

ORIGINAL SCIENTIFIC PAPER

The Impact of Motivation on Decision-Making of Futsal Goalkeepers in Indonesia: An Analysis of Self-Confidence as Mediator

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Abstract

This study aims to explore the relationship between motivation and decision-making of futsal goalkeepers through self-confidence variable. It is a quantitative correlational research using structural equating modeling (SEM) approach with Smart-PLS analysis. The sample was 150 elite goalkeepers (103 men and 47 women), aged 23.4 ± 7.8 , had 7.24 ± 5.6 years of career in competition, and had 9.78 ± 2.2 years of training experience. A questionnaire on the Google form was used as research instrument. It was arranged and adjusted to the conditions in real context by modifying the results of previous research through the (focus group discussion (FGD)). The results of this research show that the instrument is declared valid based on the Outer Loading value (>0.7) and average variance extracted (AVE; >0.5), then the reliability test is based on Cronbach's Alpha (>0.7) and Composite Reliable (>0.7). The Goodness of Fit (GOF) in this research model is Standardized Root Mean Square (SRMR; <0.10 or <0.08), showed 0.073. Path Coefficients (P-Values) showed the effect of motivation on self-confidence at 0.001, the effect of motivation on decision-making at 0.045, the effect of self-confidence on decision-making at 0.000, and motivation on decision-making through self-confidence at 0.002. It conclusion, the proper training method, coach support, team and environment must constantly be optimized to increase motivation. Furthermore, participating in trial matches and competitions at the regional and provincial levels is an effective initial method to develop and train self-confidence. Ultimately, a goalkeepers increasing skill at decision-making will lead to becoming an elite athlete.

Keywords: futsal, athlete performance, competition, sports psychology

Introduction

Futsal is a type of sport that has the character of a fast and dynamic variant of football. From the relatively small field size, there are few opportunities for errors, so it requires quick and precise decision-making skills, especially from a goalkeeper (Windoro et al., 2019). Goalkeeper is a player the team can trust to repel attacks from the opposing team. As the last guard in team defense, futsal goalkeepers face situations requiring instant decisions to anticipate opponent attacks and protect the goal (Szwarc & Oszmaniec, 2021). Futsal goalkeeper decision-making involves a quick evaluation of various factors, such as the direction of the opponent's

kick, the position of the teammate, and the overall game situation (Medina et al., 2020; Méndez-Domínguez et al., 2021). Ideally, a goalkeeper should have a high technical and tactical ability to improve his skills in repelling the ball and preventing situations that lead to goals (Szwarc & Oszmaniec, 2021).

Decision-making is crucial for athletes in all sports to determine the following strategy and movement. However, in team sports, decision-making is the most complicated thing compared to individual and team sports (Araújo et al., 2023; Nagarabetta, 2023). Decision-making is one of the factors resulting from the performance of futsal athletes, so athletes



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must undergo a lengthy training process to improve performance (Esteves et al., 2022). The factors that influence the decision-making of futsal goalkeepers are an essential focus of research to understand the dynamics of this game in more depth. From the initial observation, it can be concluded that motivation plays a crucial role in decision-making ability and performance improvement for futsal athletes in all positions (Choi, 2023; Leibo et al., 2021; Rico-Lara et al., 2023; Sanmiguel-Rodríguez & Giráldez, 2021).

As an initial observation, the Indonesia Futsal Federation has noted that the participation of early childhood and adolescents in futsal coaching has increased in recent decades (Dwi Agestin et al., 2023; Rivaldi et al., 2022; Supiati et al., 2021). Furthermore, enthusiasts who chose the goalkeeper position also showed improvement. The initial survey of prospective athletes who choose the goalkeeper position explains the initial selection process that is easy compared to other positions, wants to be recognized by everyone after becoming part of the club, makes parents proud, increases self-esteem and searches for identity. The initial survey results refer to an athlete's motivational factors (Duclos Bastías et al., 2021). Motivation is an encouragement for athletes to achieve success in achieving achievements (Katanic et al., 2022; Posavac et al., 2023). Thus, the motivation that will continue to increase can be a driving force for goalkeepers to choose specific strategies in dealing with diverse game situations through the right training process and long experience (Barrero, 2023).

