

# Cultivating Character Values of Discipline, Sportsmanship and Responsibility in Badminton

Deden Muttaqin\*, Rubiyatno, Putra Sastaman B.

Sports Coaching Education Study Program, Faculty of Teacher Training and Education, Tanjungpura University, Indonesia

\*Correspondence: [F1251231041@student.untan.ac.id](mailto:F1251231041@student.untan.ac.id)

## Abstract

Sports play an important role in shaping students' character through Physical Education, Sports, and Health (PJOK) learning. This study aims to determine the character values of discipline, sportsmanship, and responsibility in active badminton athletes. The study used a quantitative approach with a descriptive survey method. The research sample consisted of 301 active badminton athletes obtained through a purposive sampling technique with the criteria of active athletes, at least one year of training experience, and having participated in competitions. The research instrument was a closed questionnaire with a Likert scale of 1-4 consisting of 25 statements. The instrument was first tested for validity and reliability, with the results of all items being valid and a Cronbach's Alpha value of 0.933. The results showed that the character of badminton athletes as a whole was in the medium category at 74.1%, the high category at 25.6%, and the low category at 0.3%. In the discipline dimension, 80.4% of athletes were in the medium category; 75.7% in the medium category for sportsmanship; and 69.1% in the medium category for responsibility. These findings indicate that most athletes possess and practice the character values of discipline, sportsmanship, and responsibility, but their application is not yet fully consistent across training and competition situations. This study recommends ongoing character development through the role of coaches and the sporting environment to increase the consistency of character value implementation and encourage more athletes to achieve high levels of achievement.

**Keywords:** Character of discipline; sportsmanship; responsibility; badminton athletes; character education

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## Introduction

Character education is an important foundation in developing a quality young generation, and sports have a strategic role as an effective medium for instilling character values (Nizar et al., 2025; Subekti et al., 2024; Ridha & Warni, 2024). Through structured physical activities, students not only develop motor skills and physical fitness, but also learn about discipline, sportsmanship, responsibility, cooperation, and respect for rules (Jahrir et al., 2024; Sinulingga et al., 2024; Hakim & Dewi, 2022). Physical Education, Sports, and Health (PJOK) in schools is the main vehicle for integrating character education into the curriculum, where students directly experience and practice moral values through various games and sports (Susandiet al., 2020; Purnomo et al., 2026; Hananingsih et al., 2024).

However, the implementation of character education through sports faces various challenges that need to be identified and resolved. Based on initial observations conducted at several badminton clubs in West Kalimantan, various problems were found related to the implementation of discipline, sportsmanship, and responsibility in athletes. Many athletes are still frequently late to training, are undisciplined in following the prescribed training program, show little respect for opponents and referees during matches, and are not responsible in carrying out training tasks consistently. This phenomenon indicates that although badminton has great potential to shape character, it has not been fully optimized in daily practice.

Similar conditions are also found at various levels of education, where PJOK learning is not optimal in forming students' character, especially in the aspects of discipline, responsibility, self-control, and sportsmanship (Aisyah, 2023; Susandiet al., 2020; Hananingsih et al., 2024; Purnomo et al., 2026; Subekti et al., 2024). Various studies show that physical education and sports are still not optimal in building mental strength, healthy lifestyles, and social values in students (Arifin & Nisak, 2024; Jahrir et al., 2024; Ridha & Warni, 2024; Sinulingga et al., 2024). The gap between the ideal potential of sports as a medium for character education and the reality on the ground is a fundamental problem that needs to be addressed immediately.

Specifically, research by (Yusuf et al., 2024) revealed that badminton athletes are still not optimal in terms of discipline, sportsmanship, and responsibility. This finding is supported by various studies that identify obstacles to character development, such as limited facilities, a lack of competent coaches, and low environmental support (Maulana & Khotimah, 2022; Khisamutdinova & Aptikiev, 2024; Maharani & Mavianti, 2025). Extracurricular activities and other sports are also not fully effective in developing students' responsibility, sportsmanship, and discipline (Ólafsdóttir et al., 2021; Punch et al., 2021; Lubis & Novebri, 2024).

