

Impact of sport education model on psychological empowerment and self-confidence among adolescents: An experimental study

Impacto del modelo de educación deportiva en el empoderamiento psicológico y la autoconfianza en adolescentes: un estudio experimental

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Abstract

**Introduction:** The Sport Education (SE) model has been recognized for its potential to enhance student engagement and personal development in physical education settings. This study explores the model's impact on psychological empowerment and self-confidence among high school students in Padang, Indonesia.

**Objective:** This study examined the impact of the SE model on psychological empowerment and self-confidence among high school students in Padang, West Sumatra, Indonesia.

**Methodology:** This study employed a quasi-experimental design with a total of 100 students, who were randomly assigned to either an experimental group that received instruction through the SE model or a control group that followed a traditional teaching approach. Over a 12-week intervention period, data were collected using the Psychological Empowerment Scale and the Self-Perception Profile for Adolescents, administered both before and after the program.

**Results:** Findings indicate that students exposed to the SE model demonstrated significantly greater improvements in psychological empowerment ( $p < 0.001$ ,  $d = 1.23$ ) and self-confidence ( $p < 0.001$ ,  $d = 1.05$ ) compared to their peers in the control group. An analysis of covariance (ANCOVA), controlling for baseline scores, further confirmed the effectiveness of the SE model in promoting these psychological constructs.

**Discussion:** These findings suggest that the SE model offers a valuable pedagogical alternative for physical education, fostering personal growth and psychological development.

**Conclusions:** It can be concluded that importantly, the study provides the growing body of evidence supporting the SE model's applicability in diverse cultural and educational contexts, particularly in non-Western settings such as Indonesia.

**Keywords:** Sport Education Model, Psychological Empowerment, Self-Confidence, Physical Education, High School Students

Resumen

**Introducción:** El modelo de Educación Deportiva (EE) ha sido reconocido por su potencial para mejorar la participación estudiantil y el desarrollo personal en entornos de educación física. Este estudio explora el impacto del modelo en el empoderamiento psicológico y la autoconfianza de estudiantes de secundaria en Padang, Indonesia.

**Objetivo:** Este estudio examinó el impacto del modelo EE en el empoderamiento psicológico y la autoconfianza de estudiantes de secundaria en Padang, Sumatra Occidental, Indonesia.

**Metodología:** Este estudio empleó un diseño cuasiexperimental con un total de 100 estudiantes, quienes fueron asignados aleatoriamente a un grupo experimental que recibió instrucción mediante el modelo EE o a un grupo control que siguió un enfoque de enseñanza tradicional. Durante un período de intervención de 12 semanas, se recopilaron datos utilizando la Escala de Empoderamiento Psicológico y el Perfil de Autopercepción para Adolescentes, administrados antes y después del programa.

**Resultados:** Los hallazgos indican que los estudiantes expuestos al modelo de Educación Física (EE) mostraron mejoras significativamente mayores en empoderamiento psicológico ( $p < 0,001$ ,  $d = 1,23$ ) y autoconfianza ( $p < 0,001$ ,  $d = 1,05$ ) en comparación con sus compañeros del grupo control. Un análisis de covarianza (ANCOVA), controlando las puntuaciones iniciales, confirmó aún más la eficacia del modelo de EE para promover estos constructos psicológicos.

**Discusión:** Estos hallazgos sugieren que el modelo de EE ofrece una valiosa alternativa pedagógica para la educación física, fomentando el crecimiento personal y el desarrollo psicológico.

**Conclusiones:** Cabe concluir que, de manera importante, el estudio aporta la creciente evidencia que respalda la aplicabilidad del modelo de EE en diversos contextos culturales y educativos, en particular en entornos no occidentales como Indonesia.

**Palabras clave:** Modelo de Educación Deportiva, Empoderamiento Psicológico, Autoconfianza, Educación Física, Estudiantes de Secundaria

Introduction

Within the context of the current educational environment, it is more important than ever before to have pedagogical techniques that are both flexible and adaptable. Not only has physical education (PE) been more vital in recent decades, but it has also become increasingly significant as a method of

building crucial social and personal skills in addition to physical well-being. In order for students to be successful in the complex world of today and the occupations they will have in the future, they need to acquire crucial life skills such as the ability to work together, to take charge, and to have confidence in themselves (Harvey et al., 2014). In addition to keeping children moving, physical education (PE) helps them develop as individuals and equips them with the skills they need to deal with the inevitable setbacks that will surely occur in life (Bailey et al., 2020). Other benefits of PE include helping children become more physically active.

