

Prediction of Optimal Positions for Male Soccer Players in the National Sports Week (PON) Gorontalo Province based on Personality Aspects

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ABSTRACT

This study aims to identify the relationship between players' personality aspects and their positions in soccer games. This study was motivated by the poor performance of the Gorontalo PON men's soccer team at the 2024 Aceh-North Sumatra PON, which was suspected to be related to the mismatch between playing positions and players' personality aspects. A quantitative descriptive method with a survey technique was used, distributing a Likert scale questionnaire to 25 players of the Gorontalo PON team. Defenders with a score of 2.59 are still in the lower-middle category, compared to forwards (2.48), midfielders (2.38), and goalkeepers (2.52), so even though they have the highest score among other positions, it does not guarantee the overall defense of the team. Goalkeepers, despite having a relatively moderate personality score (2.48) compared to forwards (2.47), midfielders (2.33), and defenders (2.28), do not yet reflect the ideal readiness to lead the defense and save the team. Conceding 9 goals in 3 matches is an emergency signal, not only technically but also psychologically, and the goalkeeper's leadership needs to be improved.

Keywords: personality, player position, team performance, soccer, PON Gorontalo

INTRODUCTION

The Gorontalo men's soccer team, which successfully achieved runner-up status in Region C in the PON preliminary round, has demonstrated promising potential and competitiveness on the regional stage. This result is considered valuable capital for advancing to the 2024 PON Aceh-North Sumatra event. This success not only reflects achievement but also builds expectations for better performance at the national level.

This optimism has grown stronger after the PON group draw placed the Gorontalo team in Group D alongside East Nusa Tenggara, South Kalimantan, and West Sumatra, teams that historically have not dominated national football as much as teams from Java. Many believe that this group composition is quite favorable and opens up great opportunities for Gorontalo to advance to the next round.

However, in reality, the Gorontalo PON men's soccer team lost all of their group matches. In three matches, the team failed to score a single goal and conceded a total of nine goals. The 0–3 loss to West Sumatra, 0–2 loss to South Kalimantan, and 0–4 loss to East Nusa Tenggara indicate fundamental issues that are not only related to technical aspects but also to tactical management, motivation, and internal team dynamics.

The failure to score goals and the high number of goals conceded illustrate that

there is an imbalance in the functions between positions within the team. This could be an indicator of a mismatch between the roles assigned to players and their psychological characteristics or personalities. In modern soccer, the effectiveness of players in certain positions is highly dependent on the compatibility between the demands of the position and the personality traits of the players (Lago-Peñas et al., 2011; Habekost et al., 2024).

Soccer as a team sport relies not only on technical and physical abilities, but also requires cooperation, communication, and understanding between individuals (González-Ponce et al., 2022; Rausch et al., 2025). Players who occupy positions that do not suit their personalities tend to have difficulty adapting to the demands of the game. Nonverbal communication, reading situations, and decision-making under pressure are all elements influenced by personality factors (Pizzera et al., 2022; Caso et al., 2025). Several studies state that integrating personality factors into the player positioning process can improve team effectiveness (Ahn et al., 2022; Popescu et al., 2023; Çar et al., 2025). For example, players with high levels of confidence, determination, and mental toughness are more suited to attacking positions (Grønset et al., 2024). Conversely, players with precision, communication skills, and emotional resilience tend to be more optimal in midfield or defense. Thus, personality mapping can be a scientific approach to determining a player's optimal position.

In modern sports practice, a multidimensional approach that combines psychological, anthropometric, and technical performance aspects has become a trend in forming competitive teams (Afonso et al., 2022). Previous research shows that athletes who occupy positions that match their personalities tend to have higher levels of satisfaction and motivation, which has a direct impact on individual and collective performance. Therefore, the urgency to

reevaluate position placement in teams has become increasingly important.

Based on this background, this study aims to evaluate the suitability between the personality aspects of players and the positions they occupy in the Gorontalo PON men's soccer team. This study is expected to contribute to the development of selection and training strategies that are more adaptive to the psychological conditions of players. These findings are also expected to be a reference in building a more solid, resilient, and competitive team in the future.

MATERIALS & METHODS

Problem Statement

Although the Gorontalo PON men's soccer team had undergone thorough preparation and was placed in a relatively competitive group, the results of the matches showed a performance that was far from expectations. The fact that the team failed to score goals and lost all of their matches indicates a possible mismatch between the players' characteristics and the roles or positions they played on the field.

