



The Influence of Psychological Conditions on the Level of Confidence of Indoor Hockey Referees in Facing the XXI PON Aceh–North Sumatra 2024

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Abstract

This study aims to examine the influence of psychological conditions on the level of self-confidence of indoor hockey referees in facing the XXI PON in Aceh–North Sumatra 2024. A total of 16 nationally licensed referees, who were officially appointed to officiate matches, were sampled in this study using a total sampling technique. The self-confidence measurement instrument refers to the dimensions developed by Vealey, including aspects of mastery, social support, physical/mental readiness, and situational comfort. The research method uses a quantitative approach. Data analysis was carried out through validity and reliability tests, prerequisite tests (normality and linearity), and simple linear regression tests. The results showed that psychological conditions significantly influenced referee self-confidence, with a significance value of 0.014 and an R Square value of 0.363. This means that 36.3% of the variation in referee self-confidence can be explained by psychological conditions experienced. This finding emphasizes the importance of mental readiness in supporting referee performance, especially in high-intensity matches such as PON. Therefore, technical training for referees needs to be balanced with psychological development to increase emotional stability and self-efficacy in decision-making on the field.

How to Cite

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INTRODUCTION

Referees are important actors in the implementation of fair, orderly and professional sports matches (Margiyan & Nuraini, 2022). In the context of a national-scale competition like the PON, the referees' responsibilities become even heavier due to competitive pressure, public expectations, and increasingly complex match dynamics (Suhery et al., 2024). Especially in indoor hockey, the fast-paced, intense nature of the game, which demands quick reactions to events on the field, places referees in a position that is highly vulnerable to psychological stress (Salman et al., 2025). This burden does not only come from within, but also from the external environment such as pressure from athletes, coaches, spectators, and even the media (Deceli et al., 2019). Therefore, to maintain optimal performance, referees are required to possess not only technical competence but also psychological balance, including the ability to manage stress, social pressure, and self-confidence (Aygun et al., 2023).

Previous research has shown that psychological aspects play a large role in the quality of referee decision making. Pizzera et al. (2022) explains that poorly managed stress and anxiety can lead to decreased decision-making accuracy in the field. Sahin et al. (2020) in a study of indoor hockey referees, identified verbal pressure from coaches and spectators, the influence of seniority, and technical errors as the dominant sources of stress. The importance of positive cognitive coping strategies in responding to stress is emphasized, although the effectiveness of these strategies is highly dependent on the individuals' level of mental resilience (Maesaroh et al., 2025).

A follow-up study by İsmail & Pakyardim (2024) even concluded that professional referees at the elite level tend to experience high levels of performance anxiety, which has a direct impact on decreasing self-confidence, especially when facing crucial matches under the public spotlight.

Within the framework of sports psychology, self-efficacy is considered a key determinant in predicting individual performance, including referees. A referee's self-confidence is formed through various dimensions, including mastery experience, social support, physical and mental readiness, environmental comfort, and perception of the match situation (Kirey et al., 2024; Muhammad Suma Wijaya et al., 2023). Referees with high self-confidence are generally better able to manage pressure, avoid impulsive decisions,

and remain objective in critical situations. There is a negative correlation between self-efficacy and impulsivity, with individuals with high self-confidence better able to maintain emotional control in making quick decisions during matches (Yulianto et al., 2023).

However, research on the relationship between psychological conditions and referee confidence, particularly in indoor hockey, is still very limited in Indonesia. Most previous studies have focused on soccer and futsal referees, such as research by Syamsudar et al. (2023) which states that the majority of futsal referees in West Java exhibit moderate to high levels of anxiety. However, in indoor hockey, which naturally has a higher intensity and fast-paced match rhythm, the psychological pressure experienced by referees can be greater, especially in a national event as large as the XXI National Games in Aceh–North Sumatra in 2024. This research gap highlights the need for empirical studies examining how psychological conditions, including stress, anxiety, and mental resilience, impact referees' confidence levels in facing important matches.

Considering this background, this study aims to examine in depth the influence of psychological conditions on the level of confidence of indoor hockey referees on duty at the XXI National Games in Aceh–North Sumatra in 2024. The results of this study are expected to not only contribute to the development of academic literature in the field of sports psychology and refereeing leadership, but also serve as a basis for policymakers in developing training programs and mental mentoring for referees. A structured approach to referee psychological readiness is expected to improve the overall quality of matches, create a fair competitive atmosphere, and increase public trust in the neutrality and professionalism of referees in national-scale sporting events.