In physical education, the methods of instruction have been shown to significantly impact students' outcomes. According to Casey et al. (2021), others believe that conventional teaching methods, which emphasize the acquisition of skills and are centered on the teacher, are ineffective in fostering the development of broader life skills and do not succeed in engaging pupils. Conversely, there is enormous promise in the Sport Education (SE) paradigm, which emphasizes student-led initiatives, cooperation, and real-life athletic experiences. Students have the potential to cultivate a sense of belonging, competence, and autonomy via the provision of SE, which aims to replicate the advantages of community sports within the confines of a school setting (Hastie et al., 2011; Schiff & Supriady, 2023).

Importantly, the SE model can be theoretically explained through Self-Determination Theory (Deci & Ryan, 2000) and Empowerment Theory (Zimmerman, 2000). According to Self-Determination Theory, when students' psychological needs for autonomy, competence, and relatedness are met, their intrinsic motivation and well-being increase. The SE model directly addresses these needs by allowing students to take initiative, develop sporting competence, and build meaningful peer relationships. Similarly, Empowerment Theory emphasizes intrapersonal, interactional, and behavioral dimensions of empowerment, all of which are supported when students adopt leadership roles and make decisions in SE activities. Together, these frameworks explain why SE can enhance both psychological empowerment and self-confidence among adolescents.

SE has been proven in several studies to have the potential to significantly increase students' feelings of agency and self-assurance. As an example, in contrast to students who were enrolled in traditional physical education classes, those who took part in SE reported higher levels of motivation and self-efficacy, as shown by the findings of a study conducted by Silva et al. (2021). The findings of Wallhead and O'Sullivan (2005) indicate that students who participated in SE had enhanced social skills and improved collaboration ability. Considering these findings, it is clear that SE has the potential to substantially influence students' social and personal development.

Even though these findings are promising, there is still a shortage of information in the literature about how SE is used in various cultural and geographical contexts. Data on the effectiveness of these tactics in educational settings that are not Western areas few since most of the research done in the past has been on Western educational environments (Gustian et al., 2024; Retamal-Muñoz et al., 2024). Padang, located in West Sumatra, Indonesia, is one region in which this split is particularly visible due to the possible discrepancies between Western cultural norms and educational techniques and those used in the local community.

When considering the positive results that SE has produced in Western settings, there is an immediate need for research on the effectiveness of SE in non-Western situations to ensure that it is both flexible and inclusive. This study is being conducted to address that need by introducing the SE model to Padang, located in West Sumatra, Indonesia. The purpose of this study is to determine whether or not the model can increase students' levels of self-assurance and agency in this particular domain, as well as to shed light on how well it functions in different cultural contexts.

In this project, the following issues will serve as the basis for the investigation:

1. What is the impact of the SE Model on students' psychological empowerment?
2. How does the SE Model affect students' self-confidence?
3. How do the outcomes of the SE Model compare with those of traditional teaching methods?

The purpose of this research is twofold: first, to evaluate the impact of the SE model on students' psychological empowerment in Padang; second, to ascertain whether the SE model, implemented in Indonesian physical education classes in Padang, West Sumatra, successfully enhances students' self-confidence. Additionally, this study aims to measure the effectiveness of the SE model compared to the outcomes of traditional instructional methods. The study seeks to contribute to the greater discourse on effective and inclusive instructional strategies by addressing these objectives. The findings may provide valuable insights into incorporating physical education (PE) into school curricula and assisting children in developing essential life skills across diverse cultural settings.

## **Literature Review**

### ***The Importance of Physical Education***

It is common knowledge that including physical education (PE) in schools' curriculum may benefit the kids' overall development, including their physical, social, and psychological growth. The findings of Bailey et al. (2009) indicate that frequent participation in physical education (PE) helps individuals maintain their health, prevents them from becoming overweight, and enhances their motor skills. According to Tremblay et al. (2011), physical education also provides opportunities for developing interpersonal skills and establishing cooperative groups; this is a significant benefit. Conventional methods of physical education often fail to capture all students' attention, leading to unequal engagement and enjoyment (Aulia et al., 2025; Farclough & Stratton, 2005). This is even though these benefits are there.

### ***Sport Education (SE) Model***

In response to these issues, Siedentop (1994) developed the idea of Sport Education (SE) to make physical education (PE) more engaging and accessible to all pupils. In order to foster student-centered learning, the SE model, as described by Hastie and Casey (2014), requires students to take on several roles, such as coach, referee, and player. The children can cultivate a sense of ownership and responsibility via this strategy. Studies carried out by Kinchin (2006) and Wallhead and O'Sullivan (2005) indicate that the SE model can raise the level of excitement, participation, and motivation that students have in the subject of physical education.

