

IS THE BEST DEFENSE A GOOD OFFENSE? COMPARING THE BRAZILIAN AND ITALIAN SOCCER STYLES

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Abstract:

The main purpose was to test the mythical belief that Brazilian soccer teams possess an offensive style of play while Italian teams rely on a defensive game plan. A dominant rationalization for these perceived differences is rooted in the cultural and social differences between the two nations. Data (goals scored, goals conceded, and points per game) from international competitions (World Cup), and from the local premier leagues (Brazilian and Italian) were descriptively and inferentially analyzed. Descriptive and inferential analyses revealed that: (1) Brazilian teams scored more goals per game than Italian teams at both the national and league level; (2) the relationship between goals scored and performance (points per game) was significant and of strong magnitude for Italian teams only ($r=.84$); and (3) strong defense is essential for successful performance in the World Cup for both the Brazilian and Italian national teams. Altogether, there was evidence of differences in Brazilian and Italian playing styles in regard to offensive (goals scored) and defensive (goals conceded) outcomes. Specific avenues for future directions are offered.

Key words: *soccer, expertise, cross-cultural research, mythical beliefs*

Introduction

Soccer is the most popular sport in the world (Rue & Salvessen, 2000). Millions of people play the game around the globe, and the World Cup (Mondial) is one of the most watched sporting events (Dyte & Clarke, 2000; Jacklin, 2005). Among the 174 countries affiliated with the Fédération Internationale de Football Association (FIFA) (more than with the United Nations; Pollard & Reep, 1997), only eight nations have won the trophy (Argentina, Brazil, England, France, Germany, Italy, Spain, and Uruguay). Noteworthy, Brazil and Italy have combined to win nine out of 18 World Cup finals, and are considered the most successful soccer nations in the world, followed closely by Germany with three titles in seven final appearances. Although both countries have dominated world competition, there is a notion that they have established their supremacy by adopting different strategies of playing soccer (offensive versus defensive). To this extent, there is a general agreement that Brazil focuses on offensive game tactics. Such perception may also reflect nostalgic feelings towards Brazil's 1970 squad lead by the renowned Pele. Italy, conversely, is known for its emphasis on a defensive game style (Yates, North, Ford, & Williams, 2006).

Sport is a microcosm of society (Eitzen, 2009; Snyder & Spreitzer, 1974), and thus the different styles of play adopted by Brazilians and Italians may also reflect the idiosyncratic cultural values of the Brazilian and Italian societies. Brazilians are driven by the "joga bonito" (i.e. "playing beautifully") approach to the game, while Italians may be compared to the highly organized and disciplined Roman army. Metaphorically, Brazilians play like "Dionysius" (i.e. beauty-driven) while Italians play like "Apollo" (i.e. reason-driven) (see Maranhao, 2007). The present study is an initial attempt to examine, through analysis of empirical statistical data, whether the notion that Brazilian soccer teams play offensively and Italians defensively is a mythical social belief.

Previous studies have examined the relationship between styles of play, goals scored and conceded, and performance in soccer (Dyte & Clarke, 2000). Dixon and Robinson (1998), for instance, observed that the numbers of goals scored and conceded by teams in a specific game are a result of the overall offensive and defensive qualities of each team. A recent topic of interest among scholars in the sports science domain (Norman, 1998), the study of the efficacy of different strategies of playing soccer (i.e. offensive vs. defensive) has practical applications on

the betting market, especially for fans interested in predicting the number of goals scored and conceded in soccer matches (Hirotu & Wright, 2003). Additionally, many coaches have reconsidered the use of statistics and scientific analysis to gain advantage over their opponents in important soccer tournaments that bring international acclaim and financial rewards to the winners (Pollard & Reep, 1997).

Brazil and Italy are the most acclaimed soccer nations in terms of winning the World Cup. The popularity of the sport in both countries is remarkable. Soccer dominates the cultural discourse, and conversations about tactical and technical components of teams and players are regular occurrences and part of the Brazilian and Italian "way of life" (Guschwan, 2007; Salmela & Moraes, 2003). Although both countries are culturally soccer-oriented, there is uniqueness in considering the components that are crucial for a winning team. Brazilians believe in the famous, mythical saying: "The best defense is a good offense." This frame of mind lends itself to the belief that the game should be played with an emphasis on the offensive aspect, thus supporting and encouraging creativity and flexibility (Moraes & Salmela, 2009). On the other hand, Italians are known for emphasizing the defensive aspect of the game, signifying an organized, structured, and impenetrable defense (Balyan, et al., 2007; Luhtanen, Belinskij, Haeyrinen, & Vaenttinen, 2001). Aligned with this notion, Yates et al. (2006) analyzed performances of recent World Cup winners and found that Italy (winners of the 2006 World Cup): (a) scored less goals, (b) had fewer number of goal attempts, and (c) conceded half as many goals as Brazil (the 2002 World Cup winners). Derived from these findings, it is suggested that Italy and Brazil relied on different game tactics in their path to winning the most prestigious soccer tournament in the world. Specifically, whereas the Italian squad relied on a sound defensive strategy, the Brazilian team emphasized creating offensive plays.