METHOD

This study uses a quantitative approach with a descriptive correlational method to examine the influence of psychological conditions on the level of self-confidence of indoor hockey referees who will be on duty in the XXI PON Aceh–North Sumatra 2024. This study was conducted to determine the relationship between the independent variable (psychological condition) and the dependent variable (level of self-confidence) in the context of national competition pressure.

The population in this study consists of all referees who were officially appointed to lead

indoor hockey matches at the 2024 PON XXI Aceh–North Sumatra. Considering the limited and selective population, the sampling technique used was total sampling, where all members of the population were used as research samples.

The research sample consisted of 16 referees from various provinces in Indonesia, as well as two foreign referees from Malaysia. All participants held national referee licenses and had experience officiating official matches at the regional and national levels. The sample comprised 13 male referees and three female referees, reflecting gender diversity in match officiating in this sport.

The research instrument for measuring the psychological condition of referees refers to the scale used by Şahin & Yıldırım (2022). This instrument consists of several items measuring anxiety, depression, loss of behavioral control, life satisfaction, emotional state, and positive feelings, divided into Psychological Distress and Psychological Well-Being indicators. Meanwhile, to measure self-confidence, researchers used an instrument developed based on the self-efficacy theory by Vealey which was cited and used in study Marpaung et al (2021). This model encompasses several dimensions: mastery, social support, physical/mental preparation, physical/self-presentation, demonstration of ability, vicarious experience, environmental comfort, and situational favorableness.

Data were collected through a questionnaire distributed on a 4-point Likert scale (1 = strongly disagree, 4 = strongly agree). Prior to use, the instrument underwent content validation by three experts in sports psychology and coaching, and reliability testing was performed with a Cronbach's Alpha value of >0.70 , indicating a good level of internal consistency.

The collected data was analyzed using a Pearson correlation test to examine the relationship between psychological conditions and self-confidence. To further examine the influence, a simple linear regression test was used. All analyses were conducted using the latest version of SPSS software. The significance level used was $\alpha = 0.05$.

RESULTS AND DISCUSSION

This section presents the results of data analysis from a study aimed at determining the influence of psychological conditions on the level of self-confidence of indoor hockey referees in facing the PON XXI Aceh–North Sumatra 2024. This study involved 16 referees who had been officially appointed and had national licenses and

experience in leading official matches.

Prior to the main analysis, the initial stage involved validity and reliability testing of the research instrument to ensure that each item in the questionnaire consistently and accurately measured the intended variable. The test results indicated that all items used were valid and reliable, with item-total correlations meeting the criteria and Cronbach's Alpha values above 0.70.

The final stage in data analysis is a simple linear regression test used to determine the extent to which psychological conditions influence referees' confidence levels. The results of this regression serve as the basis for answering the research hypothesis and provide an overview of the extent to which psychological factors can influence referees' mental readiness for national-level competitions such as the PON. The purpose of this data analysis is to ensure that the collected data is meaningful and can be used as a benchmark for answering the research questions and drawing conclusions. The data obtained and presented in tabular form are as follows:

Before discussing the research results, the researcher will first discuss the demographics of the respondents, including their age, PON assignments, and the yo-yo test data collected for this study. All information regarding the research results and respondents was obtained from the questionnaire distribution. The distribution of the research results is presented as follows **Table 1**.

Table 1. Demographics

Data	\bar{X}	Min	Max	N
Age	33.6	26	41	16
PON Tasks	First time	First time	>1 time	16
Yo-Yo Test	13.8	10	17	16

Based on the Demographic **Table 1**, this study involved 16 indoor hockey referees with an average age of 33.6 years, the youngest being 26 years old, and the oldest being 41 years old. Several respondents had served in the PON event, with most of them having their first experience, although some had more than once. The results of the physical fitness test using the Yo-Yo Test showed an average score of 13.8 with a minimum score of 10 and a maximum of 17. This data provides an overview of the respondents' basic characteristics, which is important in understanding their psychological condition and level of self-confidence ahead of the PON XXI Aceh–North Sumatra 2024.

The conclusion that the Psychology and

self-confidence data have a significance value > 0.05 , which means the data is normally distributed.

Based on the results, it can be seen that the sig value of Linearity is $0.184 > 0.05$, which means that there is a linear relationship between the independent and dependent variables.