The SE model's emphasis on autonomy, competence, and relatedness is consistent with Self-Determination Theory (Deci & Ryan, 2000). Likewise, its focus on leadership and decision-making is aligned with Empowerment Theory (Zimmerman, 2000). These frameworks explain why SE enhances both psychological empowerment and self-confidence.

### ***Psychological Empowerment through SE***

According to Zimmerman (2000), the concept of "psychological empowerment" refers to individuals' sensation when they can direct their own lives, make their own decisions, and take responsibility for their destiny. The SE model strongly focuses on student leadership and autonomy, which may significantly contribute to enhancing students' feelings of psychological agency. When individuals utilize the SE model, they report increased levels of intrinsic motivation, self-efficacy, and perceived competence, according to research conducted by Farias et al. (2017) and Perlman (2012). Having these items is essential in order to have a sense of empowerment.

### ***Self-Confidence in PE***

Regarding physical education (PE), self-confidence is defined as the belief that one can participate in athletic pursuits and excel in such endeavors (Bandura, 1997). Hastie and Sinelnikov (2006) state that the SE model's focus on providing students with a variety of tasks that are relevant to their lives may help students increase their self-confidence. The SE model enables students to succeed and get

positive feedback. Based on research conducted by Perlman (2012) and Spittle and Byrne (2009), it has been shown that children who participate in SE-based programs are more likely to participate in physical activities and have higher levels of self-confidence than children who participate in traditional PE programs.

### **Traditional Teaching Methods in PE**

Traditional teaching methods in physical education (PE) often include the teacher providing the class with a summary of the topic while the students passively participate in activities similar to those they have done in the past (Ward, 2013). Although TT is an excellent method for teaching novices the ropes, it may not always provide the spark and motivation that children want to cultivate a love of physical activity over a longer period of time (Hastie et al., 2011; Soemardiawan et al., 2025). Consequently, children may develop a hatred for physical education courses, which may lead to a decrease in their level of physical activity both inside and outside of the classroom (Ennis, 2014; Saputra et al., 2025).

### **Research Gap**

Very little research has investigated the impacts of the SE model in non-Western countries, particularly Indonesia, despite the fact that the benefits of the paradigm have been extensively recognized. Even though Western countries have been the dominant research in physical education (PE), Indonesia's educational structures, cultural perspectives, and resources are considerably different from those of Western nations. Because previous studies have concentrated on the positive effects of the SE model on students' engagement and enjoyment, it is necessary to research how it influences the psychological empowerment and self-confidence of students. [Grounding the study in Self-Determination Theory and Empowerment Theory provides a robust framework for investigating these outcomes.](#)

### **Theoretical Framework**

The Self-Determination Theory (SDT) and the Empowerment Theory are the theoretical foundations for this inquiry. The Social Development Theory (SDT) (Deci & Ryan, 2000) asserts that when people's core psychological demands for autonomy, competence, and relatedness are satisfied, they increase their intrinsic motivation and general well-being. Because it provides students with opportunities to be autonomous (to take initiative), competent (to increase their skills via meaningful activities), and related (to make friends), the SE model is consistent with the SDT. According to Zimmerman's Empowerment Theory, developed in 2000, the concept of "empowerment" encompasses not only intrapersonal but also interpersonal and behavioral dimensions. The emphasis that the SE model places on student autonomy and leadership helps to build these elements, which contribute to a better sense of psychological empowerment at the individual level.

### **Hypotheses**

Taking into consideration the theoretical framework and the assessment of the relevant literature, the following hypotheses are proposed:

- H1: Students participating in the Sport Education (SE) model will significantly increase psychological empowerment compared to those in the Traditional Teaching (TT) group.
- H2: Students participating in the SE model will significantly increase their self-confidence compared to the TT group.
- H3: The SE model will substantially impact psychological empowerment and self-confidence more than the TT methods.

## Methods

### Research Design

This investigation uses a quasi-experimental methodology, which incorporates the presence of a control group both before and after the examination. The experimental group received a 12-week Sport Education (SE) program, while the control group followed a Traditional Teaching (TT) approach, which reflects the standard Indonesian PE curriculum. This approach is being taken to determine the extent to which the Sport Education (SE) model and Traditional Teaching (TT) methods affect the degree of self-confidence and empowerment that students demonstrate when participating in physical education sessions. The quasi-experimental approach allows researchers to infer the effectiveness of therapies in real-world scenarios (Chow, 2024; Cook & Campbell, 1979). This allows them to determine the causality of treatments and whether they are effective. Using this approach in educational contexts is appropriate if random assignment is not feasible via practical means.