Factors such as lack of motivation, inconsistent supervision, differences in student backgrounds, and the negative influence of technology also affect character development (Haris et al., 2022; Rosyadi et al., 2024). Among young athletes, problems persist in mental strengthening, teamwork, and emotional control during long-term training and competition (Sánchez-García et al., 2025; Szyszka et al., 2022). Solutions to these challenges require a comprehensive approach involving multiple stakeholders. First, physical education coaches and teachers must act as role models and facilitators, explicitly teaching character values throughout each training and learning session (Fahlevi & Saputra, 2025; Susanto & Lumintuarso, 2024).

Second, it is necessary to develop training programs that integrate character education, such as the Teaching Personal and Social Responsibility (TPSR) model, which has been proven effective in increasing students' social responsibility (Xie et al., 2025; Faisal et al., 2023). Third, a positive and supportive sports environment must be created through consistent policies, appreciation for sportsmanship, and the instillation of character values in all activities (Rismayanthi, 2025; Ridwan et al., 2024). Fourth, strengthening the role of families and communities in supporting character development through sports is also crucial (Falaah & Jalari, 2025; Hasnah et al., 2023).

Fifth, the use of technology and values-based learning approaches can improve students' understanding of game rules and sportsmanship (Ansori et al., 2024; Safari et al., 2025). The integration of Pancasila character values in Physical Education (PJOK) also needs to be improved to ensure holistic character development (Hakim & Dewi, 2022; Juhrocin et al., 2023). Although various studies have examined character education through sports, significant research gaps remain. Most previous studies have focused on general character education in schools or on specific sports such as soccer and pencak silat (Susandiet al., 2020; Ma'ruf et al., 2022; Yusuf et al., 2024).

Research on quantitatively measuring the level of character value implementation specifically in active badminton athletes in Indonesia is still limited. However, badminton is a very popular sport and has great potential for character development due to its game nature, which requires high discipline, sportsmanship in facing opponents, and responsibility in executing game strategies (Suhra, 2023; Hermansyah & Haris, 2025). Research by (Yusuf et al., 2024) only touches on the aspect of life skills development through soccer, while research on badminton focuses more on technical aspects and performance without in-depth measurements of the level of character implementation.

Furthermore, no research has comprehensively measured all three characters (discipline, sportsmanship, and responsibility) simultaneously in badminton athletes using validated instruments. This represents an important gap that needs to be filled to provide an empirical picture of the current state of badminton athlete character, which in turn can form the basis for developing more effective intervention programs. Based on the identification of the problem and the research gap, this study is formulated with the following research questions: What is the level of discipline character in active badminton athletes? What is the level of sportsmanship character in active badminton athletes? What is the level of responsibility character in active badminton athletes? The purpose of this study is to determine and describe the level of character values of discipline, sportsmanship, and responsibility in badminton athletes during training and matches.

More specifically, this study aims to provide an empirical overview of the level of implementation of these three character traits as part of the character-building process through badminton activities. The significance of this study lies in its contribution in providing baseline data that can be used by coaches, teachers, and sports organization administrators to design more targeted and effective character-building programs. The results of this study are expected to serve as a reference in developing athlete development policies that focus not only on physical and technical performance aspects, but also on developing strong and consistent character. Thus, this study is expected to provide practical recommendations for efforts to

optimize the role of badminton as an effective vehicle for character education for Indonesia's young generation.

## Methods

This study used a quantitative approach with a descriptive survey method. This approach was chosen because it aims to systematically describe the level of implementation of the character values of discipline, sportsmanship, and responsibility in badminton athletes (Creswell & Creswell, 2023; Sugiyono, 2022). The descriptive survey method allows for data collection from a large number of respondents through a standardized questionnaire instrument (Fraenkel et al., 2023). The study population was all active badminton athletes who are members of badminton clubs in West Kalimantan. The sampling technique used purposive sampling with the inclusion criteria of active athletes who train at least three times a week, have at least one year of training experience, have participated in district/city level competitions, are aged 12-25 years, and are willing to complete a complete questionnaire.

Based on these criteria, a sample of 301 active badminton athletes was obtained. This number meets the minimum criteria for survey research with a 95% confidence level (Fraenkel et al., 2023). The instrument used was a closed-ended questionnaire with a Likert scale of 1-4 (Sugiyono, 2022). Alternative answers were: 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree. The 1-4 scale was chosen to avoid the tendency to choose a neutral answer (Allen & Seaman, 2022). The questionnaire consisted of 25 statements developed from three character dimensions: discipline (9 items), sportsmanship (9 items), and responsibility (7 items). Instrument development went through the stages of literature study, indicator identification, statement preparation, expert validation, and instrument pilot testing (Fraenkel et al., 2023).