Based on these issues, the problem formulation in this study is as follows:

Does the placement of soccer players in positions that are not in line with their individual personality characteristics contribute significantly to the decline in team performance?

Research Objectives

This study aims to:

1. Identify the compatibility between players' personality characteristics and their positions in soccer games.
2. Evaluate the possibility of positional incompatibility based on personality aspects as factors that affect overall team performance.
3. Provide data-based recommendations for optimizing player positioning based on personality typology.

Research Method

This study was conducted using a quantitative approach through a survey

method to identify the relationship between players' personality aspects and their suitability for positions in soccer. The researchers developed instruments in the form of closed-ended Likert scale questionnaires based on specific personality indicators for four main positions: forward, midfielder, defender, and goalkeeper. Data were collected directly from 25 male soccer players from the Gorontalo Province PON, who were selected using purposive sampling techniques according to the criteria of maximum age of 20 years and active involvement in team training. Before use, the instruments were conceptually validated and tested for reliability using Cronbach's Alpha calculations with a minimum limit of $\alpha \geq 0.70$. Data collection was conducted in a controlled manner with the support of the coaching team, then analyzed using descriptive statistical techniques to obtain the average value per indicator for each position. This transparent and standardized approach aims to ensure the replication of results by other researchers, as well as to address the need for reliability and validity in the practice of sports science and the development of competitive soccer performance.

Research Design

This study uses a quantitative descriptive approach with a survey method. The objective is to describe and analyze the compatibility between players' personality aspects and their positions in a soccer team. This approach allows researchers to systematically measure psychological variables and relate them to the playing positions held by each player on the team.

Population and Sample

The population in this study was all male soccer players who were members of the Gorontalo Province PON team in 2024. The research sample consisted of 25 U-20 players who actively participated in training sessions and matches during the preparation period ahead of the Aceh-North Sumatra PON. The sampling technique used

purposive sampling, with the following inclusion criteria: active players, within the age limit according to regulations (born no later than January 1, 2003), and occupying various positions (forward, midfielder, defender, and goalkeeper).

Research Instrument

The instrument used was a closed-ended Likert scale questionnaire, developed based on personality indicators relevant to each position in soccer. There were a total of 32 questions, each representing eight indicators spread evenly across four positions (forward, midfielder, defender, and goalkeeper). Each item was compiled based on personality theory in the context of competitive sports.

To test the reliability of the instrument, Cronbach's Alpha method was used with the help of spreadsheet software. The instrument was considered reliable if the α coefficient value was ≥ 0.70 . The reliability test results showed that all indicators had α values that met the threshold, so the instrument was suitable for use in data collection.

Research Procedure

The research was conducted through the following five stages:

1. Preparation Stage: This included identifying the problem, conducting a literature study on personality in the context of sports, developing instruments, and determining the sample.
2. Implementation Stage: Questionnaires were distributed to players who met the inclusion criteria. The questionnaires were filled out directly in sessions facilitated by the coaching team.
3. Data Collection Stage: Collection of questionnaires that have been completed by participants, followed by data verification to ensure completeness and consistency.

Data Analysis Stage

Analysis was performed using descriptive statistical techniques, namely by calculating the average value of each indicator for each position.

1. Reporting Stage: Preparation of a final report containing a description of the results, comparative analysis between positions, and interpretation of the suitability between personality and playing position.
2. Data Analysis Techniques: Data was analyzed descriptively and quantitatively, focusing on calculating the mean value for each personality aspect indicator in each position. This approach aimed to evaluate the level of compatibility between players and their roles based on the psychological aspects measured.

Research Hypothesis

The hypothesis proposed in this study is: There is a significant positive influence between the adjustment of player positions based on personality aspects and the performance of cooperation and success of the soccer team.

RESULT

Respondent Profile and Instrument Reliability Test

A total of 25 male soccer players from PON Gorontalo (average age in accordance with U-20 regulations) participated in this study. Based on the Cronbach's Alpha calculation results, all instrument indicators achieved an α value ≥ 0.70 , indicating adequate reliability for further analysis.

