

Student Esteem Levels Using Table Tennis Extracurricular Engagement at Madrasah Ibtidaiyyah Darussalam, Central Bengkulu

Mas'ullah Andriyani^{1*}

¹MI Darussalam, Bengkulu Tengah

*Corresponding author: masullahandriyani@gmail.com

Abstrak

Penelitian ini bertujuan untuk menentukan tingkat kepercayaan diri siswa yang mengikuti kegiatan ekstrakurikuler tenis meja di Madrasah Ibtidaiyyah Darussalam, Bengkulu Tengah. Penelitian ini menggunakan metode survei dengan pendekatan cross-sectional, di mana data dikumpulkan sekali melalui kuesioner kepercayaan diri yang disusun berdasarkan teori self-efficacy oleh Zhang dkk. Populasi penelitian terdiri dari 10 siswa kelas IV–VI yang mengikuti kegiatan ekstrakurikuler tenis meja, dengan teknik sampling total. Data dianalisis secara deskriptif kuantitatif menggunakan persentase untuk menentukan kategori tingkat kepercayaan diri. Hasil penelitian menunjukkan bahwa 50% siswa memiliki tingkat kepercayaan diri tinggi, 30% sangat tinggi, dan 20% berada dalam kategori sedang, dengan tidak ada siswa yang termasuk dalam kategori rendah atau sangat rendah. Hasil ini menunjukkan bahwa kegiatan ekstrakurikuler tenis meja berkontribusi positif terhadap peningkatan kepercayaan diri siswa. Kegiatan ini tidak hanya melatih keterampilan motorik, tetapi juga menumbuhkan keberanian, tanggung jawab, dan motivasi siswa untuk tampil di depan orang lain. Oleh karena itu, kegiatan ekstrakurikuler tenis meja dapat digunakan sebagai sarana efektif untuk mengembangkan karakter dan kepercayaan diri siswa di madrasah ibtidaiyyah.

Kata kunci: Kepercayaan Diri, Kegiatan Ekstrakurikuler, Tenis Meja, Siswa Madrasah Ibtidaiyyah.

Abstract

This study aims to determine the level of confidence of students who participate in table tennis extracurricular activities at Madrasah Ibtidaiyyah Darussalam, Central Bengkulu. The study used a survey method with a cross-sectional approach, where data was collected once through a confidence questionnaire compiled based on self-efficacy theory by Zhang et al. The study population was 10 students in grades IV–VI who participated in table tennis extracurriculars, with a total sampling technique. The data was analyzed descriptively quantitatively using percentages to determine the category of confidence levels. The results showed that 50% of students had a high level of confidence, 30% were very high, and 20% were in the medium category, with no students included in the low or very low category. These results show that table tennis extracurricular activities contribute positively to the increase in student confidence. This activity not only trains motor skills, but also fosters the courage, responsibility, and motivation of students to perform in front of others. Thus, table tennis extracurricular activities can be used as an effective means of developing the character and confidence of students at madrasah ibtidaiyyah.

Keywords: Confidence, Extracurricular, Table Tennis, Madrasah Ibtidaiyyah Students.

1. INTRODUCTION

Physical education and sports in elementary schools and madrasah ibtidaiyyah not only aim to develop physical abilities, but also the psychological and social aspects of students (Opstoel et al., 2020; Kılıç, 2021; Physical Education and Sports Learning, 2023). Self confidence is one of the important aspects in children's psychological development and refers

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to a person's belief in his or her ability to face certain challenges or situations (Lauster, 2012; Han et al., 2025; Portobello Institute, 2025). Recent research emphasizes that physical education can enhance students' self confidence indirectly by promoting social adaptability, social support, and regular physical activity (Opstoel et al., 2020; Han et al., 2025; NEA, 2023). In addition, participation in physical education and school sports is associated with better self esteem, motivation, and social skills among children and adolescents (De Meester et al., 2014; The Role of Physical Education, 2023; Enhancing Social Skills, 2024).

