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The Impact of the First Goal in the Final Result of the Futsal Match

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ABSTRACT

Among the many technical and tactical aspects of the behavior of players, the goals are the most studied. The goal is the key to success for teams and its analysis in all matches of a major futsal tournament (World Cup) that allows multiple assessments. The aim of this study was to analyze the impact of the first goal for the final result in the futsal match, identifying the team that scored the first goal of the match and the final result obtained by this team: win, draw or lose. We analyzed all the matches (n=306), in all the 7 Futsal World Cups (1989 to 2012) organized by Fédération Internationale de Football Association – FIFA. Data were obtained from the database on the site of the FIFA, through overviews of the official matches. Quantitative data were collected, in relation to the time that the goals were scored in the course of the matches. The results showed a significant effect ($F = 133.12$, $p = 0.001$) of first goals on final results of matches (win, draw, defeat); so that, there are significant difference between win matches with draw and defeat matches [both ($p = 0.001$)]. It is concluded that, the team that scored the first goal of the match presents a high probability of getting the winning.

Key Words: goal, futsal, World Cup, Win.

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INTRODUCTION

Futsal (also known as Indoor soccer) is a sport classified as Collective Sport or Collective Sports Game because it has the six invariants. Given to this category, these invariants were listed by Bayer (1): a ball or a similar implement, a game space, opponents, partners, a target to attack, another one to defend and specific rules. To be in this category implies, besides the invariants, presenting some similarities with other modalities which are also in the same classification, such as football, basketball, handball, water polo, and more. Also according to the author, these similarities were named from operating principles, which are divided into three principles of defense and three of attack. The principles of defense are: ball recovery, preventing the progression of the opposing team and protecting its own target. Those of the attack are: keeping the ball possession, progression towards the opponent target and finalization seeking the score or goal. The goal is the aim and consequently the most important aspect of the futsal match (2).

Among the many technical and tactical aspects of players behavior, the goals are the most studied. The goal is the key to success for the teams (3) and therefore its analysis in all matches in a big futsal tournament (e.g. world cup) allows for multiple assessments. These results were used by the coaches with the view of producing more effective training sessions about their teams. Additional analyses of the consecutive tournaments and comparison of the results can indicate trends in futsal evolution over time (4, 5).

The aim of this study was to analyze the impact of the first goal for the end result in the futsal match; identifying the team that scored the first goal of the match and the final result obtained by this team: win, draw or defeat; thus identifying what is the

probability of a team that scores the first goal of the match to be victorious.

Futsal is a recent team sport with a significant increase in popularity in recent years (6). Scientific knowledge about futsal has increased considerably. However, due to its recent emergence, there is still much to investigate, in various domains (7). Thus, this research is justified in terms of collaborating to learn more about the internal futsal dynamic, from a strategic perspective, identifying its peculiarities and therefore, pointing out the indicators which can serve in the training plan and the regulation of the competition (8).

MATERIALS AND METHODS

Subject. We analyzed all the matches of the World Cups organized by Fédération Internationale de Football Association - FIFA. World Cup 2012 (n=52); World Cup 2008 (n=56); World Cup 2004 (n=38); World Cup 2000 (n=40); World Cup 1996 (n=40); World Cup 1992 (n=40); World Cup 1989 (n=40); totalling 306 matches in 7 World Cups.

Procedure. The data were obtained from the database on the website of the FIFA (www.fifa.com) through official overviews of the matches. We collected quantitative data, which are related to the times the goals were scored in the course of the matches. Then, we analyzed the team that scored the first goal of the match and the final result obtained by this team: win, draw or lose. Data were catalogued in graphs and a structured table.

Statistical Analysis. For the presentation of the results we used descriptive and inferential statistics, consisting of frequency distribution for every World Cup and one-way ANOVA with Dunnett's C post-hoc (equal variance not assumed) for all World Cups. Statistical data were reproduced with Absolute Frequency (number of goals) and the Relative Frequency (percentage of

goals). During the analysis, the matches that finished in draw without goals were excluded (2 in total) and we analyzed only the goals scored during the normal time of 40 minutes.

RESULTS

The results in table 1 shows a significant effect ($F = 133.12$, $p = 0.001$) of first goals on final results of matches (win, draw, defeat); so that, there are significant deference between win matches with darw and defeat matches [both ($p = 0.001$)] {graph 1- (a)}.