After conducting the normality test and linearity test, a regression test is then carried out to determine the predicted influence between the independent and dependent variables.

The results of the regression model significance test using ANOVA analysis. The significance value (Sig.) obtained is $0.014 < 0.05$, so it can be concluded that the regression model used is statistically significant, meaning that the independent variables in this study have a significant influence on the dependent variable.

This presents an R-square value of 0.363. This indicates that 36.3% of the variation in the dependent variable can be explained by the regression model used (i.e., by the independent variables). The remaining 63.7% is explained by other factors not included in this model. This value indicates a moderate influence of the independent variables on the dependent variable.

This study aims to determine the extent to which psychological conditions influence the self-confidence of indoor hockey referees in facing a large-scale national event, namely the XXI National Games in Aceh–North Sumatra 2024. The analysis process begins by describing the demographic characteristics of the research subjects, consisting of a number of referees with a fairly representative age range, varying match officiating experience, and relatively good levels of physical fitness based on the results of the tests conducted. This demographic profile provides an important initial context because factors such as age, experience, and fitness can indirectly influence a person's psychological aspects and self-confidence.

The next step was to conduct prerequisite analysis tests, including normality and linearity tests. Normality tests were conducted to ensure that the data distribution met the classical statistical assumptions underlying the regression method. The results showed that the data in this study were normally distributed, allowing for further analysis without distributional bias. Meanwhile, the linearity test indicated a proportional relationship between psychological state and self-confidence. This relationship is important because it implies that the better a referee's psychological state, the higher their self-confidence tends to be.

Next, a simple linear regression test was used to identify the strength of the relationship between the independent variable (psychological condition) and the dependent variable (self-confidence). The analysis results showed a significant influence of psychological condition on self-confidence. In other words, when a referee has emotional stability, high motivation, and good self-control, their confidence in making decisions on the field will also increase. This is in line with the theory proposed by Weinberg & Gould (2023) which states that self-confidence in sports is not only built from experience, but also from mental readiness.

This study also confirms the importance of psychological dimensions in the context of referee performance. Referees with good emotional control and positive self-perception are better able to handle pressure during matches, reduce anxiety, and maintain objectivity Koçak (2011) This is especially important in sports like indoor hockey, which are fast-paced, high-pressure, and require high levels of concentration (Wijaya & Hafid, 2024) Pressure from players, coaches, and even spectators can greatly influence decision-making, and only referees with good psychological resilience are able to maintain neutrality and consistency in their decisions (Preston et al., 2021; Yildirim & Gür, 2022).

Psychological interventions through mental training, such as visualization, relaxation training, and cognitive restructuring, have been shown to increase referees' confidence in facing important matches (Hidi & Renninger, 2019). Personality and mental readiness are strong predictors in assessing performance readiness in the context of team sports, including in the role of referee (Anessa & Prabowo, 2024).

Taking all previous results and findings into account, it can be concluded that psychological well-being plays a crucial role in influencing referees' confidence levels. Therefore, developing a structured mental health training program is highly recommended as part of referee preparation before major events like the PON. This training can include stress management workshops, decision-making training under pressure, or match simulations with challenging scenarios (Haris et al., 2023). Strengthening this aspect will not only improve the quality of individual referees but will also have a positive impact on the overall quality of matches.

In addition to demonstrating a significant relationship between psychological well-being and self-confidence, this study also underscores the importance of the dimensions of experience

and emotional context in shaping referees' preparedness to face the pressures of major competitions like the PON. Although not measured quantitatively in this study, aspects such as previous match-officiating experience, social support from fellow referees, and the environment in which they work are also contextual factors that can influence a referee's psychological well-being. This is reinforced by Kresnayadi et al (2024) which shows that external factors such as public pressure and federation expectations can worsen the psychological condition of referees if not balanced with good emotional regulation.

The ability to manage pressure is a key component of confidence, requiring referees to make decisions quickly, decisively, and objectively. In high-intensity matches like indoor hockey, the margin for error is slim, and players' and coaches' responses to refereeing decisions are often emotional (Salman et al., 2024). Therefore, self-confidence stemming from psychological stability is key to ensuring referees remain calm, unaffected, and maintain consistent performance throughout the match. This is consistent with research findings by (Gu & Villanueva, 2024) who found that self-confidence is not only influenced by technical ability, but is also greatly influenced by mental readiness and self-perception in facing competitive situations.