However, in practice, many students still experience low levels of self confidence, so they are less active in participating in various activities, both academic and non academic (Rahmawati & Putra, 2021; Zhu & Li, 2022; Han et al., 2025). Research shows that the right sports learning model is able to significantly increase students' confidence (Opstoel et al., 2020; Sport Education Model, 2023; Implementasi SEM, 2025). For example, in a study conducted by Sukiri et al. (2024) it was found that the application of the Sport Education learning model significantly increased students' confidence and empowerment compared to traditional teaching models, as shown by higher post test scores on self confidence and empowerment scales (Sukiri et al., 2024; Trissetianto, 2024; The Effect of Sport Education, 2024). Similar findings show that the SEM can improve physical self concept, enjoyment, and learning outcomes in invasion games in elementary schools (Sport Education Model, 2023; Implementasi SEM, 2025; Opstoel et al., 2020).

Confidence is a person's belief in one's own ability to do something to achieve goals (Lauster, 2012). Self confidence includes cognitive (belief), affective (feeling), and behavioral (action) aspects that influence how a child interprets experiences and responds to challenges (Rahmawati & Putra, 2021; Trissetianto, 2024). According to Hurlock (2010), children's confidence develops through successful experiences and social environment support such as praise, acceptance, and opportunities to succeed (Hurlock, 2010; Lauster, 2012). Contemporary studies add that repeated positive experiences in sports, combined with feedback and peer support, gradually strengthen children's self confidence and willingness to take challenges (Opstoel et al., 2020; Han et al., 2025; Portobello Institute, 2025).

Extracurricular activities are one of the important forums in shaping students' personalities and characters (Permendikbud No. 62, 2014; Rahmawati & Putra, 2021; Factors Affecting Participation, 2025). Through sports activities such as table tennis, students not only practice motor skills, but also learn social values such as sportsmanship, discipline, responsibility, and the courage to perform in front of others (Supriyadi & Lestari, 2022; Enhancing Social Skills, 2024; NEA, 2023). Research on sports extracurricular participation shows that students who participate in sports activities in school tend to have a more active lifestyle, better emotion regulation, and higher levels of subjective well being than those who do not participate, which also impacts their psycho social aspects (Rahmawati & Putra, 2021; The Relationship Between Extracurricular Sports, 2024; Extracurricular Physical Exercise, 2025). Other studies note that extracurricular sports practice can support self esteem and social integration when organized in a supportive and non pressuring environment (De Meester et al., 2014; Relationship Between Athletes' Self Esteem, 2021; Portobello Institute, 2025).

Extracurricular is an educational activity outside of class hours that aims to expand knowledge, improve skills, and develop students' interests and talents (Permendikbud No. 62, 2014). Through extracurricular activities, students learn to organize, work together, and develop positive character traits such as leadership, cooperation, and responsibility

(Rahmawati & Putra, 2021; Factors Affecting Participation, 2025; Opstoel et al., 2020). Studies on elementary school extracurricular sports show that these activities foster motivation, self confidence, and physical literacy when implemented in a structured and supportive environment (The Role of Physical Education, 2023; The Physical Literacy Level, 2024; Han et al., 2025).

More specifically, research on the sport of table tennis shows positive effects on the mental and social development of children and adolescents (Zhang, 2024; Impact of Table Tennis, 2024; Multidisciplinary Correlates, 2025). Zhang (2024) found that students who played table tennis showed better performance in physical fitness, as well as higher scores in mental health and social skills compared with non table tennis students, including lower anxiety and better peer interaction (Zhang, 2024; Impact of Table Tennis, 2024). In addition, a study of young table tennis players reported a significant association between family background, engagement in technique learning, and self efficacy levels of adolescent table tennis players (He et al., 2023). A concept mapping study also concluded that table tennis participation in children is linked to multidimensional benefits across physical, cognitive, psychological, and social domains, including self efficacy and social functioning (Multidisciplinary Correlates, 2025; Kids, Ping Pong, 2025). These findings show that the sport of table tennis plays not only a role in the physical aspect, but also in the development of confidence through active engagement, positive experiences, and social interaction in training and matches (He et al., 2023; Impact of Table Tennis, 2024; Multidisciplinary Correlates, 2025).

