



The Relationship Between Self-Confidence Levels and Forward Roll Skill in Students at Elementary School

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History Article

Received February 2026
Approved March 2026
Published vol 13 no 1 2026

Keywords

Self-Confidence;
Motor Skills; Forward
Roll; Floor Gymnastics

Abstract

This research is motivated by the importance of mastering basic movement skills in elementary school physical education, especially in the forward roll floor gymnastics material which demands physical and psychological readiness of students. The purpose of this study was to determine the relationship between self-confidence and forward roll motor skills among sixth-grade students at State Elementary School 02 Rejosari. The forward roll is a floor gymnastics skill that requires a high level of complexity and mental and physical readiness from students. This study used a quantitative correlational approach with a cross-sectional research design. The population of this study consisted of all sixth-grade students at State Elementary School 02 Rejosari who had learned floor gymnastics material. The sample consisted of 20 students selected using purposive sampling. The research instruments were a self-confidence questionnaire with 15 statements and an observation sheet for assessing the technical aspects of the forward roll. Data analysis was performed using the Pearson product-moment correlation test with the help of SPSS 25 software. Based on the research results, the correlation value was 0.624, with a significance of 0.003 ($p < 0.05$), which means that students' self-confidence and forward roll skills have a positive and significant relationship that is classified as strong, so that the higher the level of self-confidence, the better the students' forward roll skills. The results of this study prove that psychological aspects in physical education learning are very influential and have implications for teachers to train self-confidence in floor exercise learning.

How to Cite

Ridhiaz, M. A., Aldapit, E., Bhakti, Y. H., & Suhariyanti, M. (2026). The Relationship Between Self-Confidence Levels and Forward Roll Skill in Students at Elementary School. *Journal of Physical Education, Health and Sport*, 13 (1), 102-108.

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INTRODUCTION

Physical education is an integral part of the education system that plays a role in developing the physical, mental, social, and emotional abilities of students holistically (Anisa Julia Dwi Putri et al., 2024). In a global context, physical education is no longer seen as merely physical activity, but as a vehicle for character building, self-confidence, and life skills for children from an early age (Branquinho et al., 2022). In Indonesia, the Merdeka Belajar (Freedom of Learning) policy emphasizes the importance of physical education learning that is oriented towards the comprehensive development of student competencies, including affective and psychomotor aspects (Alfyanti et al., 2024). However, the implementation of physical education learning in elementary schools still faces various challenges, particularly in mastering basic motor skills.

National research data shows that the level of basic motor skills mastery among elementary school students in Indonesia is still in the moderate to low category (Allsabab & Harmono, 2022). Research by Lengkana et al., (2022) reveals that more than 40% of elementary school students have difficulty performing basic motor skills that require coordination, balance, and courage. This condition is a serious concern because basic motor skills are the foundation for the development of physical activity and sports in subsequent levels of education. The long-term impact of low basic motor skills can be a decrease in student participation in physical activity and an increased risk of health problems. One physical education subject that has a high level of complexity for elementary school students is floor exercises, especially the forward roll skill. The forward roll is a basic movement that requires coordination between muscle strength, flexibility, balance, and mental readiness of students. According to Prasetyo & Ahmad (2025), many elementary school students show fear, hesitation, and lack of confidence when performing forward rolls due to the perceived risk of injury and failure. This phenomenon shows that the success of floor gymnastics learning is not only determined by physical factors but also by the psychological condition of students.

Theoretically, the relationship between self-confidence and motor skills can be explained through the self-efficacy theory, which states that an individual's belief in their abilities influences their behavior, effort, and persistence in performing a task (de Oliveira et al., 2020). In

physical education, this theory has evolved with the emergence of a psychopedagogical approach that emphasizes the integration of affective aspects in motor learning (Ferreira & Diniz, 2024). This evolution in thinking has shifted the paradigm of physical education learning from a mechanistic approach to a more humanistic and learner-centered approach.

A number of studies in national journals support the view that self-confidence has a positive relationship with students motor skills. Fadhillah et al., (2025) found that students with high self-confidence tend to have better floor exercise learning outcomes than students with low self-confidence. This finding is reinforced by Hasni et al., (2024), who state that self-confidence acts as a factor that encourages students to try and repeat floor exercise movements. This synthesis of supporting citations reinforces the argument that self-confidence is an important variable in learning the forward roll.