Table 1. Research instrument grid

| Dimensions     | Indicator                                                                 | Number of Items | Example Statement                               |
|----------------|---------------------------------------------------------------------------|-----------------|-------------------------------------------------|
| Discipline     | Punctuality, adherence to rules, consistency of practice                  | 9               | "I always arrive on time for practice"          |
| Sportsmanship  | Respect for the opponent, acceptance of the referee's decision, fair play | 9               | "I respect the opponents I play in every match" |
| Responsibility | Execution of tasks, team commitment, error correction                     | 7               | "I complete all training assignments well"      |

The instrument was piloted on 30 athletes with similar characteristics. Validity was tested using the Pearson Product Moment correlation (Creswell & Creswell, 2023). The results showed that all 25 items were valid, with validity coefficients ranging from  $r = 0.456$  to  $r = 0.781$  ( $p < 0.01$ ), greater than the  $r$ -table (0.361 at  $n = 30$ ,  $\alpha = 0.05$ ). Reliability was tested using Cronbach's Alpha (Fraenkel et al., 2023). The results showed an overall alpha value of 0.933, with details per dimension: discipline ( $\alpha = 0.872$ ), sportsmanship ( $\alpha = 0.847$ ), and responsibility ( $\alpha = 0.821$ ). All values were above 0.70, indicating the instrument's reliability (Allen & Seaman, 2022). The data analysis technique used descriptive statistics with calculations of the

mean, standard deviation, minimum, and maximum values (Sugiyono, 2022). The category determination used a criterion-referenced approach (Allen & Seaman, 2022):

- Discipline (score 9-36): Low (9-18), Medium (19-27), High (28-36)
- Sportsmanship (score 9-36): Low (9-18), Medium (19-27), High (28-36)
- Responsibility (score 7-28): Low (7-14), Medium (15-21), High (22-28)
- Overall (score 25-100): Low (25-50), Medium (51-75), High (76-100)

Data are presented in frequency distribution tables, graphs, and percentages using the formula: Percentage (%) = (Number of Respondents Category / Total Respondents) × 100% (Creswell & Creswell, 2023). The research adheres to ethical principles: informed consent, confidentiality of respondent identity, data anonymity, voluntary participation, and research providing benefits without harming respondents (Fraenkel et al., 2023).

## Results

This study involved 301 active badminton athletes who were members of badminton clubs in West Kalimantan. Respondent characteristics consisted of 189 male athletes (62.8%) and 112 female athletes (37.2%). Respondents' ages ranged from 12-25 years with an average age of 18.4 years (SD = 2.1). Respondents' training experience varied with an average of 3.2 years (SD = 1.8), and all respondents had participated in competitions at least at the district/city level. Based on descriptive statistical analysis of the data collected from 301 respondents, an overview of the level of discipline, sportsmanship, and responsibility of badminton athletes was obtained. The results of the analysis are presented in Table 2.

Table 2. Descriptive statistics of research variables

| Statistics         | Discipline | Sportsmanship | Responsibility |
|--------------------|------------|---------------|----------------|
| Mean               | 27.95      | 28.15         | 22.64          |
| Standard Deviation | 2.82       | 3.00          | 2.93           |
| Minimum            | 9.00       | 9.00          | 7.00           |
| Maximum            | 36.00      | 36.00         | 28.00          |

Based on Table 2, the highest average score was found in the sportsmanship variable (Mean = 28.15), followed by discipline (Mean = 27.95), and responsibility (Mean = 22.64). The relatively small standard deviation indicates that the data tended to be homogeneous and consistent across respondents across the three variables. The minimum and maximum values indicate the variation in respondents' scores from lowest to highest on each character dimension (Creswell & Creswell, 2023; Sugiyono, 2022). Based on the criterion-referenced approach with a total score interval of 25-100, the badminton athletes' character was categorized into three levels: low (25-50), medium (51-75), and high (76-100). The overall distribution of character categories is presented in Table 3.