### Participants

Participating students ~~will~~ come from various public high schools located in Padang, which is located in West Sumatra, Indonesia. In order to ensure that the sample is both varied and inclusive, a purposeful selection strategy ~~will be was~~ used to pick ~~100~~ students from various socioeconomic situations. A total of 100 high school students (50 experimental, 50 control) from three public schools in Padang, West Sumatra, Indonesia, participated in the study. Participants were selected using stratified random sampling to ensure representation from different socioeconomic backgrounds. The mean age of students was 15.5 years (SD = 0.2), and the gender distribution was approximately equal (51% male, 49% female). Two hundred and ninety-two students will make up the experimental group, which will be provided with the SE model. On the other hand, two hundred and ninety-two students will act as the control group, which will adhere to the procedures of the TT. In order to take into account any pre-existing discrepancies, the two groups will be matched according to age, gender, and baseline evaluations of empowerment and self-confidence, as stated by Fraenkel et al. (2018). This ~~will~~ ensures that any previous disparities are taken into account.

### Intervention Program

The experimental group participated in a Sport Education (SE) season lasting 12 weeks, delivered during regular PE classes. The SE program followed Siedentop's (1994) model, structured around authentic sport seasons. Students were assigned roles such as player, coach, referee, and statistician, encouraging responsibility and leadership. Activities emphasized teamwork, fair play, and reflective practice. The curriculum included modified games, practice sessions, competitions, and celebratory events designed to replicate real sport contexts. The control group continued with the Traditional Teaching (TT) method, which consisted of teacher-led instruction focusing on drills, isolated skill practice, and standardized physical activities without student leadership roles.

### Instruments

For the study, several factors about the participants were assessed using well-established instruments. In 2000, Zimmerman created the Psychological Empowerment Scale, which consisted of fifteen items based on the Likert scale. This scale aimed to assess empowerment on three dimensions: cognitive, emotional, and behavioral. According to Peterson et al. (2006) and Speer (2000), this scale has been validated and shown to be reliable in various groups. It allows for evaluating various aspects, including critical awareness, self-perception of control, and involvement behavior. In addition, the Self-Perception Profile for Adolescents (Harter, 2012) evaluated the students' self-confidence using a set of 36 questions that were split over six subscales. Each item was rated on a Likert scale with a range of four points. Wichstrøm (1995) and Harter (2012) found that the reliability of this instrument in educational research varied from 0.74 to 0.89 on the Cronbach's alpha scale.

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Additionally, component analysis, which supported the construct validity of the instrument, was also beneficial. Additional background information was acquired using a demographic questionnaire inspired by Babbie (2020). This questionnaire included questions on age, gender, and socioeconomic status. By providing this information, we were better able to take into account demographic aspects and get a more comprehensive understanding of the features of the sample.

#### **Data Collection**

In order to collect the necessary information, there were three stages: A pre-test was given to all participants, and it consisted of the Empowerment Scale and the Self-Confidence Inventory (Field, 2013). The goal of the pre-test was to obtain baseline data, which is necessary for measuring the effectiveness of the intervention. Second, the experimental group continued to use TT methods by the physical education curriculum of the Indonesian Ministry of Education. In contrast, the control group participated in a 12-week SE program that included student-led activities, team sports, and real sporting experiences to foster the participants' sense of belonging and competence. The participants were given a post-test consisting of the same Empowerment Scale and Self-Confidence Inventory after the 12-week session. This was done to evaluate any changes the intervention may have brought about. The results of the test revealed that the SE model was more effective than the TT strategies (Creswell & Creswell, 2017). The data that was obtained after the test was presented.

#### **Data Analysis**

Several statistical techniques were used to analyze the data inside the SPSS application, an acronym for the Statistical Package for the Social Sciences. Initially, descriptive statistics characterized the sample and its score distribution. These statistics included calculating means, standard deviations, and frequencies (Pallant, 2020).

In inferential statistics, paired sample t-tests were used to ascertain the impact of the intervention on the levels of empowerment and self-confidence (Field, 2013). In these tests, the outcomes of each group were compared both before and after the intervention was carried out. The researchers used independent sample t-tests to compare the means of the two groups (control and experimental) to ascertain the efficacy of the SE model (Gravetter & Wallnau, 2017). Analysis of covariance (ANCOVA) was used in order to further analyze the main effect of the intervention after correcting for baseline scores (Tabachnick & Fidell, 2019).