Average Personality Aspects Based on Position

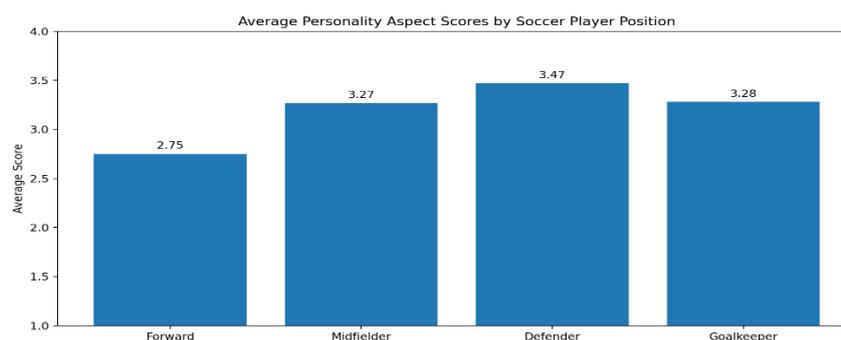


Figure 1. The results of processing the Forward position data

The analysis shows that the forward position has the lowest average score, namely 2.75, when compared to the midfielder (3.27), defender (3.47), and goalkeeper (3.28) positions. This indicates a mismatch between the psychological characteristics of players in the forward position and the ideal requirements of a forward. This means that it is highly likely that players currently occupying the forward position do not yet have the optimal personality profile to perform this role effectively. This condition deserves the attention of coaches and management teams, as forwards are the

spearhead that determines the team's success in scoring goals. The mismatch between personality and playing position may contribute to low productivity in the front line, as reflected in the results of matches where the Gorontalo men's PON team failed to score a single goal against their opponents.

Thus, the results of this graph reinforce the urgency of evaluating position placement based on player personality, and suggest the need for training or position rotation to optimize the team's overall performance.

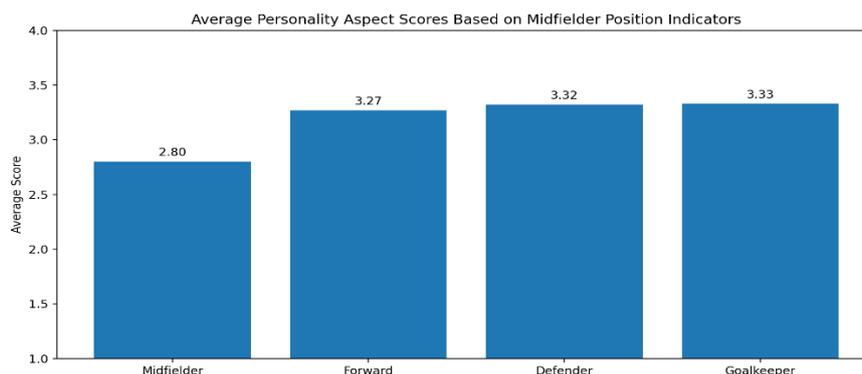


Figure 2. The results of processing the midfielder position

This graph visualizes the average personality aspect scores based on player position for the midfielder indicator. It can be seen that the midfielder position has the lowest score (2.80), while the forward (3.27), defender (3.32), and goalkeeper (3.33) positions have higher scores. This indicates that players currently occupying the midfielder position most likely do not yet reflect the ideal personality of a midfielder, such as communication skills, tactical vision, emotional resilience, and game control. These findings indicate a mismatch between the personality profiles of players placed as midfielders and the ideal characteristics of that position. In the context of the game, midfielders play a

central role in connecting the defense and attack, and are responsible for controlling the tempo of the game.

With relatively low personality scores, there are indications that the midfielders in the team are not yet able to perform these strategic functions optimally. This condition can have a direct impact on the overall effectiveness of the team's play, especially in terms of midfield control, ball distribution, and inter-line coordination. Therefore, coaches and analysts should consider reassessing players who occupy the midfielder position, either through position rotation or mental and psychological development through specialized training.

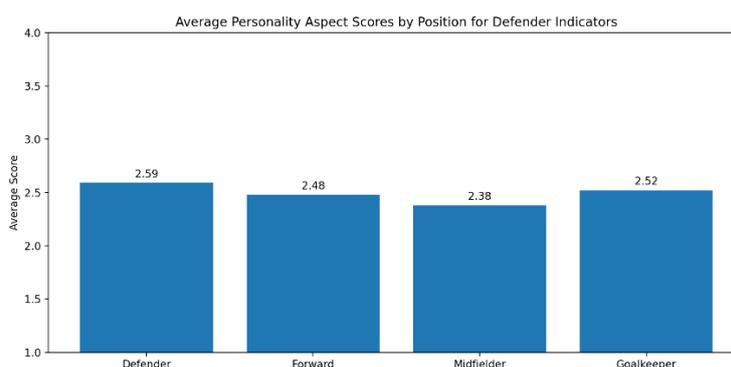


Figure 3. Results of data processing for the defender position show

This graph visualizes the average personality aspect values based on defender indicators. It can be seen that players in the defender position recorded the highest average value (2.59) compared to forwards (2.48), midfielders (2.38), and goalkeepers (2.52). This indicates that the personality profile of defenders is most suited to the