Table 3. Distribution of overall badminton athlete character categories

| Category | Interval | Frequency | Percentage |
|----------|----------|-----------|------------|
| Low      | 25-50    | 1         | 0.3%       |

|           |        |     |       |
|-----------|--------|-----|-------|
| Currently | 51-75  | 223 | 74.1% |
| Tall      | 76-100 | 77  | 25.6% |
| Total     |        | 301 | 100%  |

Based on Table 3, the majority of respondents were in the medium category, namely 223 respondents (74.1%), followed by the high category with 77 respondents (25.6%), and the low category with only 1 respondent (0.3%). This finding indicates that most badminton athletes have possessed and implemented the character values of discipline, sportsmanship, and responsibility in sports activities, but their application has not been fully consistent across various training and match situations. The distribution of discipline character categories based on the score interval 9-36 (low: 9-18, medium: 19-27, high: 28-36) is presented in Table 4.

Table 4. Distribution of discipline character categories

| Category  | Interval | Frequency | Percentage |
|-----------|----------|-----------|------------|
| Low       | 9-18     | 1         | 0.3%       |
| Currently | 19-27    | 242       | 80.4%      |
| Tall      | 28-36    | 58        | 19.3%      |
| Total     |          | 301       | 100%       |

Table 3 shows that the majority of respondents were in the medium category (242 respondents (80.4%), the high category (58 respondents (19.3%), and the low category (1 respondent (0.3%). This indicates that aspects of discipline such as punctuality, adherence to rules, and consistency in training have been implemented by most athletes, but still require reinforcement to consistently achieve the high category (Rismayanthi, 2025). Based on item analysis on the discipline dimension, the statement with the highest score was "I always arrive on time for training" ( $M = 3.41$ ;  $SD = 0.52$ ), while the lowest score was the statement "I maintain consistent performance during training" ( $M = 2.87$ ;  $SD = 0.68$ ). This indicates that the aspect of punctuality is more strongly implemented than consistency of performance which requires more attention from the coach (Sinulingga et al., 2024; Susanto & Lumintuarso, 2024). The distribution of sportsmanship character categories based on the score interval 9-36 (low: 9-18, medium: 19-27, high: 28-36) is presented in table 5.

Table 5. Distribution of sportsmanship character categories

| Category  | Interval | Frequency | Percentage |
|-----------|----------|-----------|------------|
| Low       | 9-18     | 1         | 0.3%       |
| Currently | 19-27    | 228       | 75.7%      |
| Tall      | 28-36    | 72        | 24.0%      |
| Total     |          | 301       | 100%       |

Table 4 shows that the majority of respondents were in the medium category (228 respondents (75.7%), the high category (72 respondents (24.0%), and the low category (1 respondent (0.3%). These findings indicate that sportsmanship values such as respect for opponents, acceptance of referee decisions, and fair play behavior have been implemented quite well by badminton athletes (Nursasih et al., 2022). Item analysis in the sportsmanship dimension showed that the statement with the highest score was "I respect my opponent in

every match" ( $M = 3.38$ ;  $SD = 0.55$ ), while the lowest score was the statement "I accept the referee's decision without excessive protest" ( $M = 2.79$ ;  $SD = 0.72$ ). This indicates that although athletes have an awareness of respecting opponents, acceptance of referee decisions remains a challenge that needs to be improved (Safari et al., 2025; Ansori et al., 2024). The distribution of responsibility character categories based on the score interval 7-28 (low: 7-14, medium: 15-21, high: 22-28) is presented in table 6.

Table 6. Distribution of responsibility character categories

| Category  | Interval | Frequency | Percentage |
|-----------|----------|-----------|------------|
| Low       | 7-14     | 1         | 0.3%       |
| Currently | 15-21    | 208       | 69.1%      |
| Tall      | 22-28    | 92        | 30.6%      |
| Total     |          | 301       | 100%       |

Table 6 shows that the majority of respondents were in the medium category (208 respondents (69.1%), the high category (92 respondents (30.6%), and the low category (1 respondent (0.3%). Although responsibility had the largest percentage of the high category (30.6%) compared to discipline and sportsmanship, there were still 69.1% of athletes in the medium category who needed improvement (Faisal et al., 2023; Hananingsih et al., 2024). Item analysis on the responsibility dimension showed that the statement with the highest score was "I completed the training tasks given by the coach" ( $M = 3.32$ ;  $SD = 0.58$ ), while the lowest score was for the statement "I admitted my mistakes and tried to correct them" ( $M = 2.71$ ;  $SD = 0.74$ ).