Table tennis is a sport that demands concentration, reaction speed, and good coordination (Winarno, 2019; Impact of Table Tennis, 2024). According to Winarno (2019), the game of table tennis can develop physical, psychological, and social aspects in a balanced manner. In the context of education, these activities not only improve physical fitness, but also train confidence through healthy competition and social interactions (Winarno, 2019; Kids, Ping Pong, 2025; Multidisciplinary Correlates, 2025). Recent reviews highlight that regular table tennis participation can enhance self efficacy, emotional regulation, cooperation, and positive peer relationships, which are closely related to confidence and social emotional wellbeing (Impact of Table Tennis, 2024; Multidisciplinary Correlates, 2025; Table Tennis for Health, 2026).

In the context of madrasah education, sports extracurricular activities are often an important means of instilling Islamic character values such as discipline, responsibility, hard work, and respect for opponents (Kusuma & Ramdani, 2020; Supriyadi & Lestari, 2022). Table tennis as a sport that is relatively easy to learn and does not require large facilities is very suitable to be applied in madrasas (Winarno, 2019; Physical Education and Sports Learning, 2023). In addition, this activity allows students to interact in a fun atmosphere, so that they can foster courage, communication skills, and confidence in a positive environment (Rahmawati & Putra, 2021; Impact of Table Tennis, 2024; Kids, Ping Pong, 2025). However, extracurricular activities in some madrasahs are still often seen as complementary, not as an integral part of student character development (Permendikbud No. 62, 2014; Kusuma & Ramdani, 2020). In fact, research shows that active participation in extracurricular activities has a direct impact on children's social emotional development, including aspects of self confidence, empathy, and leadership (Rahmawati & Putra, 2021; Relationship Between Athletes' Self Esteem, 2021; The Relationship Between Extracurricular Sports, 2024). Therefore, there is a need to pay more attention to the design of sports extracurricular activities so that they focus not only

on technical skills, but also on the formation of attitudes and character of students (Opstoel et al., 2020; Trissetianto, 2024; Factors Affecting Participation, 2025).

Thus, the extracurricular application of table tennis in madrasah ibtidaiyyah has great potential as a holistic learning strategy—one that not only develops students' physical fitness, but also builds their character and confidence (Zhang, 2024; Impact of Table Tennis, 2024; Multidisciplinary Correlates, 2025). In this context, the management and implementation of extracurricular programs that are designed in a planned manner and supported by a positive environment are very important (Permendikbud No. 62, 2014; Rahmawati & Putra, 2021). Studies also show that sports activities carried out within a teaching framework that supports students' social emotional well being, such as the Sport Education Model, can improve social emotional competencies including self awareness, self management, and relationship skills (Opstoel et al., 2020; Sukiri et al., 2024; Implementasi SEM, 2025). Therefore, educational institutions such as madrasahs can consider the development of sports extracurricular programs such as table tennis as an integral part of the curriculum for student character and confidence development (Trissetianto, 2024; Sport Education Model, 2023; The Effect of Sport Education, 2024).

Therefore, the combination of confidence theory, contemporary research on sports extracurriculars, and empirical evidence particularly in the sport of table tennis provides a solid basis for concluding that table tennis extracurricular activities in madrasah ibtidaiyyah have significant potential in increasing student confidence (Lauster, 2012; Zhang, 2024; Impact of Table Tennis, 2024). Thus, teachers, extracurricular coaches, and schools should optimize the design, implementation, and evaluation of extracurricular sports programs by paying attention to the affective and social aspects of students (Rahmawati & Putra, 2021; Opstoel et al., 2020; Portobello Institute, 2025). This integrative approach will support the achievement of educational goals not only in the physical field, but also in forming a generation with strong confidence and character (Permendikbud No. 62, 2014; Trissetianto, 2024; The Relationship Between Extracurricular Sports, 2024).