However, not all studies show consistent results. Some studies emphasize that physical factors such as muscle strength, flexibility, and coordination have a more dominant influence on motor skills than psychological factors. Research by Martiani (2019) shows that improvements in floor gymnastics skills are more influenced by structured physical training than psychological interventions. An evaluation of these conflicting citations reveals an academic debate regarding the relative roles of psychological and physical factors in motor skill learning.

These differing findings indicate that the relationship between self-confidence and motor skills is contextual and influenced by student characteristics and the learning environment. In the context of elementary school, the developing psychological condition of students makes self-confidence a factor that is very sensitive to learning experiences. According to Saputra (2017), experiences of success or failure in physical education learning can shape students' perceptions of their abilities. Therefore, studies that integrate psychological aspects and motor skills remain relevant.

From a methodological perspective, research on self-confidence and motor skills in Indonesia generally uses a quantitative approach with a correlational design. The instruments commonly used include a self-confidence questionnaire based on the Likert scale and a floor gymnastics motor skills test with a performance assessment rubric (Mulyani et al., 2025). Although this approach is widely used, most studies are still conducted on a broad population

without considering the specific context of the educational unit.

A common problem found in the field is the low ability of elementary school students to perform forward rolls correctly and confidently. Kumala dan Maksum (2020), revealed that many students show movement anxiety and are reluctant to try forward rolls because they are afraid of falling or receiving negative assessments from their peers. This condition has an impact on low learning outcomes and suboptimal achievement of physical education learning objectives. Therefore, this problem requires serious attention and appropriate solutions.

In the local context, State Elementary School 02 Rejosari is a public elementary school with students who are heterogeneous in terms of physical abilities, social backgrounds, and learning experiences. Physical education learning at this school still faces obstacles in increasing students courage and confidence in floor exercises. However, to date, there has been no empirical research that specifically examines the relationship between confidence levels and forward roll skills among students at State Elementary School 02 Rejosari.

The research gap in this study lies in the lack of studies focusing on the relationship between self-confidence and forward roll skills in the context of public elementary schools in certain areas. Most previous studies were conducted in different contexts or examined motor skills in general without focusing on one specific type of movement.

Based on this description, this study aims to determine the relationship between self-confidence levels and forward roll skills in students at State Elementary School 02 Rejosari. Theoretically, this study is expected to enrich physical education studies by strengthening the integration of affective and psychomotor aspects. Practically, the results of this study are expected to serve as a basis for physical education teachers in designing more effective, safe, and confidence-building floor exercise lessons.

METHOD

This study used a correlational quantitative approach with the aim of determining the relationship between self-confidence levels and forward roll skills among students at State Elementary School 02 Rejosari. This study was conducted cross-sectionally, where data collection was carried out in a single period of time to obtain an overview of the level of relationship between

the variables studied (Ayu Ardiningsih & Kardiwinata, 2021).

The population in this study was all sixth-grade students at State Elementary School 02 Rejosari who had received floor gymnastics material in physical education lessons. They were selected using purposive sampling. The inclusion criteria included students who actively participated in physical education lessons and did not have motor impairments. The sample size was 20 students from the sixth grade at State Elementary School 02 Rejosari.

The research instruments consisted of 1) a Self-Confidence Questionnaire and 2) a Forward Roll Skill Test. The self-confidence questionnaire consisted of 15 statement items. This instrument was developed by adapting student self-confidence indicators that had been tested for validity and reliability by (Maulana, 2022), and adjusted to the context of floor exercise learning in school students. Forward roll skills were measured using an observation sheet based on a technique assessment rubric that included the initial, execution, and final phases of the movement. According to Adityatama et al., (2025) the use of a technical observation rubric is effective for assessing the floor gymnastics skills of elementary school students.

Data analysis was performed using Pearson Product Moment correlation test to determine whether there was a significant relationship between self-confidence and forward roll skills among students at State Elementary School 02 Rejosari. The data was processed using SPSS 25 software.

