

Level of Knowledge of Small Ball Games Among V and VI Graders at SD Negeri Balesari, Bansari District

Zaza Afnindar Fakhrurozi¹, Abiyyu Amajida², Rangga Pangestu Aji Saputro³, Risdiyanto⁴, Kristiyono⁵, Stefanus Prasetyo Yudi Susanto⁶

^{1,2,3,4,5,6}Universitas Negeri Yogyakarta, Yogyakarta, DIY, 55281, Indonesia

ABSTRACT: The study aims to analyze the level of knowledge regarding small ball games at SD Negeri Balesari in Bansari District. This study employs a quantitative descriptive approach, using a survey method with a multiple-choice questionnaire. The validity of the research instrument has been tested. The results of this test showed that the calculated r value was greater than the table r value (0.4227), so all 25 questions were declared valid. The reliability test in this study used Cronbach's Alpha formula, yielding a result of (0.743); thus, this study was deemed reliable. The population in this study consisted of fifth- and sixth-grade students, with a sample selected using total sampling, namely all V and VI grade students at SD Negeri Balesari, totaling 50 students. The data analysis conducted in this study employed quantitative descriptive methods, utilizing SPSS 25 and Microsoft Excel 2021 to present the results as percentages.

The results of this study show that the level of knowledge of small ball games among V and VI graders at SD Negeri Balesari in Bansari District was rated "Very High" by 10% (5 students), "High" by 18% (9 students), "Moderate" at 38% (19 students), "Low" at 30% (15 students), and "Very Low" at 4% (2 students). Based on the above findings, it can be concluded that the level of knowledge regarding small ball games in Grades V and V at SD Negeri Balesari, Bansari District, falls into the "Moderate" category.

KEYWORDS: Students, Small Ball Games, Level of Knowledge.

I. INTRODUCTION

Education is a fundamental need for every human being, because humans are essentially born without the ability to live independently (Kunanti, 2021, p. 1). Education plays a vital role in human life, as it is through education that individuals are expected to develop various aspects of themselves. Some of these aspects include knowledge, skills, and creativity. Data from the Central Java Provincial Education and Culture Office (BBPMP) indicates that 43,833 children are not enrolled in school, comprising students who dropped out of elementary school, those who dropped out of junior high school, and those who have never attended school. Overall, school enrollment rates in Central Java still show relatively high levels. However, disparities between regions remain a prominent issue, particularly in ensuring the continuity of education for all students who have completed elementary school. Therefore, the education received in elementary school serves as a crucial foundation for students to advance to the next level of education.

Research conducted by Rahman et al. (2022, p. 155) states that the combined efforts of teachers and parents in a student's development—that is, the collaboration between teachers and parents in a student's education—will yield the best possible outcomes. In this context, education is not merely about academic achievement but also about developing all aspects of a student's being, including physical, emotional, social, personality, and moral aspects. One area of instruction that can be provided is physical education, sports, and health.

Physical education is an essential subject in early childhood that supports children's ongoing physical and motor development. Adriatullah (2025, p. 9) states that physical education, sports, and health are positioned as subjects aimed at developing students' self-management skills in maintaining and improving physical fitness and adopting healthy lifestyle habits through various predetermined physical activities and sports.

Based on observations conducted by the researcher on Saturday, January 17, 2026, at Balesari Public Elementary School, the physical education, sports, and health curriculum plays a crucial role in providing students with opportunities for face-to-face interaction. Through these activities, students engage in social interaction and develop their individual characteristics; when

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implemented systematically and consistently, these activities provide students with meaningful learning experiences. These experiences not only impart knowledge but also improve health, skills, and foster a positive psychological state. However, the implementation of physical education, sports, and health (PJOK) instruction at Balesari Public Elementary School faces various challenges, such as the absence of a dedicated PJOK teacher.

The situation described above significantly impacts the continuity of instruction, resulting in PJOK lessons being taught by the respective homeroom teachers. Consequently, the implementation does not comply with existing regulations; while the curriculum requires 3 JP of instruction, in reality, it is sometimes taught for only 2 JP due to the classroom teachers' limited knowledge regarding Physical Education, Sports, and Health (PJOK) instruction. Despite the absence of a dedicated PJOK teacher at the school, each classroom teacher still strives to present and explain PJOK learning materials relevant to the curriculum in effect for each grade level, such as large ball games, traditional games, and small ball games.