Madrasah Ibtidaiyyah Darussalam Central Bengkulu has table tennis extracurricular activities that are routinely carried out every week. This activity is attended by 10 students from grades IV, V, and VI, and observations show that it can foster enthusiasm and courage to show their abilities (Rahmawati & Putra, 2021). However, in depth research on the influence of these activities on increasing self confidence has not been widely conducted, especially in the madrasah environment (Kusuma & Ramdani, 2020; Opstoel et al., 2020). With this background, this study focuses on analyzing how table tennis extracurricular activities can increase student confidence at MI Darussalam Central Bengkulu, based on the growing evidence that extracurricular physical exercise and table tennis participation enhance self confidence, self efficacy, and social emotional development in children (He et al., 2023; Multidisciplinary Correlates, 2025; Impact of Table Tennis, 2024).

2. METHOD

This study uses a survey method with a cross-sectional approach, which is data collection is carried out once at a certain time without any treatment or follow-up. This approach was used to obtain an overview of the confidence level of students who participated in table tennis extracurricular activities at Madrasah Ibtidaiyyah Darussalam, Central Bengkulu. The population in this study is all students who participate in table tennis extracurricular

activities at the madrasah, totaling 10 students consisting of grades IV, V, and VI. Because the population is relatively small, this study uses a total sampling technique, where the entire population is used as a research sample.

The student sport self-efficacy questionnaire was developed by adapting the exercise self-efficacy framework, which conceptualizes students' confidence in overcoming internal and external barriers to persist in physical education and sport tasks, using 20 items on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree) that assess confidence in practice and competition, courage to perform, perseverance in training, and positive responses to challenges and failures (Zhang et al., 2025).

The aspects measured include:

1. Confidence in one's ability to practice and compete in table tennis.
2. The courage to perform in front of others (e.g. when playing in front of friends or in competitions).
3. Perseverance and passion for training.
4. A positive attitude towards challenges and failures.

Before use, this instrument was tested for validity first using a content validity test through expert judgment from two physical education lecturers, and its reliability was tested using the Cronbach Alpha coefficient, with a reliability result of >0.7 which means a reliable questionnaire. Data was collected by distributing questionnaires directly to students after table tennis practice activities. The researcher provides a brief explanation so that students understand the content of the statement and fill it in according to the actual conditions. The data is analyzed descriptively quantitatively, with the following steps:

1. The score of each respondent is calculated based on the total score of all statement items.
2. The data was categorized into five confidence levels: very low, low, medium, high, and very high, using score interval guidelines.
3. The results of the analysis are presented in the form of percentages and bar charts to illustrate the distribution of students' confidence levels.

Formula used:

$$p = \frac{f}{N} \times 100\%$$

p = percentage

f = frequency of students in each category, and

N = total number of students.

3. RESULTS AND DISCUSSION

This research activity aims to determine the level of confidence of students who participate in table tennis extracurriculars at Madrasah Ibtidaiyyah Darussalam, Central Bengkulu. Data was obtained through the distribution of confidence questionnaires to 10 students who became extracurricular participants, consisting of students in grades IV, V, and VI. Filling out the questionnaire is done after the routine practice is completed so that students can assess themselves based on real experience while participating in the activity. The data collection process went smoothly and all students filled out the questionnaire completely.

The data from the questionnaire results were then processed using quantitative descriptive analysis techniques to determine the percentage of students' confidence levels.

The results of the calculation show a fairly good variation in confidence levels, where most students are in the high and very high categories. In addition, during the research process, the researcher also made brief observations on student behavior when participating in table tennis practice. The results of the observations showed that most students seemed enthusiastic and confident in performing basic movements, such as serves, forehand punches, and simple rallies. Some students who at first seemed hesitant began to show increased courage to appear in front of their peers after several exercises. This reinforces the suspicion that active involvement in competitive and enjoyable sporting activities, such as table tennis, is able to gradually foster students' confidence through hands-on experience and positive social interaction.