RESULTS AND DISCUSSION

This study involved 20 students of State Elementary School 02 Rejosari as research subjects, with two main variables analyzed, namely self-confidence levels and forward roll skills. The analysis was conducted to obtain a descriptive overview of each variable, ensure the suitability of the data for inferential analysis, and test the relationship between the two variables.

Descriptive analysis was conducted to provide an overview of the data characteristics of the two research variables. **Table 1** below presents a summary of the descriptive statistics for the variables of self-confidence level and forward roll movement skills of students.

Based on **Table 1**, students' self-confidence levels showed an average score of 47.75 with a standard deviation of 3.740, a minimum score of 43, and a maximum score of 55. The score

range of 12 points indicates that students' self-confidence is relatively homogeneous, with little variation between individuals. This condition indicates that most students have a fairly balanced level of confidence in participating in physical education learning activities, especially those that require courage and confidence in their abilities. This homogeneity is important because it provides a stable basis for seeing how small variations in confidence can still contribute to differences in motor skills.

For the forward roll motor skill variable, the average score was 18.40 with a standard deviation of 2.415, a minimum score of 14, and a maximum score of 22, with a range of 8 points. This data shows that students' forward roll skills are also within a relatively concentrated range, although the variation is slightly greater than that of self-confidence when viewed from the coefficient of variation. This variation reflects differences in students' motor skills in coordinating movements, maintaining balance, and executing the forward roll movement sequence correctly. These differences are relevant when linked to students' internal psychological factors, particularly self-confidence, which theoretically plays a role in the courage to try and the accuracy of performing movements.

Table 1. Descriptive Statistics of Research Variables

Statistics	Self Confidence	Forward Roll Skill
N	20	20
Mean	47.75	18.40
S.Deviation	3.740	2.415
Min	43	14
Max	55	22
Range	12	8

To gain a deeper understanding of the data distribution, categorization was performed based on the scores obtained. **Table 2** shows the frequency distribution of students' confidence levels based on low, medium, and high categories.

Table 2. Frequency Distribution of Student Confidence Levels

Category	Score Range	Frequency	Percentage
Low	< 45	6	30.0
Medium	45 - 50	10	50.0
High	> 50	4	20
Total		20	100

Table 2 shows that the majority of stu-

dents (50%) are in the moderate self-confidence category, while (30%) are in the low category, followed by the high category (20%). This distribution, which tends to be centered on the moderate category, confirms the previous descriptive statistical findings that indicate data homogeneity. This indicates that self-confidence improvement interventions can be focused on the majority group using a standardized approach, while special attention can be given to students with low self-confidence.

Table 3. Frequency Distribution of Student Forward Roll Skills

Category	Score Range	Frequency	Percentage
Poor	< 16	1	5
Sufficient	16 - 19	13	65.0
Good	> 19	6	30
Total		20	100

Table 3 shows the distribution of students' forward roll skills, indicating that the majority of students (65%) are in the adequate category, followed by the good category (30%) and poor category (5%). This distribution shows that most students have mastered the forward roll technique (sar), but there is still room for improvement in their skills. Students in the poor category require special attention in terms of coordination and balance, while students in the adequate category can be improved to the good category through more intensive and systematic training.

Before analyzing the relationship between variables, a normality test was conducted to ensure that the data obtained was normally distributed. The normality test used the Kolmogorov-Smirnov method, with the results presented in **Table 4**.

Table 4. Kolmogorov-Smirnov Normality Test Results

Variable	Statistics	Significance
Self-Confidence	0.181	0.85
Forward Roll Skill	0.166	0.152

Based on **Table 4**, the Kolmogorov-Smirnov normality test results show a significance value for the self-confidence variable of 0.85 and for the forward roll skill variable of 0.152. Both significance values are greater than alpha 0.05 ($p > 0.05$), which indicates that the data for both variables are normally distributed. With this normality assumption fulfilled, Pearson's correlation analysis can be performed to test the relationship between the two variables. Data normality is very

important because it ensures that the statistical analysis performed is valid and the results can be interpreted reliably.

After the prerequisite tests were met, Pearson's correlation analysis was performed to test the relationship between self-confidence and students' forward roll skills. **Table 5** presents the results of the correlation analysis.