Physical education, sports, and health education cover a diverse range of topics, including games and sports. The sports category includes traditional sports, while the games category includes small ball games. Research conducted by Sudarti (2024, p. 5) states that small-ball games are games that use a small ball with a diameter of less than 50 cm and typically involve the use of supporting equipment such as bats, sticks, or rackets. Playing small-ball games requires more than one person, so they are usually played in teams. Small-ball games can be defined as a form of play that utilizes a small ball as its primary equipment. Teaching small-ball games contributes to supporting students' growth and development. Through these learning activities, students gain the opportunity to deepen and broaden their knowledge in alignment with the curriculum, while simultaneously cultivating, strengthening, and shaping their existing skills. After conducting unstructured interviews, the influencing factors became apparent and were divided into two categories. Among the internal factors, the differences between male and female students were quite clear, particularly in their ability to answer questions, with many male students responding more quickly. In addition, there are external factors, specifically teacher training, which is a major factor; due to the limited number or absence of teachers in the Physical Education (PJOK) learning process at Balesari Public Elementary School, this has an impact on the implementation of instruction, particularly resulting in suboptimal teaching of the material during lessons. One example I observed is the students' knowledge of small ball games. Small ball games at the school are implemented in a way that is considered less than optimal, as the material is delivered by classroom teachers and there is a lack of dedicated Physical Education class hours (JP). The small ball games taught are limited to softball and badminton. During instruction, teachers only explain the definitions, basic techniques, and rules; however, the explanations provided are incomplete. Consequently, this has led some students to not take the physical education material seriously enough. Furthermore, the absence of a physical education teacher often results in physical education lessons—particularly those on small ball games—being rarely taught.

The researcher conducted this study based on the observations outlined above, titled "Level of Knowledge of Small Ball Games Among Fifth and Sixth Graders at Balesari Public Elementary School, Bansari Sub district."

II. MATERIAL AND METHODS

A. Type of Research

This study employs a quantitative descriptive approach focused on the level of knowledge of small ball games among fifth- and sixth-grade students at Balesari Public Elementary School in Bansari Sub district. Quantitative research is an approach that uses quantitative data in the form of numbers to answer research questions (Waruwu, 2025, p. 918). This study employs a quantitative research method, defined as a series of scientific steps conducted by a researcher using a quantitative approach to collect data that can be quantified and analyzed to answer or resolve a problem (Muin, 2023, p. 3).

B. Location and Date of Implementation

This study was conducted at Balesari Public Elementary School, located in Balesari Village, Bansari, Temanggung, Central Java, on Monday, May 4, 2026.

C. Population and Sample Population

The population for this study consists of fifth- and sixth-grade students at Balesari Public Elementary School.

Sample

The sampling method used for this study employs total sampling. Total sampling is a method that includes the entire population, where the total number of samples equals the total population itself. The sample for this study consists of all fifth- and sixth-grade students at Balesari Public Elementary School, totaling 50 children, who will serve as the sample.

D. Research Instruments

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Arikunto, as cited in Makbul (2021, p. 18), states that a research instrument can be defined as a tool determined and utilized by the researcher in data collection activities, with the aim of ensuring the research process proceeds in a structured and more efficient manner. Therefore, an instrument can be defined as a tool to facilitate the processing of data collected during the research. A survey using multiple-choice instruments is the method applied in this study titled "Level of Knowledge of Small Ball Games in Grades 5 and 6 at Balesari Public Elementary School." According to Hadi in Susilowati (2024, p. 69), there are three important stages in the development of research instruments: defining the research objectives, identifying factors, and formulating the questions. E. Data Collection Techniques

In quantitative research, data analysis activities include data processing and presentation, calculations to interpret the data, and the analysis process to test the research hypothesis (Sofwatillah et al., 2024, p. 80). The data collection techniques involved the following mechanisms:

1. The researcher collected data on fifth- and sixth-grade students at Balesari Public Elementary School.
2. The researcher distributed the questionnaire to all students and asked them to fill it out.
3. The researcher collected all completed questionnaires and transcribed the responses.
4. Next, the obtained data were compiled, and the researcher drew conclusions and made recommendations.