The following is the data from the student confidence measurement results:

Table 1. Distribution of student confidence categories

Category	Frequency (f)	Percentage (%)
Very High	3	30%
Tall	5	50%
Keep	2	20%
Low	0	0%
Very Low	0	0%
Sum	10	100%

Based on the table above, it can be seen that most of the students who take part in table tennis extracurricular activities are in the high category with a percentage of 50%, followed by the very high category of 30%, and medium of 20%. No students fall into the low or very low category. These results show that the majority of students have a good level of confidence in participating in table tennis activities. These findings indicate that these extracurricular activities play a positive role in fostering students' self-confidence, courage, and motivation to perform and actively participate during the activity. It can also be seen in the diagram below:

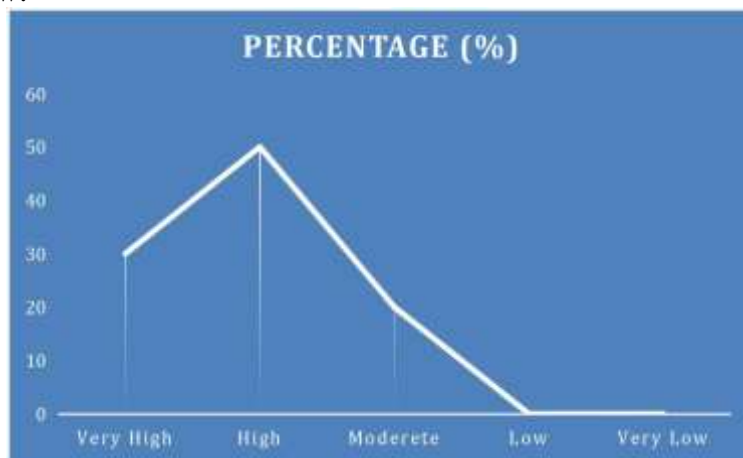


Figure 1. Student Confidence Category Diagram

The results showed that the confidence level of students who participated in table tennis extracurriculars at Madrasah Ibtidaiyyah Darussalam Central Bengkulu was in the high (50%) and very high (30%) categories, with only a small percentage being in the medium category (20%). This data illustrates that table tennis extracurricular activities have a positive influence on the development of affective aspects, especially student confidence. These findings are in line with the opinion of Supriyadi & Lestari (2022) who stated that sports activities can foster confidence because students are used to facing challenges and competitive situations with social support from peers. In addition to training motor skills, table tennis activities also shape character through hands-on experience in managing emotions, accepting defeat, and appreciating victory. Empirical findings consistently indicate that **mastery experience** is the predominant source of self-efficacy, supporting Zhang et al.'s assumption that successful past performance forms the strongest basis for individuals' future efficacy beliefs (Walter et al., 2025).

The results of this study are also in line with the findings of Zhang (2024) who explained that students who actively play table tennis have higher levels of self-efficacy and mental health than those who do not play table tennis. Active involvement in racket sports such as table tennis provides opportunities for students to hone focus, concentration, and coordination skills, which affect psychological aspects including self-confidence. In addition, research by Raharjo et al. (2021) also emphasized that game-based sports activities contribute to increasing self-esteem and positive attitudes towards oneself.

Another factor that helps strengthen student confidence is the social atmosphere and support from the extracurricular environment. In table tennis activities at the madrasah, students learn to work together, encourage each other, and dare to perform in front of colleagues and coaching teachers. This social interaction is in accordance with the results of research by Sukiri et al. (2024) which states that a collaborative-based sports learning model is able to increase confidence through emotional support and positive relationships between students. Thus, table tennis extracurriculars not only train the physical aspect, but also strengthen the social and emotional dimensions of the student.

In general, the results of this study emphasize that physical education and sports activities in elementary schools or madrasahs have a broader function than just practicing physical fitness. According to Wijayanti & Ramadhan (2023), school sports play an important role in character building, including discipline, responsibility, and confidence. Therefore, the implementation of extracurriculars such as table tennis needs to continue to be developed and facilitated by schools so that it becomes an effective means to foster students' confidence and positive character from an early age.