Initial observations are also addressed to futsal goalkeepers who have high competition experience. The initial observations showed that goalkeepers with high experience did not show problems, and there was no decrease in motivation (Csáki et al., 2017). However, further investigation through unstructured interviews will be conducted by adopting a research questionnaire on futsal goalkeeper decision-making from Windoro et al. (2019). The results showed doubts about cutting the ball during corner kicks, passing the ball short to the defender, assisting the attack when the score was behind, and dispelling the arrival of a tight-bottom ball (Castillo-Rodríguez et al., 2022). The following result was that the goalkeepers said they were worried, nervous, and unsure of the match's outcome before the match (Mouloud, 2019). Then, as the match progresses, sometimes it takes time to quickly adapt, easily intimidated and unsure of winning when seeing a better and solid opponent play (Madsen et al., 2022). Based on the initial interview results, the goalkeeper's confidence was affected (Álvarez-Kurogi et al., 2019). The interview answers are based on factors showing that optimists' self-confidence variable is not worrisome and can adapt (Supriyanto et al., 2022). Previous studies have reported that confidence can affect the skills of futsal athletes (Febrinaldo et al., 2023; Hidayati et al., 2023).

The relationship among motivation, decision-making, and confidence of futsal goalkeepers is an exciting research subject, especially in efforts to improve individual and team performance. Until now, no scientific publications have analyzed the impact of motivation and confidence in decision-making on futsal goalkeepers. This study aims to explore the relationship between motivation and decision-making of futsal goalkeepers through self-confidence variable. By understanding how motivation influences the decision-making process through self-confidence, it is expected that new strategies can be found in the training and coaching of futsal goalkeepers that can improve the quality of team play.

Method

Procedures

This correlational quantitative study investigates the influence between variables. The analysis of this study used a structural equating modeling (SEM) approach because it involved a mediator variable, self-confidence. The independent variable is motivation, and the dependent variable is the decision-making. The advantage of SEM research is that it can comprehensively analyze each variable based on direct and indirect influence. This research was conducted for three months, from January to March 2024, with a sequence of identification based on problem phenomena, formulating research objectives, data collection, and preparation of scientific reports in this article.

Participants

The population of this study was futsal athletes in Indonesia, but the sample selection used purposive sampling. Thus, the goalkeeper criteria in this study were still active as athletes, and had career in a club that competes in the Indonesian Pro Futsal League and the Indonesian National Sports Week (PON) in 2024. PON is a multi-event sports championship held every four years in Indonesia, one of which is futsal. The sample was 150 elite goalkeepers (103 men and 47 women), aged 23.4 ± 7.8 , had 7.24 ± 5.6 years of career in competition, and had 9.78 ± 2.2 years of training experience.

Measurements

The research instrument was adopted from the results of previous studies. The motivation variable was adopted from the Sport Motivation Scale (SMS-6), which consisted of six dimensions, namely amotivation, external regulation, introjected regulation, identified regulation, integrated regulation, and intrinsic motivation (Kawabata & Mallett, 2013; Mallett et al., 2007;). The self-confidence variable consists of five dimensions, namely Optimistic, Independent, Sportsman-like, Not Worrisome, Self-Adaptable (Amir, 2015; Arif & Sujarwo, 2021). The decision-making variable adopted from the results of the study by Windoro et al. (2019) consists of five dimensions, namely reading the movement of the ball (Y1), regulating the tempo of the game (Y2), keeping the ball away from the circle and goal line (Y3), angling for the opponent (Y4), and blocking the shot (Y5). After the instrument preparation material had been determined, a focus group discussion (FGD) was carried out to determine valid items. This FGD was attended by lecturers with a minimum doctor qualification who was an expert in futsal coaching and a lecturer in sports psychology. Futsal coaches with AFC level 1 licenses were also involved. The specified scale was in the form of a Likert scale of 1 to 5.

Statistical Analysis

The analysis of this study used the help of Smart-PLS (Hair et al., 2019). There were two model approaches, namely the first-order model used for the motivation variable (X) and self-confidence (M), and the second-order model used for decision-making (Y). The decision-making variable (y) consisted of five dimensions, namely reading the movement of the ball (Y1), setting the tempo of the game (Y2), keeping the ball away from the circle and goal line (Y3), angling for the opponent (Y4), blocking the shot (Y5). Then there are two methods for reporting results. The first is in the PLS Algorithm

menu which aims to analyze convergent validity values, the outer loading value must be >0.7 and the average variance Extracted (AVE) value >0.5. Then the reliability test is based on Cronbach's Alpha (>0.7) and Composite Reliability (>0.7). Next, report the goodness of fit (GoF) value to see the goodness of this research model. Second, in the bootstrapping

menu, the results of this menu will show direct and indirect effects based on P Values (<0.05).

Results

The following is a report using the Smart-PLS software with the PLS Algorithm menu according to Figure 1.