Data Analysis Techniques

The data analysis technique used in this study is descriptive analysis, which employs descriptive statistics to analyze the data. This analysis aims to determine the level of understanding of traditional games in physical education and health classes among fifth- and sixth-grade students at Balesari Public Elementary School.

The grouping of data into specific categories begins with determining the maximum and minimum values first. The next step involves calculating the mean and standard deviation of the data obtained. Subsequently, the data is organized into a frequency table as the basis for grouping. The results of the analysis were then divided into five categories: Very High, High, Moderate, Low, and Very Low. Classification in this process was based on score criteria established using a benchmark approach that refers to a specific formula by Sudijono in Susilowati (2024, p. 78).

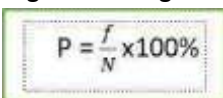
Table 1. Multiple-Choice Scoring Standards

Interval	Category
$M + 1,5 S < X$	Very High
$M + 0,5 S < X \leq M + 1,5 S$	High
$M - 0,5 S < X \leq M + 0,5 S$	Moderate
$M - 1,5 S < X \leq M - 0,5 S$	Low
$X \leq M - 1,5 S$	Very Low

Source: Susilowati (2024, p. 78)

Interpretation as a discussion of the problem is presented in the form of percentages.

Figure 1. Categorization Formula


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

Notes

P = Percentage to be calculated

F = Frequency

N = Number of Respondents

III. RESULTS AND DISCUSSION

The purpose of this study was to describe data regarding the level of knowledge of small ball games among fifth- and sixth grade students at Balesari Public Elementary School in Bansari Sub district. The study utilized the results of a multiple-choice exam consisting of 25 questions classified into four categories: the definition of small ball games, facilities and equipment for small ball games, rules of small ball games, and basic techniques of small ball games. The research findings are then presented in the form of descriptive statistics, which illustrate the relevant assessment results.

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Table 2. Description of Knowledge Levels Regarding Small Ball Games in Grades 5 and 6 at Balesari Public Elementary School, Bansari District

Category	Interval	Frequency	Persentase
Very High	$20 < X$	5	10%
High	$16 < X < 20$	9	18%
Middle	$11 < X < 16$	19	38%
Low	$7 < X < 11$	15	30%
Very Low	$X < 7$	2	4%
Total	50		100%

When presented in diagram form, it appears as shown in the figure below:

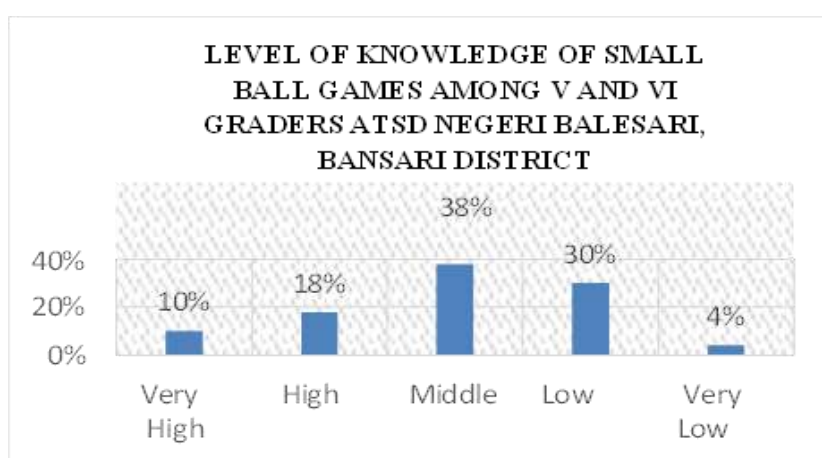


Figure 1. Histogram of Knowledge Levels Regarding Small Ball Games

The results of the study on the Level of Knowledge of Small Ball Games among 5th and 6th graders at Balesari Public Elementary School in Bansari Sub district included the following classifications: "Very High" at 10% (5 students), "High" at 18% (9 students), "Moderate" 38% (19 students), "Low" at 30% (15 students), and "Very Low" at 4% (2 students). From the above statement, it can be concluded that the level of knowledge regarding small ball games in grades 5 and 6 at Balesari Public Elementary School in Bansari Sub district, within the Physical Education (PJOK) curriculum, falls into the "Moderate" category.