Via the use of Cohen's d (Cohen, 2013), the magnitude of the intervention's impact was ascertained via the process of effect size calculation. Effect sizes (Cohen's d, partial  $\eta^2$ ) were calculated to assess the magnitude of differences. These statistical techniques provide light on the outcomes and effectiveness of the SE program in terms of enhancing the participants' sense of empowerment and self-confidence in comparison to the conventional methods of instruction.

#### **Ethical Considerations**

For this study, ethical guidelines set by the American Psychological Association (APA) and the Indonesian Educational Research Association (IERA) were adhered to. An informed consent statement outlining the objectives, procedures, possible risks, and benefits of the research needed to be signed by all participants and their legal guardians (Babbie, 2020). Only research team members had access to personally identifiable information, ensuring participant anonymity was strictly maintained. Each participant was given a one-of-a-kind code, and all the data was kept in a safe location. Ethical approval was obtained from the Research Ethics Committee of Universitas Negeri Padang. According to Bryman (2016), participants were not penalized in any way if they chose to withdraw from the study at any time. Because the SE model included age-appropriate activities to enhance the well-being of pupils, efforts were taken to ensure that the intervention did not damage the participants (Sieber, 1998). As part of the debriefing process, participants were given a summary of the study's findings and the opportunity to ask any questions they may have had before, during, or

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after the research (Smith, 2024). The purpose of this study was to get a response to the question, "Did the SE model help high school students in Padang, West Sumatra, feel more empowered and confident?" by adhering to these particular processes.

Results

Demographic Characteristics

The final sample included 100 high school students from Padang, West Sumatra, Indonesia, equally divided between the experimental group (Sport Education, n = 50) and the control group (Traditional Teaching, n = 50). The mean age was 15.5 years (SD = 0.9), with 52% male and 48% female participants. Socioeconomic status was distributed as follows: low (31%), medium (49%), and high (20%), located in the province of West Sumatra in Indonesia. The number of participants in both the experimental group (Sport Education) (n=50) and the control group (Traditional Teaching) (n=50) was allocated equally. Table 1 provides a summary of the demographic and demographic features.

Table 1  
Demographic Characteristics of Participants

| Characteristic           | Sport Education Group<br>(n=10050)  | Traditional Teaching Group<br>(n=10050) |
|--------------------------|-------------------------------------|-----------------------------------------|
| Age (Mean ± SD)          | 15.5 ± 0.9                          | 15.4 ± 1.0                              |
| Gender<br>(Male/Female)  | 5026/2456                           | 5226/4824                               |
| Socio-Economic<br>Status | Low: 3015, Medium: 5025, High: 2010 | Low: 3216, Medium: 4824, High: 2010     |

Research Question 1: Impact of the SE Model on Students' Psychological Empowerment

Table 2 compares the pre-test and post-test mean scores for psychological empowerment in both groups.

Table 2  
Descriptive Statistics for Psychological Empowerment

| Group                      | Pre-test Mean ± SD | Post-test Mean ± SD |
|----------------------------|--------------------|---------------------|
| Sport Education Group      | 3.20 ± 0.45        | 4.10 ± 0.50         |
| Traditional Teaching Group | 3.15 ± 0.50        | 3.25 ± 0.55         |

The Sport Education group showed a significant increase in psychological empowerment (t(49) = 8.45, p < 0.001, d = 1.23), while the Traditional Teaching group showed no significant change (t(49) = 1.12, p = 0.27). Post-test comparisons revealed that the SE group scored significantly higher than the TT group (t(98) = 6.85, p < 0.001). ANCOVA confirmed the effect (F(1, 97) = 52.34, p < 0.001). Through the use of a paired sample t-test, it was discovered that the Sport Education group had a noteworthy rise in psychological empowerment (t(99) = 12.34, p < 0.001, Cohen's d = 1.23), which signifies a substantial impact size. It was determined that there was no significant difference in the Traditional Teaching group (t(99) = 1.76, p = 0.08).

There was a significant difference between the two groups post-test scores, as shown by an independent sample t-test (t(198) = 11.25, p < 0.001). The Sport Education group scored higher than the Traditional Teaching group, indicating that the difference was statistically significant.

In order to account for pre-test scores, an analysis of covariance (ANCOVA) was carried out. The results of this analysis confirmed that the difference between groups after the post-test remained significant (F(1, 197) = 128.45, p < 0.001). This finding suggests that the SE model considerably influences psychological empowerment.

**Research Question 2: Impact of the SE Model on Students' Self-Confidence**

Table 3 reports both groups' mean scores on the self-confidence test before and after the test, which can be seen here.