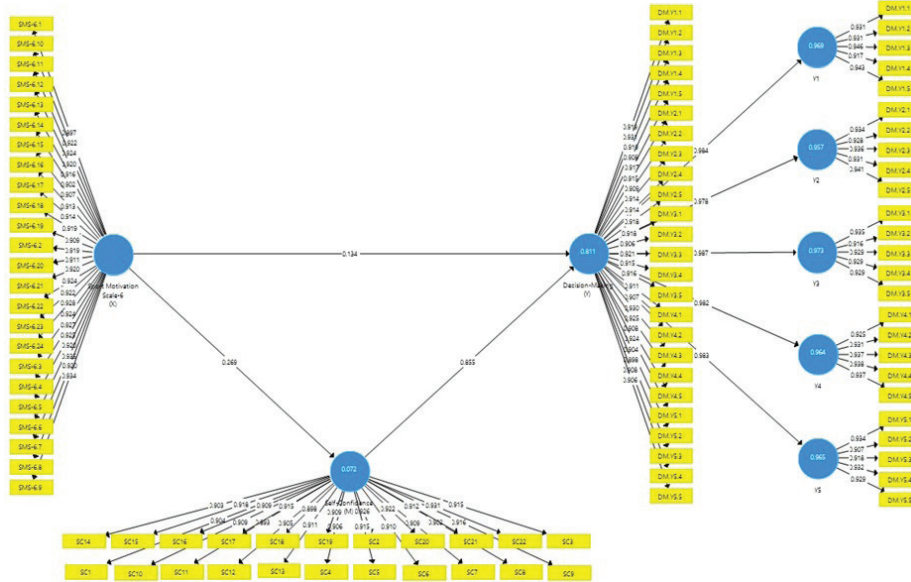


FIGURE 1. Analysis Results on PLS Algorithm Menu

Validity and Reliability

The convergent validity results based on the outer loading value for each item in the instrument show >0.7 (Figure 1), then the average value for each variable shows an AVE value >0.5 (table 1).

Furthermore, the Cronbach's Alpha value for each variable shows results >0.7 and the Composite Reliability value for each variable also shows results >0.7. Thus, the research instrument shows valid and reliable results.

Table 1. Construct Validity and Reliability Result

| | Cronbach's Alpha | rho_A | Composite Reliability | Average Variance Extracted (AVE) |
|--|------------------|-------|-----------------------|----------------------------------|
| Decision-Making (Y) | 0.992 | 0.992 | 0.992 | 0.836 |
| Self-Confidence (M) | 0.990 | 0.990 | 0.991 | 0.830 |
| Motivation (X) | 0.992 | 0.993 | 0.992 | 0.844 |
| Reading The Movement of The Ball (Y1) | 0.963 | 0.963 | 0.971 | 0.871 |
| Regulating The Tempo of The Game (Y2) | 0.963 | 0.963 | 0.972 | 0.873 |
| Keeping The Ball Away from The Circle and Goal Line (Y3) | 0.959 | 0.959 | 0.969 | 0.860 |
| Angling for The Pponent (Y4) | 0.963 | 0.963 | 0.971 | 0.871 |
| Blocking The Shot (Y5) | 0.957 | 0.957 | 0.967 | 0.854 |

Fit Model

The fit model test was carried out to see suitability of this research model. The criteria for the fit research model are

RMS Theta (Root Mean Square Theta) Value is <0.102, SRMR (Standardized Root Mean Square) Value is <0.10 or <0.08, and NFI Value is >0.9.

Table 2. Goodness of Fit (GoF)

| | Saturated Model | Estimated Model |
|--|-----------------|-----------------|
| SRMR (Standart Root Mean Residual) | 0.073 | 0.073 |
| d_ULS | 5.138 | 5.215 |
| d_G | 5.867 | 5.867 |
| Chi-Square | 2316.884 | 2316.884 |
| NFI (Normed Fit Index) | 0.613 | 0.613 |
| RMS Theta (Root Mean Square Residual Covariance) | 0.131 | |

Based on the results in Table 3, the RMS Theta (Root Mean Square Theta) value is $0.131 > 0.102$, and the NFI value is $0.613 < 0.9$. So, based on the two assessments of the model, it does not meet the criteria for the fit model.

However, based on the SRMR (Standardized Root Mean Square) value, the value is $0.073 < 0.10$ or < 0.08 , so the model

is fit. Thus, it can be said that the model fits the data.

Path Coefficient

Path analysis in this study used the bootstrapping menu shown in the following Figure 2. The analysis will be explained based on the table.