The data in graph 1-(b) shows the results obtained in the matches of the Futsal World Cup 2012 and the relationship between the first goal scored and the final result of the match. In 71.15% of the matches (37 matches), the team that scored the first goal won the match; the match ended in draw in 13.46% of matches (7 matches), and the team that scored the first goal was defeated in 15.39% of the matches (8 matches).

The graph 1-(c) shows the results obtained in the matches of the Futsal World Cup 2008. In 73.21% of the matches (41 matches), the team that scored the first goal won the match; the match ended in draw in 14.29% of matches (8 matches), and the team that scored the first goal was defeated in 12.5% of the matches (7 matches).

The graph 1-(d) shows the results obtained in the matches of the Futsal World Cup 2004. In 76.32% of the matches (29 matches), the team that scored the first goal won the match; the match ended in draw in

5.26% of matches (2 matches), and the team that scored the first goal was defeated in 18.42% of the matches (7 matches). In 2 matches of this tournament were not scored goals in normal time of the match.

The graph 1-(e) shows the results obtained in the matches of the Futsal World Cup 2000. In 82.5% of the matches (33 matches), the team that scored the first goal won the match; no matches ended in draw; and the team that scored the first goal was defeated in 17.5% of the matches (7 matches).

The graph 1-(f) shows the results obtained in the matches of the Futsal World Cup 1996. In 67.5% of the matches (27 matches), the team that scored the first goal won the match; the match ended in draw in 12.5% of matches (5 matches), and the team that scored the first goal was defeated in 20% of the matches (8 matches).

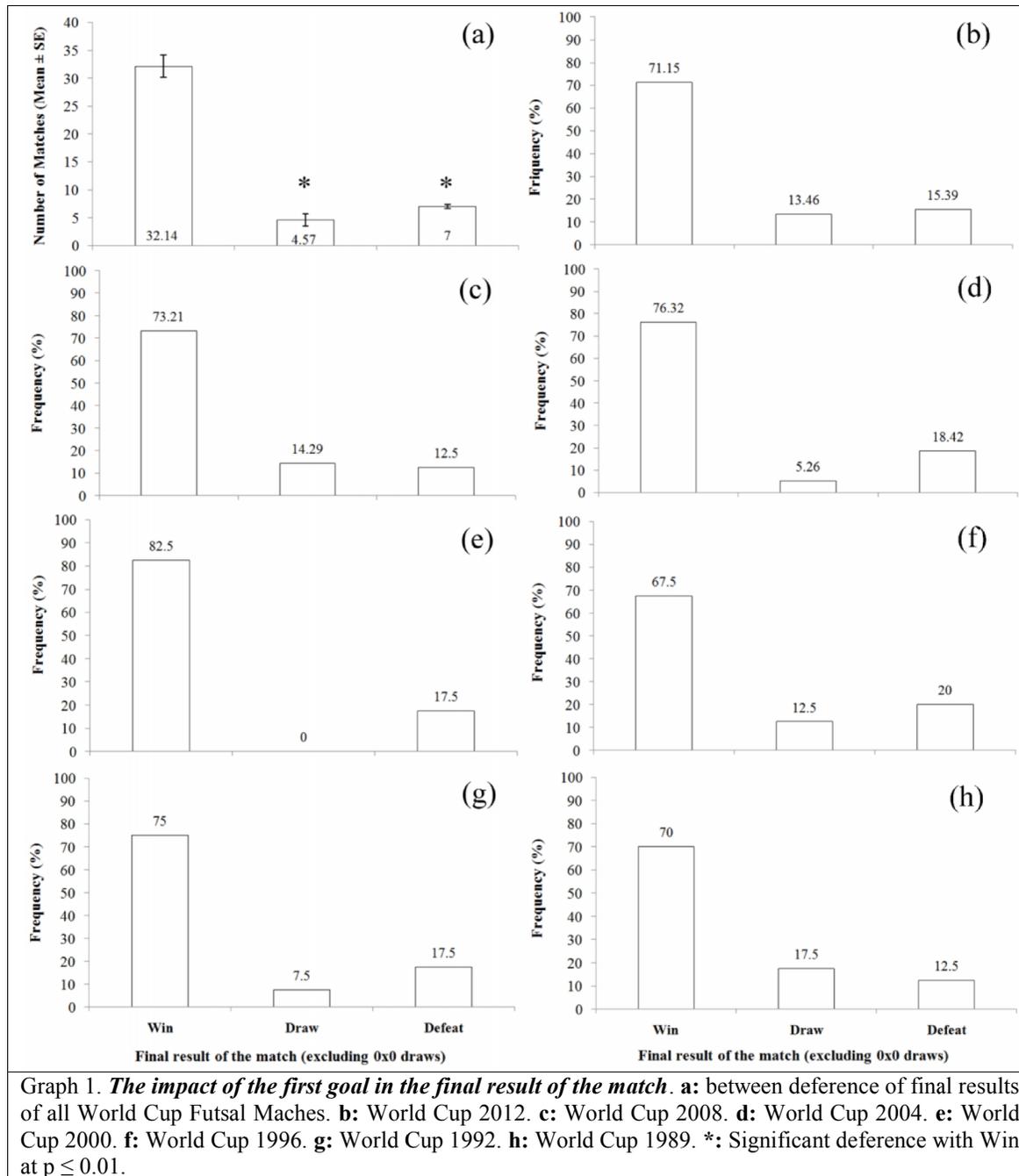
The graph 1-(g) shows the results obtained in the matches of the Futsal World Cup 1992. In 75% of the matches (30 matches), the team that scored the first goal won the match; the match ended in draw in 7.5% of matches (3 matches), and the team that scored the first goal was defeated in 17.5% of the matches (7 matches).