Table 3  
Descriptive Statistics for Self-Confidence

| Group                      | Pre-test Mean ± SD | Post-test Mean ± SD |
|----------------------------|--------------------|---------------------|
| Sport Education Group      | 3.35 ± 0.50        | 4.05 ± 0.55         |
| Traditional Teaching Group | 3.30 ± 0.55        | 3.40 ± 0.60         |

"The SE group significantly improved in self-confidence ( $t(49) = 10.45, p < 0.001, d = 1.05$ ), whereas the TT group showed a minor but non-significant increase ( $t(49) = 1.36, p = 0.18$ ). Independent t-test confirmed significant differences in post-test scores ( $t(98) = 5.76, p < 0.001$ ). ANCOVA also confirmed the effect ( $F(1, 97) = 43.12, p < 0.001$ ). The results of a paired sample t-test indicated that the group that received Sport Education saw a noteworthy boost in self-confidence ( $t(99) = 10.45, p < 0.001$ , Cohen's  $d = 1.05$ ), which is indicative of a substantial effect size. ( $t(99) = 1.98, p = 0.05$ ). The Traditional Teaching group showed a minor but not statistically significant increase in students.

After conducting an independent sample t-test, it was found that there was a significant difference between the two groups in terms of their post test scores ( $t(198) = 9.88, p < 0.001$ ). The Sport Education group scored higher than the other group.

The findings of the ANCOVA analysis, which controlled for pre-test scores, corroborated the substantial difference between groups after the post test ( $F(1, 197) = 97.23, p < 0.001$ ). This demonstrates that the SE model is successful in boosting self-confidence.

**Research Question 3: Comparison of Outcomes Between SE Model and Traditional Teaching Methods**

Controlling for pre-test scores on empowerment and self-confidence measures, an analysis of covariance (ANCOVA) was carried out to compare the effects of the SE model and Traditional Teaching (TT) approaches among senior high school students in Padang, West Sumatra, Indonesia. The intervention had a significant main impact on psychological empowerment ratings, as shown by the analysis using ANCOVA, with the F-value being 12.34 and the p-value being less than 0.001. Participants in the SE model displayed substantially higher post-test scores on psychological empowerment ( $M_{\text{adjusted}} = 4.92$ ) as compared to those in the traditional teaching (TT) group ( $M_{\text{adjusted}} = 4.68$ ). This was the case even when baseline scores were controlled for. The magnitude of the effect, as measured by the partial eta squared value of 0.11, revealed that the SE model significantly impacted the enhancement of psychological empowerment among the participants.

Based on the results of the ANCOVA analysis, it was determined that the intervention had a significant main impact on the self-confidence scores, with  $F(1, 198) = 8.76$  and  $p = 0.004$ . After taking into account the students' initial levels of self-confidence, post hoc comparisons revealed that students who participated in the SE model exhibited significantly higher levels of self-confidence after the intervention ( $M_{\text{adjusted}} = 4.25$ ) in comparison to students who were in the traditional teaching (TT) group ( $M_{\text{adjusted}} = 3.95$ ). The magnitude of the effect, as measured by the partial eta squared score ( $\eta^2 = 0.08$ ), suggested that the SE model had a modest but significant impact on the enhancement of students' self-confidence.

Based on these findings, the SE model, which emphasizes student-led activities, teamwork, and authentic sporting experiences, significantly improves psychological empowerment and self-confidence among senior high school students in Padang, West Sumatra, Indonesia, in comparison to traditional teaching methods. Based on the effect sizes, it can be concluded that the SE model

significantly influences the development of good psychological outcomes in contexts that include physical education.

Table 4  
*Comparison of Post-Test Scores on Psychological Empowerment and Self-Confidence between SE Model and Traditional Teaching Methods*

| Measure                   | SE Model (n = 10050) | Traditional Teaching (n = 10050) | Adjusted Mean Difference | Effect Size ( $\eta^2$ ) |
|---------------------------|----------------------|----------------------------------|--------------------------|--------------------------|
| Psychological Empowerment | 4.1592 (0.086)       | 34.6825 (0.07)                   | 0.2492                   | 0.1128                   |
| Self-Confidence           | 4.025 (0.0509)       | 3.4095 (0.0608)                  | 0.6155                   | 0.0822                   |

Note. Adjusted means and standard errors are presented. Effect sizes are based on partial eta squared ( $\eta^2$ ).

The significance of these findings lies in the fact that they demonstrate the efficacy of the SE model in fostering psychological empowerment and self-confidence among high school students. Furthermore, they illustrate the advantages of incorporating new teaching strategies into physical education classrooms.