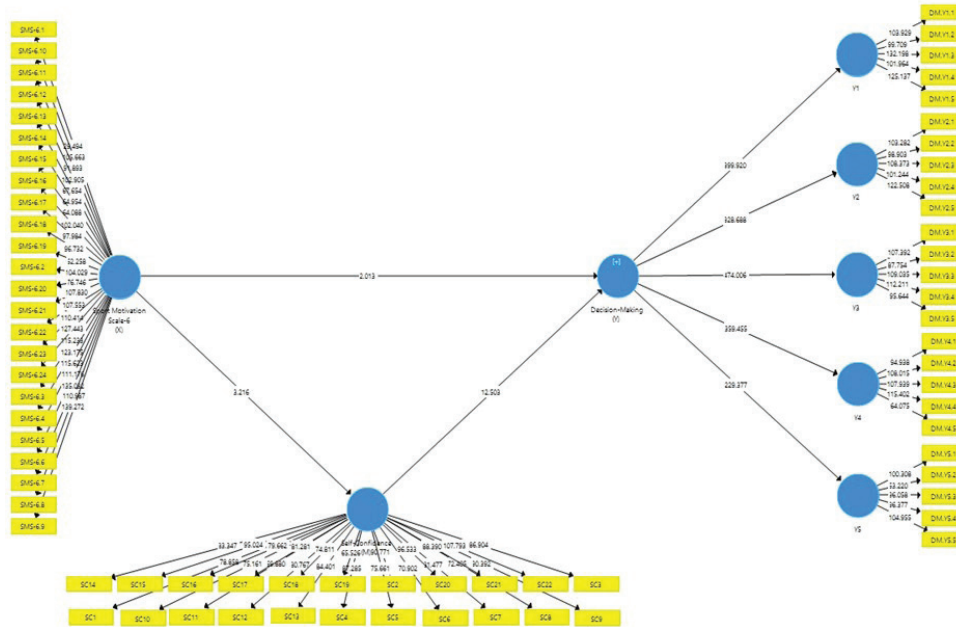


FIGURE 2. Path Coefficient Results of Bootstrapping

The Smart-PLS model in this research combines the first-order model and the second-order model. Based on Table 4, the second-order model is used on the dependent variable, namely decision-making. The decision-making variable consisted of five dimensions, namely reading the movement of the

ball (Y1), setting the tempo of the game (Y2), keeping the ball away from the circle and goal line (Y3), angling for the opponent (Y4), blocking the shot (Y5). From the five dimensions, it shows that the P-Values are 0.000, meaning that the five dimensions in decision-making are stated to be interconnected.

Table 3. Results of Path Coefficient Analysis

| | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (O/STDEV) | P Values |
|--|---------------------|-----------------|----------------------------|--------------------------|----------|
| Decision-Making (Y) -> Y1 | 0.984 | 0.984 | 0.002 | 399.920 | 0.000 |
| Decision-Making (Y) -> Y2 | 0.978 | 0.979 | 0.003 | 328.688 | 0.000 |
| Decision-Making (Y) -> Y3 | 0.987 | 0.987 | 0.002 | 474.006 | 0.000 |
| Decision-Making (Y) -> Y4 | 0.982 | 0.982 | 0.003 | 359.455 | 0.000 |
| Decision-Making (Y) -> Y5 | 0.983 | 0.983 | 0.004 | 229.377 | 0.000 |
| Self-Confidence (M) -> Decision-Making (Y) | 0.855 | 0.852 | 0.068 | 12.503 | 0.000 |
| Motivation (X) -> Decision-Making (Y) | 0.134 | 0.138 | 0.066 | 2.013 | 0.045 |
| Motivation (X) -> Self-Confidence (M) | 0.269 | 0.273 | 0.084 | 3.216 | 0.001 |
| Motivation (X) -> Self-Confidence (M) -> Decision-Making (Y) | 0.230 | 0.233 | 0.075 | 3.074 | 0.002 |

Furthermore, the results of the path analysis are: 1) the effect of motivation has a positive and significant effect on self-confidence, namely P-Values 0.001; 2) the effect of motivation has a positive and significant effect on decision-making, namely P-Values 0.045; 3) the effect of self-confidence has a positive and significant effect on decision-making, namely P-Values 0.000; 4) the effect of motivation on decision-making through self-confidence, namely P-Values 0.002.