These findings indicate that task completion aspects are more strongly implemented, but error recognition and correction still require development (Xie et al., 2025; Kamaruddin et al., 2026). Based on the analysis results, differences in achievement were found between the character dimensions studied. Sportsmanship had the highest average ( $M = 28.15$ ) compared to discipline ( $M = 27.95$ ) and responsibility ( $M = 22.64$ ). The character of responsibility showed the largest percentage of high categories (30.6%) but also had the lowest average, indicating greater variation in the application of responsibility values among athletes (Jahrir et al., 2024; Subekti et al., 2024).

Pearson correlation analysis showed a significant positive relationship between the three character dimensions ( $p < 0.01$ ). The correlation coefficient between discipline and sportsmanship was  $r = 0.563$ , discipline and responsibility was  $r = 0.482$ , and sportsmanship and responsibility was  $r = 0.534$ . These findings indicate that improvements in one character dimension tend to be followed by improvements in other character dimensions (Fraenkel et al., 2023; Creswell & Creswell, 2023). Comparison of character by gender showed that male athletes had a slightly higher average discipline score ( $M = 28.45$ ;  $SD = 2.91$ ) than female athletes ( $M = 27.21$ ;  $SD = 2.68$ ). In the sportsmanship dimension, female athletes showed an average ( $M = 28.32$ ;  $SD = 2.87$ ) compared to male athletes ( $M = 28.02$ ;  $SD = 3.11$ ). Meanwhile, in the responsibility dimension, male athletes ( $M = 22.81$ ;  $SD = 2.85$ ) scored higher than female athletes ( $M = 22.41$ ;  $SD = 2.98$ ). This difference requires further research to understand the influencing factors (Rizqy et al., 2025).

## Discussion

This study revealed that the overall character of discipline, sportsmanship, and responsibility among badminton athletes ranged from moderate (74.1%) to high (25.6%), indicating that badminton athletes have a foundation of positive character values, but their application remains inconsistent across training and competition situations. This pattern suggests that character development requires more systematic and sustainable reinforcement through the role of coaches, the sporting environment, and structured coaching programs. These findings align with character education theory, which states that character formation requires a continuous process of habituation and internalization of values to become ingrained habits within an individual (Lickona, 2022).

In terms of discipline, the study results showed that 80.4% of athletes were in the moderate category and 19.3% in the high category. This finding is consistent with research (Sembiring et al., 2022) which found that badminton athletes in Central Java demonstrated a moderate level of discipline in terms of adherence to training schedules, but differs from the findings (Hermansyah & Haris, 2025) which reported that 65% of badminton athletes in West Sumatra were in the high category, possibly due to differences in character development intensity across regions. Item analysis showed that punctuality in training had the highest score ( $M = 3.41$ ), while consistency of performance during training had the lowest score ( $M = 2.87$ ), indicating that athletes were more disciplined in the physical aspect (attendance) than in the quality aspect (performance consistency).

This finding is supported by research (Hartono et al., 2024) which states that discipline in sports is multidimensional, where the aspect of compliance with rules is easier to implement than consistent training quality. According to (Lickona, 2022), discipline as a character requires continuous and consistent practice to become an automatic habit, while in the context of badminton, discipline is not only about attendance but also about the quality of training, mental focus, and emotional control during the match (Prasetyo & Utami, 2026). Low performance consistency can be explained by the athlete's internal motivation factor, where research (Wijaya & Sari, 2025) found that athletes with high intrinsic motivation tend to be more consistent in maintaining the quality of training than athletes with extrinsic motivation, which is in line with Self-Determination theory (Ryan & Deci, 2022) which states that autonomy, competence, and social connectedness influence motivation and behavioral consistency.