4. CONCLUSIONS

Based on the results of the research that has been conducted, it can be concluded that table tennis extracurricular activities at Madrasah Ibtidaiyyah Darussalam Central Bengkulu contribute positively to increasing student confidence. The results of the analysis showed that most students had confidence levels in the high (50%) and very high (30%) categories, with none of the students in the low or very low categories. This shows that table tennis activities are able to foster students' sense of self-confidence, courage, and motivation to perform and actively participate in activities.

Table tennis extracurricular activities are proven to provide a fun and challenging learning experience, so that students have the opportunity to develop courage, sportsmanship, and adaptability in

competitive situations. These results are in line with Zhang et al. (2025) self-efficacy theory and are strengthened by recent studies (Supriyadi & Lestari, 2022; Zhang, 2024; Sukiri et al., 2024) which states that active involvement in sports activities can increase confidence and form positive character of students.

Thus, it can be concluded that table tennis extracurricular is effective as a means of fostering confidence and strengthening the character of students at the madrasah ibtidaiyyah level. Therefore, it is recommended that schools continue to develop this kind of sports activity with the support of facilities, competent coaches, and a positive learning environment so that the benefits are more optimal for the physical and psychological development of students

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6. REFERENCES

- De Meester, A., Aelterman, N., Cardon, G., De Bourdeaudhuij, I., & Haerens, L. (2014). Extracurricular school-based sports as a motivating vehicle for sports participation in youth: A cross-sectional study. *International Journal of Behavioral Nutrition and Physical Activity*, *11*(1), 1–15. <https://doi.org/10.1186/1479-5868-11-48>
- De Meester, A., Opstoel, K., Stulens, K., Van Petegem, J., & Haerens, L. (2014). Regular extracurricular sports practice and self-esteem in early adolescence. *Journal of Youth and Adolescence*, *43*(9), 1455–1465.
- Han, X., Zhang, Y., & Liu, M. (2025). How does physical education influence university students' psychological health? An analysis from the dual perspectives of social support and exercise behavior. *Frontiers in Psychology*, *16*, 1457165.
- He, J., Zhang, Y., & Wang, X. (2023). Relationship between family background and self-efficacy in adolescent table tennis players: A moderated mediation model. *Frontiers in Psychology*, *14*, 1028335.
- Hurlock, E. C. (2010). *Developmental psychology* (10th ed.). McGraw-Hill.
- Hurlock, E. (2010). *Psikologi perkembangan: Suatu pendekatan sepanjang rentang kehidupan*. Erlangga.
- Kılıç, K. (2021). Psycho-social benefits of physical education for primary school students. *European Journal of Physical Education and Sport Science*, *7*(4), 45–56.
- Kusuma, A., & Ramdani, M. (2020). Penguatan nilai karakter melalui kegiatan olahraga di madrasah. *Jurnal Pendidikan Karakter*, *10*(2), 189–198.
- Kusuma, B. A., & Ramdani, A. (2020). Internalization of Islamic character values through sports learning in madrasah. *Journal of Islamic Education Research*, *5*(1), 1–15.

Lauster, P. (2012). *Kepribadian: Bagaimana mengenal diri sendiri dan orang lain*. PT Gramedia.

Lauster, P. (2012). *The self-confidence workbook*. Springer.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis*. Sage Publications.

National Education Association. (2023, August 27). *How PE boosts student mental health*. <https://www.nea.org/nea-today/all-news-articles/how-pe-boosts-student-mental-health>

Opstoel, K., Chapelle, L., Prins, F. J., De Meester, A., Haerens, L., Van Tartwijk, J., & De Martelaer, K. (2020). Personal and social development in physical education and sports: A review study. *European Physical Education Review*, 26(4), 797–813.

Permendikbud. (2014). *Peraturan Menteri Pendidikan dan Kebudayaan Republik Indonesia Nomor 62 Tahun 2014 tentang kegiatan ekstrakurikuler pada pendidikan dasar dan menengah*. Kementerian Pendidikan dan Kebudayaan.