At the player level, differences between the Brazilian and Italian style of playing are evident. Over the last ten years, three Brazilian offensive players (Ronaldo, Ronaldinho, and Kaka) received the FIFA World Player of the Year award, while one defensive Italian player (Cannavaro) was awarded the same prize (see FIFA.com). These differences may reflect the perceptions concerning the preferred strategy of the teams and players from the respective countries. However, the Brazilian mythical belief that "the best defense is a good offense" has not been reliably tested, nor has the Italian assumption that winning teams must be defense-oriented. Accordingly, such views may be mythical as opposed to fact (Pollard & Reep, 1997).

Within the sport context, many coaches, athletes, and supporters tend to disregard scientific

investigations, preferring to rely on anecdotal evidence and self-beliefs (Pollard & Reep, 1997). An example of a myth that has been examined in soccer is the belief that a fouled player should not take the impending penalty kick, since his/her chances of scoring are reduced. This myth was not supported in a recent analysis (Kuss, Kluttig, & Stoll, 2007). In fact, evidence suggests that the success rate for penalty kicks is not contingent on player selection for the penalty kick (i.e. the fouled player or another player from the team). Another example of a myth buster is the "hot hand belief" in sports, in which the common notion is that successful performance leads to a subsequent successful performance (i.e. streak shooting) (see Filho, Moraes, & Tenenbaum, 2008; Gilovich, Vallone, & Tversky, 1985). To this extent, a meta-analytical review, covering 29 years of research in the sport setting, found little support for the hot hand belief (see Avugos, Koppen, Czieskowski, Raab, & Bar-Eli, 2013). Noteworthy, however, some argue that the hot hand belief (and other myths in sport) should not be analyzed under statistical lenses only (Gula & Raab, 2004). Instead, such beliefs should be considered as "contextual information" amid other behavioral cues (e.g. scout data) used by coaches and athletes as heuristic roots to inform decision-making during moments of action (Raab, Gula, & Gigerenzer, 2012). In all, it is important to investigate and empirically test mythical beliefs, despite the general tendency in society to maintain myths and traditional beliefs given their substantial cultural meaning (Bar-Eli, Avugos, & Raab, 2006).

In view of the aforementioned, the aim of the study was to factually test the mythical belief regarding the different styles of play utilized by Brazilian and Italian soccer teams. Although evidence suggests differences between Brazilian and Italian *national* teams, examinations of the playing style adopted by the Brazilian and Italian teams are limited, or non-existent, at the *league* level. The importance of studying at the league level centers on the notion that cultural beliefs are reflected in the way people manifest themselves in sports, dance, and other forms of social interactions (Wachelke, 2008). Indeed, research shows that social representation of soccer and coaching methods (e.g. talent selection, scouting strategies, training principles) are influenced by a shared understanding of soccer philosophy (Moraes & Salmela, 2009). Thus, these differences should be reflected, not only at the national level, but also at the league level.

The overarching aim, therefore, was to elicit possible differences between Brazilian and Italian soccer styles at both the national and league level and to determine whether successful Brazilian teams are indeed more offense-oriented and Italian winning squads more defense-oriented. The emphasis was on contrasting the pros and cons of a defensive and offensive approach to soccer. Specifically, the

purpose was to examine the myth that success in the Brazilian league is dependent on the number of goals scored (i.e. attacking style of play), whereas success in the Italian league is mainly dependent on the number of goals conceded (i.e. defensive style of play). At the national level, the aim was to test these differences between the two national teams in the World Cup in general and in successful performance in particular (i.e. when reaching the final). The importance of investigating high-level performance has been emphasized by various scholars interested in examining the underlying mechanisms associated with expert performance in sports and in other domains of human performance (Ericsson, Krampe, & Tesch-Römer, 1993).

Derived from statistical data in international competitions, including the World Cup, and from the general notion that the two nations have different styles of play, it was hypothesized that: (1) the Brazilian national team scored and conceded more goals per game than Italy in general; (2) the Brazilian national team scored and conceded fewer goals per game than Italy when reaching the finals; (3) more goals were scored in the Brazilian league than in the Italian league; and (4) goals scored is a better predictor of points per game in the Brazilian league compared to the Italian league. This is congruent with the notion that Brazilian culture believes that success in soccer is dependent upon an offensive game style, whereas Italian society links success to a defensive game style (Hamil, Morrow, Idle, Rossi, & Faccendini, 2010; Maranhao, 2007).