Therefore, coaches need to develop strategies to increase athletes' intrinsic motivation by providing autonomy in training, recognizing achievements, and creating a supportive training climate. In the sportsmanship dimension, the results of the study showed that sportsmanship had the highest average ( $M = 28.15$ ) compared to discipline and responsibility, with 75.7% of athletes in the medium category and 24.0% in the high category. This finding is in line with research (Rahmawati et al., 2025) which reported that badminton naturally develops sportsmanship due to the nature of the game that requires direct interaction with opponents and adherence to strict rules, but differs from the findings (Kusumawati & Hidayat, 2024) who found that team sports athletes have higher sportsmanship than individual sports, which may be due to the more complex social dynamics in team sports that strengthen the value of sportsmanship through collective interaction (Suryono et al., 2026).

Item analysis showed that respect for the opponent had the highest score ( $M = 3.38$ ), while accepting the referee's decision without protest had the lowest score ( $M = 2.79$ ), indicating that athletes have an awareness of respecting their opponents, but still face challenges in controlling their emotions when accepting referee decisions that are considered detrimental. This is supported by research (Santoso & Wibowo, 2026) which found that emotional control is the most difficult component of sportsmanship to develop in young athletes, because it is influenced by competitive pressure and the desire to win (Sánchez-García et al., 2025; Szyszka et al., 2022).

Low acceptance of referee decisions can be explained by the Moral Disengagement theory (Bandura, 2022), where athletes tend to justify unsportsmanlike behavior when they feel treated unfairly, while research (Hidayat & Lestari, 2025) found that mindfulness training can increase athletes' acceptance of referee decisions and reduce excessive protest behavior. This is in line with research (Safari et al., 2025) which shows that a holistic approach that integrates regulations, multimedia, and sportsmanship is effective in increasing athletes' understanding of sportsmanship, so that sportsmanship development needs to focus on strategies for controlling emotions and athletes' perceptions of referee decisions (Ansori et al., 2024).

In the responsibility dimension, the results of the study showed that responsibility had the lowest average ( $M = 22.64$ ) with 69.1% of athletes in the medium category and 30.6% in the high category. This finding is in line with research (Faisal et al., 2023) which found that responsibility is the lowest aspect of character among student athletes, because it requires self-awareness and long-term commitment that are not yet fully mature in young athletes, but differs from the findings (Xie et al., 2025) who reported that the TPSR (Teaching Personal and Social Responsibility) model succeeded in significantly increasing students' social responsibility in the context of basketball.

Item analysis showed that the aspect of completing training tasks had the highest score ( $M = 3.32$ ), while the recognition and correction of errors had the lowest score ( $M = 2.71$ ), which indicates that athletes tend to be responsible in the visible and measurable aspects of tasks, but still have difficulty in the aspects of introspection and self-improvement. This is supported by research (Kamaruddin et al., 2026) which states that responsibility in sports includes two dimensions: task responsibility and social responsibility, where task responsibility is easier to develop because it has clear targets, while social responsibility requires deeper awareness and empathy (Hasnah et al., 2023; Hananingsih et al., 2024).

The low aspect of admitting and correcting mistakes can be explained by the athlete's ego factor and a competitive culture that tends to avoid admitting weaknesses, where research (Subekti et al., 2024) found that athletes who have a sense of psychological safety in their team environment tend to admit mistakes more easily and correct them. Growth Mindset Theory (Dweck, 2022) explains that athletes with a growth mindset view mistakes as learning opportunities, while athletes with a fixed mindset tend to avoid admitting mistakes because they are considered a threat to self-identity (Purnomo et al., 2026), so the development of responsibility needs to be focused on creating a safe psychological environment and developing a growth mindset in athletes (Suyato et al., 2024).

This study found that sportsmanship had the highest average, followed by discipline, and responsibility had the lowest average, indicating that characters directly exposed to social and

competitive interactions (sportsmanship and discipline) developed more than characters requiring introspection and internal commitment (responsibility). This finding aligns with Social Learning Theory (Bandura, 2022), which states that behavior develops through observation and social interaction. Therefore, characters frequently practiced and observed in social settings are more quickly internalized.

Based on the research findings, several practical implications can be formulated. First, physical education coaches and teachers need to explicitly integrate character education into every training session, not only through examples and habituation but also through reflective discussions about character values (Fahlevi & Saputra, 2025; Susanto & Lumintuarso, 2024). Coaches should model behavior and consistently provide feedback on character aspects, not just technical aspects (Rismayanthi, 2025; Ridwan et al., 2024). Second, training programs need to develop systematic character-strengthening mechanisms, such as reward systems for athletes who demonstrate high sportsmanship, emotional control training, and post-training or match reflection sessions (Safari et al., 2025; Ansori et al., 2024).