The details of the level of knowledge regarding small ball games in grades 5 and 6 at Balesari Public Elementary School in Bansari Sub district are divided into four classifications, namely:

1. Understanding of small ball games.

The understanding of small ball games yielded a mean of 2.64, a median of 3, a maximum score of 4, a minimum score of 1, a mode of 2, and a standard deviation (SD) of 0.964.

Table 3. Description of the understanding of small ball games

Category	Interval	Frequency	Percentage
Very High	$4,1 < X$	0	0%
High	$3,12 < X < 4,09$	11	22%
Middle	$2,16 < X < 3,12$	16	32%
Low	$1,19 < X < 2,16$	17	34%
Very Low	$X < 1,19$	6	12%
Total	50		100%

When presented in diagram form, it appears as shown in the figure below:

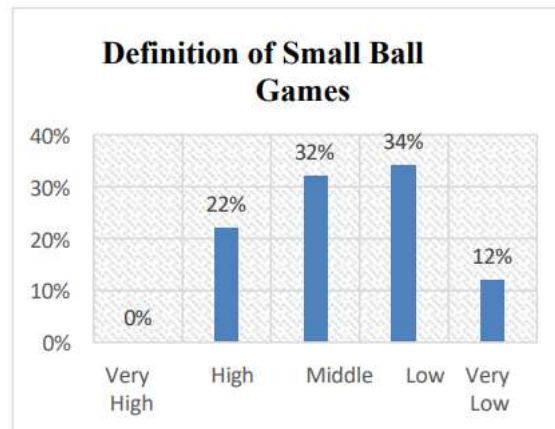


Figure 2. Diagram illustrating the concept of small ball games

The classification of the data in the figure above is as follows: “Very High” at 0% (0 students), “High” at 22% (11 students), “Moderate” at 32% (16 students), “Low” at 34% (17 students), “Very Low” at 12% (6 students). From the results above, it can be concluded that the study on the Level of Knowledge of Small Ball Games in Grades 5 and 6 at Balesari Public Elementary School in Bansari Sub district indicates that the factor of understanding small ball games falls into the “Low” category.

2. Facilities and Infrastructure for Small Ball Games The results of the data analysis

regarding the study on the level of knowledge of small ball games in Grades 5 and 6 at Balesari Public Elementary School, Bansari Sub district, show that the classification of facilities and infrastructure for small ball games yielded a median of 5, a maximum score of 8, a minimum score (minimum) of 2, a mean of 5.20, a mode of 4, and a standard deviation (SD) of 1.773.

Table 4. Descriptive Statistics for Small Ball Game Facilities and Infrastructure

Category	Interval	Frequency	Persentase
Very High	$7,86 < X$	5	10%
High	$6,09 < X < 7,86$	9	18%
Middle	$4,31 < X < 6,09$	16	32%
Low	$2,54 < X < 4,31$	17	34%
Very Low	$X < 2,54$	3	6%
Total	50		100%

When presented in diagram form, it appears as shown in the figure below:

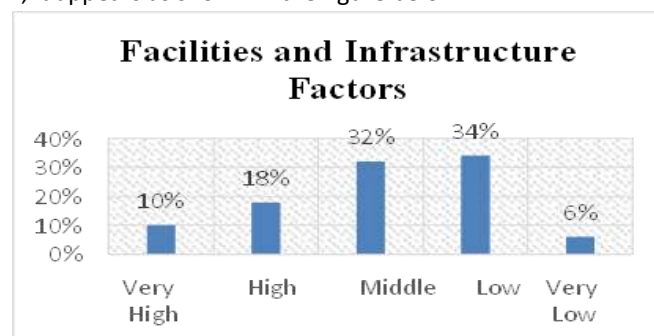


Figure 3. Results on Small Ball Sports Facilities and Infrastructure

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The results of the study on the level of knowledge of small ball games among fifth- and sixth-grade students at Balesari Public Elementary School in Bansari Sub district, based on the classification of small ball game facilities and infrastructure, fell into the "Very High" category (10%, or 5 students), "High" (18%, or 9 students), "Moderate" (32%, or 16 students), "Low" 34% (17 students), and "Very Low" 6% (3 students). From these results, it can be concluded that the level of knowledge regarding small ball games among fifth and sixth graders at Balesari Public Elementary School in Bansari Sub district, as assessed in the Physical Education and Health (PJOK) curriculum, falls into the "Low" category in terms of facilities and infrastructure for small ball games.