Methods

National data

Brazilian and Italian data from the World Cup, throughout the 80 years of its existence, were obtained from FIFA.com. Specifically, the data consisted of (a) goals scored, (b) goals conceded, and (c) mean points per game. The World Cup is considered the highest stage of competition in professional soccer at the national team level. Both teams have consistently competed in the tournament, and have achieved much success. Brazil has competed in all 19 FIFA World Cups, while Italy has participated in 17 (Italy did not participate in 1930 and 1958). Brazil has reached the World Cup finals seven times (winning five times), while Italy has advanced to the finals six times (winning four times). In addition, other studies have also utilized data from the World Cup to examine moderating variables associated with soccer performance (Brown, et al., 2002; Dyte & Clarke, 2000).

League data

Data pertaining to the Brazilian and Italian premier leagues (i.e. first division) were collected

from 2003 to 2008 (i.e. six soccer seasons). The rationale for including only data from the first division was based on the notion that data gathered from higher-level competitive settings are more reliable than data obtained from lower-level settings (Ericsson, 1996). Furthermore, offensive and defensive parameters were shown to be more prominent in higher-level teams than in lower-level teams (Dixon & Robinson, 1998). It is important to note that both the Brazilian and Italian league are ranked in the top 5 in the world (see IFFHS.de). Additionally, only data from 2003 and onward was analyzed, given that the Brazilian league was created in this year. Prior to 2003, the Brazilian league was organized differently (i.e. tournament structure), and thus comparison with the Italian league would not be feasible. Furthermore, during the period 2003–2008, the leagues and rules remained relatively stable. Specifically, there were no substantial changes in league characteristics (e.g. number of teams, rules, scoring) or in the official soccer rules.

Data were obtained online from two statistical websites (i.e. infobola.com.br and soccerstats.com), and consisted of (a) mean points per game (MPG), (b) goals scored (GS), and (c) goals conceded (GC). Noteworthy, goals scored, goals conceded and points accumulated have been used to analyze defensive and offensive strengths of teams in previous studies (Hirotsu & Wright, 2003). Examining aggregated data gathered from online sources is among the methodological approaches adopted by scholars interested in examining sporting events and different playing styles (Pollard & Gómez, 2009). Although the leagues were not equivalent in every aspect, their fundamentals were similar. In both countries, the teams played in a league-type competition, in which each team played against each other team twice (i.e. home and away). Both leagues adopted the FIFA regulations in which three points were allocated for a win, one point for a draw, and zero points for a loss. Points accumulated throughout the season determined: (a) the league champion, (b) the Italian teams that will participate in either the UEFA Championship league or UEFA Cup and the Brazilian teams that would advance to the Libertadores Cup or the South American Cup, and (c) the teams relegated to the respective second divisions.

Data analysis

To correct for the different number of games throughout the seasons and between the leagues, average scores were computed. Descriptive statistics of mean goals scored (GS) and goals conceded (GC) for each league and per season were used to compare the national teams and the Italian and Brazilian leagues. Independent *t*-tests were performed to test any potential statistical mean differences be-

tween two teams. Multiple linear regression analysis was performed to account for the MPG variation that was associated with the GS and GC in the Brazilian and Italian leagues. Alpha level for all statistical analyses was set at .05.

Noteworthy, the choice of a linear rather than logistic estimation relied on a “judgment call” based on several conceptual arguments and evolved by the authors during a number of peer-debriefing meetings (see APA Publications and Communications Board, 2008). First, we sought to be consistent in using aggregated scores for all measures. Hence, when interpreting the coefficients from the estimated model, one should consider the change in Y (outcome variable) as related to *one* unit increase in X. Second, a logistic solution was not deemed appropriate in relation to our interest in examining the differences in playing styles (Brazil and Italy) over a number of seasons. Specifically, a logistic solution would warrant the analysis of every season separately (as the ranks changed), resulting in a discontinued data matrix and ultimately forcing us to limit the scope of our study to a much narrower number of seasons. Finally, and perhaps more importantly, ordinal regression was not deemed appropriate as it is built around the assumption that the distance between numbered ranks are of the same magnitude (1 and 2; 2 and 3; 3 and 4) (Bryman & Cramer, 2011). For instance, the distance between the first- and second-place team may not be of the same magnitude of the distance between the 19th and 20th place team. Likewise, the challenge of scoring one goal per game is different from the challenge of scoring two or more goals.