Discussion

As a result of participating in the Sport Education (SE) program, high school students in Padang, located in West Sumatra, Indonesia, The findings show that students exposed to the SE program demonstrated significantly greater gains than their peers in the Traditional Teaching (TT) group. These results provide evidence that the SE model is a promising pedagogical alternative in physical education (PE) classes in Indonesia to increase their psychological empowerment and self-confidence, according to this study. On the other hand, students who participated in the SE model showed significant gains in psychological agency and self-assurance compared to students who received more traditional types of education. Because these results are consistent with prior studies conducted in Western contexts (Hastie & Casey, 2014; Kinchin, 2006), the benefits of the SE model have the potential to be implemented on a worldwide dimension.

The model explains why students in the SE group reported much greater feelings of psychological empowerment. This is because the paradigm focuses on student agency, leadership, and meaningful involvement. According to the Self-Determination Theory (SDT) (Deci & Ryan, 2000), these components are absolutely necessary when satisfying core psychological needs and boosting intrinsic motivation. According to Perlman (2012), the SE model framework allows students to exercise control over their own learning, which in turn provides them with a greater sense of agency.

One reason the SE model appears effective is its emphasis on autonomy, responsibility, and authentic sport experiences. According to Self-Determination Theory (Deci & Ryan, 2000), fulfilling students' needs for autonomy, competence, and relatedness leads to stronger intrinsic motivation and positive self-perceptions. The SE model provided students with opportunities to choose roles (e.g., coach, referee, player), take initiative in decision-making, and engage in collaborative tasks, which in turn enhanced their sense of empowerment. Our results are consistent with those of Farias et al. (2017), who discovered that the SE model positively impacted the students' sense of self-efficacy and perceived competence.

According to Bandura (1997), the premise that providing students with demanding and varied activities to accomplish enhances their confidence is supported by the observation that students in the SE group had a higher level of self-assurance. Increased self-confidence can also be explained through Bandura's (1997) concept of self-efficacy. Students in the SE program experienced repeated opportunities to succeed in varied roles and receive positive reinforcement from peers and teachers. This mastery experience, combined with vicarious learning from observing teammates,

likely contributed to their improved self-confidence. According to Hastie and Sinelnikov (2006), the approach taken by the SE model helps students experience an increase in their self-confidence. This is because the SE model allows students to get positive reinforcement and accomplish success in various contexts. The findings provide credence to the findings shown by Spittle and Byrne (2009), who said that the SE model significantly boosted the students' self-confidence and motivation to participate in physical activities.

The cultural context of Indonesia further strengthens the significance of these findings. Most prior SE research has been conducted in Western countries (Hastie & Casey, 2014; Wallhead & O'Sullivan, 2005). Indonesian classrooms, however, are often characterized by teacher-centered methods and hierarchical learning traditions (Gustian et al., 2024). By shifting responsibility from teacher to students, the SE model not only challenges traditional structures but also empowers adolescents to take leadership roles, an outcome particularly valuable in societies where student voice is often limited.

When the SE model is contrasted with the tactics of TT, it becomes abundantly evident that the SE model contributes far more efficiently to the promotion of psychological empowerment and self-confidence. Traditional education methods are characterized by standardized activities and instruction that the instructor guides. These methods not only fail to engage students but also fail to inspire intrinsic motivation (Ward, 2013). Consequently, pupils could have negative opinions of physical education and show decreased interest in participating in it (Ennis, 2014; Astuti et al., 2023). Our results support the argument that SE is not only more engaging but also more effective in developing essential soft skills such as leadership, collaboration, and resilience. The SE model is more dynamic and student-centered than other methods, which makes learning more exciting and entertaining for students while overcoming the disadvantages of conventional knowledge (Wallhead & O'Sullivan, 2005). This is in contrast to more static systems.

The findings of this study shed light on several significant implications for enhancing current approaches to physical education, particularly in non-Western contexts such as Indonesia. The Sport Education (SE) paradigm fosters student autonomy and leadership, dramatically enhancing student engagement and passion in physical education courses. This strategy, as stated by Hastie and Casey (2014), has a dual purpose: It makes the classroom more welcoming and enjoyable for all students and encourages children to move about and develop an interest in physical activity that will last the rest of their lives. The psychological empowerment and self-confidence of adolescents are essential components of personal development that have the potential to have a good influence on the adolescents' general well-being as well as their academic achievement of adolescents. According to Zimmerman (2000), the SE model's focus on meaningful engagement and positive reinforcement is a significant help in this attempt for the organization. The cultural adaptability of the SE model and its potential for broader application in various educational contexts across the globe is illustrated by the successful adaption of the SE model in Padang, located in West Sumatra. According to Perlman (2012), this method is successful and adaptable, and it can be modified to accommodate the particular requirements and circumstances of a variety of student groups. Putting a significant amount of money into programs that provide physical education instructors with opportunities for professional development is very necessary to promote this transformation. According to Hastie et al. (2011), the primary objective of these programs should be to provide physical education instructors with the information and skills necessary to implement the SE model effectively, which will result in long-term improvements in student accomplishment and classroom efficiency.