This research also has practical implications for the development of national referee human resources. Referee training, which has so far focused largely on technical aspects and game rules, needs to be supplemented with psychological training modules. Programs such as emotional control training, mindfulness, motivational coaching, and relaxation techniques should be integrated into the national referee training curriculum. Especially in the lead-up to major competitions like the PON (National Games), psychological evaluations of referees' mental readiness will assist organizers in making more appropriate assignments. Such initiatives can not only improve the quality of on-field decisions but also contribute to the professionalism and psychological well-being of referees themselves.

CONCLUSION

Based on the research results, it can be concluded that psychological conditions have a significant influence on the level of self-confidence of indoor hockey referees in facing the PON XXI Aceh-North Sumatra 2024. The results of the regression test showed a significance value of $0.014 < 0.05$, so it can be concluded that there is

a meaningful relationship between psychological conditions and referee self-confidence. In addition, the R Square value of 0.363 indicates that 36.3% of the variation in self-confidence levels can be explained by psychological conditions, while the rest is influenced by other factors outside the model. These findings strengthen the view that mental readiness, including the ability to manage stress, competitive pressure, and anxiety, is an important aspect that underlies the optimal performance of a referee. By paying serious attention to psychological factors, the process of coaching and training referees in the future is expected to not only focus on technical aspects, but also include mental strengthening and self-efficacy development to create professional, stable, and objective leadership performance amidst the demands of competitive and dynamic matches.

REFERENCES

- Anessa, L. A., & Prabowo, B. Y. (2024). Tingkat Kecemasan Wasit Sepak Bola C1 Asosiasi PSSI Provinsi Jambi Pada Saat Memimpin Pertandingan. Universitas Jambi.
- Aygun, M., Murathan, T., & Universty, A. (2023). Analysis of the self-efficacy of ice hockey referees. 12, 1–12.
- Deceli, Ç., Hüseyin, Ü., & ERBAŞ, M. K. (2019). Investigation of self-efficacy levels of football referees. *Sakarya University Journal of Education*, 9(1), 69–82.
- Gu, Q., & Villanueva, L. E. (2024). Social Cognitive Ability and Competence Motivation of Athletes in a Chinese Vocational Institute Towards Personalized Mental Skills Training Program. *Journal of Humanities, Arts and Social Science*, 8(12).
- Haris, I., Yulianto, A. G., Ernawati, E., & Akbar, M. (2023). Tingkat Kesulitan Pembelajaran Pendidikan Jasmani: Studi Cross Sectional Pada Siswa SMPN 2 Pomala. *Jurnal Penelitian Pendidikan*, 15(2), 130–140.
- Hidi, S. E., & Renninger, K. A. (2019). Interest Development and Its Relation to Curiosity: Needed Neuroscientific Research. *Educational Psychology Review*, 31(4), 833–852. <https://doi.org/10.1007/s10648-019-09491-3>
- İsmail, K. O. Ç., & Pakyardim, C. (2024). Relationship Between the Mental Toughness, Self-Efficacy and Decision Making in Wrestling Referees. *Journal of Education and Recreation Patterns*, 5(2), 178–195.
- Kirey, A. P., Kusnaedi, K., Hidayat, Y., Muda, I., Wijaya, M. S., Yulianto, A. G., & Sofyan, D. (2024). Analysis of Physical Activity Levels, Economic Status and Depression in People with Diabetes Mellitus in Bandung City. *Indonesian Journal of Sport Management*, 4(4).
- Koçak, Ç. V. (2011). Investigation of the referee