Table 5. Results of Pearson Correlation Analysis

Variable Relationship	Correlation Coefficient (r)	Significance (p)
Self-Confidence and Forward Roll Skill	0.624	0.003*

* Significant at $\alpha = 0.05$

The Pearson correlation results in **Table 5** show a correlation coefficient value of 0.624 with a significance of 0.003 ($p < 0.05$). A significance value of less than 0.05 indicates that there is a significant relationship between self-confidence and students' forward roll skills. A positive correlation coefficient indicates that the relationship between the two variables is unidirectional, meaning that the higher the students' self-confidence, the better their forward roll skills.

The correlation coefficient of 0.624 is in the strong category according to Guilford's interpretation, which suggests that self-confidence is one of the important factors, but not the only one, that affects forward roll movement skills. To clarify the interpretation of the strength of the relationship,

Table 6. Correlation Coefficient Interpretation Guidelines

Coefficient Interval	Level of Relationship
0.00 - 0.199	Very Low
0.20 - 0.399	Low
0.40 - 0.599	Moderate
0.60 - 0.799	Strong
0.80 - 1.000	Very Strong

The results of the study indicate a significant relationship between self-confidence and students' forward roll motor skills. The Pearson correlation coefficient value of $r = 0.624$ with a significance of $p = 0.003$ ($p < 0.05$) indicates that the relationship between the two variables is positive and falls into the strong category. This finding indicates that the higher the students' self-confidence, the better their forward roll skills. This strong relationship shows that self-confidence is not merely a supporting factor, but plays an important role in the success of students in per-

forming floor exercises. However, the correlation value, which has not reached the very strong category, suggests that there are other factors that also influence forward roll skills. Therefore, self-confidence can be understood as one of the main determinants in the achievement of students' movement skills.

Theoretically, movement skills in floor gymnastics are influenced by a combination of psychological, physical, and technical factors. Self-confidence plays a role in the mental aspect, while muscle strength, flexibility, coordination, and training experience influence the physical and technical aspects. The theory of motor learning states that optimal movement performance is achieved when psychological and physical factors develop in a balanced manner (Cattuzzo, 2018). In other words, high self-confidence without adequate physical ability does not necessarily result in optimal motor skills. This is in line with the view that gymnastics performance is the result of the interaction of various components, not just a single factor (Milosis et al., 2018). Therefore, self-confidence needs to be understood as part of an interrelated system.

The reason why confidence is not the only factor can be explained by the technical demands of the forward roll movement. This movement requires arm strength to support the body, flexibility in the back, and good coordination between body parts. Students who are confident but lack strength or flexibility will still have difficulty executing the movement perfectly. Conversely, students with good physical abilities but lacking confidence also tend to perform stiff and suboptimal movements. This condition shows that forward roll skills develop optimally when physical and psychological factors support each other. Therefore, the contribution of confidence is significant but not exclusive.

The results of this study are in line with the research by Lubis and Setiakarnawijaya, which found that gymnastics skills are influenced by a combination of self-confidence and physical factors such as muscle strength and flexibility. The study confirms that self-confidence has a significant influence, but its contribution will be greater if supported by good physical condition (Lubis et al., 2023). This similarity indicates that the current research results are consistent with previous findings in the context of gymnastics. Thus, this study reinforces the evidence that gymnastics skills are the result of multidimensional interactions. Self-confidence plays an important role, but its effectiveness depends on other factors.

Another study by Sukamti et al. also shows

that physical condition and psychological readiness together influence students' basic gymnastics skills. The study emphasizes that improving gymnastics skills will be more effective if physical training is integrated with strengthening students' mental aspects (Sukamti et al., 2020). Compared to that study, the results of this study place greater emphasis on the role of self-confidence, but still show a similar pattern regarding the involvement of many factors. The similarity of these results makes it clear that self-confidence cannot be separated from other supporting factors. Thus, the development of forward roll skills needs to be carried out in a comprehensive and integrated manner.

CONCLUSION

Based on the research results and discussion described above, it can be concluded that there is a real and positive relationship between self-confidence and students' forward roll skills. The correlation coefficient value of 0.624 with a significance of $p < 0.05$ indicates that the higher the students' self-confidence, the better their forward roll skills. Self-confidence plays an important role in helping students execute movements with more confidence, coordination, and optimality, especially in floor gymnastics skills that require courage and good body control.

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