The unique contribution of this study is its demonstration of the SE model's effectiveness in a non-Western setting. By confirming that the model significantly enhances empowerment and self-confidence among Indonesian adolescents, the study provides evidence of the model's cross-cultural adaptability. Using the SE model as an alternative to more standard methods of physical education training can yield many advantages. The program's centering on the students, as stated by Hastie and Casey (2014), leads to higher educational outcomes via greater engagement, motivation, and

enjoyment. In addition, the SE model is said to be beneficial for developing critical soft skills like leadership, problem-solving, and cooperation, as stated by Farias et al. (2017).

It is important to note that using the SE model is not devoid of challenges. Educators who are used to the traditional methods of doing things may resist the extensive modifications required to implement the SE model in the classroom (Ward, 2013). According to the SE model, teachers are required to commit a greater amount of time and effort to planning and preparation, and they are also expected to actively engage in continuous professional development (Hastie et al., 2011; Handrianto et al., 2023). In addition, instructors are expected to attend continuing education classes.

In spite of these problems, the SE model is a valuable and effective method of physical education because of its positive impact on students' psychological empowerment and self-confidence. The research's optimistic findings underscore the potential that the SE model holds for making physical education classes more dynamic and fascinating places to learn, which fosters students' development as people.

The implications of the findings of this research are not limited to the specific sector of physical education; rather, they extend farther afield. The ideas of the SE model, which include fostering student autonomy, leadership, and meaningful participation, may benefit other areas of education. The goal of the SE model is to increase student engagement and motivation. By adopting student-centered techniques that allow students agency over their learning and enhance their self-esteem, educators may be better able to fulfill the demands of their diverse student bodies, foster the personal development of their students, and assist their students in achieving success both academically and personally (Deci & Ryan, 2000; Hazizah et al., 2024).

In addition, the research highlights the need for pedagogy sensitive to other cultures in the sphere of education. Instructional strategies that are both culturally sensitive and regionally relevant are needed, as shown by the successful application of the SE model in a culture that is not Western. By using this approach, it is ensured that all students, regardless of their cultural heritage, are provided with the opportunity to get an education of superior quality that fosters their overall growth and development (Perlman, 2012; Jusoh et al., 2023).

Last but not least, the outcomes of this research support the notion that the SE model assisted high school students in Padang, West Sumatra, in experiencing a greater sense of self-confidence and empowerment. In addition to adding to the growing body of research that backs up this notion, these findings shed light on the potential of the SE model to change physical education and enhance educational outcomes (Sunarti et al., 2024; Waty et al., 2024). Future research should explore teacher professional development strategies to support SE implementation and examine the long-term effects of SE on psychological outcomes.

In conclusion, this study provides robust evidence that the Sport Education model enhances psychological empowerment and self-confidence among Indonesian adolescents. The findings contribute both practically, by offering PE teachers an effective strategy for promoting personal growth, and theoretically, by confirming that SE's mechanisms operate across cultural contexts.

## Conclusion

This study demonstrates the efficacy of the sports education model in enhancing psychological empowerment and self-confidence among high school students in Padang, West Sumatra, Indonesia. The significant improvements observed in the SE group compared to traditional teaching methods highlight the potential of this approach to transform physical education practices. These findings contribute to the growing body of evidence supporting the SE model and extend its applicability to non-Western contexts. The success of the SE model in this cultural setting underscores the importance of student-centered, engaging pedagogical approaches in fostering positive psychological outcomes and personal development. Future research should explore the long-term effects of the SE model and its potential adaptation across diverse educational and cultural contexts. Implementing the SE model more broadly could lead to more effective physical education programs that promote

students' psychological well-being and confidence, ultimately contributing to their overall development and lifelong engagement in physical activity.

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Con formato: Inglés (Malasia)

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Con formato: Inglés (Estados Unidos)

Código de campo cambiado

Con formato: Inglés (Estados Unidos)

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Con formato: Inglés (Estados Unidos)

Código de campo cambiado

Con formato: Inglés (Malasia)

Código de campo cambiado

Con formato: Inglés (Malasia)

Con formato: Inglés (Malasia)

Con formato: Portugués (Portugal)

Con formato: Portugués (Portugal)

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Con formato: Portugués (Portugal)

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Código de campo cambiado

Con formato: Portugués (Portugal)

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