The graph 1-(h) shows the results obtained in the matches of the Futsal World Cup 1989. In 70% of the matches (28 matches), the team that scored the first goal won the match; the match ended in draw in 17.5% of matches (7 matches), and the team that scored the first goal was defeated in 12.5% of the matches (5 matches).

Table 1. one-way ANOVA for effect of first goal on final results of Futsal WordCup Matches

Statistics	Sum of Squares	df	Mean Square	F	Sig.
Between Groups ^a	3262.571	2	1631.286	133.123	.001**
Within Groups	220.571	18	12.254		
Total	3483.143	20			

a- groups: Win, Draw, Defeat. **- Significance at $p \leq 0.01$.



The table 2 shows a comparative relationship between the first goal scored

and the final result of the match in all the futsal World Cups.

Table 2. Comparison between the first goal scored and the winnings in Futsal World Cups

World Cup	2012	2008	2004	2000	1996	1992	1989
Aspect (excluding 0x0 draws)							
Matches won by the team scoring first (%)	71.15	73.21	76.32	82.5	67.5	75	70

DISCUSSION

According to data of the graphs 1 (a-h) and Table 1&2, the teams that scored the first goal in the Futsal World Cup matches showed a high probability of achieving victory (average of 73.66%). It was not possible to compare the results found in this study with those of previous studies because the similar studies of the futsal were not found in the literature, only few studies in football.

The futsal, like the football, is a game of invasion (as the occupation of space), the direct struggle for possession of the ball (as the dispute of the ball), the movement of circulation of the ball (as the predominant trajectories), predominantly, from the point of view of energetic-functional, intermittent efforts, alternated mixes (aerobic-anaerobic) (9). Thus, despite the evolution of futsal, its specialization in technical, tactical and energetic-functional terms, and a certain departure from the sport that gave rise to it - football - (10), the obtained results in this study will be compared with the results found in football, considering that despite a certain difference between the 2 modalities, the results are similar.

Saltas and Ladis (11) examined all the games of the Greek championship 1990-91 and found that the team that scored the first goal of the match came out victorious in 70.3% of all matches. In the study headed by Armatas *et al.* (12) the 64 matches of the World Cup 2006 were analyzed, the authors found that the team that scored the first goal of the match won in 73.21% of the matches analyzed.

Armatas *et al.* (12) studied the impact of the first goal in the final result of the game

in 240 matches in the Greek Super League 2006-2007 and found that in 71.43% the team that scored the first goal of the match won. Armatas *et al.* (10) also studied the impact of the first goal in the final outcome of the Greek Super League games from 2007-2008, of the 240 matches played in the competition, the team that scored the first goal of the match came out victorious in 74.2%.

Leite (13) analyzed the impact of the first goal scored for the final result of the match at Euro 2012. According to the data obtained, the team that scored the first goal of the match came out victorious in 75.86% of the matches (22 matches).

According to Armatas and Yiannakos (14), maybe the participation of very weak teams in World Cup but also the deterioration of physical condition of most teams (tournament conducted after all major leagues) resulted in a decrease reaction when a team conceded a goal. Probably the participation of weaker teams, mainly related to the technical aspect (but also considering the tactical and physical aspect), is certainly one of the possible causes. The deterioration of the physical condition, by itself, does not seem to explain it, since all the teams participating in the World Cup and Euro Cup participate in tournaments at the end of their leagues and have similar schedules. Another factor is that in futsal the physical aspect does not interfere directly in the obtained results because the substitutions are unlimited.