3. Rules of Small Ball Games

The rules of small ball games had a mean of 3.52, a median of 3, a maximum score of 8, a minimum score of 1, a mode of 2, and a standard deviation (SD) of 1.940. The complete data is presented in the table:

Table 5. Descriptive Statistics for Small Ball Game Rules

Category	Interval	Frequency	Persentase
Very High	$6,43 < X$	7	14%
High	$4,49 < X < 6,43$	7	14%
Middle	$2,55 < X < 4,49$	17	34%
Low	$0,61 < X < 2,55$	19	38%
Very Low	$X < 0,61$	0	0%
Total	50		100%

When presented in diagram form, it appears as shown in the figure below:

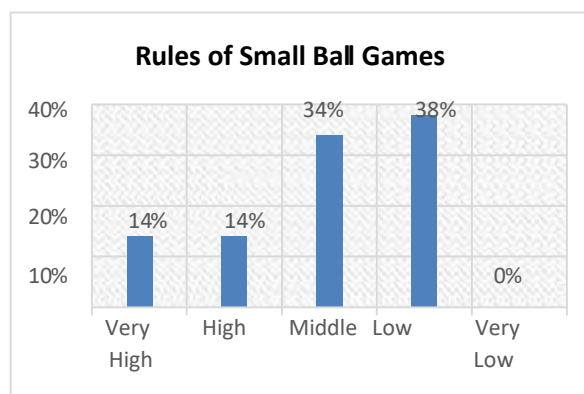


Figure 4. Results of the Small Ball Game Rules

The results of the study on the Level of Knowledge of Small Ball Games among fifth- and sixth-grade students at Balesari Public Elementary School in Bansari Sub district regarding the rules of small ball games fell into the "Very High" category (14%, or 7 students), "High" (14%, or 7 students), "Moderate" (34%, (17 students), "Low" 38% (19 students), and "Very Low" 0% (0 students). From these results, it can be concluded that the level of knowledge regarding small ball games among fifth and sixth graders at Balesari Public Elementary School in Bansari Sub district, specifically regarding the rules of small ball games, falls into the "Low" category.

4. Basic Techniques of Small Ball Games: Aspect of Small Ball Game Rules

with a mean of 2.08, a median of 2, a maximum score of 4, a minimum score of 0, a mode of 2, and a standard deviation (SD) of 1.275.

The following is presented in the table:

Table 6. Description of basic small ball game techniques

Category	Interval	Frequency	Persentase
Very High	$3,93 < X$	10	20%
High	$2,67 < X < 3,93$	7	14%
Middle	$1,41 < X < 2,67$	15	30%

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Low	$0,15 < X < 1,41$	13	26%
Very Low	$X < 0,15$	5	10%
Total		50	100%

When presented in diagram form, it appears as shown in the figure below:

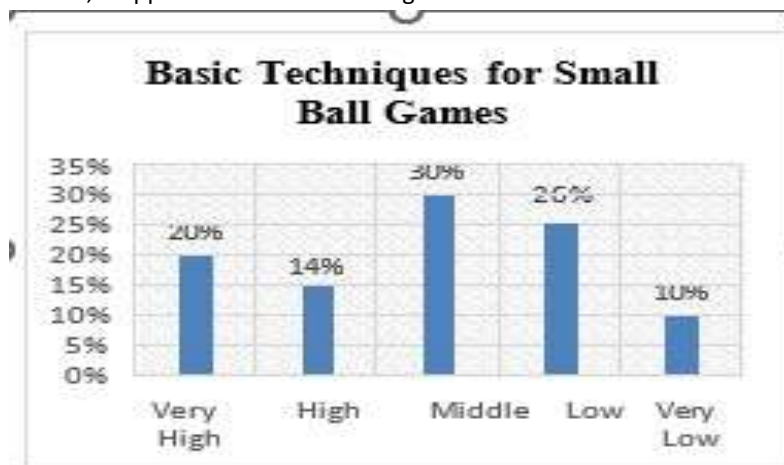


Figure 5. Histogram Results for Basic Small Ball Game Techniques

The rules of small ball games fell into the “Very High” category (20%, or 10 students), “High” (14%, or 7 students), “Moderate” 30% (15 students), “Low” 26% (13 students), and “Very Low” 10% (5 students). From these results, it can be concluded that the level of knowledge regarding small ball games among fifth- and sixth-grade students at Balesari Public Elementary School in Bansari Sub district falls into the “Moderate” category for basic small ball game techniques.

Discussion

This study yielded results thanks to the support of previous researchers on badminton; a study conducted by Putra in 2023 at Bantul Public Junior High School showed that 47.24%, or 60 students, fell into the moderate category. The results of the above study indicate that students’ badminton skills at Bantul Public Junior High School are still classified as moderate, especially given that the target school lacks specialized teachers, particularly physical education teachers. Consequently, the level of knowledge regarding small ball games falls into the moderate category.

This study focuses on several key aspects to measure the level of knowledge regarding small ball games among fifth- and sixth-grade students at Balesari Public Elementary School in Bansari Sub district, specifically concerning the definition of small ball games, the facilities and equipment for small ball games, the rules of small ball games, and the basic techniques of small ball games. Of these four classifications, three fell into the “Low” category, while the classification for basic techniques fell into the “Moderate” category. These results were due to several factors, namely the absence of specialized teachers— particularly physical education teachers—at the school, which led to a lack of optimal physical education activities. This significantly affects students’ level of knowledge regarding Physical Education and Health (PJOK) learning, particularly in small ball games. This is supported by the opinion of Putri et al. (2025, p. 418) that PJOK teachers play the roles of motivators, classroom managers, facilitators, and evaluators—all of which are crucial in fostering student motivation. Therefore, the presence of a PJOK teacher is essential to ensure that these roles can be carried out more effectively.

The results of the multiple-choice questionnaire administered revealed differences in knowledge regarding small ball games between female and male students. The majority of the highest scores were achieved by male students. This significant difference is attributed to male students’ greater curiosity compared to female students, particularly during physical education lessons. This was confirmed by the findings and the unstructured interviews that were conducted. The role of teachers in physical education is truly essential to enhance knowledge of small ball games at Balesari Public Elementary School in Bansari District.

IMPLICATIONS

Taking into account all the research findings, the following implications can be presented:

1. This study presents data illustrating the level of knowledge regarding small ball games among fifth- and sixth-grade students at Balesari Public Elementary School in Bansari Sub district. Thus, it can be concluded that this level of knowledge falls into the moderate category, indicating a need for greater attention to physical education (PJOK) instruction at Balesari Public Elementary School.

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2. This study can serve as a reference for physical education teachers and as evidence that students' knowledge of physical education is moderate, indicating that the school must give greater attention to physical education instruction at the school.

IV. CONCLUSIONS

Based on the data collected, the level of knowledge about small ball games among fifth- and sixth-grade students at Balesari Public Elementary School in Bansari Sub district was rated "Very High" for 10% (5 students), "High" for 18% (9 students), "Moderate" for 38% (19 students), "Low" at 30% (15 students), and "Very Low" at 4% (2 students). From the above findings, it can be concluded that the level of knowledge regarding small ball games in grades 5 and 6 at Balesari Public Elementary School in Bansari Sub district falls into the "Moderate" category. Recommendations

Based on the results of this study, several recommendations can be proposed, as explained below:

1. For researchers, studies on knowledge of small ball games need to be further developed through more in-depth research. Future studies are recommended to use a variety of samples, variables, and research locations to ensure a broader scope.
2. Students need to show greater enthusiasm and attention during the learning process. Additionally, students are expected to deepen their understanding of small ball games.
3. Schools are encouraged to have specialized teachers—particularly Physical Education (PJOK) teachers—to more effectively deliver Physical Education instruction. This will ensure that students' knowledge of all Physical Education curriculum content is conveyed comprehensively and effectively.

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