Results

National team data

Descriptive examination of the national team data shows that Brazil scored and conceded more goals than Italy in general (see Table 1), therefore lending support to the first hypothesis. In addition, Brazil’s final position (M=4.47; SD=.83), on average, was higher (i.e. smaller M) and more consistent (i.e. smaller SD) than Italy’s (M=6.76; SD=6.48; Table 1).

Testing mean differences using independent samples *t*-tests revealed that only one significant difference emerged, that of average number of goals scored per game: $t(34)=2.48, p<.05$, and Cohen’s $d=0.85$. Average amount of goals conceded and final position were not significantly different between the two national teams. Inferential analysis revealed that (a) Brazil scored more goals than Italy when reaching the World Cup finals ($t(11)=3.48, p<.05$), and Cohen’s $d=2.10$; and (b) there was no clear pattern regarding goals conceded for both national teams when reaching the finals ($t(11)=.69, p=.50$).

League data

As shown in Table 2, since 2003 more goals per game were scored each season (and overall) in the Brazilian league than in the Italian league (only goals scored data is presented given that goals conceded is a mirror image of goals scored). To test the hypothesis that there are more goals scored in the Brazilian league than in the Italian league, independent samples *t*-tests were conducted for each season. The results revealed one significant difference for the 2005 season, $t(40)=3.57, p<.05$, and another for the overall average, $t(243)=3.28, p<.05$. In addition, standardized mean differences were computed (d; Cohen, 1988) between the two leagues for each season and the overall value across seasons. The average d was 0.43, indicating a moderate effect size. The smallest effect size obtained was for the 2004 season ($d=0.16$) and the greatest effect size was for the 2005 season ($d=1.11$). Noteworthy, the observed non-significant findings regarding goals scored when comparing leagues by year (as opposed to the overall value) may reflect a power issue caused by the small sample size.

Linear regression analysis with associated variance inflation factor ($VIF<3$) revealed that multicollinearity threats were not a major concern in the study. More specifically, to test the fourth hypothesis, multiple linear regression analysis was performed to account for the variation of points per game (MPG) by the goals scored (MGS) and goals conceded (MGC). Correlation analysis revealed that MPG and MGS were highly correlated with MPG for both leagues. However, MGS and MGC were

Table 1. Descriptive statistics at the national team level

	Brazilian team			Italian team		
	median	M	SD	median	M	SD
POS	4	4.47	0.83	5	6.76	6.48
GS	10	11.05	1.30	8	7.35	3.31
GC	4	4.63	0.60	5	4.29	0.48
GS/G	2.0	2.12	0.79	1.6	1.57	0.49
GC/G	0.83	1.06	0.72	0.86	1.03	0.56

Note. POS = position; GS = goals scored; GC = goals conceded; GS/G = goals scored per game; GC/G = goals conceded per game.

Table 2. Mean goals scored (MGS) per game and per season for the Brazilian and Italian leagues (2003–2008)

MGS per season	Brazilian League		Italian League		df	t	d
	M	SD	M	SD			
2003	1.44	0.29	1.28	0.36	40	-1.48	0.50
2004	1.39	0.31	1.33	0.42	40	-0.49	0.16
2005	1.57	0.25	1.26	0.29	40	-3.57*	1.11
2006	1.35	0.40	1.27	0.23	37	-0.77	0.25
2007	1.38	0.28	1.27	0.36	38	-1.0	0.32
2008	1.36	0.20	1.28	0.34	38	-0.96	0.31
Overall	1.42	0.36	1.28	0.27	243	-3.28	0.43**

*p<.05; **p<.01

Table 3. Correlations between points per game, goals scored and goals conceded for each league

Measure	MPG	MGS	MGC
1. MPG	1	.68**	-.70**
2. MGS	.84**	1	-.13
3. MGC	-.79**	-.56**	1

*p<.05; **p<.01

Note: Intercorrelations for the Brazilian League (n=130) are presented above the diagonal. Intercorrelations for the Italian League (n=115) are presented below the diagonal. MPG = mean of points per game; MGS = mean of goals scored; MGC = mean of goals conceded.

Table 4. Multiple linear regressions where MGS (mean goals scored), MGC (mean goals conceded), league, league x MGS, and League x MGC were regressed on MPG (mean points per game).