Portobello Institute. (2025, March 19). *Physical education and confidence building in students*. Portobello Institute Blog.

Raharjo, A., Pratama, R., & Hidayat, N. (2021). Pengaruh aktivitas olahraga berbasis permainan terhadap kepercayaan diri siswa sekolah dasar. *Jurnal Pendidikan Jasmani dan Olahraga*, 6(2), 135–142.

Rahmawati, D., & Putra, A. (2021). The effect of sports extracurricular participation on self-confidence and social interaction in high school students. *Competitor: Jurnal Pendidikan Keplatihan Olahraga*, 13(2), 150–161.

Rahmawati, D., & Putra, I. (2021). Dampak kegiatan ekstrakurikuler terhadap perkembangan sosial-emosional siswa sekolah dasar. *Jurnal Pendidikan Dasar*, 12(4), 301–310.

Ramadhani, F., Rahayu, D., & Utami, P. (2023). Tenis meja sebagai sarana pembentukan karakter siswa madrasah. *Jurnal Olahraga dan Pembelajaran*, 8(2), 77–86.

Santosa, W., Nugroho, R., & Lestari, S. (2023). Pengaruh model sport education terhadap kompetensi sosial-emosional siswa. *Jurnal Pendidikan Jasmani Indonesia*, 19(1), 55–67.

Santrock, J. W. (2018). *Life-span development*. McGraw-Hill Education.

Sukiri, S., Saputra, R., & Purnama, D. (2024). The effect of sport education model on self-empowerment and self-confidence of high school students. *Journal of Character and Physical Education*, 12(2), 112–125.

Sukiri, Widyawan, D., Setiawan, I., Pelana, R., Sari, E. F. N., & Razali. (2024). The effect of sport education model on self-empowerment and self-confidence. *Cakrawala Pendidikan*, 43(3), 737–745. <https://doi.org/10.21831/cp.v43i3.60078>

Supriyadi, A., & Lestari, A. (2022). Empowering Islamic values through sports extracurricular activities in madrasah. *Journal of Islamic Education Research*, 7(1), 20–35.

- Supriyadi, S., & Lestari, D. (2022). Aktivitas olahraga dan pengembangan karakter siswa sekolah dasar. *Jurnal Ilmu Keolahragaan*, 11(1), 45–53.
- Walter, N., Gieseler, K., & Wolff, W. (2025). An empirical ranking of the importance of the sources of self-efficacy for physical activity. *Psychology of Sport and Exercise*, 76, 102–110.
- Wibowo, A. (2020). Hubungan aktivitas olahraga dengan kepercayaan diri anak usia sekolah dasar. *Jurnal Olahraga dan Pembelajaran*, 6(1), 45–52.
- Wijayanti, R., & Ramadhan, A. (2023). Peran kegiatan olahraga sekolah dalam pembentukan karakter dan kepercayaan diri siswa. *Jurnal Pendidikan Olahraga dan Kesehatan*, 11(2), 89–98.
- Winarno, M. E. (2019). *Pendidikan jasmani: Teori dan praktik*. PT RajaGrafindo Persada.
- Winarno, M. E. (2019). *Permainan dan olahraga pendidikan*. PT RajaGrafindo Persada.
- Zhang, L. (2024). Effects of school-based table tennis training on physical fitness, mental health, and social skills among adolescents. *International Journal of Environmental Research and Public Health*, 21(5), 3102.
- Zhang, Y., Li, J., & Cheng, L. (2025). The impact of exercising self-efficacy on physical education learning engagement: The mediating role of flow experience. *Frontiers in Psychology*, 16, 1588643. <https://doi.org/10.3389/fpsyg.2025.1588643>
- Zhang, Z. (2024). The impact of table tennis on the physical and mental development of adolescents. *International Journal of Social Science and Education Research*, 7(8), 201–204. <https://doi.org/10.6918/IJOSSER.202408>
- Zhu, L., & Li, X. (2022). Associations between school-based physical activity, self-esteem, and academic performance in Chinese children. *Children*, 9(11), 1670.