ideal indicators for that position, such as alertness, willingness to defend, courage, communication, and tactical discipline. These findings support the idea that positioning based on personality aspects can contribute significantly to forming a solid and coordinated defense system. The success of the backline heavily depends on

the alignment between role demands and the psychological profiles of the players. Therefore, these graph results emphasize the importance of psychological evaluation in

position mapping and player selection, and can serve as a reference for coaches in strategizing formations or allocating roles more effectively during matches.

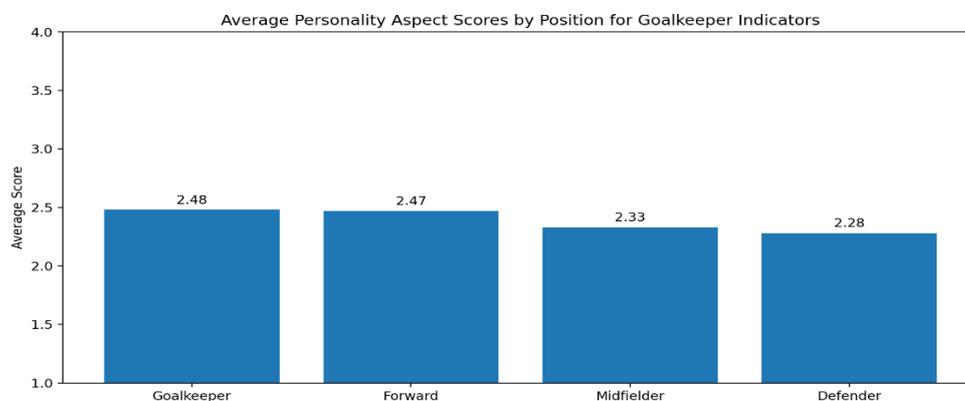


Figure 4. Results of goalkeeper position data processing show

The following graph visualizes the average personality aspect scores based on goalkeeper indicators. It can be seen that players in the goalkeeper position have the highest score (2.48) compared to forwards (2.47), midfielders (2.33), and defenders (2.28). This shows that the personality profile of goalkeepers is more in line with the ideal characteristics of a goalkeeper, such as courage, high concentration, ability to cope with pressure, and effective communication with the defense line. However, it should be noted that the score of 2.48 is still far from the ideal score of 4, which in the context of the Likert scale indicates the maximum level of mastery of the key personality characteristics of a goalkeeper. The fact that this value is still far from the maximum reflects that there is still significant room for improvement, especially in crucial aspects such as decision-making in crisis situations and consistency of concentration throughout the game.

This condition is consistent with the actual match results, in which the Gorontalo PON team conceded a total of 9 goals in 3 matches without scoring a single goal. This indicates that although goalkeepers may be more psychologically prepared than players in other positions, this preparedness is not sufficient to provide optimal protection for

the team's goal. It is likely that this immature personality aspect contributes to the weak defensive organization and delayed anticipation of threats from opponents.

Therefore, even though statistically the goalkeeper position appears to be the most suitable based on personality indicators, this condition cannot be used as a guarantee of a goalkeeper's skill or absolute superiority. Coaches and training teams need to consider advanced training programs that integrate technical, mental, and psychological aspects more deeply to develop goalkeepers' abilities to approach the ideal profile.

DISCUSSION

The findings indicate notable variations in psychological readiness across playing positions, with all average scores remaining below the ideal benchmark of 4.00. These results suggest that psychological characteristics essential for optimal positional performance have not yet been fully developed among the players.