Variables in Model	β	SE	β*
MGS	.67*	.04	.61
MGC	-.64*	.05	-.54
LEAGUE	.08	.15	.12
LEAGUE x MGS	-.04	.06	.08
LEAGUE x MGC	.02	.07	.03
(Constant)	1.29*	.11	--

*p<.05; R²= .84

Note.: MGS = mean goals scored; MGC = mean goals conceded; LEAGUE x MGS = interaction between league and mean goals scored; LEAGUE x MGC = interaction between league and mean conceded;

moderately and negatively correlated (r=-.48, p<.05) in the Italian league but very weakly correlated in the Brazilian league (r=-.08, p>.05). This may lead to a different prediction pattern between the two leagues. Therefore, league membership (0=Italy; 1=Brazil) and the interaction terms between the league membership and MGS and MGC were included in the regression model (i.e. league × MGC, league × MGS). Consequently, there were five predictors in the regression model. Residuals were ran-

domly dispersed around the independent variable (X-axis), thus indicating that the assumptions for linear regression modeling were satisfied. Results, as shown in Table 3, revealed that MGS and MGC were significant predictors of MPG, while league membership and the two interaction terms were not significant. Non-significant interaction terms suggested that the relationship between (a) MPG and MGS and (b) MPG and MGC were similar for both leagues. Five predictors accounted for 85% of the explained variance in MPG. However, the regression model including only MGS and MGC explained 84% of the variation in MPG. This finding suggests that MGS and MGC were important predictors while the other three added little to the prediction. Comparison of standardized slopes suggested that MGS (β=.61) was a stronger predictor of MPG when compared to MGC (β=-.54).

Discussion and conclusions

The purpose of the study was to analyze the differences between the Brazilian and Italian soccer styles at the national and league levels. Specifically, we examined the notion that the successful Brazilian teams display an attacking style of play, while the Italian teams succeed because of a strong defensive approach to the game.

At the national level, findings indicated that the Brazilian national squad scored more goals (per game) than the Italian team. There was no significant difference between the national teams regarding goals conceded (per game). Follow-up analysis showed that the Brazilian squad scored more goals than the Italian team when reaching the final, while a clear pattern did not emerge in the number of goals conceded. These findings support the notion that Brazilian national teams are offense-oriented in nature and tend to place greater emphasis on scoring (Maranhao, 2007; Salmela, Marques, Machado, & Durand-Bush, 2006; Yates, et al., 2006). Indeed, the Brazilian approach to the game is influenced by shared beliefs regarding the importance of “joga bonito” (i.e. “playing beautifully”) and the notion that

“the best defense is a good offense”. Thus, soccer is much more than a popular game (Kuper, 1994) and the analysis of cultural, political, and economical characteristics of countries may help to explain why countries play the game so differently.

The notion that the Italian national teams are more defensive than the Brazilian teams was not supported. Thus, it might be that the decisive factor in reaching the final stages of the World Cup is the number of goals conceded, since both teams conceded a similar number of goals during the tournaments. In fact, defensive skills have been found to be crucial for successful performance in the World Cup (Suzuki & Nishijima, 2004). Furthermore, in a study conducted in the Norwegian soccer league, the authors examined the influence that offensive and defensive tactics have on performance (Tenga, Holme, Ronglan, & Bahr, 2010). Results revealed that successful performance is dependent on a balanced defensive style of play, as well as on counter-attack and ball possession strategy. Hence, teams that have a balanced defensive style of play and consequently concede fewer goals are more likely to be successful, regardless of their offensive power (i.e. number of goals scored).

At the league level, findings confirmed the notion that the Brazilian teams are more offense-oriented and score more goals than the Italian teams. From 2003 to 2008, more goals were scored per year and overall, in the Brazilian league than in the Italian league. These findings are in accordance with the popular worldwide belief that Brazilians place a greater emphasis on the offensive aspects of the game as compared to Italians (Hamil, et al., 2010; Maranhao, 2007). Furthermore, this finding is congruent with research in sociology of sport and cross-cultural psychology suggesting that Brazilian players manifest themselves by trying to emulate an offensive game style (Moraes & Salmela, 2009; Wachelke, 2008).

Noteworthy, the non-observance of statistical findings contrasting the number of goals conceded in the Brazilian and Italian leagues may reflect the high international mobility in modern sports (Stambulova & Alfermann, 2009). In other words, the Italian league is cosmopolitan in nature, given that players from all over the world play in Italian clubs. Thus, the Italian league is a “melting soccer pot” rather than a reliable picture of the Italian culture, values, and game style. Therefore, future studies should control for the number and nationality of international players, as these factors may interfere with preferred game style, team dynamics, and performance expectations (Carron, Eys, & Burke, 2007).

Regression analysis revealed that both the goals scored and the goals conceded are significant determinants of performance (i.e. points per game) in the Brazilian and Italian national league.

However, league affiliation failed to moderate between the goals scored or the goals conceded and points per game. Thus, a balanced style of play is a prerequisite for succeeding in both leagues, supporting previous findings conducted on other European soccer leagues (Tenga, et al., 2010).