Regarding tactical issues probably after achieving a goal, the coaches change their tactics and give more defensive orientation in their teams (3). Although it does not

happen always, usually, the team scores a goal (in the first case), has a natural tendency to retreat somewhat their red lines and defend more. This forces the opposing team, which is at a disadvantage, to try to reverse the score. This fact has two characteristics:

- Exposes the team that is looking to reverse the score more, attacking the opposing team, and consequently suffer counterattack;
- Can also cause physical wear more pronounced in this team, which may favour a higher incidence of goals at the end of the match by the opposing team.

Theis (15) states that when a team scored first goal, presented improvement in performance and increased self-confidence. For the author, a futsal coach should have his players prepared tactically and psychologically, in order to be ready to face getting back in score. Thus, training of the team should include training matches with different number of players and time limit. Thus, the psychological aspect seems to be the main factor associated with the impact of the first goal in the final outcome of the futsal match. That is, the team that can score the first goal of the match improves its psychological aspect, while maintaining or improving its performance, as the team that suffered the first goal has a reduction in the psychological aspect

Bompa (16) states that the higher the player's level is, the bigger the demanded requirement will also be and therefore the stress during a game. According to Brandão (17), of the psychological point of view, stress is related to the activation of cognitive, psychological or mental activity. The author found the stress factors in

football players, saying that, in the modality, stress is a complex and multifunctional process that can negatively influence the performance of the athlete. Thus, having to try to return an adversely score, besides the physical wear, it can certainly cause the player's psychological strain.

Thus, the high probability of victory in favour of the team that scores the first goal in the match of futsal – like also in football – is linked to the physical, technical, tactical and psychological aspects. In futsal teams of top-level, the team that is well trained and able to maintain a good performance in all these respects tend to be more likely to perform better in the match. According Garganta (18), the final result of a player or team in sportive games has a multifactorial character. Therefore, sports performance can be attributed to a high degree of specialization and development of the physical, technical, tactical and psychological parameters.

CONCLUSION

According to the obtained results, scoring the first goal in a futsal match represents a high possibility of winning (average of 73.66%).

Regarding the characteristics that may explain the impact of the first goal for the final outcome of the match, all the aspects of the team sport must be present: physical, technical, tactical and the psychological. According to similar literature (in football), in futsal matches the psychological aspect seems to be the main aspect responsible for the victory of the team that scored the first goal. More studies should be conducted to compare the results and to infer conclusions.

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تازه‌های علوم کاربردی ورزش

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تأثیر گل اول در نتیجه نهایی مسابقه فوتسال

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چکیده

در میان بسیاری از وجوه تکنیکی و تاکتیکی رفتار بازیکنان، اغلب گل زدن‌ها مورد مطالعه قرار گرفته‌اند. گل زدن برای موفقیت تیم‌ها و تحلیل آن در همه مسابقات یک تورنومنت مهم فوتسال (جام جهانی) دارای اهمیت است بطوریکه ارزیابی متعددی را مهیا می‌کند. هدف از تحقیق حاضر تحلیل تأثیر گل اول بر نتیجه نهایی در مسابقه فوتسال بود، به عبارتی تیمی که گل اول را می‌زند و نتیجه نهایی بدست آمده توسط این تیم- برد، قرعه، یا باخت- تعیین گردد. همه مسابقات (n = ۳۰۶) ۷ جام جهانی اخیر فوتسال (۲۰۱۲-۱۹۸۹) سازماندهی شده توسط FIFA با مرور بازی‌های رسمی مورد تحلیل قرار گرفت. داده‌ها از پایگاه داده سایت FIFA گرفته شد و همه مسابقات رسمی بازنگری شد. داده‌های کمی با توجه به زمانی جمع‌آوری شد که گل‌ها در دوره مسابقات ثبت شدند. نتایج اثر معنادار ($F = 12/133$, $p = ۰/۰۰۱$) گل اول بر نتیجه نهایی مسابقات (برد، باخت، و قرعه) را نشان داد؛ بطوری که تفاوت معناداری میان مسابقات برده شده با مسابقات باخت و قرعه وجود داشت (هر دو $p = ۰/۰۰۱$). با توجه به نتایج، تیمی که گل اول مسابقه را ثبت نمود، یک احتمال بالای برد را نیز نشان داد.

واژگان کلیدی: گل، فوتسال، جام جهانی، برد.

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