The forward position recorded the lowest average personality aspect score (2.75), highlighting a substantial gap between existing psychological traits and those ideally required for attacking roles. Forwards are expected to demonstrate high self-confidence, rapid risk-taking, and

creative decision-making in goal-scoring situations. However, the relatively low score suggests that these attributes are insufficiently developed. Previous research has shown that conscientiousness and extraversion are strongly associated with attacking effectiveness, implying that the current psychological profile of forwards may hinder their performance. Therefore, integrating Big Five personality assessments into striker selection and development processes is essential. In addition, mental training programs focusing on pressure desensitization and visualization of scoring opportunities can enhance attacking confidence and creativity.

The midfielder position obtained an average score of 2.80, which is unexpectedly low considering the strategic importance of this role. Midfielders act as the central link between defense and attack and must constantly adapt to dynamic game situations. This role demands strong executive functions—such as working memory and cognitive flexibility—as well as high levels of conscientiousness. The findings indicate that these psychological components are not yet optimal. To address this issue, coaches should employ executive function assessments alongside cognitive training methods, including rapid scenario simulations and pressurized decision-making drills. Such interventions are likely to improve adaptability and transition-oriented play.

The defender position achieved the highest average score among outfield players (2.59), yet this value remains far from the ideal level. Defensive roles require emotional

stability, discipline, effective communication, and situational awareness. While defenders appear relatively stronger psychologically than other positions, the score suggests room for improvement, particularly under high-pressure conditions. Simulated match-pressure scenarios, such as 1v1 duels and coordinated backline exercises, can be used to strengthen emotional control, communication skills, and leadership qualities, thereby reinforcing defensive solidity.

The goalkeeper position recorded an average score of 2.48, the highest within its specific indicator but still considerably below the optimal threshold. Goalkeepers operate under unique psychological demands, including sustained concentration, rapid decision-making, and resilience after critical errors. The findings indicate that mental toughness and focus have not been maximized. Consequently, goalkeeper training programs should extend beyond technical drills to include structured psychological training, such as focus maintenance during penalty situations, controlled exposure to high-adrenaline scenarios, and exercises that enhance decisiveness under pressure. These approaches can better prepare goalkeepers to cope with the psychological intensity of competitive matches.

Overall, the results underscore the importance of position-specific psychological development. Tailored mental and cognitive training interventions should be systematically incorporated into coaching programs to enhance performance across all playing positions.

Table 1. Psychological Profile Assessment by Playing Position and Recommended Training Interventions

Position	Average Score	Psychological Challenges	Training Recommendations
Forward	2,75	Confidence, risk-taking, creativity – below ideal	Mental training, visualization, trait assessment
Midfielder	2,80	Executive function & conscientiousness lacking	Cognitive drills, scenario training, executive function assessment
Defender	2,59	Cognitive drills, scenario training, executive function assessment	Defensive pressure simulation, communication drills
Goalkeeper	2,48	Mental toughness & focus not yet optimal	Resilience program, focus drills, high-pressure situational practice

CONCLUSION

This study aims to evaluate the suitability between the personality aspects of players and the positions they occupy in the Gorontalo Province PON men's soccer team. Based on the results of descriptive analysis, there were significant differences in the level of personality suitability based on position. The defender position showed the highest level of suitability, while the forward and midfielder positions showed a mismatch between personality characteristics and the demands of the role.

These findings reinforce the hypothesis that adjusting player positions based on personality aspects contributes positively to the effectiveness of teamwork and overall team performance. This study not only supports previous literature emphasizing the importance of psychological profiles in team formation but also highlights the urgency of integrating personality evaluation into player selection and placement systems.

Thus, positioning in soccer cannot rely solely on technical or physical factors, but must be aligned with the psychological and cognitive aspects of the players. This approach is expected to improve individual and collective performance, as well as provide a scientific basis for coaches and policy makers in developing more holistic training strategies.

RESEARCH LIMITATIONS

This study has several limitations that must be acknowledged scientifically. First, the limited sample size (25 players from one regional team) limits the generalization of findings to a broader context. Second, the cross-sectional research design does not allow for the exploration of causal relationships between personality and performance in the long term. Third, the measurement instruments used only focus on personality aspects and do not cover executive functions or mental resilience in depth.

Recommendations

Further research is recommended to:

- Use larger samples and involve multiple teams from different regions to obtain a more representative picture.
- Develop a longitudinal design that can track the dynamics of personality and performance changes during training or competition.
- Integrating instruments for measuring executive function and mental resilience to enrich multidimensional analysis of players' optimal positions.
- Developing position-based personality assessment modules as tools to assist coaches in player selection and development strategies.

Declaration by Authors

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