To summarize, this study expands the literature by directly comparing Brazilian and Italian soccer teams at the national (i.e. in general and in successful performance) and league level, and by addressing the mythical belief that Brazilian soccer is offense-oriented, while Italian soccer is defensive in nature. Results from the current study suggest that (a) the Brazilian teams score more goals than the Italian teams (at the national and league level), (b) a balanced and strong defense is essential for successful performance in the World Cup as suggested by the analysis of the two most successful nations in the history of the tournament, and (c) scoring goals “makes the difference” in the final ranking in the Italian league. Overall, the mythical belief was supported, as both the Brazilian national team and Brazilian league teams were found to score more goals than their Italian counterparts. Finally, this study is in line with the notion of “equifinality”, which suggests that there are multiple pathways for reaching success (Côté, Baker, & Abernethy, 2007; Royce & Diamond, 1980).

This study is not without limitations. First, our analytical approach did not consider all possible nuances in the data. Specifically, we used linear regression and our analysis was based on aggregated scores. Although such an approach allowed us to observe reliable statistical relationships in the data matrix, it is important to note that non-linear relationships, as well as ordinal and/or multinomial effects, were not accounted for. Furthermore, a number of potential moderators were not established *a priori* and thus not used as covariates in our analysis. In this regard, the assessment of potential moderators of team performance, such as home field advantage and number of international players (particularly in the Italian league), could have yielded more robust findings. Controlling for the competitiveness (difficulty) of the respective leagues along with its respective variability (range of points) were also not considered in the computations and thus represent limitations of the study. Caution is also warranted in generalizing the findings to other teams and soccer styles in general, particularly to other traditional and contemporary soccer powerhouses (e.g. Argentina, Germany, and Spain).

In view of these limitations, we echo the voice of other scholars regarding the need to control for potential moderators of performance in regard to the performance of soccer teams (see Heuer & Rubner, 2012). Moreover, studies considering other analytical approaches (e.g. stochastic methods, Bayesian

models) may allow for a deeper understanding (i.e. beyond traditional null hypothesis testing) of the relationship between offense, defense and objective performance in team sports. Temporal analysis (e.g. longitudinal growth-models) and ecological approaches (e.g. course of action frameworks; see Bourbousson, Poizat, Saury, & Sève, 2012) may also yield further insights pertaining to the development of effective tactics in soccer. Further avenues may also involve the analysis of hierarchical data by examining the effects of team affiliation on offensive and defensive statistics (e.g. goals scored,

goals conceded, ball possession). Furthermore, future studies should examine younger players to investigate the: (a) roots of the differences among successful soccer nations, and (b) cultural and social variability of player development. Finally, from a meta-cognitive standpoint, we encourage scholars to continue testing mythical beliefs and exploring the antecedents, moderators and mediators, as well as the outcomes (pros and cons) of ecological rationality and simple heuristics (Hutchinson, & Gigerenzer, 2005; Raab, et al., 2012; Todd & Gigerenzer, 2007).