Discussion

Based on the findings of this research, motivation influences decision making either directly or through self-confidence. These results show that the higher the level of motivation a futsal goalkeeper has, the better his ability to make decisions while on the field. The results of this research are in accordance with the results of previous research which explains that a goalkeeper's motivation can encourage them to look for the best solution in different situations when playing futsal (Alves

et al., 2022; Choi, 2023). Other findings also show that motivation influences self-confidence. In the next stage, this self-confidence influences decision making among futsal goalkeepers. These results explain that the motivation to become professional athletes, they tend to have greater self-confidence in their ability to achieve achievements and overcome challenges, of course by not letting the ball enter the goal. Analysis of this performance, it has been found in previous research that goalkeepers who have high experience will choose to make the decision to move early during a penalty and have a greater chance of successfully blocking the ball (Noël et al., 2021). Meanwhile, experience has a positive relationship with the level of motivation, so that the more competitions an athlete participates in, the more motivation will increase (Hussein, 2023). In the discussion section of the research results of Noël et al. (2021), the goalkeeper who moves at the start is due to having strong self-confidence, which will ultimately affect the goalkeeper's performance, namely the chance of successfully blocking the ball is very high.

Then, the level of self-confidence is also directly caused by the athlete's experience in participating in competitions. This statement was found in this research that motivation directly influences the self-confidence of futsal goalkeepers in various ways, such as increasing training time at school or university and looking for a team for match trials. This explanation is supported by previous research. One method for increasing achievement in futsal is to encourage athletes to increase their training time outside of their training schedule (Permadi et al., 2023; Syaifuddin et al., 2023). The more training and competition time they participate in, the more confident the goalkeeper will be in his own ability to make decisions quickly and correctly (Iusepolsky et al., 2022). The training method involves modifying a small side game of 3 versus 3 involving the goalkeeper (Alex et al., 2024). Thus, achievement motivation can increase decision-making in futsal goalkeepers directly and also through increased confidence (Brendon, 2022).

Previous research studies have proven that motivation can have an impact on athlete performance (Juita et al., 2024; Prayoga et al., 2024; Wibowo et al., 2024). Motivation factors towards decision-making of futsal goalkeepers must also be trained in their training programs, such as setting challenging but realistically achievable goals to increase motivation. For example, they aim to catch the ball's direction to improve reaction ability in certain situations on the field. Recognition of achievement and progress in technical and physical quality can be a strong driver to increase a goalkeeper's motivation (Bastias et al., 2021). It can be in the form of compliments from coaches and teammates, prizes from the organization or even awards in competitions. A goalkeeper should also be taught to be open to suggestions. Having an open attitude towards learning and developing and seeing failure as an oppor-

tunity to learn and grow can increase achievement motivation, indirectly affecting their skills. Another study shows that support from coaches, teammates, family support, and other close people can increase motivation by providing encouragement, support, or praise (Mandan et al., 2024).

Motivation and trust are interrelated psychological elements (Ita et al., 2022; Levine et al., 2022; Park & Jeon, 2023). The factor that increases self-confidence is when they have successful experience in training or previous matches. Each small success can reinforce the belief that they can perform the task as goalkeepers. Therefore, coaches must consider holding trials against teams whose playing qualities are lower than the team being coached, with the aim of producing a win to increase mental motivation and self-confidence before taking part in a long competition (Almeida et al., 2019). The coach must also teach how to form a realistic understanding of each goalkeeper's strengths and weaknesses and focus on mastering the necessary skills. Training models using positive reinforcement techniques, such as imagery, visualization exercises, or positive self-affirmations, can help increase self-confidence (Rozi et al., 2023). The training model has been proven to improve the skills of a goalkeeper, which will affect decision-making during matches.

By paying attention to the right training program such as challenging games, then environmental factors such as team support, coaches, organizations can increase the motivation and self-confidence of a futsal goalkeeper. The limitation of this research is the time used in the data collection process because this research is purely a type of quantitative research. Combining quantitative methods as primary data and qualitative methods using interviews to strengthen research results would be better.

Conclusion

This study reveals that motivation plays a vital role in mental health and impacts the ability of futsal goalkeepers. These results indicate that motivation affects the self-confidence of a goalkeeper, which in turn will positively affect decision-making. Motivation must be built and developed when the athlete chooses to be in the goalkeeper position. The conclusion is that the proper training method, coach support, team and environment must constantly be optimized to increase motivation. Furthermore, participating in trial matches and competitions at the regional and provincial levels is an effective initial method to develop and train self-confidence. Thus, suitable training methods, positive environmental support, and match experience that are often followed will affect the decision-making of futsal goalkeepers. In the end, a goalkeeper's better and improved skills will lead to becoming an elite athlete who will play in the professional futsal league and at the international level.

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Conflict of Interest

The researchers have no conflicts both with the researchers and the results of other studies.

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