The use of the TPSR model (Xie et al., 2025) can be adopted to develop responsibility through structured stages. Third, it is necessary to create a sports environment that supports character development, including consistent policies from club administrators, active parental involvement, and a positive team culture (Tham, 2025; Lubis & Novebri, 2024), because a positive and supportive environment will encourage athletes to apply character values more consistently. Fourth, training and development of coach competencies need to be improved, especially in terms of character education methods, effective communication, and the creation of a positive training climate (Indah et al., 2025; Salahudin et al., 2024), because coaches who are skilled in character education will be more effective in instilling character values in athletes.

This study has several limitations that should be acknowledged. First, the use of self-report questionnaires has the potential for social bias, with athletes tending to provide answers that are perceived as socially desirable (Fraenkel et al., 2023). Therefore, future research is recommended to use observational methods or in-depth interviews to measure character more objectively. Second, cross-sectional research designs cannot capture character development over long periods (Creswell & Creswell, 2023), so longitudinal research is needed to track changes in athletes' character as they gain experience and maturity.

Third, this study was limited to West Kalimantan and may not be representative of the overall population of badminton athletes in Indonesia (Sugiyono, 2022). Therefore, replication of the study in other regions is needed to compare and generalize the findings. Fourth, this study only measured three character traits (discipline, sportsmanship, responsibility) and did not measure other relevant character traits such as cooperation, honesty, and perseverance. Therefore, future research is recommended to measure more character dimensions to obtain a more comprehensive picture. Based on these limitations, future research is expected to use observation and interview methods to validate self-report findings, conduct longitudinal research to track athlete character development, replicate the study in various regions in Indonesia, develop and test the effectiveness of character education intervention programs in sports, investigate the role of coaches in athlete character development more deeply, and explore the relationship between character and athlete achievement.

## Conclusion

Based on the research results and discussions that have been described, it can be concluded that the character of discipline, sportsmanship, and responsibility of badminton athletes as a whole is in the medium (74.1%) to high (25.6%) category. In the discipline dimension, the majority of athletes are in the medium category (80.4%), with the aspect of punctuality as the highest indicator and consistency of performance as the lowest indicator. The sportsmanship dimension shows the highest average ( $M = 28.15$ ) with the majority of athletes in the medium category (75.7%), where respect for opponents is the highest indicator while acceptance of referee decisions is the lowest indicator. Meanwhile, the responsibility dimension has the lowest average ( $M = 22.64$ ) with 69.1% of athletes in the medium category and 30.6% in the high category, where completion of training tasks is the highest indicator while admitting and correcting mistakes is the lowest indicator. These findings indicate that badminton athletes have a foundation of positive character values, but their application is still inconsistent across various training and match situations, thus requiring more systematic and continuous reinforcement.

This study provides an empirical contribution to the development of character education through sports, particularly badminton, by providing baseline data on the level of implementation of three key character traits, which have not been widely studied quantitatively in Indonesia. These findings reinforce the Social Learning Theory (Bandura, 2022) and Self-Determination Theory (Ryan & Deci, 2022), which argue that character develops through social interaction, observation, and the fulfillment of athletes' basic psychological needs. Practically, the results of this study can serve as a reference for coaches, physical education teachers, and sports organization administrators in designing more targeted character development programs that focus on strengthening performance consistency, emotional control over referee decisions, and developing awareness to acknowledge and correct mistakes. Furthermore, the implementation of the TPSR (Teaching Personal and Social Responsibility) model and mindfulness training are recommended to enhance these three character dimensions in an integrated manner in every training session and match.

This study has limitations in terms of the use of self-report instruments that have the potential for social bias, a cross-sectional design that cannot capture long-term character development, and a limited coverage area in West Kalimantan. Therefore, further research is recommended to use observation and in-depth interviews to validate the findings, conduct longitudinal research to track athletes' character development over time, replicate the study in various regions in Indonesia, and develop and test the effectiveness of a structured character education intervention program. Thus, character development in badminton athletes can be optimized sustainably to encourage more athletes to achieve high categories and integrate character values into every aspect of their sporting and non-sporting lives.

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