References

- APA Publications and Communications Board Working Group on Journal Article Reporting Standards. (2008). Reporting standards for research in psychology: Why do we need them? What might they be? *American Psychologist*, 63, 839-851. Retrieved from <http://www.apa.org/pubs/authors/jars.pdf>
- Avugos, S., Koppen, J., Czienskowski, U., Raab, M., & Bar-Eli, M. (2013). The "hot hand" reconsidered: A meta-analytic approach. *Psychology of Sport and Exercise*, 14, 21-27. doi:<http://dx.doi.org/10.1016/j.psychsport.2012.07.005>
- Balyan, M., Vural, F., Çatıkkas, F., Yücel, T., Afacan, S., & Atik, E. (2007). Technical Analysis of 2006 World Cup Soccer Champion Italy. In *VIth World Congress on Science and Football*, Book of Abstracts, January 15-20, 2007, Antalya, Turkey.
- Bar-Eli, M., Avugos, S., & Raab, M. (2006). Twenty years of "hot hand" research: Review and critique. *Psychology of Sport and Exercise*, 7, 525-553.
- Bourbousson, J., Poizat, G., Saury, J., & Sève, C. (2012). Temporal aspects of team cognition: A case study on concerns sharing within basketball. *Journal of Applied Sport Psychology*, 24, 224-241. doi: <http://dx.doi.org/10.1080/10413200.2011.630059>
- Brown, T.D., Van Raalte, J.L., Brewer, B.W., Winter, C.R., Cornelius, A.E., & Andersen, B. (2002). World Cup soccer home advantage. *Journal of Sport Behavior*, 25, 134-144. Retrieved from <http://search.proquest.com/docview/619721117?accountid=4840>
- Bryman, A., & Cramer, D. (2011). *Quantitative data analysis with IBM SPSS 17, 18 and 19: A guide for social scientists*. Routledge-Cavendish/Taylor & Francis Group.
- Carron, A.V., Eys, M.A., & Burke, S.M. (2007). Team cohesion: Nature, correlates, and development. In S. Jowette & D. Lavalley (Eds.), *Social psychology in sport* (pp. 91-102). Champaign, IL: Human Kinetics.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: L. Erlbaum Associates.
- Côté, J., Baker, J., & Abernethy, B. (2007). Practice and play in the development of sport expertise. In G. Tenenbaum & R.C. Eklund (Eds.), *Handbook of sport psychology* (3rd ed.; pp. 184-202). New York: Wiley.
- Dixon, M.J., & Robinson, M.E. (1998). A birth process model for association football matches. *Statistician*, 47, 523-538.
- Dyte, D., & Clarke S.R. (2000). A ratings based poisson model for World Cup soccer simulation. *The Journal of the Operational Research Society*, 51, 993- 998.
- Eitzen, D. (Ed.) (2009). *Sport in contemporary society* (8th ed.). Boulder, CO: Paradigm Publishers.
- Ericsson, K.A. (1996). The acquisition of expert performance: An introduction to some of the issues. In K.A. Ericsson (Ed.), *The road to excellence: The acquisition of expert performance in the arts and sciences, sports, and games* (pp. 1-50). Mahwah, NJ: Erlbaum.
- Ericsson, K.A., Krampe, R.T., & Tesch-Römer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review*, 100, 363-406.
- Filho, E.S., Moraes, L.C., & Tenenbaum, G. (2008). Affective and physiological states during archery competitions: Adopting and enhancing the probabilistic methodology of individual affect-related performance zones (IAPZs). *Journal of Applied Sport Psychology*, 20, 441-456. doi:10.1080/10413200802245221
- Gilovich, T., Vallone, R., & Tversky, A. (1985). The hot hand in basketball: On the misperception of random sequences. *Cognitive Psychology*, 17(3), 295-314.
- Gula, B., & Raab, M. (2004). Hot hand belief and hot hand behavior: A comment on Koehler and Conley. *Journal of Sport & Exercise Psychology*, 26, 167-170.
- Guschwan, M. (2007). Riot in the curve: Soccer fans in twenty-first century Italy. *Soccer & Society*, 3, 250-266.

