benefits of sport for life skills do not always emerge automatically; objectives and learning experiences need to be deliberately designed (Bean & Forneris, 2016; Kendellen et al., 2016). Nugraha et al. (2022) also demonstrated the importance of integrating life skills into Kids' Athletics programs. The novelty of this study lies in its more specific focus on teamwork and resilience. Compared with previous research, this study combines Kids' Athletics and an intentionally structured program to develop both skills simultaneously (Fabian et al., 2025; Witarsa, 2022). However, the limited number of participants, single research site,

and relatively short program duration mean that the results should be interpreted with caution (Jerebine et al., 2024).

Future research should involve more participants from several schools and use a longer intervention period. Measurement could also be supplemented with behavioral observation, teacher or coach assessments, and follow-up after the program has ended (Hall et al., 2024; Qiu et al., 2025). Future research could also compare regular Kids' Athletics with intentionally structured Kids' Athletics to determine whether the development of teamwork and resilience is influenced more by physical activity itself or by how the program is designed.

CONCLUSION

The results showed statistically significant changes in teamwork and resilience scores in the experimental group ($p < 0.001$), whereas changes in the control group were not significant ($p = 0.83$ for teamwork and $p = 0.61$ for resilience). These findings indicate that an intentionally structured Kids' Athletics program is associated with increased teamwork and resilience among elementary school ch*i*ldren. Varied activities conducted together provide children with opportunities to communicate, share roles, help *t*heir friends, face challenges, and try again when experiencing difficulties. Thus, Kids' Athletics can not only be used to develop movement abilities, but also has the potential to serve as a means of building skills needed by children for learning and interacting with others.

This study also highlights the importance of structuring sport programs in an intentional and structured manner. Teamwork and resilience are not only expected to emerge from sport activities, but are directly introduced through the objectives and experiences during the activities. This approach can help children become more aware that working together, continuing to make efforts, and facing difficulties are part of the learning process. Therefore, intentionally structured Kids' Athletics can be considered as one approach to developing children's social and personal skills in school sport settings.

Nevertheless, the findings of this study need to be understood in accordance with its limitations. The study was conducted with a limited number of participants, in a single sport setting, and with an intervention duration of 12 sessions, so the findings cannot yet be broadly generalized. Future research should involve more

diverse participants, a longer intervention period, and measurements that use not only questionnaires but also behavioral observations. With broader and more sustained research, the benefits of Kids' Athletics for teamwork and resilience can be better understood.

REFERENCES

Bean, C., & Forneris, T. (2016). Examining the importance of intentionally structuring the youth sport context to facilitate positive youth development. Journal of Applied Sport Psychology, 28(4), 410–425. https://doi.org/10.1080/10413200.2016.1164764

Bean, C., & Forneris, T. (2017). Is life skill development a by-product of sport participation? Perceptions of youth sport coaches. Journal of Applied Sport Psychology, 29(2), 234–250. https://doi.org/10.1080/10413200.2016.1231723

Bengtsson, D., Svensson, J., Wiman, V., Stenling, A., Lundkvist, E., & Ivarsson, A. (2025). Health-related outcomes of youth sport participation: A systematic review and meta-analysis. International Journal of Behavioral Nutrition and Physical Activity, 22, Article 89. https://doi.org/10.1186/s12966-025-01792-x

Cronin, L. D., & Allen, J. (2017). Development and initial validation of the Life Skills Scale for Sport. Psychology of Sport and Exercise, 28, 105–119. https://doi.org/10.1016/j.psychsport.2016.11.001

Fabian, J. H., Wibowo, R., & Gumilang, E. S. (2025). Implementation of the Kid's Athletics program on gross motor skills and sportsmanship of elementary school students. Journal of Physical Education Health and Sport, 12(2), Article 37615. https://doi.org/10.15294/jpehs.v12i2.37615

Fitriani, S. A., Carsiwan, & Mudjianto, S. (2026). The effect of futsal extracurricular activities on the development of attitude and teamwork among students. Journal of Physical Education Health and Sport, 13(1), 641–647. https://doi.org/10.15294/jpehs.v13i1.48129

Hall, J. R., Deery, B., Sciberras, E., Kern, M., & Quach, J. (2024). How are we measuring resilience in children? A systematic review. Mental Health and Prevention, 35, Article 200351. https://doi.org/10.1016/j.mhp.2024.200351