- self-efficacy levels of the volleyball referees. *SPORMETRE Journal of Physical Education and Sport Sciences*, 17, 33–40.
- Kresnayadi, I. P. E., Dewi, I. A. K. A., Fis, M., Widi-
antari, N. L. G., Fis, M., Indrawathi, N. L. P.,
& Fis, M. (2024). *Dasar-dasar perwasitan pan-
duan untuk wasit: buku referensi*. PT. Media
Penerbit Indonesia.
- Maesaroh, L., Wijaya, M. S., Hafid, J., Rosad, R.,
Shopiani, A., & Mahmud, A. M. (2025). Ef-
forts to Improve Learning Concentration and
Learning Outcomes Through Extracurricular
Activities of Wushu Sanda Sports for Junior
High School Students. *ACTIVE: Journal of
Physical Education, Sport, Health and Recre-
ation*, 14(1), 114–118.
- Margiyan, M. E., & Nuraini, S. (2022). The effect of
referee knowledge, leadership style and confi-
dence on the performance of hockey referee.
Gladi: Jurnal Ilmu Keolahragaan, 13(2), 161–
177.
- Marpaung, A. F. S., Wiradihardja, S., & Tahki, K.
(2021). the Effect of Anxiety, Confidence, and
Motivation on the Performance of National
Volleyball Referee Province of North Suma-
tra. *Jurnal Ilmu Keolahragaan*, 12(05),
403–411.
- Pizzera, A., Laborde, S., Lahey, J., & Wahl, P. (2022).
Influence of physical and psychological stress
on decision-making performance of soccer
referees. *Journal of Sports Sciences*, 40(18),
2037–2046.
- Preston, C., Allan, V., & Fraser-Thomas, J. (2021). Fa-
cilitating Positive Youth Development in Elite
Youth Hockey: Exploring Coaches' Capabili-
ties, Opportunities, and Motivations. *Journal
of Applied Sport Psychology*, 33(3), 302–320.
<https://doi.org/10.1080/10413200.2019.1648327>
- Sahin, N., Bilir, F. P., & YÄ±ldÄ±rÄ±m, A. (2020).
Self-Efficacy and Decision Making of Hockey
Referees. *PONTE International Scientific Re-
searches Journal*, 76(8), 148–156. <https://doi.org/10.21506/j.ponte.2020.8.11>
- Şahin, N., & Yıldırım, A. (2022). Stress Sources of
Hockey Referees and the Emotion-Centered
Approaches that they Use to Cope. *Education
Quarterly Reviews*, 5(3).
- Salman, S., Hidayat, T., Riansyah, R., & Wijaya, M.
S. (2024). Pelatihan Umpire Judge dan Techni-
cal Official Cabang Olahraga Hockey Indoor.
*Gelanggang Olahraga: Jurnal Pendidikan Jas-
mani Dan Olahraga (JPJO)*, 8(1), 145–150.
- Salman, S., Hidayat, T., Riansyah, R., Williyanto, S.,
Wijaya, M. S., Wilujeng, G. E., & Rusdiana,
A. A. M. (2025). Pelatihan Umpire Judge dan
Technical Official Cabang Olahraga Hockey
Indoor. *Abdimas Galuh*, 7(1), 226–230.
- Suhery, M., Ramadhan, G., & Hasugian, A. H. (2024).
Analisis Sentimen Masyarakat Kota Medan
Terhadap Persiapan PON XXI Sumut-Aceh
2024 Menggunakan Metode Naive Bayes. *Poly-
gon: Jurnal Ilmu Komputer Dan Ilmu Pengeta-
huan Alam*, 2(5), 10–18.
- Syamsudar, B., Hambali, S., & Nuryasin, S. (2023).
Anxiety Levels of Futsal Referees in the West
Java Provincial Sports Week 2022. *Journal
Coaching Education Sports*, 4(1), 173–184.
- Weinberg, R. S., & Gould, D. (2023). Foundations of
sport and exercise psychology. *Human kinetics*.
- Wijaya, Muhamad Suma, & Hafid, J. (2024). Model
Cooperative Learning dalam Meningkatkan
Keterampilan Bermain Hoki: (Studi Eksperi-
men di SMK PGRI 1 Kota Serang). *Jurnal
Master Penjas & Olahraga*, 5(2), 477–485.
- Wijaya, Muhammad Suma, Hidayat, Y., & Sutresna,
N. (2023). Integration Of Life Skills Through
Hockey In The Framework Of Positive Youth
Development. *JUARA: Jurnal Olahraga*, 8(1),
639–647.
- Yildirim, A., & Gür, Y. (2022). An Investigation
of Exposure of Attending Referee Training
Hockey Referees to Mobbing Behaviors and
Their Zest for Work Levels: Example of Ref-
erees Attending University Education. *Journal
of Educational Issues*, 8(2), 215. <https://doi.org/10.5296/jei.v8i2.20050>
- Yulianto, A. G., Hendrayana, Y., & Mahendra, A.
(2023). Analysis of Intentionally Structured
Programs to Improve Life Skills Through Out
of School Activities. *JUARA: Jurnal Olahraga*,
8(1), 73–89.