- Hamil, S., Morrow, S., Idle, C., Rossi, G., & Faccendini, S. (2010). The governance and regulation of Italian football. *Soccer & Society, 11*, 373-413.
- Heuer, A., & Rubner, O. (2012). How does the past of a soccer match influence its future? Concepts and statistical analysis. *Plos One, 7*, 1-7. doi:10.1371/journal.pone.0047678
- Hirotsu, N., & Wright, M. (2003). An evaluation of characteristics of teams in association football by using a Markov process model. *The Statistician, 52*, 591-602.
- Hutchinson, J.M.C., & Gigerenzer, G. (2005). Simple heuristics and rules of thumb: Where psychologists and behavioural biologists might meet. *Behavioural Processes, 69*, 97-124. doi:http://dx.doi.org/10.1016/j.beproc.2005.02.019
- InfoBola website. Retrieved October 19, 2009, from infobola.com.br
- International Federation of Football History and Statistics, Retrieved January 2011, from http://iffhs.de/?b002ec70a81474cd003f14
- Jacklin, P. (2005). Temporal changes in home advantage in English football since the Second World War: What explains improved away performance? *Journal of Sports Sciences, 23*, 669-679.
- Kuss, O., Kluttig, A., & Stoll, O. (2007). "The fouled player shouldn't take the penalty himself!" An empirical investigation of an old German football myth. *Journal of Sport Sciences, 25*, 963-967.
- Lowther, J., & Lane, A. (2002). Relationship between mood, cohesion and satisfaction with performance among soccer players. *The Online Journal of Sport Psychology, 4*, 57-69.
- Luhtanen, P., Belinskij, A., Hayrinen, M., & Vääntinen, T. (2001). A comparative tournament analysis between the EURO 1996 and 2000 in soccer. *International Journal of Performance Analysis in Sport, 1*, 74-82.
- Maranhão, T. (2007). Apollonians and Dionysians: The role of football in Gilberto Freyre's vision of Brazilian people. *Soccer & Society, 8*, 510-523.
- Moraes, L.C., & Salmela, J.H. (2009). *Working with Brazilian athletes* (pp. 117-124). Champaign, IL: Human Kinetics.
- Norman, J.M. (1998). Soccer. In: J. Bennett (Ed.), *Statistics in sport* (pp. 105-118). London: Arnold.
- Pollard, R., & Gómez, M.A. (2009). Home advantage in football in South-West Europe: Long-term trends, regional variation, and team differences. *European Journal of Sport Science, 9*, 341-352.
- Pollard, R., & Reep, C. (1997). Measuring the effectiveness of playing strategies at soccer. *The Statistician, 46*, 541-550.
- Raab, M., Gula, B., & Gigerenzer, G. (2012). The hot hand exists in volleyball and is used for allocation decisions. *Journal of Experimental Psychology Applied, 18*, 81-94.
- Royce, J.R., & Diamond, S.R. (1980). A multifactor-system dynamics theory of emotion: Cognitive-affective interaction. *Motivation and Emotion, 4*, 263-298.
- Rue, H., & Salvesen, O. (2000). Prediction and retrospective analysis of soccer matches in a league. *Statistician, 49*, 399-418.
- Salmela, J.H., & Moraes, L.C. (2003). Development of expertise: The role of coaching, families, and cultural contexts. In J.L. Starkes & K.A. Ericsson (Eds.), *Expert performance in sports* (pp. 275-294). Champaign, IL: Human Kinetics.
- Salmela, J.H., Marques, M., Machado, R., & Durand-Bush, N. (2006). Perceptions of the Brazilian football coaching staff in preparation for the World Cup. *International Journal of Sport Psychology, 37*, 139-156.
- Snyder, E.E., & Spreitzer, E. (1974). Sociology of sport: An overview. *The Sociological Quarterly, 15*, 467-487.
- Soccerstats website. Retrieved October 19, 2009, from soccerstats.com
- Stambulova, N.B., & Alfermann, D. (2009). Putting culture into context: Cultural and cross-cultural perspectives in career development and transition research and practice. *International Journal of Sport and Exercise Psychology, 7*, 292-308.
- Suzuki, K., & Nishijima, T. (2004). Validity of a Soccer Defending Skill Scale (SDSS) using game performances. *International Journal of Sport and Health Science, 2*, 34-49.
- Tenga, A., Holme, I., Ronglan, L.T., & Bahr, R. (2010). Effect of playing tactics on achieving score-box possessions in a random series of team possessions from Norwegian professional soccer matches. *Journal of Sports Sciences, 28*, 245-255.
- Todd, P.M., & Gigerenzer, G. (2007). Environments that make us smart: Ecological rationality. *Current Directions in Psychological Science, 16*, 167-171.
- Wachelke, J.F.R. (2008). Brazilian fans' social representations on soccer. *Revista Internacional De Ciencias del Deporte/ The International Journal of Sport Science, 4*, 1-19.
- Yates, I., North, J., Ford, P. & Williams, M. (2006). A quantitative analysis of Italy's World Cup performances. A comparison of World Cup winners. *Insight – The FA Coaches Association Journal, Autumn/Winter, 6*, 55-59.

JE LI DOBAR NAPAD NAJBOLJA OBRANA? USPOREDBA BRAZILSKIH I TALIJANSKIH STILOVA NOGOMETNE IGRE

Glavni je cilj bio ispitati mitsko vjerovanje da brazilske nogometne momčadi njeguju napadački stil igre, dok se talijanske momčadi više oslanjaju na obrambeni stil igre. Objašnjenje zamijećenih razlika je ukorijenjeno najviše u kulturnim i socijalnim razlikama između ta dva naroda. Podaci (postignuti golovi, primljeni golovi i bodovi po utakmici) prikupljeni s utakmica međunarodnih natjecanja (svjetska prvenstva) i nacionalnih prvih liga (brazilska i talijanska), analizirani su opisno i statistički. Deskriptivna i statistička analiza ukazale su na sljedeće: (1) brazilske momčadi postižu u prosjeku više golova od talijanskih (na reprezentativnim natjecanjima, ali i u okviru ligaških natjecanja); (2) odnos

između postignutih golova i uspješnosti (bodova) bio je značajan i imao je visoku korelaciju samo za talijanske momčadi ($r=0,84$) i (3) snažna obrana pokazala se ključnom za uspjeh na svjetskim prvenstvima za obje momčadi. Zaključno, postoje dokazi o razlikama između brazilskih i talijanskih stilova igre u odnosu na napadačke (broj postignutih golova) i obrambene (broj primljenih golova) ishode. U radu se raspravlja o ograničenjima istraživanja, kao i o smjerovima mogućih istraživanja u budućnosti.

Ključne riječi: nogomet, stručnost, interkulturalno istraživanje, mitsko vjerovanje

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