Jerebine, A., Arundell, L., Watson-Mackie, K., Keegan, R., Jurić, P., Dudley, D., Ridgers, N. D., Salmon, J., & Barnett, L. M. (2024). Effects of holistically conceptualised school-based interventions on children's physical literacy, physical activity, and other outcomes: A systematic review. Sports Medicine - Open, 10, Article 105. https://doi.org/10.1186/s40798-024-00766-w

Jiang, C., Wang, K., & Qin, H. (2025). Physical exercise and children's resilience: Mediating roles of self-efficacy and emotional intelligence. Frontiers in Psychology, 16, Article 1491262. https://doi.org/10.3389/fpsyg.2025.1491262

Kendellen, K., Camiré, M., Bean, C. N., Forneris, T., & Thompson, J. (2016). Integrating life skills into Golf Canada's youth programs: Insights into a successful research to practice partnership. Journal of Sport Psychology in Action, 8(1), 34–46. https://doi.org/10.1080/21520704.2016.1205699

Mao, F., Huang, F., Zhao, S., & Fang, Q. (2024). Effects of cognitively engaging physical activity interventions on executive function in children and adolescents: A systematic review and meta-analysis. Frontiers in Psychology, 15, Article 1454447. https://doi.org/10.3389/fpsyg.2024.1454447

Mei, Z., Cai, C., Wang, T., Yang, Y., Lam, C., Zhang, Y., Zhao, W., Shi, Y., Luo, S., & Luo, S. (2025). Interventions to promote resilience in children and adolescents: A systematic review and meta-analysis of randomized controlled trials. General Hospital Psychiatry, 96, 295–306. https://doi.org/10.1016/j.genhosppsych.2025.08.011

Moon, J., Webster, C. A., Mulvey, K. L., Brian, A., Stodden, D. F., Egan, C. A., Ha, T., Merica, C. B., & Beets, M. W. (2024). Physical activity interventions to increase children's social and emotional learning: A systematic review and meta-analysis based on the comprehensive school physical activity programme framework. Review of Education, 12(1), Article e3455. https://doi.org/10.1002/rev3.3455

Nugraha, E., Hidayat, Y., Sumpena, A., Salman, & Wibowo, R. (2022). Integrating life skills into Kid's Athletics program on extracurricular activities. International Journal of Human Movement and Sports Sciences, 10(5), 932–938. https://doi.org/10.13189/saj.2022.100509

Sheng, X., Liang, K., Li, K., Chi, X., & Fan, H. (2024). Association between sports participation and resilience in school-attending students: A cross-sectional study. Frontiers in Psychology, 15, Article 1365310. https://doi.org/10.3389/fpsyg.2024.1365310

Wei, D., Xue, J., & Sun, B. (2025). Team vs. individual sports in adolescence: Gendered mechanisms linking emotion regulation, social support, and self-efficacy to psychological resilience. Frontiers in Psychology, 16, Article 1636707. https://doi.org/10.3389/fpsyg.2025.1636707

Witasa, A. A. (2022). Effect of Kid's Athletics program on elementary school student's goal setting, problem solving, and social skills. TEGAR: Journal of Teaching Physical Education in Elementary School, 6(1), 9–14. https://doi.org/10.17509/tegar.v6i1.51915

Xu, Y., Qi, K., Meng, S., Dong, X., Wang, S., Chen, D., & Chen, A. (2025). The effect of physical activity on resilience of Chinese children: The chain mediating effect of executive function and emotional regulation. BMC Pediatrics, 25, Article 563. https://doi.org/10.1186/s12887-025-05883-3

Zang, W., Zhu, J., Xiao, N., Fang, M., Li, D., Li, H., Yan, J., Jing, H., & Wang, S. (2024). Effects of aerobic exercise on children's executive function and academic performance: A systematic review and meta-analysis. Heliyon, 10(7), Article e28633. https://doi.org/10.1016/j.heliyon.2024.e28633

Zhou, T., & Colomer, J. (2024). Cooperative learning promoting cultural diversity and individual accountability: A systematic review. Education Sciences, 14(6), Article 567. https://doi.org/10.3390/educsci14060567